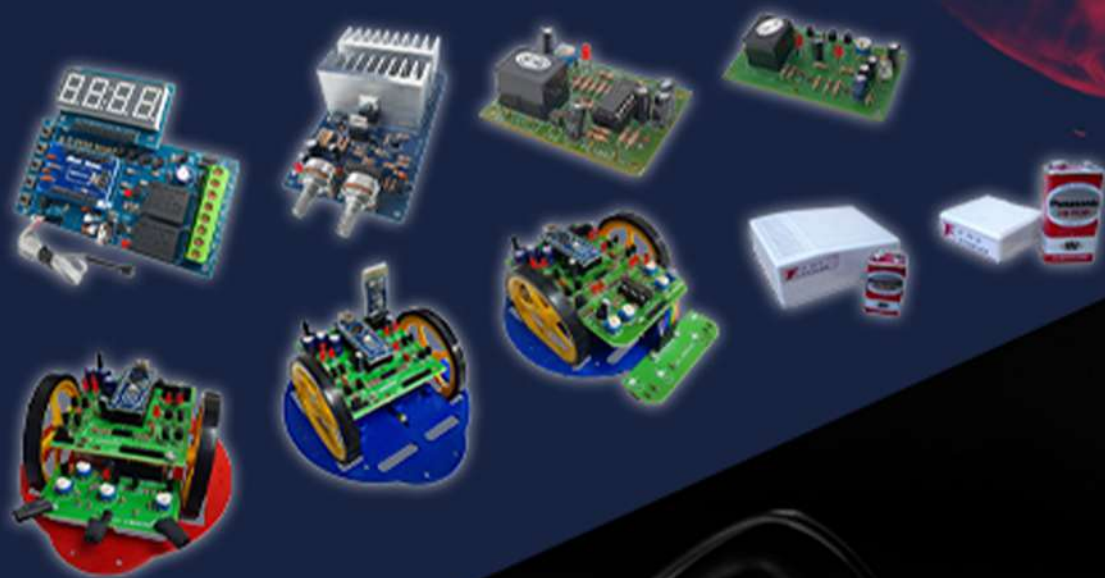




FUTURE KIT CATALOG 2022

TECHNOLOGY KIT SET
& HOBBY EDUCATION



Introduction

FK Series

This growing range of interesting DIY projects features ease of assembly, easily followed pictorial guides, and the use of common circuit elements that make them a valuable part of electronics learning experience. As users gain more experience they will be encouraged to see how many of the FK projects may be linked to make up small systems in communication, lighting, sound and mechatronics. The economy of the FK Series makes them suitable for students learning about the basic of circuit design and assembly. Hobbyists will find opportunities to adapt these kits into their own projects. Automation and control technicians will be able to easily integrate FK kits into their installations.

FA Series

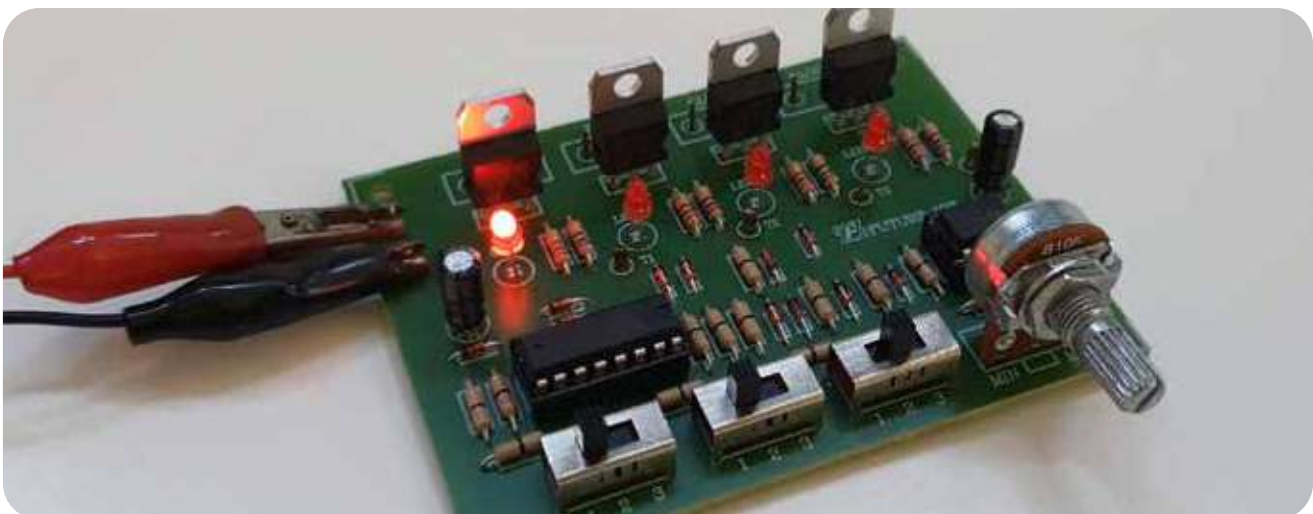
The FA Series offers the same wide variety of circuits as the FK series, but time saving, cost-effective, preassembled and tested modules. Students, hobbyists and experimenters will be able to immediately apply the FA modules as functional circuit elements in larger control and measurement projects. Commercial systems builders, as well as saving on development and manufacturing costs will shorten their time to market by incorporating FA modules as components in their systems. Typical applications include the integration of timers and counters with infrared sensing modules or with lighting and LED controls.

Introduction	1
Future Kit	
Series1xx Flasher Display Lighting Games	2
Series2xx Voice & Sound Generator	22
Series3xx Telephone & Communication Equipment	37
Series4xx Controller By Light,Sound,Remote	42
Series5xx Prequation Equipment	51
Series6xx Audio Equipment	55
Series7xx Radio Equipment	66
Series8xx Regulator Equipment	69
Series9xx Generally Electronic Project	74
Series10xx Solar Energy Project	86
Series11xx Robot Kit	88
Series12xx Beginner Solder Kit	95
Series13xx IC OTP VOICE GENEATOR	99
Series14xx Experiment Board For Microcontroller	104
Maxxtronic	
Dc Speed Control,Counter and Measurment	107
Switch Electronic and relay Board	111
Voice Recorder and Accessory	114
Timer and Game	117
Control and Power Supply	120
Detector, Alarm and Burglar	123
Stopwatch and Digital Clock	127
Jumbo Display, Driver and Flasher Light	128
Microbot Kit	
Series1xx Microcontroller Bot	132
Series2xx Control Robot Set	138
Series3xx Accessory Robot	139
Series5xx Experiment Board	141
Series6xx Input/output Board	143
Series7xx Sensor Board	144
Future Box	145

SERIES 1xx

The Future Kit range of light-related circuits provides many interesting points of entry for the novice and hobbyist into the world of electronics. The accompanying notes with each kit feature easily followed construction details and a circuit diagram. Most projects can be completed within an hour and many will give the visual satisfaction of a functioning device or decoration within minutes. LED control extends beyond pure electronics into the visual arts, wearable light sources, indoor and outdoor ambience devices, festival decoration and advertising. These units are available also as pre-assemblies under the FA prefix.

Flashers, Chasers, Lighting Controls, Decorations, Games





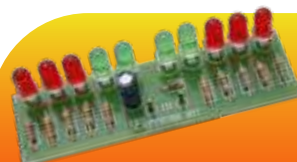
FK101

6 LED MONO VU METER

PRODUCT DESCRIPTION

The FK101 is an easily assembled mono VU meter, designed to be attached directly to the output terminals of your 5 to 30Watt mono audio amplifier or to your speaker input leads. The FK101 utilizes highly efficient LEDs to ensure almost immeasurable energy drain from your amplifier and eliminating the need for an additional

- power supply Power Supply : Not required.
- Unit Dimensions : 1.83" x 0.88" x 0.6"(incl. components : 47mm x 24mm x 15mm)
- Recommended Housing : FB01, FB12



FK102

10 LED STEREO VU METER

PRODUCT DESCRIPTION

Here is an easily assembled stereo VU meter, designed to be attached directly to the output terminals of your 5 to 30Watt stereo audio amplifier or to your speaker input leads. The FK102 utilizes highly efficient LEDs to ensure almost immeasurable energy drain from your amplifier and eliminating the need for an additional power supply.

- Power Supply : Not required.
- Unit Dimensions : 2.89" x 0.93" x 0.6"(incl. components : 73.4mm x 24mm x 15mm)
- Recommended Housing : FB02



FK103

15 LED MONO WIRELESS VU METER

PRODUCT DESCRIPTION

This VU meter is designed to be portable for measurement of sound levels anywhere in the listening field. The FK103 receives audio signals via an inbuilt microphone and displays their sound level on highly efficient 15 LEDs. The FK103 also be used as a party talking piece when it is built into Robot or Ghostbuster costumes as it follows the voice of the wearer or another guest. Substitute blue LEDs for dramatic effect.

- Power Supply : 9-12V and draws just a few milliamps.
- Unit Dimensions : 3.45" x 2.18" x 0.6"(incl. components : 88mm x 55.5mm x 15mm)
- Recommended Housing : FB17



FK109

2 LED FLASHER

PRODUCT DESCRIPTION

The FK109 is a great beginner's or classroom kit. This low cost unit is assembled in just a few minutes to flash two LEDs ON and OFF alternately. The flash rate is adjusted by the on-board trim-pot.

- Power Supply : 9-12V
- Unit Dimensions : 1.43" x 1.22" x 0.6"(incl. components : 36.5mm x 31mm x 15mm)
- Recommended Housing : FB03



FK110

3 LED CHASER

PRODUCT DESCRIPTION

The FK110 is ideal beginner's project or classroom kit. Assembled in just a few minutes, the FK110 turns each of its three LEDs ON and OFF in sequence. Use it as a decoration or in model building. Vary the cycle time and the ON time for the LEDs by altering the C and R values.

- Power Supply : 9-12V @ 16-22mA max.
- Unit Dimensions : 1.59" x 1.32" x 0.6"(incl. components : 44.5mm x 36.5mm x 15mm)
- Recommended Housing : FB03



FK111

5 LED IN-LINE FLASHER

PRODUCT DESCRIPTION

FK111 is assembled in just a few minutes, making it great beginner's or classroom kit. This flasher alternately turns two sets of LEDs ON and OFF. The flash rate is varied by adjusting the on-board potentiometer.

- Power Supply : 9-12VDC
- Consumption : 20-34mA max.
- Adjust flashing speed with trimmer potentiometer.
- PCB Dimensions : 2.05" x 1.22"
- Recommended Housing : FB02



FK112

10 LED CIRCULAR FLASHER

PRODUCT DESCRIPTION

Here is an economical and easily assembled kit that alternately blinks two sets of 5 LEDs that are arranged in a circle. The red green shift color and position shift is very attention make this project suitable for decoration or wearable electronics.

- Power Supply : 9-12VDC
- Consumption : 14-20mA max.
- Adjust flashing speed with trimmer potentiometer.
- PCB Dimensions : 2.02" x 2.09"
- Recommended Housing : FB03



FK113

SINGLE CHANNEL 220-240VAC FLASHER

PRODUCT DESCRIPTION

The FK113 Utilizes a Triac circuit to drive up to 700Watts of incandescent lights ON and OFF. The flash rate is varied by adjusting the on-board potentiometer. Used in advertising signs and emergency warning situations.

- Power Supply : 220VAC
- Load : lamp 220VAC, max.700W.
- Adjust flashing speed with trimmer potentiometer.
- PCB Dimensions : 1.96" x 1.22"
- Recommended Housing : FB01



FK114

DUAL CHANNEL 220-240VAC FLASHER

PRODUCT DESCRIPTION

The FK114 Utilizes two Triac circuits to drive up to 700 Watts per channel of incandescent lights ON and OFF in a running pattern. The flash rate is varied by adjusting the on-board potentiometer. Ideal for advertising signs, theatre signage and festooned lighting.

- Power Supply : 220VAC (SUITABLE FOR EXPERIENCED ASSEMBLERS)
- PCB Dimensions : 2.28" x 1.42" x 1.25"
(incl. components : 32.5mm x 36mm x 32mm)
- Recommended Housing : FB03



FK115

10 LED IN-LINE RUNNING LIGHT

PRODUCT DESCRIPTION

The combination of ICs utilized in the FK115 make it one of the most versatile running light circuit kits available. As it is originally set up, the FK115 controls 10 LEDs in a one-by-one sequence with an adjustable running speed. However, the FK115 can also be simply modified to act as an up counter, a down counter, 2 to 10 LED chaser, timers, scanners and 20 or more applications in decoration, model building, advertising, industry and public display.

- Power Supply : 6-12V @ 8mA max.
- PCB Size : 2.68" x 1.49" x 0.6" (incl. components : 68.1mm x 38mm x 15.24mm)
- Recommended Housing : FB03



FK116

10 LED CIRCULAR PATTERN RUNNING LIGHT

PRODUCT DESCRIPTION

The ICs utilized in the FK116 are the same as the FK115 making it as versatile as its in-line companion. As it is originally set up, the FK116 controls 10 LEDs in a one-by-one sequence in a circular pattern with an adjustable running speed. However the FK116 can also be simply modified to act as an up counter, a down counter, 2 to 10 LED chaser and 20 or more applications in decoration, model building, advertising and public display.

- Power Supply : 6-12V @ 8mA max.
- PCB Size : 2.49" x 2.01" x 0.6" (incl. components : 32.5mm x 36.0mm x 15mm)
- Recommended Housing : FB03



FK117

12 LED TWO WAY CHASING LIGHT

PRODUCT DESCRIPTION

The FK117 drives 12 LEDs in two rows of six red LEDs to "run" up and down sequentially in a fascinating and eye-catching display. The "running" rate of the FK117 may be altered by adjusting the on-board potentiometer. Substituting LEDs of different colors will make the FK117 even more versatile in applications such as festive decorations, "night rider" vehicle lighting, costume effects, advertising and public displays.

- Power Supply : 6V-12V @ 12mA max.
- PCB Size : 2.80" x 1.77" x 0.6"
(incl. components : 81.2mm x 62.23 mm x 15mm)
- Recommended Housing : FB03



FK118

16 LED ROTAYING CHASER

PRODUCT DESCRIPTION

This rotation chasing light circuit is best for light decoration. The LEDs of the FK118 chaser are arranged in two concentric circles so when each set of four LEDs are in a row light up in sequence, they appear to rotate like the vanes of a windmill. The "rotating" speed can be adjusted, through the on-board potentiometer. Applications include festive decorations, "eye catchers" at point-of-sale in retail stores and fancy dress costume effects.

- Power Supply : 9-12V @ 18-30mA max.
- PCB Size : 3.09" x 2.08" x 0.6"
(incl. components : 78.5mm x 52.08mm x 15mm)
- Recommended Housing : FB04



FK124

XENON TUBE FLASHER

PRODUCT DESCRIPTION

The FK124 can be used in automotive and domestic security situations where its blinding light flashes would disorient a would-be thief or intruder. Other applications include disco lighting and garden decoration.

- Power Supply : 9-12VDC @ 150mA max.
- PCB Size : 2.09" x 1.81" x 0.8"
(incl. components : 53.1mm x 50.0mm x 20 mm)
- Recommended Housing : FB03



FK126

SUPER 36 LED ROULETTE WHEEL

PRODUCT DESCRIPTION

Realistic sounds and operation, hold the FK126 switch down to start the LEDs, cycling through sequentially to simulate the turning of a roulette wheel. Release the switch and the LED cycling slows down until it rests randomly at any number between 1 and 36, can also be used in other random number games like quiz games; lucky dip and raffle draws. By scaling up the LED Display board, the FK126 circuit can be used in fund raising events. To heighten the player anticipation, the cycling rate may be slowed down by using the potentiometer.

- Power Supply : 6-12V @ 8mA max.
- PCB Size : 2.49" x 2.01" x 0.6" (incl. components : 32.5mm x 36.0mm x 15mm)
- Recommended Housing : FB03



FK127

10 LED POCKET ROULETTE WHEEL

PRODUCT DESCRIPTION

Push the switch to start the LEDs, cycling through sequentially 1 through 10 to simulate the turning of a roulette wheel. Release the switch and the LED cycling will slow down until it rests randomly at any number between 1 and 10, can also be used to generate random numbers for board games or quiz games. The rotation rate can be adjusted by using the on-board potentiometer.

- Power Supply : 9-12V @ 30mA max.
- PCB Size : 3.2" x 2.45" x 0.6" (incl. components : 81.3mm x 62.23mm x 15mm)
- Recommended Housing : FB04



FK128

HEADS OR TAILS GAME

PRODUCT DESCRIPTION

Here is an electronic version of the traditional coin-flip decision maker. Press the FK128's switch, and its red and green LEDs will alternate back and forth. Release the switch and the LED action will slow down until randomly one LED remains lit.

- Power Supply : 9VDC @ 15mA max.
- PCB Size : 1.98" x 1.27" x 0.6"
(incl. components : 50.3mm x 32.26mm x 15mm)
- Recommended Housing : FB03



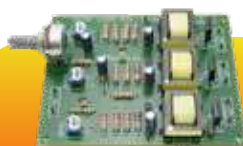
FK129

ELECTRONIC DICE GAMES

PRODUCT DESCRIPTION

Instead of tossing a dice to decide who goes next or how far to advance along a board game, press the FK129's switch and its 7 red LEDs will cycle through rapidly. Release the switch and the LED action will stop at a random selection of LEDs between 1 and 6 in the traditional dice pattern. Use two FK129 for craps or similar games or for classroom demonstration of random numbers.

- Power Supply : 9VDC @ 18-30mA max.
- PCB Size : 3.59" x 1.59" x 0.6"
(incl. components : 91.2mm x 40.4mm x 15mm)
- Recommended Housing : FB04



FK130

3 CHANNEL MUSIC TO COLOR LIGHT DRIVER

PRODUCT DESCRIPTION

The FK130 features three sound-to-light channels, each tuned to a different part of the sound spectrum. The light driving outputs are Triacs that can drive lighting loads up to 800watts per channel at 220-240VAC. The high voltage driver circuits are totally isolated from the amplifier/filter stages so that the FK130 may be safely attached to the audio outputs of entertainment equipment.

- Power Supply : 9-12VDC @ 35mA max.
- Max. load : 800W per channel.
- Input sensitivity is adjustable using the on-board potentiometer.
- PCB Size : 3.64" x 2.80" x 0.8" (incl. components : 92.46mm x 71.2mm x 20mm)
- Add excitement to your party or dance.
- Recommended Housing : FB04



FK133

6 LED "DISCO" LIGHT

PRODUCT DESCRIPTION

The FK133 is a quickly assembled LED array that features alternately flashing RED and GREEN LEDs. Such an array can be hung on trees at night time to give a twinkling effect. When multiple arrays are used, combinations of high brightness, red and white, green and yellow, and blue and white LEDs may be used. The FK133 may be scattered by festooning throughout a garden to add atmosphere to your barbecue or party.

- Power Supply : 9-12VDC @ 30-57mA max.
- PCB Dimensions : 1.17" x 1.39" x 0.6" (incl. components : 29.7mm x 35.3mm x 15mm)
- Recommended Housing : FB03



FK134

SINGLE LED DUAL COLOR FLASHER

PRODUCT DESCRIPTION

This is an easily assembled LED flasher circuit that demonstrates the application of dual coloured LEDs to create a third colour - in this case, amber. Use the same circuit to see the effect in LEDs featuring other combinations.

- Power Supply : 6-12VDC @ 12-15mA.
- PCB Dimensions : 0.99" x 1.19" x 0.6"
(incl. components : 25.4mm x 30.2mm x 15mm)
- Recommended Housing : FB03



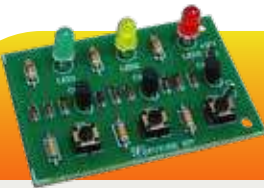
FK135

2 LED DUAL COLOR FLASHER (DRAFT)

PRODUCT DESCRIPTION

The FK135's two LEDs are white. Turn the power ON and each LED will displays two colors Red and Green through their three lead circuits. Experiment with different flash rates to show the effect of alternating single-source red and green LEDs at a rapid rate.

- Power Supply : 9-12V
- PCB Dimensions : 1.27" x 1.20" x 0.6" (incl. components : 36.5mm x 31.0mm x 15mm)
- Recommended Housing : FB03



FK137

3 LED 3 PLAYER GAME SHOW PANEL

PRODUCT DESCRIPTION

This is an easily assembled circuit that simulates the priority deciding panels in TV game shows. The player who presses his or her switch first, has the right to answer, whilst locking the other two players out. The winning player is identified by the LED associated with that player's switch. The other player's LEDs remain OFF. The switches and LEDs may be wired into remote podiums to provide the same functions. The FK137 is suitable for 2-3 players.

- Power Supply : 9-12VDC @ 10mA max.
- PCB Dimensions : 2.34" x 1.66" x 0.6" (incl. components : 59.4mm x 42.2mm x 15mm)
- Recommended Housing : FB03



FK140

FLASHING CHRISMAS TREE

PRODUCT DESCRIPTION

16 bright red, blinking LEDs are arranged in an outline on a suspended green christmas tree shape, simulating the lights you would put on a full scale tree. Several of these trees may be powered from the one low cost, low voltage plug pack. Nothing beats the satisfaction of making your own safe festive season decorations.

- Power Supply : 9-12VDC @ 40-70mA max.
- PCB Dimensions : 2.60" x 4.17" x 0.6" (incl. components : 56.0mm x 106mm x 15mm)
- Recommended Housing : FB04



FK141

FLASHER (SUPER BRIGHT LEDs)

PRODUCT DESCRIPTION

The FK141's 7 super-bright LEDs are arranged in an adense array, making this display flasher ideal as an attetion-grabbing point-of-sale specials indicator, or a highly visible emergency alert. It may be built in to signage as a back-light as it is, or alternatively, Super Bright LEDs of other colors may be substituted as required. Using Super Bright Low Voltage LEDs instead of incandescent lamps significantly reduces the size and energy consumption making the FK141 suitable for portable battery powered operation.

- Power Supply : 3VDC @ 90mA max.
- Unit Dimensions : 1.18" x 1.73" x 0.6" (incl. components : 30mm x 40mm x15mm)
- Recommended Housing : FB02



FK142

ROBOT'S EYES FLASHER

PRODUCT DESCRIPTION

Outlined in the shape of a robot's face, this fun circuit uses two LEDs that flash ON and OFF alternately to simulate eyes opening and closing. The flash rate may be adjusted by means of the on-board trimmer pot. Other LEDs are used to identify the robot's nose and mouth. The FK142 is a rewarding use of a few minutes of assembly time and a practical introduction to flasher circuit design.

- Power Supply : 3VDC @ 30mA max.
- PCB Dimensions : 1.58" x 1.61"x 0.6"(incl. components : 40.1mm x 40.0mm x 15mm)
- Recommended Housing : FB01



FK144

6 PROGRAM CHASING LED OR INCANDESCENT LAMP DRIVER

PRODUCT DESCRIPTION

This versatile, low voltage, driving circuit features 6 switch-selected, programmed chaser sequences. Four LED indicators monitor each power output. The rate at which each sequence progresses may be adjusted by using the on-board potentiometer.

Sequence 1. The outputs are stepped through turning ON and OFF in ascending order from 1 to 4, and then stepped in descending order through output 4 to 1, then all outputs are turned ON for one step period and then turn OFF before repeating the sequence. Sequence 2. Outputs are turned ON and OFF in ascending order 1 to 4 and then all outputs are turned on for one step period, then the sequence will repeat. Sequence 3. Outputs 1 and 3 are alternately flashed with outputs 2 and 4. Sequence 4. Outputs are stepped On and OFF through from 1 to 4 then back down to 1 and the pattern is repeated. Sequence 5. Outputs step through from 1 to 4 sequentially and then back down to 1. The outputs are then turned OFF for one step period before output 1 turns on and then the sequence will repeat. Sequence 6. The outputs are repeatedly stepped through from 1 to 4 in ascending order.

- Power Supply : 12 VDC @ 40mA max.
- Power Output : 25Watt @ 12VDC per Channel
- Unit Dimensions : 3.44" x 2.60" x 1.1" (incl.components : 87.5mm x 66mm x 28mm)
- Recommended Housing : FB05



FK145

DEFTNESS GAME WITH SOUNDER

PRODUCT DESCRIPTION

The object of this game is for each player to pass a metal loop over twisted conductive wire from start to finish without touching the wire. Touch the wire and - BUZZ! You're out! The wire may be made longer and more convoluted to increase the amount of concentration needed. The remaining players pit their skill against an increasingly difficult course until a winner emerges.

- Power Supply : 3VDC @ 50mA max.
- Unit Dimensions : 3.19" x 1.12" x 0.6" (incl. components : 81mm x 29mm x 15mm)
- Recommended Housing : FB17



FK146

STAR BURST CHASING LIGHT 25 LED

PRODUCT DESCRIPTION

The LEDs used in the FK146 produce a spectacular display where the LEDs sequence up from the bottom and then burst out from the top effectively simulating the look of a rocket-launched star burst, clever builders will quickly work out how to use the FK146 circuit to power even bigger displays for public events. (The star-burst repetition rate may be potentiometer adjusted.)

- Power Supply : 9-12VDC.
- Current consumption : 20-45mA max
- Adjust flashing speed with trimmer potentiometer.
- IC-board dimension : 3.71 in x 5.84 in.
- Recommended Housing : FB09



FK147

STAR FLASHER 11 LED

PRODUCT DESCRIPTION

Two 5 pointed LED stars, one fitted inside the other flash alternately to give a star burst appearance to give an eye catching decoration for trees or shop. The flash rate may be adjusted to simulate the randomness or twinkling in applications where many decorations are used.

- Power Supply: 3VDC @ 260mA max.
- Unit Dimensions : 1.43" x 2.22" x 0.6" (incl. components : 36.3mm x 56.4mm x 15mm)
- Recommended Housing : FB01



FK148

4 WAY TRAFFIC LIGHT 12 LED

PRODUCT DESCRIPTION

No model railway or village miniature would be complete without realistic sets of traffic lights. Build these yourself for a fraction of the cost you'd pay from a model shop. The FK148 sequences the Red Amber and Green lights for typical cross-roads applications.

- Power Supply : 9-12VDC @ 18-30mA max.
- Unit Dimensions : 3.53" x 1.21" x 1.21" (incl. components : 30.1mm x 30.1mm x 125mm)
- Recommended Housing : FB03



FK149

ARROW CHASING LIGHT 21 LED

PRODUCT DESCRIPTION

This arrow shaped flasher features a matrix of 21 LEDs that are sequenced through in three steps of 7 LEDs in an attention grabbing display. The FK149 will find application in crowd or traffic direction control, retail point-of-sale highlighters, decorations and portable emergency units.

- Power Supply : 9-12VDC @ 70-120mA max.
- Unit Dimensions : 2.84" x 2.12" x 0.7" (incl. components : 72.1mm x 54mm x 0.18mm)
- Recommended Housing : FB03



FK150

ATOMIC CHASING LIGHT 7 LED

PRODUCT DESCRIPTION

Here's an ideal decoration for school science shows and also for wearable electronics in fancy dress situations. 7 LEDs simulate the nucleus and "spinning" electrons of an atomic structure.

- Power Supply : 9-12VDC @ 24-33mA max.
- Unit Dimensions : 1.76" x 2.37" x 0.6" (incl. components : 44.7mm x 58.4mm x 15mm)
- Recommended Housing : FB03



FK151

TWO WAY LED CHASING LIGHT 35 DOT

PRODUCT DESCRIPTION

A 7 x 5 LED dot matrix is driven by a sequence driver to power seven columns of five LEDs in a three step running mode to indicate direction. The FK151 may be mounted on walls or set into floors for pedestrian traffic flow control. The running direction can be set to forward or reverse to suit changed conditions. Other applications include wearable electronics in safety gear, or in massed arrays in festive decorations.

- Power Supply : 9-12VDC @ 40-70mA max.
- Unit Dimensions : 1.67" x 3.06" x 0.6" (inc. components : 42.5mm x 77.7mm x 15mm)
- Recommended Housing : FB03



FK152

TRIANGLE FLASHER 6 LED

PRODUCT DESCRIPTION

Two overlaid, 3 LED triangles blink alternately in an easily assembled, inexpensive star formation. The bright red and green flashes go well with the festive season's decorations.

- Power Supply : 9-12VDC @ 13-23mA max.
- Flashing speed is adjustable by trimmer potentiometer.
- Unit Dimensions : 1.64" x 2.1" x 0.6" (inc. components : 42mm x 53.4mm x 15mm)
- Recommended Housing : FB03



FK153

ELECTRONIC WINDMILL 25 LED

PRODUCT DESCRIPTION

The 25 LEDs of the FK153 are arranged as curved "vanes" in a fan-like pattern and driven by a simple chaser circuit to simulate the turning of a windmill or propeller. Applications include decorations or in models displaying rotating objects, blades or turbines. LEDs of different colors may be substituted to add variety and interest to arrays using multiples of these easy-to-assemble units.

- Power Supply : 9-12VDC @ 26-56mA max.
- "Rotation speed" is adjustable by on-board potentiometer.
- Unit Dimensions : 2.53" x 2.79" x 0.6" (incl. components : 64.25mm x 71mm x 15mm)
- Recommended Housing : FB04



FK154

ELECTRONIC SANDGLASS 22 LED

PRODUCT DESCRIPTION

22 LEDs are arranged like sand in an hourglass shape. The LED "sand" from the top section falls to the bottom until it runs out. The operation may be selected by jumper from continuous recycling after each runout, or to run out and stop. The speed of the "sand" fall may be adjusted by potentiometer.

- Power Supply : 9-12VDC @ 50-80mA max.
- Unit Dimensions : 2.64" x 4.27" x 0.6" (incl. components : 67mm x 108.4mm x 15mm)
- Note for compositor Sandglass Anti Clock-wise 90°
- Recommended Housing : FB04



FK155

CUPID SWEETHEART FLASHER (32 LED)

PRODUCT DESCRIPTION

A cupid-heart shaped chaser in red LEDs is pierced by an arrow in green LEDs makes a great St. Valentines decoration or a fun present to show how much you care.

- Power supply : 9VDC.
- Electric current consumption : 40mA max.
- The flashing rate may be changed by changing timing resistor.
- IC board dimension : 2.47 in x 3.36 in.
- Recommended Housing : FB04



FK156

MINI TRAFFIC LIGHT 3 LED

PRODUCT DESCRIPTION

It is a one-way traffic light circuit of which the LEDs are arrayed as those of traffic light at any intersection. It is good to apply to other kinds e.g. Modeling or decoration.

- Power Supply : 9-10VDC.
- Electric current consumption : 16mA (max.)
- LEDs : 5 mm. high in red, amber and green
- IC board dimension : 1.09 in x 2.39 in
- Recommended Housing : FB02



FK157

TWO WAY CHASING LIGHT 10 BI COLOUR LED

PRODUCT DESCRIPTION

The FK157 features an interesting play of lights which starts with the LEDs glowing green and running from the center of the array to the outside and same LEDs shining red from the outside LEDs to the centre. The chase rate may be adjusted by the on-board trimmer potentiometer. Suitable for decoration, wearable electronics or advertising displays

- Power Supply : 9-12VDC @ 15mA max.
- PCB Dimensions : 2.90" x 1.82" x 0.6" (incl. components : 73.6mm x 46.3mm x 15mm)
- LEDs : 5mm. red/green(bi-colour)
- Recommended Housing : FB03



FK158

XENON LIGHT 220-240VAC.

PRODUCT DESCRIPTION

This xenon light is suitable for built-in applications and for festooning at discotheques, stage decoration and advertising signs. The 220VAC operational circuit reduces the number of components thus the module size making assembly into mass displays easier and at lower cost.

- Power supply : 220 to 240VAC.
- Flashing rate : 2 flashes/sec.
- IC board dimension : 1.71 in x 2.52 in.
- Recommended Housing : FB03



FK159

"BUMP" DICE

PRODUCT DESCRIPTION

A shock sensing switch initiates the scan of possible dice combinations when the PCB of the FK 159 is bumped or tapped by a player. After "rolling", a random dice face number will be displayed just like a real one.

- Power Supply : 9-12VDC @ 24mA max. @ 12VDC
- Shock Sensitivity : Adjustable
- Display : 7x3mm LEDs organized in a dice pattern.
- Unit Dimensions : 1.88" x 1.64" x 1.5"
(incl. components : 48mm x 42mm x 38mm)
- Recommended Housing : FB03



FK160

RANDOM NUMBER GAME 1 DIGIT

PRODUCT DESCRIPTION

This is a pocket sized random number game that uses a seven segment display to display random numbers between 0 and 9.

- Power Supply : 9-12VDC @ 42mA max.
- Display : 1 digit (0.5 inch, 7-segment LED)
- Unit Dimensions : 2.22" x 2.63" x 0.7"
(incl. components : 56.4mm x 67mm x 17.8mm)
- Recommended Housing : FB04



FK161

FEELING FLASHER 14 LED

PRODUCT DESCRIPTION

Mount this on your desk or door to let people know how you are feeling right now. Smiling face or down, just change the switch to set the mood.

- Power Supply : 9-12VDC @ 30mA max.
- Display : 12 x 3mm LED for the mouth and two 5mm bi-colour LEDs (red and green) for the eyes.
- Unit Dimensions : 1.84" x 2.66" x 0.6"
- Recommended Housing : FB17



FK162

SATURN'S RING 31 LED FLASHER

PRODUCT DESCRIPTION

Decorate the science lab or the gang's HQ with this LED picture of Saturn. 14 red LEDs outline the planet and 17 green LEDs in chaser mode form the ring to simulate its motion around Saturn.

- Power Supply : 9-12VDC @ 67mA.
- Display : 14 x 3mm red LEDs. and 17 x 3mm green LEDs.
- Unit Dimensions : 2.28" x 2.66" x 0.6"
(incl. components : 58mm x 67.6mm x 15mm)
- Recommended Housing : FB17



FK163

SOLAR SYSTEM FLASHER 10 LED

PRODUCT DESCRIPTION

10 LEDs are arrayed as a flashing pattern of our solar system pattern with the sun as bright yellow LED in the middle and the nine planets as red and green LEDs set in their orbits. A handy gadget for the class-room or as a decoration.

- Power Supply : 9-12VDC @ 21mA.
- LEDs : 7LEDs 3mm and 3LEDs 5mm
- Unit Dimensions : 3.16" x 3.26" x 0.6"
(incl. components : 80.2mm x 83.0mm x 15mm)
- Recommended Housing : FB04



FK164

XENON TUBE FLASHER 220-240VAC

PRODUCT DESCRIPTION

This xenon light is suitable for built-in applications and for festooning at discotheques, stage decoration and advertising signs. The flash rate may be adjusted by the on-board potentiometer for applications requiring multiple flashes in a random fashion such as in advertising signs and disco lighting. Each unit may be switched on individually.

- Power Supply : 220-240VAC
- Flashing rate (adjustable)
- Unit Dimensions : 1.98" x 2.79" x 0.9"
(incl. components : 50.1mm x 71mm x 24mm)
- Recommended Housing : FB23



FK165

SOUND ACTIVATED XENON TUBE FLASHER

PRODUCT DESCRIPTION

Use this as a sentry to detect intruders. Any sounds and the xenon flash will make them think they've been photographed. Also make an excellent talking point at a party. The sensitivity to sound, at which the FK165 triggers, is adjustable via a trim pot. There is also a test switch to check the unit's operation.

- Power Supply : 220-240VAC
- Unit Dimensions : 1.96" x 3.05" x 1.25"
(incl. components : 49.8mm x 77.5mm x 32mm)
- Recommended Housing : FB03



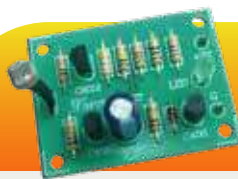
FK166

LIGHT ACTIVATED XENON TUBE FLASHER

PRODUCT DESCRIPTION

This is an interesting unit that takes a light to trip a light. When used as a sentry, this xenon flasher will pick up intruder torchlights or from any other light sources. Light sensitivity can be adjusted by using the on board trim-pot. The unit also features an on-board function test switch.

- Power Supply : 220-240VAC
- Unit Dimensions : 2.15" x 2.61" x 1.2"
(incl. components : 54.6mm x 62.3mm x 32mm)
- Recommended Housing : FB23



FK167

FIREFLY LIGHT (NIGHT ACTIVATE)

PRODUCT DESCRIPTION

The firefly light circuit is flashing circuit which is activated at night. This flashing of light is like firefly light in the nature. The circuit will be working when LDR isn't detecting the light. Ideal as light-shows for model construction etc.

- power supply : 3VDC.
- consumption : 0.2mA (standby), 11mA (working)
- light sensor : LDR
- PCB dimensions : 1.06 x 1.21 inches.
- Recommended Housing : FB01



FK168

NO SMOKING FLASHER 46 LED

PRODUCT DESCRIPTION

one is going to ignore this flashing "No Smoking" sign. The flashing universal prohibition symbol frames a cigarette which smoke slowly turns on and off. The FK168 is practical project with a positive health message.

- Power Supply : 9-12VDC @ 80mA max.
- Unit Dimensions : 3.54" x 3.50" x 0.6"
(incl. components : 90mm x 89mm x 15mm)
- Display : 38 x 5mm red LEDs and 8 x 3mm red LEDs.
- Recommended Housing : FB05



FK169

DANCING ROBOT FLASHER 33 LED

PRODUCT DESCRIPTION

This flasher circuit is mounted on PCB as a robot shaped. This ideal as a low cost entry level project with a fun result. The various colored LEDs of the FK169 flash ON and OFF alternately.

- Power Supply : 9-12VDC @ 60mA max.
- Unit Dimensions : 3.17" x 3.51" x 0.6"
(incl. components : 80.5mm x 89.15mm x 15mm)
- Display : 33 x 5mm LEDs
- Recommended Housing : FB05



FK170

42 LED FLASHER DANGER DIGN

PRODUCT DESCRIPTION

A bright triangle of LEDs on the FK170 suggests the universal symbol for danger and the eye-catching exclamation mark makes this compact sign an arresting indicator of unsafe situations such as liquid spills or refrigerator leaks in supermarkets. The FK170 is ideal for mounting on top of plastic danger cones in public places.

- Power Supply : 9-12VDC @ 80mA max.
- Unit Dimensions : 3.55" x 3.56" x 0.6"
(incl. components : 90mm x 90.4mm x 15mm)
- Display : 31 x 5mm LEDs and 11 x 3mm LEDs
- Recommended Housing : FB01



FK171

TWO LAMP FLASHER

PRODUCT DESCRIPTION

This low cost project features two incandescent lamps driven alternately by a basic flasher circuit. This is an ideal project for a beginner to electronics.

- Power Supply : 3VDC @ 300mA max.
- Light indication : 2 subminiature 3 volts lamps
- Unit Dimensions : 1.68" x 1.06" x 0.6"
(incl. components : 42.7mm x 27mm x 15mm)
- Recommended Housing : FB01



FK172

THREE STEP FLASHER 19 LED

PRODUCT DESCRIPTION

The 19 red LEDs of this flasher are arranged in three concentric circles which are addressed sequentially for a spectacular effect. LEDs of different colours may be substituted to give variety to these eye catching units in massed arrays.

- Power Supply : 9-12VDC @ 40mA max.
- Unit Dimensions : 2.69" x 3.56" x 0.6"
(incl. components : 68.3mm x 71mm x 15mm)
- Display : 13 x 5mm LEDs
- Recommended Housing : FB04



FK173

HALLOWEEN PUMPKIN FLASHER 23 LED

PRODUCT DESCRIPTION

The LEDs on the FK173 are in a shape like the face of a Halloween pumpkin. Use it on its own or add drama and action to your hollowed pumpkin head. You could even make the FK173 part of your halloween costume.

- Power Supply : 9-12VDC
- Electric current consumption : 45mA max.@ 9VDC
- Display : 23 LED's each 5 mm.
- IC board dimension : 3.83 in x 3.96 in
- Recommended Housing : FB05



FK174

ANIMATED LED SIGNBOARD

PRODUCT DESCRIPTION

This circuit utilizes a 5x7 dot matrix of 5mm LEDs to display both symbols and characters. It has three display functions: 1. Chasing from right to left, 2. Chasing from left to right, and 3. Chasing from right to left and left to right alternately. The FK174 may be programmed to set up messages and custom symbols. The units may be banked to extend the display up to a maximum of 48 columns in 5 rows.

- Power Supply : 3-5VDC @ 85mA max.
- Unit Dimensions : 2.25" x 3.26" x 0.6"
(incl. components : 57.2mm x 83mm x 15mm)
- Recommended Housing : FB05



FK175

JUMBO 2 LED FLASHER

PRODUCT DESCRIPTION

The two 10mm LEDs alternate blinking speed is adjustable using the on-board potentiometer

- Power Supply : 3VDC @ 14mA max.
- Unit Dimensions : 1.39" x 1.27" x 0.6"
(incl. components : 35.3mm x 32.3 x 15mm)
- Recommended Housing : FB03



FK176

THREE WAY RUNNING LIGHT 15 LED

PRODUCT DESCRIPTION

The 15 LEDs will run from one end to the other in a Night Rider mode or from the centre LED to the extremes and back in a sci-fi robot simulation. Suitable for adding to sci-fi costumes and models.

- Power Supply : 9-12VDC @ 14mA max.
- Running Speed : Adjusted using on-board trimmer potentiometer.
- Unit Dimensions : 3.87" x 2.48" x 0.6" (incl. components : 117mm x 63.0mm x 0.6mm)
- Recommended Housing : FB04



FK177

DOUBLE HEART FLASHER 50 LED

PRODUCT DESCRIPTION

Here's a fun project for young lovers. Two LED heart shapes are pierced by Cupid's arrow. The two hearts flash in turn and are followed by the arrow lighting up to complete the picture.

- Power Supply : 9-12VDC @ 25mA max
- Flashing Rate : Adjusted using on-board trimmer potentiometer.
- Unit Dimensions : 4.60" x 3.29" x 0.6" (incl. components : 198.3mm x 83.6mm x 0.6mm)
- Recommended Housing : FB04



FK178

TWO STEP DISCO LIGHT 18 LED

PRODUCT DESCRIPTION

Used en-masse, the FK178 will add eye appeal to dance parties and barbecues. The FK178 features jumper selection of fixed flashing rates or on-board potentiometer adjustment of rates from very slow to fast.

- Power Supply : 9-12VDC @ 42mA max.
- Unit Dimensions : 2.33" x 2.69" x 0.6"
(incl. components : 59mm x 68.3mm x 15mm)
- Recommended Housing : FB03



FK179

WARNING LIGHT FLASHER 20 LED

PRODUCT DESCRIPTION

This warning flasher may be used for light decoration or warning signs indicating hazardous zones. The flash rate can be freely adjusted over the range or set to be continuously ON. Two different characters outlines may be selected.

- Power Supply : 110/220VAC
- Flashing Speed : Adjusted by on-board trimmer potentiometer.
- Unit Dimensions : 3.34" x 3.30" x 0.6"
(incl. components : 85mm x 84mm x 15mm)
- Recommended Housing : FB21



FK180

ROBOT FLASHER 7 LED

PRODUCT DESCRIPTION

The FK180 is an amusing little project that is low cost, simple to build and easy to understand, so it is an idea starter kit. The finished unit makes an interesting desk top or work-bench decoration.

- Power Supply : 9VDC @ 65 mA max.
- Unit Dimensions : Approximately 5.7inches (144mm) tall, and 1.11inches (28mm) wide plus the LED "arms".



FK181

SOUND TESTER 10 LED

PRODUCT DESCRIPTION

Similar to a VU meter, the FK181 can be used to detect and visually display the general level of sound in various parts of a room or auditorium. The unit may be used on its own or augmented by power drivers for large displays in discos and public places. The FK181 can also be used as a wearable sound-sensitive display in "Ghost Buster" or "Star Wars" costumes.

- Power Supply : 9VDC @ 20mA. (stand by), 50mA. (working)
- Sound sensitivity adjustment : trimmer potentiometer.
- Unit Dimensions : 2.29" x 1.11" x 1.0"
(incl. components : 58.2mm x 28.2mm x 25.4mm)
- Recommended Housing : FB03



FK182

AVR LED CHASING LIGHT 12 LED 16 PROGRAM

PRODUCT DESCRIPTION

The FK182 demonstrates how, by utilizing an AVR Microcontroller, many more functions can be incorporated into a project without increasing the circuit complexity or size. In this case, the FK182 offers 16 different LED chasing and flashing sequences which can be selected individually, or cycle through the whole 16 repeatedly. The FK182 will find application in festive decorations, party, dance lighting and advertising.

- Power supply : 9-12VDC @ 60mA max.
- Output : 12 LEDs
- Programs : Up to 16 programs
- Flash Rate : User selectable
- PCB dimensions : 3.25" x 1.95" x 0.6"
(incl. components : 82.55mm x 49.53 x 15mm)
- Recommended Housing : FB03



FK183

ENERGY SAVING LED FLASHER

PRODUCT DESCRIPTION

This circuit is energy saving LED flasher. There is the light checking sensor. When the area is getting dark, LED will flashing periodically, that's make this circuit live longer. It is suitable to use as a navigator lamp on-off switch in the dark, or to be a caution lamp circuit for bicycle.

- Power supply : 3VDC. (CR2032 battery not included)
- Duration of battery : 1,200 hour.
- Frequency of flashing : 0.5 second.
- PCB dimension : 1.42 in x 1.49 in.
- Recommended Housing : FB28



FK184

UFO CHASING LIGHT 8 LED

PRODUCT DESCRIPTION

This is a chasing light circuit with many patterns for selection. The chasing speed can be adjusted. It is a small PC board with low-voltage and easy mobility to any decorating places.

- Power supply : 4.5-6VDC.
- Consumption : 150mA. max.
- Chasing speed can be adjusted up to 12 levels.
- 17 chasing patterns are available.
- PCB dimensions : 2.20 x 2.20 in.
- Recommended Housing : FB13



FK185

1.5V 6-LED LIGHT

PRODUCT DESCRIPTION

This circuit, when put into the proper housing will turn itself into a general-purpose hand-held flashlight. Because of its small size and light weight (it use only 1 AA battery), this flashlight is still bright and handy enough for day to day application.

- Power supply : 1 AA battery (not included).
- Power consumption : 200mA.
- Display : 6 white LEDs.
- There is ON-OFF switch.
- IC board dimension : 2.41 in x 0.68 in.
- Recommended Housing : FB28



FK186

LED CENDLE

PRODUCT DESCRIPTION

This circuit is the flasher circuit. The flashlight is like the flameless candle and can be blow for snuff the candle.

- Power Supply : 3VDC
- Power Consumption : 15mA.
- Display : 1 yellow LED.
- IC board dimension : 2.43 in x 1.13 in.
- Recommended Housing : FB17



FK187

RGB LED FLASHER

PRODUCT DESCRIPTION

This circuit is the flasher circuit. The flashlight will be the charge the color all the time. It is suitable for decorate.

- Power supply : 9-12VDC.
- Power consumption : 80mA. @ 9VDC.
- Can be adjusted the time of blinking.
- Display : 1 LED RGB or LED RGB module (exclude).
- PCB dimension : 2.14 in x 1.56 in.
- Recommended Housing : FB17



FK188

18-LED RUNNING LIGHT

PRODUCT DESCRIPTION

This circuit develops from the LED running light 10 DOT (FK 115). It utilizes the 3 ICs for working control of 18 LEDs in a one-by-one sequence, and to control or adjust speed of the runner. These things make FK118 was classified as excellent multi-purpose integrated circuits, running one. It will be used for experimental studies, and can also lead to a variety of applications in decoration, model building, advertising, industry and public display.

- Power Supply : 9-12 VDC @ 15 mA max.
- Output LED : 5 mm. 18 ea
- Running Speed : Adjusted by potentiometer
- PCB Dimensions : 1.60 x 2.20 inches
- Recommended Housing : FB18



FK189

SINGLE CHANNEL FLASHER 12V 35W

PRODUCT DESCRIPTION

This circuit is energy saving LED flasher. There is the light checking sensor. When the area is getting dark, LED will flashing periodically and can be adjust ON-OFF timer separately, that's make this circuit live longer. It is suitable to use as a navigator lamp on-off switch in the dark, or to be a caution lamp circuit for bicycle.

- Power supply : 12VDC.- Electric current consumption : 20mA. (No Load)
- Total load : 35W. bulb.
- Blinking speed ON and OFF : adjustable 0.5 to 8 seconds.
- There is the light detector circuit for setting the operation of the blinking circuit when the photo isn't receiver the light, the blinking circuit is working (the circuit has the jumper for setting the operation of sensor).
- PCB dimensions : 2.27 x 1.68 inch.
- Recommended Housing : FB03



FK190

ELECTRONIC ESIIMSI

PRODUCT DESCRIPTION

This operation of CODE 190 is the random number circuit. It works similar to the esiimsi. But use the push of a bottom to display numbers and sound. Instead of shaking wood. This circuit is suitable for the esiimsi electronic in the temple.

- Power supply : 3VDC.
- Working current consumption : 25mA. max.
- Standby current consumption : 6mA. max. (display on)
- Standby current consumption : 0.01mA. max. (display off)
- Can be select for random the number from 1 to 99.
- PCB dimensions : 1.87 x 3.42 inch.
- Recommended Housing : FB04



FK191

6 PLAYER PRIORITY TESTING GAME

PRODUCT DESCRIPTION

This is an easily assembled circuit that simulates the priority deciding panels in TV game shows. The player who presses his or her switch first, has the right to answer, whilst locking the other players out. The winning player is identified by the LED associated with that player's switch. The other player's LEDs remain OFF. The switches and LEDs may be wired into remote podiums to provide the same functions. The FK191 is suitable for 2-6 players.

- Power supply : 9-12VDC.
- Electric current consumption : 25mA (max.)
- An LED is equipped to indicate who presses the switch first.
- IC board dimension : 3.19 in. x 1.44 in.
- Recommended Housing : FB17



FK192

HEAD OR TAIL SHAKING GAMES

PRODUCT DESCRIPTION

This is an easy game-play electronic version of the traditional coin-flip decision maker. Just shaking the FK 192, both LEDs will alternately flash. When stop shaking and the LED action will slow down until randomly one LED remains lit.

- Power supply : 9 VDC.
- Electric current consumption : 20mA (max.)
- PCB dimension : 1.88 in. x 1.42 in.
- Recommended Housing : FB03

Serie 2 Voice & Sound Generator

The Future Kit range of sounding devices uses technology from several sources, namely transistor oscillator circuits, IC oscillator circuits and digitally recorded sound ICs. Applications for 2XX Series sound devices range from toys through to advertising, alarm systems, doorbells and hobby sound effects such as found in model railway set ups. These units are available also as pre-assemblies under the FA prefix.





FK201

MONKEY VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK202

COW VOICE

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK203

WIRELESS VU METER 15 LED

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK204

LION VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK205

DINOSAUR VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK206

ELEPHENT VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK207

DOG BARKING IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK208

ROOSTER VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK210

SHEEP VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK211

HORSE VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK212

TIGER VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK214

FROG VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK215

CHICKEN VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK216

CAT VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK217

BIRDS VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK221

GLASS BROKEN SOUND IC VOICE

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable)
(75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK222

WITCH VOICE IC DIGITAL

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable) (75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK223

LAUGHTER VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK224

SCREAMING VOICE IC DIGITAL

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable) (75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK225

BABY CRY VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK226

GHOST SOUND IC DIGITAL

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable) (75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK228

MINI SIREN SINGER TONE

PRODUCT DESCRIPTION

This mini-siren project is low cost, easily assembled and its principles of operation are readily understood by the novice to electroics. Despite its simplicity, the FK228 gives out a demanding sound through its included speaker, making it suitable for alarm systems, intrusion alerts, mobility assistance equipment and battery powered vehicles.

- Power Supply : 9VDC @ 36mA max.
- Loudspeaker Supplied : 8 Ohm/0.25W
- PCB Dimensions : 1.79" x 1.36" x 0.6" plus speaker (45.5mm x 34.5mm x 15mm)
- Recommended Housing : FB18



FK229

MINI SIREN 2 TONE

PRODUCT DESCRIPTION

The low cost and easily assembled FK229 features a switch to engage a second tone. Manually selecting between the two tones helps in choosing the most penetrating sound for appropriate to the ambient noise, making the FK229 suitable for alarm systems.

- Power Supply : 9VDC @ 40mA max.
- Loudspeaker Supplied : 8 Ohm/0.25W
- PCB Dimensions : 2.14" x 1.19" x 0.6" plus speaker (53.4mm x 30.2mm x 15mm)
- Recommended Housing : FB19



FK230

SUPER SIREN SINGLE TONE 10W

PRODUCT DESCRIPTION

The FK230 10Watt Single Tone Super Siren is constructed upon the same simple lines as the FK228 however its output transistor can handle much higher peak currents making it suitable for warning device, alarm-systems, telephone ring repeaters and doorway alarms. It may be added to personnel detectors of most types.

- Power Supply : 12VDC @ 200mA max.
- Peak output power : 10W max.
- Loudspeaker connection : 8 Ohm
- PCB Dimensions: 2.15" x 1.41" x 0.6"
- Recommended Housing : FB04



FK231

SUPER SIREN 2 TONE 10W

PRODUCT DESCRIPTION

The FK231 10Watt Dual Tone Super Siren is constructed upon the same simple lines as the FK229 and features a tone selector switch for ambience matching. However its output transistor can handle much higher peak currents making it suitable for warning device, alarm-systems, telephone ring repeaters and doorway alarms. It may be added to personnel detectors of most types.decoration.

- Power Supply : 12VDC @ 200mA max.
- Peak output power : 10W max.
- Loudspeaker connection : 8 Ohm
- PCB Dimensions: 2.55" x 1.41"x 0.6"
- Recommended Housing : FB04



FK232

AMBULANCE SIREN

PRODUCT DESCRIPTION

This easy-to-build project mimics the two-tone sounds of many ambulance services. The Kit comes complete with an 8 Ohm 0.25Watt speaker, and it is an ideal entry point into basic electronics. Students will find that by altering the values of the timing components they will change the sounds being produced. Applications include class room instruction, toys and alarm systems.

- Power Supply : 9VDC @ 45mA max.
- Unit Dimensions : 2.14" x 1.19" x 0.6"
(plus speaker : 56.6mm x 30.2mm x 15mm)
- Recommended Housing : FB12



FK233

FIRE SIREN

PRODUCT DESCRIPTION

Our most popular and practical small kit, the FK233 is a great favorite of boys of all ages. Several electronic functions such as sound generation, push button control of sound rise and fall control are quickly realized in this economical project. The kit comes complete with 8 Ohm 0.25W speaker and alarm systems.

- Power Supply : 9VDC @ 20mA max.
- Unit Dimensions : 1.11" x 1.28" x 0.6"
(plus speaker : 28.2mm x 32.5mm x 15mm)
- Recommended Housing : FB03,FB17



FK234

POLICE SIREN

PRODUCT DESCRIPTION

The FK234 is another in the series of emergency vehicle sounders, suitable for class room practical soldering sessions and examination of transistors in simple tone generation circuits. The output sound, through the supplied 8 Ohm 0.25W speaker, is similar to the police vehicles siren in many countries, so the FK 234 would be an ideal sound effect unit for stage, models and toys.

- Power Supply : 9-12VDC @ 30-35mA max.
- Unit Dimensions: 1.22" x 2.01" x 0.6"
(plus speaker : 31mm x 50.8mm x 15mm)
- Recommended Housing : FB17



FK235

TRAIN WHISTLE SOUND

PRODUCT DESCRIPTION

This sound generator circuit combines transistor tone generation and the function of the industry standard LM555 general purpose timing chip to increase the "white noise" component present in train whistles. The FK235 is supplied with an 8 Ohm 0.25W speaker and offers a realistic train-whistle sound, making it an ideal sound unit for model train sets.

- Power Supply : 9VDC @ 55mA max.
- Unit Dimensions : 1.98" x 1.05" x 0.6" (plus speaker : 50mm x 26mm x 15mm)
- Recommended Housing : FB17



FK238

TWO-TONE DOORBELL

PRODUCT DESCRIPTION

The digitized Ding-Dong sound of the FK238 is held permanently in a masked Read Only Memory (ROM) on a microchip carrier inserted into the project's PCB. A transistor output amplifier drives the supplied 8 Ohm 0.25W for a demanding sound suitable for household and shop applications.

- Power Supply : 3VDC @ 60mA max. @ 3VDC
- Dimensions : 0.99" x 1.06" x 0.6" (plus speaker: 25.4mm x 27mm x 15mm)
- Recommended Housing : FB17



FK240

DOORBELL SOUND

PRODUCT DESCRIPTION

This economical two-transistor project can be put together by a novice in less than 15 minutes. Ideal as a class-room exercise in soldering and basic transistor function the FK240 comes complete with a 8 Ohm 0.25W speaker. The project can be practically applied in domestic and retail applications.

- Power Supply : 6-12VDC @ 105mA max.
- Dimensions : 1.02" x 1.06" x 0.6" (plus speaker : 26mm x 27mm x 15mm)
- Recommended Housing : FB17



FK243

MINI ORGAN 13 TONE

PRODUCT DESCRIPTION

This mini organ circuit generates 13 different tones by selecting between conductive electrodes with a stylus or conductive wand. A supplied, 8 Ohm 0.25W speaker acts as an efficient audio output device. The tone setting resistors are readily accessible for class room study of the effect of component values on the frequency of an oscillator. The FK243 utilizes the versatility of the LM555 timer as both tone generator and audio driver.

- Power Supply : 9VDC @ 75mA max. (operational), 5mA (stand by)
- Dimensions : 3.72" x 1.04" x 0.6" (plus speaker : 94.5mm x 26.4mm x 15mm)
- Recommended Housing : FB04



FK244

MINI 25 TONE ORGAN

PRODUCT DESCRIPTION

The FK244 mini organ circuit is an ideal classroom project for basic electronics, component values and frequency and musical scales. Tone selection is by stylus or conductive wand and conductive points on the PCB. An LM555 creates the 25 basic tones and a transistor oscillator provides a vibrato effect. All of the frequency-determining components are accessible for substitution in sound experiments and to achieve additional tone qualities. The kit is supplied with an 8 Ohm 0.25W speaker.

- Power Supply: 9V @ 83mA(operational) 9mA (stand by)
- Output : 25 notes with vibrato
- Dimensions : 2.14" x 1.24" x 0.6" (motherboard), 3.72" x 0.92" x 0.6" (keyboard)
- Recommended Housing : FB04



FK245

LIGHT ACTIVATED ALARM

PRODUCT DESCRIPTION

This is a low cost and practical demonstration of photo electronics. This circuit will sound an alarm through its included 8 Ohm 0.25W speaker when the on-board photo-transistor is exposed to light. Light sensitivity is adjusted by a trimmer potentiometer.

- Power Supply : 12VDC @ 22mA max.
- Dimensions : 2.38" x 1.24" x 0.6"
(plus speaker : 60.5mm x 31.5mm x 15mm)
- Recommended Housing : FB03



FK246

SPACE GUN SOUNDER

PRODUCT DESCRIPTION

This low cost easy-build project results in a futuristic sounding noise generator suitable for sound effects in movies, stage shows, toys and atmospherics at "Star Wars" parties. A speaker is supplied with the kit.

- Power Supply : 9VDC @ 45mA max.
- Dimensions : 1.98" x 1.19" x 0.6" (plus speaker : 50.3mm x 30.2mm x 15mm)
- Recommended Housing : FB17



FK248

AUDIBLE CAR TURNING ALARM

PRODUCT DESCRIPTION

In crowded traffic situations and where allowed by law, the FK248 is fitted to a car's turning indicator circuit and is designed to alert nearby pedestrians and cyclists, of the turning intention of vehicle drivers. This offers an additional safety feature to vehicle's flashing turning lights.

- Power Supply : 6-12VDC
- Dimensions : 1.79" x 1.27" x 0.6" (45.5mm x 32.3mm x 15mm)
- Recommended Housing : FB01



FK249

VEHICLE REVERSING ALARM

PRODUCT DESCRIPTION

The FK 249 audible alarm is fitted to the reversing light circuit of a vehicle. Pedestrians and cyclists in the vicinity are alerted to the fact that a vehicle is reversing or intending to do so.

- Power Supply : 12VDC
- Dimensions : 2.18" x 1.27" (55.4mm x 32.3mm)
- Recommended Housing : FB01



FK253

ELECTRIC PIEZO SIREN 230VAC

PRODUCT DESCRIPTION

This is a mains powered piezo siren suitable for permanent installation in situations where only 220VAC is available. The FK253 features transformer-less design and it is recommended only experienced installers be responsible for installation. This unit is designed to be a warning device for alarm-systems in industry and domestic applications.

- Power Supply : 220-240VAC
- Output sound level : 100dB/m.
- Dimensions : 2.75" x 1.79"
- Recommended Housing : FB17



FK254

DUCK VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK257

PARROT VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK258

HEN VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK259

KID LAUGHTER IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK260

WHISTLE VOICE IC DIGITAL

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable)
(75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK270

CRICKET CHIRP SOUNDER

PRODUCT DESCRIPTION

To some cultures the presence of a cricket is said to be good luck. To others it is an annoying, intrusive insect. The FK270 utilizes op-amps to mimic the sound of a cricket. Hobbyists and students will see immediately that the same circuit can be used to play an amusing joke. Add a photo transistor that when the "cricket" is exposed to light the sound stops. Then push the cricket under a bed or other furniture and watch the fun when people start looking for the source of voice.

- Power Supply : 9VDC @ 30mA max.
- Tone : Trimmer adjustable
- Dimensions : 2.25" x 1.57" x 1.2"
(excluding speaker : 57mm x 40mm x 30.5mm)
- Recommended Housing : FB03



FK272

3 TONE SPACE GUN SOUNDER

PRODUCT DESCRIPTION

This space-gun effects generator features 3 switch selectable tones that evoke the sounds of weapons in sci-fi movies. This circuit comes with an 8 Ohm 0.25W speaker and is ideal for use in model weapon construction, movie sound effects or wearable electronics in Star Wars costumes.

- Power Supply : 9V @ 30mA max.
- Dimensions : 2.61" x 1.36" x 0.6"
(excluding speaker : 66.3mm x 34.5mm x 15mm)
- Recommended Housing : FB03



FK274

13 TONE MINI ORGAN

PRODUCT DESCRIPTION

This mini organ circuit can generate 13 different notes which are selected by pressing any of the tact switches which are set out as a keyboard. The FK274 has the same operational characteristics and LM555 circuit as the FK243. The tact switches make the FK274 easier to manage in music sessions, experiments.

- Power Supply : 9VDC @ 75mA max.(working), 5mA (stand by)
- Speaker : 8 Ohms 0.25Watt (supplied)
- Dimensions : 4.18" x 1.2" x 0.6"
(excluding speaker : 106mm x 31mm x 15mm)
- Recommended Housing : FB05



FK275

THREE TRAIN SOUNDS IC DIGITAL

PRODUCT DESCRIPTION

This series of boards features sounds that are recorded or synthesized and then factory mask programmed onto Read Only Memory (ROM) ICs for permanence and repeatability.

- Power Supply : 3VDC or 12VDC (jumper selectable)
(75mA max. @3VDC)
- Board Dimensions : 1.21" x 1.77"
- Recommended Housing : FB17



FK276

OWL VOICE IC DIGITAL

PRODUCT DESCRIPTION

It is the circuit of sound effects recorded in the IC chip - a sort of sound generation circuit by means of digital memory (digital signal) and programmed in an IC. All the process was built unchangeably by an IC manufacturer. Such IC is so-called "OTP" (One Time Programmable).

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB17



FK278

6 ALARM SOUND SIREN

PRODUCT DESCRIPTION

The six digitized alarm sounds of the FK278 are held permanently in a masked Read Only Memory (ROM) in a decoder IC. A transistor output amplifier drives the supplied 8 Ohm 0.25W speaker for a demanding sound suitable for toys and novelty applications.

- Power Supply : 3VDC @ 105mA max.
- Speaker : 8 Ohm 0.25 (supplied)
- Dimensions : 1.31" x 1.00" x 0.6"
(excluding speaker : 30.7mm x 45mm x 16mm)
- Recommended Housing : FB03



FK280

SIREN 6 SOUNDS AND 6 SWITCH

PRODUCT DESCRIPTION

This circuit is created the small siren sound which contain 6 differences sound. User can be selected the type of siren sound as satisfied. It is suitable for toy or other noiselessly siren circuit.

- Power supply : 3-6VDC.
- Electric current consumption : 5mA. (standby), 75mA. (working) @ 3VDC.
- There are 6 siren sounds available.
- The siren tone can be adjusted.
- Recommended Housing : FB28



FK281

SUPER SIREN 6 SOUNDS AND 6 SWITCH

PRODUCT DESCRIPTION

This circuit is created the small siren sound which contain 6 differences sound. User can be selected the type of siren sound as satisfied. It is suitable for toy, alarm circuit, security or other noiselessly siren circuit.

- Power supply : 12VDC.
- Electric current consumption : 18mA. (standby), 400mA. (working).
- There are 6 siren sounds available.
- The siren tone can be adjusted.
- Recommended Housing : FB03



FK282

MUSIC DOOR (UM66) WITH MAGNATIC SWITCH

PRODUCT DESCRIPTION

An encased magnetic reed switch is held open by a magnet so that when the two are separated, as in the opening of a door, the switch closes and initiates a musical door chime sound. The FK282 not only demonstrates the working of a reed switch it is also ideal for use in shops and domestic situations, to indicate that a visitor or customer has passed through the doorway.

- Power supply : 3VDC.
- Electric current consumption : 110mA. max. (working), 3μA. (stand by)
- Detection : magnatic switch or other switch (NC)
- IC board dimension : 1.45 in x 1.06 in.
- Recommended Housing : FB17



FK283

HOME SWEET HOME SONG

PRODUCT DESCRIPTION

The digitized sound of the FK283 is held permanently in a Read Only Memory (ROM) on a microchip carrier inserted into the IC voice. A transistor output amplifier drives the supplied 8 ohm 0.25W for a demanding sound suitable for household and shop applications.

- Power supply : 3VDC.
- Electric current consumption : 70mA (max.)
- IC board dimension : 0.98 in x 1.13 in
- Recommended Housing : FB17



FK285

IT'S A SMALL WORLD SONG

PRODUCT DESCRIPTION

The digitized sound of the FK285 is held permanently in a Read Only Memory (ROM) on a microchip carrier inserted into the IC voice. A transistor output amplifier drives the supplied 8 ohm 0.25W for a demanding sound suitable for household and shop applications.

- Power supply : 1.5-3VDC.
- Electric current consumption : 40mA (max.) @ 1.5VDC (LED is lighted off).
- Electric current consumption : 70mA (max.) @ 3VDC (LED is lighted on).
- IC board dimension : 0.98 in x 1.13 in.
- Recommended Housing : FB17



FK286

HAPPY BIRTHDAY TO YOU SONG

PRODUCT DESCRIPTION

The digitized sound of the FK286 is held permanently in a Read Only Memory (ROM) on a microchip carrier inserted into the IC voice. A transistor output amplifier drives the supplied 8 ohm 0.25W for a demanding sound suitable for household and shop applications.

- Power supply : 1.5-3VDC.
- Electric current consumption : 40mA (max.) @ 1.5VDC (LED is lighted off).
- Electric current consumption : 70mA (max.) @ 3VDC (LED is lighted on).
- IC board dimension : 0.98 in x 1.13 in.
- Recommended Housing : FB17



FK287

JINGLE BELL SONG

PRODUCT DESCRIPTION

The digitized sound of the FK287 is held permanently in a Read Only Memory (ROM) on a microchip carrier inserted into the IC voice. A transistor output amplifier drives the supplied 8 ohm 0.25W for a demanding sound suitable for household and shop applications.

- Power supply : 3VDC.
- Electric current consumption : 70mA (max.)
- Recommended housing : FB17
- PCB dimensions : 0.98" X 1.13"
- Recommended Housing : FB17



FK288

4 MELODY DOOR BELL

PRODUCT DESCRIPTION

The melody door bell circuit is the melody generator which is held permanently in a Read Only Memory (ROM) on a microchip carrier inserted into the IC voice.

- Power supply : 3-5VDC.
- Electric current consumption : 100mA (max.)
- There are 4 melody for selecting (Jingle bell, It is a small world, Cuckoo and For alice).
- Can be selected the operation by operating only one melody or work all 4 melody in order.
- It has the sensor connector to receive control signals from external sensor (FK515, MXA112 and MXA115 etc.).
- Recommended housing : FB03 or FB28
- PCB dimensions : 1.26" X 1.38"



FK289

LIGHT AND SOUND RAILROAD CROSSING SIGN

PRODUCT DESCRIPTION

FK289 works similar to a flashing warning light at railway crossing. While the circuit is running, it will sound a warning along with a flashing light alternately. Which has a beep to choose from 8 styles. This warning flasher may be used in modelling, decorative lighting and sound, etc.

- Power supply : 4.5-6VDC.
- Electric current consumption : 120mA (max.)
- Choose from 8 alarm sounds.
- Can be selected the operation by operating only one melody.
- PCB dimension : 1.91 in x 4.83 in.
- Recommended Housing : FB04 FB05

Series 3

Telephone & Communication Equipment

Many of the Future Kit telephone add-on devices and accessories are not available from regular telephone equipment vendors. Those that do stock them often ask an unreasonable premium for them. Hobbyists who adapt these easily constructed projects will increase the amenity of their phone system and save money at the same time. Students building these projects will be introduced to the fundamentals of the telephone system as well as deriving a practical and useful outcome.

These units are available also as pre-assemblies under the FA prefix





FK301

TELEPHONE RECORDING ADAPTER

PRODUCT DESCRIPTION

The FK301 may be set to automatically record telephone conversations when a handset is picked up. It may also find application in PABX situations.

- Power Supply : 12VDC @ 300mA max. (15mA stand-by)
- PCB Dimensions : 2.22" x 1.47" x 0.6"
(56.4mm x 37.4mm x 15mm)
- Recommended Housing : FB03



FK302

TWO-WAY TELEPHONE AMPLIFIER

PRODUCT DESCRIPTION

It will also provide a low line-load connection where telephone call interception is required. In situations where telephone signal is poor the FK302 two-way amplifier boosts the sound level so that parallel hand sets can be accommodated. An 80ohm 0.25W speaker is included in the kit.

- Power Supply : 4.5-9VDC (160mA max. @ 9VDC)
- Signal Level Adjustment : Trimmer potentiometer.
- PCB Dimensions : 2.21" x 1.37" x 0.6"
(56.13mm x 37.8mm x 15mm)
- Recommended Housing : FB03



FK304

TELEPHONE EXTENSION RINGER

PRODUCT DESCRIPTION

This low cost add-on to the telephone system allows for multiple ringing extensions without loading the line. The FK304 is designed for use in the shops, home and the office.

- Power Supply : 6-9VDC (36mA max. @ 9VDC)
- Tone Level Adjustment : Trimmer Potentiometer.
- PCB Dimensions : 2.13" x 1.87" x 0.6"
(54mm x 1.87mm x 15mm)
- Recommended Housing : FB04



FK305

HIGH POWERED TELEPHONE RINGING 10W

PRODUCT DESCRIPTION

The FK305 is a high power telephone ringing extension circuit for use in areas of high ambient noise and to drive multiple speakers. Designed for factories, warehouses and shops. The 10Watt output will ensure that calls are answered.

- Power Supply : 12VDC @ 240mA max.
- Output Level Adjustment : Trimmer Potentiometer.
- PCB Dimensions : 2.10" x 1.82" x 1.00"
(53.3mm x 46.23mm x 25.4mm)
- Recommended Housing : FB04



FK306

TELEPHONE INTERCEPTION UNIT

PRODUCT DESCRIPTION

This telephone interception circuit features a simple 3V amplifier that provides a clear signal through the supplied earphone bud. By adopting a high impedance input design that FK306 presents minimal loading on the telephone line.

- Power Supply : 12VDC @ 300mA max. (15mA stand-by)
- PCB Dimensions : 2.22" x 1.47" x 0.6"
(56.4mm x 37.4mm x 15mm)
- Recommended Housing : FB03



FK307

BUSY TELEPHONE INDICATOR

PRODUCT DESCRIPTION

It's annoying to have your telephone call interrupted by someone picking up an extension phone and it can be embarrassing to accidentally pick up a line that is engaged. The low cost easy-to-build FK307 circuit has a bright LED that shows clearly when a line is picked up.

- Power Supply : 3VDC @ 10mA.
- PCB Dimensions : 1.51" x 0.91" x 0.6"
(38.35mm x 23.11mm x 15mm)
- Recommended Housing : FB17



FK308

TELEPHONE MUSIC ON-HOLD INTERFACE

PRODUCT DESCRIPTION

This FK308 is designed to create a port in the telephone circuit to insert music or advertising messages when the caller is put on hold. The circuit requires no additional power. However, its efficiency ensures practically no load on the line. FK308 is an economical easily-built accessory for home, shop or office.

- Power Supply : Not required.
- PCB Dimensions : 1.88" x 1.63" x 0.6" (45.7mm x 41.4mm x 15mm)
- Recommended Housing : FB01



FK310

MINI TELEPHONE CIRCUIT

PRODUCT DESCRIPTION

This tiny circuit telephone receiver circuit is easy to build and is an excellent classroom project to learn about the fundamentals of the operation of a telephone handset. The FK310 is very efficient and needs no external power supply. The kit comes complete with a miniature earphone bud and on-board microphone.

- Power Supply : Not required.
- PCB Dimensions : 2.59" x 1.72" x 0.6" (65.8mm x 43.7mm x 15mm)
- Recommended Housing : FB03



FK313

DUAL STATION INTERCOM

PRODUCT DESCRIPTION

Here is a simple 2 station intercom for domestic and office use. It is supplied with two speakers and hook-up wire for room to room communication.

- Power supply : 6 to 12VDC.
- Electric current consumption :
 - 28mA max.(stand by) @ 12VDC.
 - 160mA max.(working) @ 12VDC.
- Adjustable sound level by trimmer potentiometer.
- Select station by push switch.
- IC-board dimension : 2.46 in x 1.99 in.
- Recommended Housing : FB04



FK318

TELEPHONE IN-USE INDICATOR

PRODUCT DESCRIPTION

Minimize the accidental pick-up of your calls with this two LED line in-use indicator. The tiny, low cost, line-powered, easy-to-build FK318 circuit displays a green signal if the line is clear and a bright red LED to indicate when a line is picked up.

- Power Supply : Not required.
- PCB Dimensions : 0.77" x 0.81" x 0.6"
- Display : 1 Red LED and 1 Green LED 3 mm.
- Recommended Housing : FB11



FK319

TELEPHONE PRIVACY PROTECTION

PRODUCT DESCRIPTION

This circuit will find application in situations where several handsets share the same phone line. The FK319 is a line-powered priority switch so that, when one handset is in use, the other phones are disconnected from the line. Each circuit module is a two line unit and may be used in tandem with other FK319 to accommodate additional phones. Connections to the other lines are restored when the first phone handset is replaced.

- Power supply : 3VDC
- Electric current consumption : 90mA (max.)
- IC board dimension : 1.22 x 1.40 inch
- Recommended Housing : FB01



FK320

TELEPHONE RF TRANSMITTER

PRODUCT DESCRIPTION

Designed to wirelessly monitor telephone conversations, the FK320 is a 90MHz FM transmitter which allows telephone calls to be monitored over a standard FM radio receiver.

- Power Supply : Line powered. (no additional power required)
- Transmit Frequency : Approx. 90 MHz (adj.)
- PCB Dimensions : 1.92" x 1.09" x 0.6" (48.8mm x 27.7mm x 15mm)
- Recommended Housing : FB15



FK321

PHONE RING VISUAL ALERT

PRODUCT DESCRIPTION

This mains powered unit can drive up to 300Watts of lights in time with the incoming ringing signal. Ideal for noisy workshops, factories or where hearing impaired people require extra warning of incoming telephone calls

- Power Supply : 220VAC
- Operating Voltage : 220-240VAC
- Load : 300W @ 220VAC
- PCB Dimensions : 2.25" x 1.90" x 0.6" (57.2mm x 48.3mm x 15mm)
- Recommended Housing : FB04



FK323

TELEPHONE CALL PROTECTOR CIRCUIT

PRODUCT DESCRIPTION

To prevent eavesdropping on your calls this circuit generates an annoying tone on other handsets connected in parallel with your hand-piece. An on-board LED indicates if an unauthorized tap is being made. (PARALLEL EXTENTION)

- Power Supply : Line Powered. (no additional power required)
- PCB Dimensions : 1.90" x 2.33" x 0.6"(48.3mm x 59.2mm x 15mm)
- Recommended Housing : FB03



FK324

TELEPHONE EXPERIMENTAL BOARD

PRODUCT DESCRIPTION

This circuit is laid out on a large and partitioned PCB making it ideal as a training board or a class aid in understanding the building blocks which make up the telephone handset. The dialing mode may be set to pulse or DTMF to suit either the telephone system to which it may be connected or to demonstrate the older decadic dialing system.

- Power Supply : Line Powered. (no additional power required)
- PCB Dimensions : 4.91" x 4.05" x 0.7" (12.47mm x 102.8mm x 15mm)
- Recommended Housing : FB09



FK325

RINGING SIGNAL LIGHT 5 LED

PRODUCT DESCRIPTION

This ringing signal light circuit provides a visual indication of an incoming call. It is suitable for areas where silence is mandated such as, hospitals, libraries and laboratories. It will also find application in noisy factory areas and with hearing impaired people.

- Power Supply : Line Powered. (no additional power required)
- Display : 5 Super Bright LEDs.
- PCB Dimensions : 1.38" x 2.13" x 0.6" (35mm x 54.1mm x 15mm)
- Recommended Housing : FB01



FK326

DUAL STATION INTERCOM AND DOOR BELL

PRODUCT DESCRIPTION

It will also provide a low line-load connection where telephone call interception is required. In situations where telephone signal is poor the FK302 two-way amplifier boosts the sound level so that parallel hand sets can be accommodated. An 80hm 0.25W speaker is included in the kit.

- Power Supply : 4.5-9VDC (160mA max. @ 9VDC)
- Signal Level Adjustment : Trimmer potentiometer.
- PCB Dimensions : 2.21" x 1.37" x 0.6" (56.13mm x 37.8mm x 15mm)
- Recommended Housing : FB03



FK327

DUAL STATION INTERCOM

PRODUCT DESCRIPTION

This is a very simple and low cost circuit and comes complete with two 8 Ohm 0.25W speakers. Essentially, it is a single amplifier set up to act as a transmitter and a receiver through the use of a slide switch on the amplifier board. The slide switch may be set to speak or listen. The FK327 is an ideal class room project and the outcome is a useful device for inter-room communication or child monitoring.

- Power Supply : 4.5-6VDC @ 8mA max. @ 4.5VDC (stand by), 50mA - max @ 4.5VDC (working)
- Function Select : Slide Switch.
- PCB Dimensions : 1.95" x 1.31" x 0.6" (49.53mm x 34.29mm x 15mm)
- Recommended Housing : FB03

Series 4

AC Controller By Light, Sound, Remote

The FK4XX Series is a rich source of projects for classroom construction and are ideal demonstrations of applied sensors of several types. Most of the FK4XX series embody three of the basic elements of electronic control i.e.

Input, Process and Output, in broad range of economical, easy-to-build circuits. An additional benefit of this series is that these proven, functional control units are easily adapted to industrial, security and domestic systems.

These units are available also as pre-assemblies under the FA prefix.





FK401

LIGHT ACTIVATED SWITCH (Light ON)

PRODUCT DESCRIPTION

The FK401 is an excellent project for class demonstration of the operation of a photo transistor. Working on the principle of ambient light falling on the light sensitive junction of a photo transistor operating a relay through an amplifier, the FK401 embodies three basic elements of electronics in an economical, easy-to-build circuit and the outcome is practical and tangible.

- Power Supply : 12VDC @ 46mA max.
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC.
- PCB Dimensions : 1.29" x 2.36" x 0.8" (32.8mm x 60mm x 20mm).
- Recommended Housing : FB03



FK402

LIGHT OPERATED REMOTE SWITCH (LIGHT ON)

PRODUCT DESCRIPTION

This remote control switch has been designed for efficiency, ease of construction and economy. The FK402 detects the presence of light using a photo transistor and uses that signal to operate an output relay to carry heavy loads. An LED monitor indicates the relay state.

- Power Supply : 12VDC @ 42mA max.
- Sensitivity Adj. : Trimmer Potentiometer
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 1.54" x 2.85" x 0.8" (39.11mm x 72.39mm x 20mm)
- Recommended Housing : FB03



FK403

NIGHT ACTIVATED SWITCH (LIGHT OFF)

PRODUCT DESCRIPTION

When night falls the FK403 can switch on your outdoor lighting for safety or save you money by turning off your lights at dawn. This project is a low cost, easy to build and practical application of photo electric control in the opposite logic demonstrated in the FK401 and FK402.

- Power Supply : 12VDC @ 45mA max.
- Sensitivity Adj. : Trimmer Potentiometer
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.30" x 1.30" x 0.8" (58.42mm x 33mm x 20mm)
- Recommended Housing : FB03



FK404

NIGHT SWITCH 230V POWERED

PRODUCT DESCRIPTION

Where low voltage supply is impractical this circuit uses a transformer-less circuit to supply power to the light detection circuit. The FK403 turns on safety, advertising, and garden lighting or security equipment at nightfall and off again at dawn. This unit is easily installed by qualified electrical personnel and uses a minute amount of mains electricity.

- Power Supply : 220-240VAC
- Sensitivity Adj. : Trimmer Potentiometer.
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.5" x 1.72" x 0.8" (63.5mm x 1.43.7mm x 20mm)
- Recommended Housing : FB03



FK405

TOUCH-CONTROL SWITCH

PRODUCT DESCRIPTION

Two conductive discs complete a resistive circuit when bridged by the touch of a finger. This signal is amplified and used to switch an output relay. The first touch turns the circuit ON and the second touch turns it OFF. This is a practical demonstration of a step-type latching.

- Power Supply : 12VDC @ 45mA max.
- Maximum Contact Load : 10A @ 125VAC, and 5A @ 220VAC
- PCB Dimensions : 3.17" x 1.56" x 0.8" (80.5mm x 39.6mm x 20mm)
- Recommended Housing : FB04



FK406

TIMER SWITCH 0-3 HRS

PRODUCT DESCRIPTION

This timer switch device will time-control loads of up to 500 Watts at 220VAC. The operation period from 0 to 3 hours is adjusted by both a jumper selector and an on-board potentiometer.

- Power Supply : 12VDC @ 45mA max.
- Time Adjust : On-board potentiometer
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.95" x 1.74" x 0.8" (74.9mm x 44.2mm x 20mm)
- Recommended Housing : FB10



FK407

TIMER SWITCH SELECTABLE 0-10 HRS.

PRODUCT DESCRIPTION

The FK407 timer switch circuit uses a switched-range counter to achieve long time intervals for controlling appliances and processes in periods from 15 minutes to 10 hours in 14 ranges.

- Power Supply : 12VDC @ 50mA max.
- Time Adjust : Jumper and Rotary Selector Switch
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.76" x 3.13" x 0.8" (70.1mm x 79.5mm x 20mm)
- Recommended Housing : FB04



FK408

SOUND-ACTIVATED SWITCH WITH TIMER

PRODUCT DESCRIPTION

Just as we can demonstrate light activated switches, the FK408 uses sound as its triggering input. A microphone detects the sound which is amplified to drive a relay. A 0-60 second, adjustable timer can be set to hold the output relay on for a preset time after the sound has stopped. As a class project, students may experiment with various filter designs inserted after the microphone to make the FK408 only operate at specified frequencies.

- Power Supply : 12VDC @ 60mA max.
- Sensitivity and Time Delay
- Adjustment : On-Board Trimmer Potentiometers.
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC.
- PCB Dimensions : 2.49" x 2.15" x 0.8" (63.25mm x 54.61mm x 20mm)
- Recommended Housing : FB10



FK409

SOUND-ACTIVATED SWITCH (ALTERNATE ACTION)

PRODUCT DESCRIPTION

Using the FK409, students can demonstrate a bistable sound operated switch that responds to a voice or hand clap by changing state. Upon detecting the second sound the FK409 changes back to its original state. An on-board potentiometer allows for sensitivity adjustments.

- Power Supply : 12VDC @ 50mA max.
- Sensitivity Adjustment : Trimmer potentiometer.
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.92" x 1.49" x 0.8" (74.17mm x 37.85mm x 20mm)
- Recommended Housing : FB04



FK410

INFRARED REMOTE CONTROL 8 M. SINGLE CHANNEL

PRODUCT DESCRIPTION

This project introduces the concept of using modulation of an Infrared beam to facilitate control by IR under normal ambient lighting conditions. The receiver (RX) is set to accept only signals from its matched transmitter (TX). The switch action of the RX is alternate ON-OFF. Applications include lighting, heating and appliance control.

- Power Supply : TX, 9VDC @ 50mA max RX, 12VDC @ 65mA max
- Control Distance : 25ft. (8meters)
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : (TX) 2.02" x 1.22" x 0.8" (FB17)
(51.3mm x 32.2mm x 20mm)
- (RX) 3.11" x 1.68" x 0.6" (FB10) (79mm x 42.7mm x 15mm)
- Recommended Housing : FB16,FB17



FK411

INFRARED REMOTE CONTROL 16M. SINGLE CHANNEL

PRODUCT DESCRIPTION

50 FEET 1 CH (TX-RX) For applications requiring control over longer distances, the FK411 utilizes two Infrared LEDs in the transmitter (TX) and a specialized module in the Receiver (RX). The modulated beam control link is immune to ambient light fluctuations. The switch action of the RX is alternate ON-OFF. Applications include lighting, heating and appliance control.

- Power Supply : TX, 9VDC @ 70mA max RX, 12VDC @ 65mA max
- Control Distance : 50ft. (16metres)
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC.
- PCB Dimensions : (TX) 2.04" x 1.23" x 0.8" (FB17)
(51.8mm x 31.2mm x 20mm)
- (RX) 3.11" x 1.68" x 0.6" (FB16) (79mm x 42.7mm x 15mm)
- Recommended Housing : FB16,FB17



FK412

INFRARED REMOTE CONTROL 10-15M. TWO CHANNEL

PRODUCT DESCRIPTION

The FK412 infrared remote control set has two modulated control channels for control of two different appliances. Dual IR LEDs in the Transmitter (TX) and a specialized IR module in the Receiver (RX) gives the FK412 additional range. Both channels operate as independent alternate action switches. Applications include lighting, heating and appliance control.

- Power Supply : TX, 9VDC @ 25mA max RX, 2VDC @ 100mA max
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : (TX) 1.59" x 2.73" x 0.6" (FB17) (40.4mm x 69.3mm x 15mm) (RX) 4.03" x 2.10" x 0.8" (FB10) (102.36mm x 53.3mm x 20mm)
- Recommended Housing : FB16,FB17



FK415

LIGHT DIMMER 500W

PRODUCT DESCRIPTION

This simple, compact dimmer/controller utilizes a Triac to control the duty cycle of AC power to incandescent lights, heaters, appliances and small commutated motors up to 500Watts. As a student project the FK415 is an economical introduction to the concepts of phase angle control.

- Power Supply : 220-240VAC max.
- Load : 500 watts @ 220VAC max.
- Control Adjustment : On-board potentiometer
- PCB Dimensions : 1.01" x 1.46" x 0.9" (25.5mm x 37.1mm x 23mm)
- Recommended Housing : FB03,FB27



FK416

LIGHT DIMMER 1,000W

PRODUCT DESCRIPTION

By adopting a higher power Triac the FK 416 can control the duty cycle of AC power to incandescent lights, heaters, appliances and small commutated motors up to 1000Watts. As a student project the FK416 is an economical introduction to the concepts of phase angle control.

- Power Supply : 220-240VAC max.
- Load : 1000 watts @ 220VAC max.
- Control Adjustment : On-board potentiometer
- PCB Dimensions : 1.01" x 1.46" x 0.9" (25.5mm x 37.1mm x 23mm)
- Recommended Housing : FB03,FB27



FK418

LIGHT DIMMER 2,500W

PRODUCT DESCRIPTION

The maximum load capability of the FK 418 is 2500 Watts which makes this Triac controller suitable for OEM installation in a wide range AC control applications including incandescent lights, heaters and cooking appliances.

- Power Supply : 220-240VAC max.
- Load : 2500 watts @ 220VAC max.
- Control Adjustment : On-board potentiometer
- PCB Dimensions : 3.29" x 2.73" x 2.17" (83.6mm x 69.3mm x 55mm)
- Recommended Housing : FB10



FK420

AC MOTOR CONTROL FOR ELECTRIC FAN

PRODUCT DESCRIPTION

This AC, Triac controller is specifically designed for fan speed control loads up to 1000Watts. The FK420 is compact, economical and easy to assemble.

- Power Supply : 220-240VAC
- Load : 1000 watts @ 220VAC max.
- Control Adjustment : On-board potentiometer
- PCB Dimensions : 1.01" x 1.82" x 0.9" (25.5mm x 46.2mm x 23mm)
- Recommended Housing : FB20



FK422

ELECTRONIC CODE SWITCH

PRODUCT DESCRIPTION

Keyless entry is a very secure way of preventing unauthorized access to private areas or storage units or for stopping unqualified personnel using reserved electrical equipment. The FK422 features a keyboard-entered, 4-digit numeric code sequence which is programmable up to 3000 combinations.

- Power Supply : 12VDC @ 45mA max. (output on)
- Maximum Contact Load : 10A @ 125VAC and 5A @ 220VAC
- PCB Dimensions : 2.38" x 2.77" x 0.8" (71.2mm x 70.4mm x 20mm)
- Recommended Housing : FB16



FK423

SOLID STATE RELAY (DRAFT)

PRODUCT DESCRIPTION

Solid state relays are often used instead of electromechanical units in continuously switched AC applications where contact burn out is a problem. By using a photo-diac as the isolation element the low voltage input of the FK423 is completely isolated from the AC mains side. Additionally, the mains zero point at which the output triac is switched on makes the FK423 ideal for switching lighting and high inrush loads.

- Input Voltage : 5-15VDC
- Resistor-limited to 5mA.
- Load : 1000 watts @ 220VAC
- PCB Dimensions : 2.04" x 1.46" x 1.00" (51.8mm x 37.1mm x 25.4mm)
- Recommended Housing : FB03



FK425

WATER LEVEL PUMP CONTROL

PRODUCT DESCRIPTION

The FK425 combines a two level water depth detection circuit with a power relay to control pumps or solenoids in water tank, filling or draining situations. In a typical configuration, a low level sensor detects when to start a pump to refill the vessel. When the water reaches the high sensor the pumps is stopped.

- Power Supply : 12VDC @ 45 mA max
- Load : 1000 watts @ 220VAC
- PCB Dimensions : 2.42" x 1.62" x 0.8" (61.46mm x 41.1mm x 20mm)
- Recommended Housing : FB03



FK432

RECYCLING TIMER 0-180 MIN

PRODUCT DESCRIPTION

The ON and the OFF times of the FK 432 recycling timer can be independently set over the range 1 to 180minutes. The timers once set will each time out to their preset intervals and repeat the cycle. Applications include industrial process control, public display lighting, stairwell lighting and dark-room timing.

- Power Supply : 12VDC @ 45mA max.
- Relay Contact Load : 10A @ 110VAC, 5A @ 230VAC
- Timer Ranges : from 1 to 180 minutes
- PCB Dimensions : 3.01" x 1.87" x 0.8" (76.5mm x 47.5mm x 20mm)
- Recommended Housing : FB04



FK433

MULTI-PURPOSE TIMER SWITCH 0-180 MIN

PRODUCT DESCRIPTION

The FK433 may be applied to automatically turn a device or appliance on after a period, or turn off, as required. The timer may be started by an on-board push button or by externally connected switches. A stop switch is also provided to over-ride the timing cycle.

- Power Supply : 12VDC @ 45mA max.
- Relay Contact Load : 10A @ 110VAC, 5A @ 230VAC
- Switch Functions : On-board START and STOP switches.
- Time range : Fully adjustable from 2 seconds to 180 minutes
- PCB Dimensions : 3.69" x 1.81" x 0.8" (93.73mm x 46mm x 20mm)
- Recommended Housing : FB10



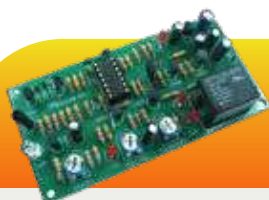
FK436

UHF REMOTE CONTROL 1 CH

PRODUCT DESCRIPTION

This circuit is a control circuit which uses UHF frequency as carrier for control receiver circuit. The operation is divided into two functions, causing suitable for multipurpose.

- power supply : 9VDC. (TX), 12VDC. (RX)
- consumption : 21mA (TX), 58mA (RX)
- frequency : approx. 400MHz
- distance TX/RX : 20m (65') (clearing)
- relay output : 220VAC./5A max.
- PCB dimensions : 1.93 x 1.24 inches. (TX) 3.35 x 1.84 inches. (RX)
- Recommended Housing : FB01(TX) and FB17(RX)



FK437

PROXIMITY SENSOR SWITCH

PRODUCT DESCRIPTION

This is a short-range detector that detects an object in its range by picking a reflected InfraRed signal generated by the on-board IR transmitter. An adjustable 0-10 second timer adds functionality by maintaining a contact for external controls. The same circuit may be used with photo interrupters and mark-sense reflective detectors in materials handling applications.

- Power Supply : 12V @ 100mA
- Detection Range : 5-30cm
- Time Delay : 0-10sec.
- Relay Contact Load : 10A @ 110VAC, 5A @ 230VAC
- PCB Dimensions : 3.84" x 2.01" x 0.8" (97.5mm 51mm x 20mm)
- Recommended Housing : FB04



FK438

WATER LEVEL PUMP CONTROL WITH ALARM

PRODUCT DESCRIPTION

This is a warning and water pump level control circuit for checking water level and control the water pump automatically. Besides it has a alarm sound when the water is full or lose. It can be used for application such as a small water pump, an alarm sound of water level, etc

- Power Supply : 12VDC
- Consumption : 150mA max. (working), 11mA max. (standby).
- Can be set the operation of relay and alarm sound when the water in tank is full or lose.
- Loading : 1A.
- PCB Dimensions : 2.64" x 1.87"
- Recommended Housing : FB03



FK439

ENERGY SAVING LED LAMP (21 LED)

PRODUCT DESCRIPTION

This is a energy-saving LED lamp. It is the same as a flashlight. A good thing of this circuit is selecting two power supply as 12VDC or 220VAC. It can be used for application such as a small lamp, a lamp of emergency light, etc.

- Power Supply : 12VDC or 220-240VAC (select by jumper).
- Consumption : 155mA max. @ 12VDC
- Display : 21 LEDs
- PCB Dimensions : 3.27" x 2.27"
- Recommended Housing : FB17



FK440

SINGLE CHANNEL REMOTE INFRARED CONTROL

PRODUCT DESCRIPTION

This infrared remote control is controlling the electric equipment with infrared remote control. It can be used for application such as lamp, fan, etc.

- Power Supply : 12VDC (RX) and 3VDC (TX)
- Consumption : max. 42mA. (RX)
- Consumption of standby : 9mA max. (RX)
- Can be set the button of transmitter by yourself.
- Can be set the operation of relay to be push-on - push-off switch or push switch. Loading : 1A.
- PCB Dimensions : 1.75" x 2.41"
- Recommended Housing : FB04



FK441

SINGLE CHANNEL INFRARED REMOTE CONTROLLED RECEIVER

PRODUCT DESCRIPTION

This infrared remote control is controlling the electric equipment with infrared remote control. It can be used for application such as lamp, fan, etc.

- Power Supply : 12VDC
- Consumption : 42mA max.
- Consumption of standby : 9mA. max.
- Loading : 1A.
- PCB Dimensions : 1.75" x 2.41"
- Recommended Housing : FB04



FK442

FIVE CHANNEL REMOTE INFRARED CONTROL

PRODUCT DESCRIPTION

This infrared remote control is controlling the electric equipment with infrared remote control. It can be used for application such as lamp, fan, etc.

- Power Supply : 12VDC (RX) and 3VDC (TX)
- Consumption : 190mA max. (RX)
- Consumption of standby : 9mA max. (RX)
- Can be set the button of transmitter by yourself.
- Can be set the operation of relay to be push-on push-off switch or push switch.
- Loading : 1A. per channel
- PCB dimensions : 3.66 x 2.88 in.
- Recommended Housing : FB05



FK443

FIVE CHANNEL INFRARED REMOTE CONTROLLED RECEIVER

PRODUCT DESCRIPTION

This infrared remote control is controlling the electric equipment with infrared remote control. It can be used for application such as lamp, fan, etc.

- Power Supply : 12VDC (RX)
- Consumption : 190mA max. (RX)
- Consumption of standby : 9mA max. (RX)
- Loading : 1A. per channel
- PCB Dimensions : 3.66" x 2.88"
- Recommended Housing : FB05



FK444

DIGITAL MULTIFUNCTION TIMER SWITCH 1 SEC - 99 HOURS

PRODUCT DESCRIPTION

This timer switch circuit is used to control electric equipment with timer circuit. It can be used for application such as lamp, fan and sporting events.

- Power supply : 12VDC
- Consumption : max. 90mA.
- Time setting range : 1 second - 99 hours.
- Adjustable pattern range : timer on, timer off, alternative on-off timer and automatic timer on-off.
- Loading : 1A. max.
- Recommended Housing : FB04



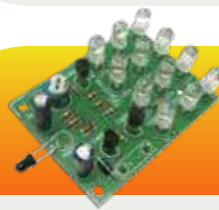
FK445

3-FUNCTIONS VOICE ACTIVATED SWITCH

PRODUCT DESCRIPTION

This Sound Activated Switch circuit can be selected to work into 3 programmable selection; ie, automatic ON-OFF by sound detect, automatic ON by sound and automatic time setting OFF, and automatic ON by sound and repeat time setting OFF by sound. Moreover that, this circuit also use the condenser microphone as the sound receiver. The properties of this microphone is its sensitivity and small in size.

- Power Supply : 12 VDC @ 60 mA max.
- Max Load : 200 Watt.
- Switch Function : 3 Programmable selection; on-off mode, timer mode and trig timer mode.
- PCB Dimensions : 2.10 x 2.70 inches.
- Recommended Housing : FB03



FK446

12-LED NIGHT LIGHT

PRODUCT DESCRIPTION

This LED Night Light circuit is suitable for study or daily usage. Don't cause personnel injury due to operate by 9-12 volts power supply and using 12 LED for lighting. Normally, the working concept is lighting during night time and automatic close when day time.

- Power Supply : 9-12 VDC @ 100 mA max.
- 5 mm LED 12 bulbs.
- Use photo transistor for light detection.
- Sensitivity adjustment : Trimmer Potentiometer
- PCB Dimensions : 1.6 x 2.20 inches.
- Recommended Housing : FB03



FK447

4 FUNCTION DIGITAL TIMER

PRODUCT DESCRIPTION

FK447 is used to control the operation of various electrical appliances. It can be applied to devices such as timer circuit, motor control or small pump control for alternative on-off.

- Power supply : 12VDC 75mA max.
- Time setting range : 1 second - 99 hours.
- Adjustable pattern mode : Mode 1 timer off, Mode 2 timer on, Mode 3 alternative on-off timer and Mode 4 automatic timer on-off.
- Loading : 1A. max. per channel.
- PCB dimensions : 2.11 x 4.43 in.
- Recommended Housing : FB04



FK448

2 LEVEL WATER PUMP CONTROL

PRODUCT DESCRIPTION

This water pump cutting. Is a 2-level automatic water level control circuit which can choose 2 functions : pumping water into To store general household water and pump out water for used in various wastewater treatment ponds.

- Power supply : 12VDC.
- Electric current consumption : 50mA (max).
- Contact load : 1A @ 220VAC.
- 2 levels detect.
- Can be setting the operation of relay : empty or fill the water tank.
- PCB dimensions : 2.61 x 1.32 in.
- Recommended Housing : FB03

Series 5 Precaution Equipment.

The FK5XX Series builds on the experiences and technologies utilized in the FK5XX range. Here we feature an economical range of applied sensors and timing units applied in practical ways to monitor and protect property and premises. This series follows the same principle throughout the Future Kit range of ease of construction and rational design. These units are available also as pre-assemblies under the FA prefix.





FK501

INTRUDED ALARM (DELAY FUNCTION)

PRODUCT DESCRIPTION

The FK501 initiates an alarm signal through an in-built speaker when its photo transistor detects a light level change. To prevent transient light changes giving false alarms an adjustable delay timer has been incorporated.

- Power Supply : 9VDC @ 40mA (working)
- Delay ON Adjustment: Approximately 30-50 seconds.
- PCB Dimensions : 2.80" x 1.55" x 0.6" (71.1mm x 39.4mm x 15mm)
- Recommended Housing : FB03



FK502

VISITOR CHIME

PRODUCT DESCRIPTION

This simple chime may be installed at gateways or doorways. It detects a break in a light beam coming from a source on the opposite side of the walkway. A familiar ding-dong sound through the supplied speaker will both welcome the visitor and announce an arrival.

- Power Supply : 4.5VDC @ 50mA(working)
- Sensitivity of photo-transistor : On-board potentiometer
- PCB Dimensions : 2.73" x 1.56" x 0.8" (69.3mm x 40mm x 20mm)
- Recommended Housing : FB04



FK504

CAR STARTING ALARM

PRODUCT DESCRIPTION

The FK504 detects a sudden change in the vehicle's 12v electrical system, such as that caused by a door opening, turning on the interior light, starting the car or by wire tampering. Unless disabled by using a secret switch within 10 seconds of entry, the FK504 will initiate an alarm signal through the car's horn circuit or other warning device.

- Power Supply : 12VDC @ 50mA (working)
- Power on delay : approximately 10 seconds
- Off delay (adj.) : from 10 seconds to 3 minutes
- PCB dimensions : 2.27" x 1.70" x 0.8" (57.6mm x 43.2mm x 20mm)
- Recommended Housing : FB03



FK505

INFRARED BURGLAR ALARM

PRODUCT DESCRIPTION

An invisible, modulated InfraRed beam is sent by a transmitter (TX) over a distance of up to 8 metres and detected by a receiver (RX). If the beam is broken by an intruder, the RX detects the break and activates an output relay to sound an alarm or initiate a telephone dialer (not supplied). Both delay times and sensitivity are adjustable to suit the security application.

- Power Supply : 12VDC @ 40mA(stand by), 80mA(working)
- Delay ON time : 1 min.
- Detection Range: 8m. (with lens)
- Maximum Relay Contact Load : 10A@125VAC and 5A@220VAC
- PCB Dimensions : (TX) 1.68" x 1.39" x 0.6" (42.7mm x 53.3mm x 15mm)(RX) 3.43" x 2.16" x 0.8" (84.8mm x 54mm x 20mm)
- Recommended Housing : FB17(TX),FB10(RX)



FK506

MAGNETIC SENSOR BURGLAR ALARM

PRODUCT DESCRIPTION

An encased magnetic reed switch is held open by a magnet so that when the magnet is moved away such as in the opening of a door or window, the switch closes. This initiates a warning sound through an inbuilt sounder. The FK506 has an optional, adjustable inbuilt timer which may be switch-selected to regulate the duty cycle of the sounder device.

- Power Supply : 9VDC @ 40mA max.
- PCB Dimensions : 3.27" x 1.57" x 0.6" (83mm x 40mm x 15mm)
- Recommended Housing : FB04



FK507

DOOR KNOB TOUCH ALARM

PRODUCT DESCRIPTION

A door knob is turned into a touch alarm when the wire loop of the FK507 is placed over the handle on the other side of the door. The demanding sound will warn off intending intruders. In your hotel or motel room the FK507 will warn you that House-keeping is entering if you are taking a shower.

- Power Supply : 9VDC @ 50mA(working)
- PCB Dimensions : 2.60" x 1.90" x 0.6" (66mm x 48.3mm x 15mm)
- Recommended Housing : FB03



FK511

TWO FUNCTION INFRARED SENSOR

PRODUCT DESCRIPTION

This circuit may be applied as either a barrier or reflective Infrared sensor. It features a modulated IR signal to reduce the effects of incidental lighting. The FK511 may be used as doorway sensor, intruder alarm or production line counter sensor. A 500 watt output relay can be used to control locking or electromechanical devices.

- Power Supply : 12VDC @ 20mA (standby), 55mA (working)
- Operating Distance : Barrier mode (8metres max.) Reflective mode (50cm.max.)
- Relay Contact Load : 500 watts @ 220VAC
- PCB Dimensions : 2.33" x 2.77" x 0.8" (59mm x 70.4 x 20mm)
- Recommended Housing : FB03



FK514

RECORDABLE PIR MOTION SENSOR WITH AMPLIFIER

PRODUCT DESCRIPTION

This circuit is a Digital Recorder and Audio Player which can be activated by the passing of the life through the PIR sensor. This circuit can be installed on the entrance. To say words such as welcome, thank you, or music, etc.

- Power supply : 12VDC.
- At standby stage the circuit consumes about 15mA and at working stage about 250mA. at speaker 8-ohm 0.25W.
- Time record : max. 80 seconds.
- Select record signal from MIC or the external signal.
- Build-in on-board audio power amplifier.
- Detection range : 5-meter
- PCB dimensions of sensor unit : 1.21 in x 1.01 in.
- PCB dimensions of voice recorder unit : 4.11 in x 2.08 in.
- Recommended Housing : FB01(Sensor) and FB04(Mainboard)



FK515

PIR MOTION SENSOR

PRODUCT DESCRIPTION

A multipurpose detector circuit that can be applied for various applications such as an alarm system, automatic light controller etc.

- Power supply : 4.5-12VDC.
- Electric current consumption : 0.2mA. (standby), 35mA. (working)
- Detection range : 5-meter.
- Can be selected the operation at OUT point.
- Recommended Housing : FB03



FK516

PIR MOTION SENSOR DOORBELL

PRODUCT DESCRIPTION

This circuit is motion detector circuit that can be applied for door entry alarm.

- Power supply : 4.5-6VDC.
- Electric current consumption : 0.2mA.(standby), 150mA. (working)
- Detection range : 5-meter.
- Recommended Housing : FB03



FK517

9 LED PIR MOTION LIGHT

PRODUCT DESCRIPTION

This circuit is motion detector circuit that can be applied for the light switches on when you enter the room. It switch off automatically when you leave the room.

- Power supply : 6VDC or 12VDC.
- Electric current consumption : 0.2mA. (standby), 90mA. @ 6VDC (working), 45mA.@ 12VDC (working)
- Detection range : 5-meter.
- Time delay range : 3-25 seconds.
- Using 9 pcs. White color 5MM. LED.
- Recommended Housing : FB03



FK518

BARKING DOG ALARM

PRODUCT DESCRIPTION

This circuit is PIR detection circuit picks up the radiation from human. Improved PIR sensitivity will provide signal to create the barking dog. This circuit is suitable to the security systems.

- Power supply : 4.5-6VDC.
- Power consumption : 0.02mA. (standby), 325mA. (working, @ 8 Ohms 0.25W.)
- Detection range : 4-5 meters.
- Can be select the barking dog voice : flock of barking dogs and barking dog.
- Volume control equipped.
- PCB dimension (sensor board) : 1.21 x 1.01 inch.
- PCB dimension (main board) : 1.58 x 2.21 inch.
- Recommended Housing : FB04



FK519

PIR MOTION SENSOR WITH TIMER

PRODUCT DESCRIPTION

This detector circuit uses the PIR sensor to detect human and animal movements. It is used to study learning work. Can also be applied to a variety of practical applications such as alarm systems and automatic power off and lighting systems.

- Power supply : 12VDC.
- Electric current consumption (standby) : 13mA (max.)
- Electric current consumption (working) : 85mA (max.)
- Detection range : 4-meter.
- Can set the delay time, when first supplying the power : 99.59 minutes (max.)
- Can set the delay time of detection : 99.59 minutes (max.)
- Can set the time of the relay : 99.59 minutes (max.)
- Can be set to wait for detection : 99.59 minutes (max.)
- Control output : contact capacity 1A/250VAC.
- PCB board dimension (PIR sensor board) : 1.22 in x 1.02 in.
- PCB board dimension (control board) : 1.72 in x 4.45 in.
- Recommended Housing : FB18



FK520

TILT SENSOR INDICATOR

PRODUCT DESCRIPTION

Code 520 is the area tilt detection circuit, with LED display. This circuit can be used to check slope of the area. In addition, when connected to the microcontroller set. Can be applied to other forms of work.

- Power supply : 3-5VDC.
- Electric current consumption : 24mA max.
- Display : LED.
- IC board dimension : 0.99 in x 1.95 in.
- Recommended Housing : FB01,FB20

Series 6 Audio Equipment

Future Kit offers a very broad range of amplifiers, preamplifiers, mixer and tone controls. In the class room, students will be introduced to the various elements that go to make up amplifiers from simple 2 watt single channel units right through to 100 watt rms per channel Stereo Units. Common to all of the FK6XX series is ease of assembly and economy of design. Successful completion of any one of this series will result in a highly satisfying learning experience. Professional amplifier builders will find in the FK6XX range, opportunities to reduce the time to market for products suitable for commercial applications. These units are available also as pre-assemblies under the FA prefix.





FK602

AUDIO AMPLIFIER 2 WATTS

PRODUCT DESCRIPTION

This economical, general-purpose audio amplifier is an ideal stand-by for students, technicians and hobbyists. Use it as an MP3 add-on, intercom or guitar practice amplifier. The on-board trimmer for volume control may be substituted by an external potentiometer.

- Power Supply : 9VDC @ 300mA max.
- Maximum load : 300mA (8 Ohm 0.25W Speaker)
- S/N Ratio : 80dB (A weighted)
- Frequency Response : 20Hz to 20KHz (+0/- 3 dB)
- PCB Dimensions : 1.62" x 1.42" x 0.8" (41.1mm x 36mm x 20mm)



FK603

STEREO AUDIO AMP. 2 WATTS PER CHANNEL

PRODUCT DESCRIPTION

The FK603 is an economical, general purpose 2.0Watt stereo audio amplifier. Here is an ideal stand-by for students, technicians and hobbyists. Use it as an MP3 add-on, intercom or in "retro" radio projects. The on-board volume control trimmers may be substituted by external potentiometers.

- Power Supply : 9VDC @ 600mA max.
- Maximum load : 3 Channels of 300mA (8 Ohm 0.25W Speaker)
- S/N Ratio : 80dB (A weighted)
- Frequency Response : 20Hz to 20KHz (+ 0/- 3 dB)
- PCB Dimensions : 2.22" x 1.89" x 0.8" (56.4mm x 48mm x 20mm)



FK604

AUDIO AMPLIFIER 8 WATTS (MONO)

PRODUCT DESCRIPTION

Here is an economical, general purpose 8Watt audio amplifier utilizes IC TDA2030 which features an efficient low distortion OTL output. Suitable for students, technicians and hobbyists. Use it as an MP3 add-on, intercom, guitar practice amplifier or in retro radio projects. The on-board trimmer for volume control may be substituted by an external potentiometer.

- Power Supply : 12VDC
- Maximum Load : 800mA
- Output Power : 8Watt
- S/N Ratio : 94dB (A weighted)
- Total Harmonic Distortion : 0.03% @ 0.1-14Watt into 40hm/1kHz
- Frequency Response : 20Hz-20KHz (+ 0/- 3 dB)



FK605

STEREO AUDIO AMP. 8 WATTS PER CHANNEL

PRODUCT DESCRIPTION

The FK605 8W + 8W audio amplifier utilizes the TDA2004 stereo IC making this project easy and economical to build and suitable for students, technicians and hobbyists. Use it as an MP3 add-on, intercom, guitar practice amplifier with two input channels or in retro stereo projects.

- Power Supply : 12VDC @ more than 1.0 Amp
- Music Power Output : 8Watt into 4 Ohm
- S/N Ratio : 80dB (A weighted)
- Gain : 30dB Max
- Input Sensitivity : 150mV into 200KOhm
- Total Harmonic Distortion : 0.1% @ 1 Watt into 4 Ohm (1kHz)
- Frequency Response : 20Hz-20KHz (+ 0/- 3 dB)
- Overload and short-circuit protected



FK607

AUDIO AMPLIFIER 15 WATTS (MONO-BTL)

PRODUCT DESCRIPTION

The BTL output of the FK607 means that it can deliver 15Watts from a 12V rail. Its uncomplicated construction makes the FK607 suitable for students, technicians and hobbyists. Use it as an MP3 add-on, intercom, guitar practice amplifier, or in retro radio projects.

- Power Supply : 12VDC @more than 1.0Amp
- Output Power : 15Watt Music Power into 4 Ohm
- S/N Ratio : 80dB (A weighted)
- Input Sensitivity : 150mV into 200KOhm
- Gain : 30dB
- Frequency Response : 20Hz-20Khz (+ 0/- 3 dB)



FK608

STEREO AUDIO AMP. 15 WATTS PER CHANNEL

PRODUCT DESCRIPTION

The FK608 15W + 15W audio amplifier utilizes two stereo ICs making this project easy and economical to build and suitable for students, technicians and hobbyists. Use it as an MP3 add-on, intercom, guitar practice amplifier with two input channels or in retro stereo projects. The on-board trimmer for volume controls may be substituted by an external potentiometer.

- Frequency Response : 20Hz to 20Khz (+ 0/- 3 DB)
- Total Harmonic Distortion : 0.1% @ 1 Watt into 4 Ohm (1kHz)
- Overload and short-circuit protected
- PCB Dimensions : 4.76" x 1.89" x 2.0" (121 mm x 48.0 mm x - 50.8mm)
- Power Supply : 12VDC @more than 2.0Amp
- Output Power : 2 x 15Watt Music Power into 4 Ohm
- S/N Ratio : 80dB (A weighted)



FK617

15 WATT CLASS ROOM AUDIO AMPLIFIER

PRODUCT DESCRIPTION

The FK617 comes complete with tone control, microphone pre-amplifier and a push-on push-off switch for input channel selection. Use the FK617 in a portable, 12V (battery-powered) PA amplifier or as a guitar practice amplifier.

- Capable of delivering 15 Wrms at 4 Ohms (BTL)
- With have build-in mono tone-control and pre-amplifier of microphone.
- Two input selection can be operated using PUSH-ON PUSH-OFF switch.
- Power supply : 12 VDC. / Max 1A.



FK625

TONE CONTROL MODULE (MONO)

PRODUCT DESCRIPTION

Featuring a preamplifier, volume, treble and base control the FK625 is an easily assembled unit that expands the functionality of general-purpose audio amplifiers. Students will gain practical experience with RC filtering in audio systems.

- Power Supply : 12VDC @ 10mA max.
- Maximum Output : 3Vrms @ 12VDC supply
- Maximum Input : 3Vrms @ 12VDC supply
- Gain (loss) : -2dB, Input Impedance : 47KOhm
- Frequency Response : 20Hz-50Khz (+ 0/- 3 dB)
- Total Harmonic Distortion @ 1Khz : 0.1% at 1Vrms output
- S/N Ratio @ 1Vrms : 85dB Tone Control;
- Bass boost/cut : 12dB @ 50Hz
- Treble boost cut : 12db @ 15Khz
- PCB dimensions: 3.4"x1.29"x0.9" (86.36mm x 32.8mm x 22mm)



FK626

TONE CONTROL MODULE (STEREO)

PRODUCT DESCRIPTION

This stereo tone control module features twin preamplifiers, volume, treble and base controls. The FK626 is an easily assembled unit that expands the functionality of general-purpose stereo audio amplifiers. Students will gain practical experience with RC filtering in audio systems.

- Power Supply : 6-15VDC @ 25mA max.
- Maximum Output : 3Vrms @ 12VDC supply
- Maximum Input : 3Vrms @ 12VDC supply
- Gain (loss) : -2dB
- Input Impedance : 47KOhm
- Frequency Response : 20Hz to 50KHz (+ 0/- 3 DB)
- Total Harmonic Distortion @ 1KHz : 0.1% at 1Vrms output 1Vrms output
- S/N Ratio @ 1Vrms : 85dB
- Tone Control; Bass boost/cut : 12dB @ 50Hz Treble boost cut: 12db @ 15KHz
- PCB dimensions : 4.74" x 1.39" x 0.9" (120.4 x 53.3mm x 22mm)



FK627

SUPER TONE CONTROL MODULE (MONO)

PRODUCT DESCRIPTION

This mono tone control module uses a +15V- 0 -15V power supply making its +/- output compatible with OCL amplifier projects. The FK627 features preamplifier, volume, treble and base control. Students will gain practical experience with RC filtering in audio systems and dual rail amplifiers.

- Power Supply : +15V- 0 -15V @ 5mA
- Maximum Output : 6Vp-p
- Maximum Input : 3Vrms
- Gain (loss) : -2dB
- Input Impedance : 47KOhm
- Frequency Response : 20Hz to 50KHz (+ 0/- 3 DB)
- Total Harmonic Distortion @ 1KHz : 0.1% at 1Vrms output
- S/N Ratio @ 1Vrms : 85dB Tone Control;
- Bass boost/cut : 12dB @ 50Hz
- Treble boost cut : 12db @ 15KHz
- PCB dimensions: 3.39" x 1.23" x 0.9" (86mm x 31.2mm x 22mm)



FK628

SUPER TONE CONTROL MODULE (STEREO)

PRODUCT DESCRIPTION

This stereo tone control module uses a +15V- 0 -15V power supply making its +/- output compatible with OCL amplifier projects. The FK628 features twin preamplifiers, volume, treble and base controls. Students will gain practical experience with RC filtering in audio systems and dual rail amplifiers.

- Power Supply : +15V- 0 -15V @ 6mA
- Maximum Output : 6Vp-p
- Maximum Input : 3Vrms
- Gain (loss) : -2dB
- Input Impedance : 47KOhm
- Frequency Response : 20Hz to 50KHz (+ 0/- 3 dB)
- Total Harmonic Distortion @ 1KHz : 0.1% at 1Vrms output
- S/N Ratio @ 1Vrms : 85dB Tone Control;
- Bass boost/cut : 12dB @ 50Hz
- Treble boost cut : 12dB @ 15KHz
- PCB dimensions : 6.19" x 1.47" x 0.9" (157.22mm x 37.3mm x 22mm)



FK642

BASS BOOSTER PREAMPLIFIER (MONO)

PRODUCT DESCRIPTION

The FK642 is a fixed-gain amplifier that boosts incoming lower audio frequencies whilst attenuating the higher frequencies to give a deeper, richer sound in audio systems that utilize smaller speakers.

- Power Supply : 12VDC @ 5mA max.
- Input impedance : 47KOhm
- Frequency range : 150Hz-250Hz
- PCB Dimensions : 2.46" x 1.63" x 0.6" (57.7mm x 41.4mm x 15mm)



FK643

BASS BOOSTER PREAMPLIFIER (STEREO)

PRODUCT DESCRIPTION

The FK643 is a stereo fixed-gain amplifier that boosts incoming lower audio frequencies whilst attenuating the higher frequencies. This gives a richer, deeper sound in stereo audio systems that utilize smaller speakers.

- Power supply : 4.5-6VDC.
- Power consumption : 0.02mA. (standby), 325mA. (working, @ 8 Ohms 0.25W.)
- Detection range : 4-5 meters.
- Can be select the barking dog voice : flock of barking dogs and barking dog.



FK647

DYNAMIC MICROPHONE PREAMPLIFIER

PRODUCT DESCRIPTION

This simple circuit is designed to amplify the low output levels of most dynamic microphones to suit the inputs of most audio amplifiers.

- Power Supply : 9-12VDC @ 0.5mA max.
- PCB Dimensions : 1.41" x 1.76" x 0.6" (35.8mm x 44.7mm x 15mm)



FK648

CONDENSOR MIC. WITH PREAMPLIFIER

PRODUCT DESCRIPTION

This easily constructed preamplifier circuit incorporates a condenser microphone. The output of the FK648 is designed to suit the input requirements of most audio amplifiers.

- Power Supply : 9VDC @ 5mA max.
- PCB Dimensions : 0.67" x 1.5" x 0.6" (17mm x 38.1mm x 15mm)



FK649

SPEAKER PROTECTION UNIT (MONO)

PRODUCT DESCRIPTION

This unit is designed to protect loud speakers attached to OCL amplifiers. If an OCL has no in-built protection circuit, a short circuit in its output transistors will allow an uncontrolled DC current through the attached speaker causing it to burn out. The FK649 is designed to detect such a short-circuit condition and disconnect the speaker before damage can occur.

- Supply voltage : 12 VDC
- Consumption : 35mA.max
- Dimension : 2.32 x 1.34 inches.



FK650

SPEAKER PROTECTION (STEREO)

PRODUCT DESCRIPTION

This unit is designed to protect loud speakers attached to a stereo OCL (Output Capacitor Less) amplifier. If an OCL amplifier has no in-built protection circuit, a short circuit in its output transistors will allow an uncontrolled DC current through the attached loudspeaker causing it to burn out. The two channel FK650 is designed to detect such a condition and disconnect the speaker before damage can occur.

- Supply voltage : 12 VDC
- Consumption : 60mA.max
- Dimension : 3.24 x 1.84 inches.



FK651

STEREO SIMULATOR

PRODUCT DESCRIPTION

The FK651 splits the audio signals from mono source to simulate a stereo performance. It takes the frequency bands 64Hz, 1 KHz and 4 KHz and directs them to the right hand channel. The bands 32Hz, 500Hz and 2KHz are directed to the left channel to give a heightened spatial effect.

- Power Supply : 12VDC @ 5mA max.
- PCB Dimensions : 2.67" x 2.71" x 0.6" (82.3mm x 46.7 mm x 15mm)



FK652

3 CHANNEL MICROPHONE MIXER

PRODUCT DESCRIPTION

This mixer can take three signal sources such as microphones or outputs from other sources such as guitars and mix them into one output. On-board potentiometers allow for pre-emphasis and balancing of signals prior to power amplification.

- Power Supply : 12VDC @ 5mA max.
- PCB Dimensions : 1.98" x 2.21" x 0.9" (50.3mm x 56.1mm x 20mm)



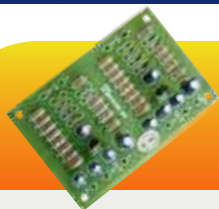
FK653

LOUDNESS

PRODUCT DESCRIPTION

The FK 653 loudness circuit has 3 frequency filters to boost low and high frequency audio signals prior to amplification to give smaller speakers richer and fuller sound or to adjust the ambience to suit individual taste. The FK653 circuit is inserted in the volume control circuit. It may be switched in and out of circuit as desired.

- Power Supply : 12VDC @ 5mA max.
- PCB Dimensions : 2.22" x 1.73" x 0.6" (56.4mm x 43.9mm x 15mm)



FK654

LOUDNESS STEREO

PRODUCT DESCRIPTION

This is a stereo loudness circuit. Each channel has 3 frequency filters to boost bass and treble audio signals prior to amplification to give smaller speakers richer and fuller sound or to adjust the ambience to suit individual taste. The FK653 circuit is inserted in the volume control circuit. It may be switched in and out of circuit as desired.

- Power Supply : 12VDC @ 5mA max.
- PCB Dimensions : 2.22" x 3.33" x 0.6" (56.4mm x 84.6mm x 15mm)



FK655

VIDEO AMPLIFIER 1 TO 4 CHANNEL

PRODUCT DESCRIPTION

The FK655 allows for up to 4 devices to be attached to a single 75Ohm video output from TV related devices. A typical situation would be attaching both an HDD and an Analogue TV to a Digital TV set-top box. The gain of the FK655 is adjustable using the on-board potentiometer.

- Input impedance : 75Ohm
- Output impedance : 75Ohm
- Gain : Adjustable 1 to 4dB.
- Power Supply : 12VDC @150mA max
- Frequency Range : 500Khz-5Mhz
- PCB Dimensions : 2.17" x 2.88" x 0.9" (55.1mm x 73.1mm x 22mm)



FK656

POWER AMP. OTL 30W

PRODUCT DESCRIPTION

This 30Watt power amplifier is an economical driver which may be coupled with a preamplifier, tone controls and mixer circuits to build a powerful unit for public address, entertainment and warning systems. The OTL output provides loudspeaker protection against output transistor short circuit.

- Power Supply : 40V - 50VDC @ more than 1.5Amp
- Output Power : 30Wrms into 4 Ohm or 8 Ohm
- PCB Dimensions : 4.65" x 1.77" x 1.8" (118mm x 45.1mm x 45.7mm)



FK657

POWER AMP. OTL 30+30W

PRODUCT DESCRIPTION

This 30Wrms Stereo power amplifier is a dual economical driver which may be coupled with a stereo preamplifier, tone controls and mixer circuits to build a powerful unit for public address and home entertainment. The OTL outputs provide loudspeaker protection against output transistor short circuit.

- Power Supply : 50VDC @ more than 3.0Amp
- Output Power : 30Wrms 8 Ohm Two Channels
- PCB Dimensions : 4.65" x 1.77" x 3.6" (118mm x 45.1mm x 91.4mm)



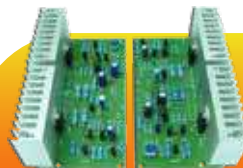
FK658

POWER AMPLIFIER OCL 35W

PRODUCT DESCRIPTION

This mono, class AB amplifier is a low distortion unit that when added to a preamplifier, mixer, and tone control will result in an economical and powerful amplifier for public address and warning systems.

- Power Supply : +35V 0V -35V (more than 2 Amps)
- Frequency Response : 10hz-100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 15KOhm
- Output Power : 35Wrms into 4 or 8 Ohms.
- Total Harmonic Distortion : 0.02%
- PCB Dimensions : 4.74" x 2.28" x 2.0" (120.4 mm x 54.7mm x 50.8mm)



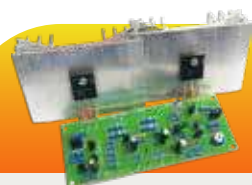
FK659

POWER AMPLIFIER OCL 35+35W

PRODUCT DESCRIPTION

This stereo, class AB amplifier is a low distortion unit that when added to a preamplifiers, mixers, and tone controls will result in an economical and powerful amplifier for public address and home entertainment.

- Power Supply : +35V 0V - 35V @ more than 3 Amps
- Frequency Response : 10hz - 100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 15KOhm
- Output Power : 35Wrms + 35Wrms.into 4 or 8Ohms.
- Total Harmonic Distortion : 0.02%
- PCB Dimensions : 4.74" x 4.6" x 2.8" (120.4mm x 5116.8mm x 50.8mm)



FK660

MONO POWER AMPLIFIER OCL 50W

PRODUCT DESCRIPTION

The FK660 is a powerful Class AB amplifier for public address, emergency and office applications. Users will add a preamplifier, mixer, and tone control to complete the system in accordance with their individual requirements.

- Power Supply : +35V 0V -35V @ more than 3 Amps
- Frequency Response : 10hz - 100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 15KOhm
- Output Power : 50Wrms into 4 or 8 Ohms.
- Total Harmonic Distortion : 0.02%
- PCB Dimensions : 4.50" x 1.78" x 3.0" (148.8mm x 60.7mm x 76.2mm)



FK661

STEREO POWER AMPLIFIER OCL 50+50W

PRODUCT DESCRIPTION

The FK661 is a powerful Class AB stereo amplifier for public address, emergency, home entertainment and office applications. Users will add a preamplifiers, mixers, and tone controls to complete the system in accordance with their individual requirements.

- PCB Dimensions : 4.5" x 1.78" x 3.0" (114.3 mm x 90.4mm x 76.2mm)
- Output Power : 50Wrms + 50Wrms into 4 or 8Ohms.
- Total Harmonic Distortion : 0.02%
- Power Supply : +35V 0V -35V @more than 5 Amps
- Frequency Response : 10hz-100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 15KOhm



FK666

MONO POWER AMPLIFIER OCL 100W

PRODUCT DESCRIPTION

In applications requiring a high powered amplifier the FK666 features a powerful Class AB 100Wrms output to do the job. Users will add a preamplifier, mixer, and tone control to complete the system in accordance with their individual requirements for public address, entertainment, emergency and office applications.

- Power Supply : +50V 0V -50V @ more than 3 Amps
- Frequency Response : 10hz - 100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 20KOhm
- Output Power : 100Wrms into 4 or 8 Ohms.
- Total Harmonic Distortion : 0.02%
- PCB Dimensions : 5.86" x 2.39" x 3.0"
(114.3mm x 45.2mm x 76.2mm)



FK667

STEREO POWER AMPLIFIER OCL 100+100W

PRODUCT DESCRIPTION

In applications requiring a high powered stereo amplifier the FK667 features a twin powerful Class AB 100Wrms outputs to do the job. Users will add a preamplifiers, mixers, and tone controls to complete the system in accordance with their individual requirements for public address, home entertainment, emergency and office applications.

- Power Supply : +50V 0V -50V @ more than 6 Amps
- Frequency Response : 10hz-100KHz
- Input Sensitivity : 1Vrms
- Input Impedance : 15KOhm
- Output Power : 100Wrms+100Wrms into 4 or 8 Ohms.
- Total Harmonic Distortion : 0.02%
- PCB Dimensions : 4.5" x 3.56" x 3.0" (114.3mm x 90.4mm x 76.2mm)



FK671

SUB-WOOFER AMPLIFIER 48W OCL

PRODUCT DESCRIPTION

This amplifier is optimized to give a rich bass sound to music sources and video sound tracks. It features on-board tone volume control potentiometers to adjust the sound to suit the user's taste.

- Power Supply : +35V 0V -35V @ more than 3 Amps
- Frequency Response : 25Hz-200Hz
- Input Sensitivity: 1Vrms
- Input Impedance : 100KOhms
- Output Power : 48Wrms Class AB into 4 or 8 Ohms
- PCB Dimensions : 4.53" x 2.48" x 2.0" (115mm x 63mm x 50.8mm)



FK672

MINI MEGAPHONE

PRODUCT DESCRIPTION

This economical amplifier/speaker combination is an ideal class room project. The FK672 is also supplied with a dynamic microphone and its circuit incorporates a preamplifier with a volume control.

- Power Supply : 4.5-12VDC (1.5Amp Max @ 12V)
- Output Power : 2 watt max into 8 Ohms.
- S/N Ratio : 80dB (A weighted)
- Frequency Response : 20Hz-20KHz (+0/- 3 dB)
- PCB Dimensions : 2.34" x 1.42" x 0.9" (59.4mm x 36mm x 22mm)



FK673

MINI POWER AMPLIFIER 1+1W. STEREO

PRODUCT DESCRIPTION

This is an economical stereo amplifier and an ideal class room project. The FK673 suit for apply in radio, computer and other audio projects. Volume adjustment is by on-board trimmer potentiometers.

- Power Supply : 3- 12VDC (500mA Max @12V)
- Output Power : 1+1Watt max into 2x8 Ohms Speaker
- S/N Ratio : 70dB (A weighted)
- Sensitivity : 120mVeff (1Khz/500mW)
- PCB Dimensions : 2.16" x 1.42" x 0.9" (59.4mm x 36mm x 22mm)



FK674

MINI POWER AMPLIFIER 2W. MONO

PRODUCT DESCRIPTION

This is an economical mono amplifier and an ideal class room project. The FK674, with its supplied speaker, will find applications in radio, computer and other audio projects. Volume adjustment is by on-board trimmer potentiometers. This kit comes complete with a 3Watt 16Ohm speaker.

- Power Supply : 9- 12VDC @more than 1.5Amp
- Power Consumption : 300mA @12V with 0.25W 8 Ohm Speaker
- Output Power : 2W max into 8 Ohms Speaker
- Frequency Response : 20Hz-20Khz (+0/- 3 dB)
- S/N Ratio : 80dB (A weighted)
- Sensitivity : 120mVeff (1Khz/500mW)
- PCB Dimensions : 1.62" x 1.42" x 0.9" (41.1mm x 36mm x 22mm)



FK675

MINI POWER AMPLIFIER 2+2W. STEREO

PRODUCT DESCRIPTION

This compact, economical stereo amplifier is an ideal class room or weekend project. The FK675 will find applications in radio, computer and other audio projects. Volume adjustment is by on-board trimmer potentiometers. This kit comes complete with two 3Watt 16 Ohm speakers.

- Power Supply : 9-12VDC @more than 3Amps
- Power Consumption : 600mA @12V with 0.25W 8 Ohm
- Speaker Output Power : 2+2Watt max into 2x8 Ohms Speaker
- S/N Ratio : 80dB (A weighted)
- Sensitivity : 120mVeff (1Khz/500mW)
- PCB Dimensions : 2.22" x 1.89" x 0.9" (59.4mm x 36mm x 22mm)



FK676

STEREO HEAD PHONE AMPLIFIER

PRODUCT DESCRIPTION

This handy, compact stereo audio amplifier is optimized for use with "bud" type earphones. Applications include signal tracing in electronic circuits and listening to radio, video and computer content.

- Power Supply : 3VDC @ 60mA max.
- Output Power : 90mW + 90mW max (Higher output up to 1watt per channel is available with a 12VDC power supply)
- Sensitivity : 120mVeff (1KHz/500mW)
- Sound Level Adjustment : Trimmer potentiometer.
- S/N ratio : 70dB (A weighted)
- PCB Dimensions : 2.24" x 1.34" x 0.6" (70.3mm x 34mm x 15mm)



FK677

3+3W SMD CLASS-D STEREO AMPLIFIER

PRODUCT DESCRIPTION

It is a small amplifying circuit suits with various sources of sound : radio, video, computer etc.

- Power Supply : 5VDC
- Maximum electric current
- consumption : 200mA @ loudspeaker 8 Ohm, 3 watt, 5V
- Maximum amplification : 3 watts @ loudspeaker 4 Ohm, 3 watts, 5V
- S/N ratio : 80dB
- Total Harmonic Distortion : 0.15%
- IC board dimension : 1.39 in x 1.09 in



FK678

3+3W SMD CLASS-D STEREO AMPLIFIER WITH SPEAKER

PRODUCT DESCRIPTION

It is a small amplifying circuit suits with various sources of sound : radio, video, computer etc.

- Power Supply : 5VDC
- Maximum electric current consumption : 200mA @ loudspeaker 8 Ohms, 3 watt, 5V
- Maximum amplification : 3 watts @ loudspeaker 4 Ohms, 3 watts, 5V
- S/N ratio : 80dB
- Total Harmonic Distortion : 0.15%
- IC board dimension : 1.39 in x 1.09 in



FK679

5+5W SMD CLASS-D STEREO AMPLIFIER

PRODUCT DESCRIPTION

It is a small amplifying circuit suits with various sources of sound : radio, video, computer etc.

- Power Supply : 5VDC
- Maximum electric current consumption : 300mA @ loudspeaker 8 Ohms, 3 watt, 5V
- Maximum amplification : 5 watts @ loudspeaker 2 Ohms, 5 watts, 5V
- S/N ratio : 90dB
- Total Harmonic Distortion : 0.15%
- IC board dimension : 1.39 in x 1.09 in



FK680

5+5W SMD CLASS-D STEREO AMPLIFIER WITH SPEAKER

PRODUCT DESCRIPTION

It is a small amplifying circuit suits with various sources of sound : radio, video, computer etc.

- Power Supply : 5VDC
- Maximum electric current consumption : 300mA @ loudspeaker 8 Ohms, 3 watt, 5V
- Maximum amplification : 5 watts @ loudspeaker 2 Ohms, 5 watts, 5V
- S/N ratio : 90dB
- Total Harmonic Distortion : 0.15%
- IC board dimension : 1.39 in x 1.09 in



FK681

5 WATT MINI MEGAPHONE

PRODUCT DESCRIPTION

It is a small amplifying circuit suits with various sources of sound : radio, video, computer etc.

- Power supply : 5VDC.
- Maximum electric current consumption : 200mA @ loudspeaker 8 Ohm, 0.25 watt, 5V
- Maximum amplification : 5 watts @ loudspeaker 2 Ohms, 5 watts, 5V
- S/N ratio : 90dB
- Total harmonic distortion : 0.15%
- IC board dimension : 2.37 in x 2.07 in
- Recommended Housing : FB03



FK682

20W MONO CLASS D AUDIO AMPLIFIER

PRODUCT DESCRIPTION

This mono, class D amplifier is uncomplicated construction, making it economical to build and suitable for students, technicians and hobbyists. It is a low distortion unit that when added to a radio, computer and other audio projects will result in a powerful amplifier for public address and warning system.

- Power supply : 12VDC.
- Maximum electric current consumption : 1A @ loudspeaker 8 Ohms, 20 watts, 12V
- Maximum amplification : 20 watts @ loudspeaker 4 Ohms, 12V
- S/N ratio : 95dB
- Total Harmonic Distortion : 0.05%
- PCB dimension : 1.67 in x 1.21 in
- Recommended Housing : FB01,FB03,FB17



FK683

20+20W STEREO CLASS D AUDIO AMPLIFIER

PRODUCT DESCRIPTION

This stereo, class D amplifier is uncomplicated construction, making it economical to build and suitable for students, technicians and hobbyists. It is a low distortion unit that when added to a radio, computer and other audio projects will result in a powerful amplifier for public address and warning system.

- Power supply : 12VDC.
- Maximum electric current consumption : 2A @ loudspeaker 8 Ohms, 20 watts, 12V
- Maximum amplification : 20 watts @ loudspeaker 4 Ohms, 12V
- S/N ratio : 95dB
- Total Harmonic Distortion : 0.05%
- PCB dimension : 1.67 in x 1.21 in
- Recommended Housing : FB03,FB17

Series 7

Radio Frequency Equipment

Despite the inroads of MP3 and similar entertainment devices, students and teachers, alike, will find the technology applied in this series accessible, interesting and insightful. Technology buffs will be stimulated into thinking about "applications beyond the basics" through this gateway into the field of radio-communications. Coupling these device with the FK6XX of amplifiers will yield wireless microphone systems at a fraction of the cost of store-bought units. These units are available also as pre-assemblies under the FA prefix.





FK701

FM. WIRELESS MIC (3V SINGLE STAGE)

PRODUCT DESCRIPTION

This compact wireless microphone utilizes a resonant coil pattern that is etched onto the PCB to simplify construction. Its small outline lends itself to use as a lapel microphone or security "bug". The FK 701 may be used with any FM radio receiver in public address applications.

- Power Supply : 3VDC @ 10mA max.
- Transmitting Frequency : 88MHz (Adjustable)
- PCB Dimensions : 1.64" x 1.06" x 0.6" (41.65mm x 26.9mm x 15mm)
- Recommended Housing : FB08



FK702

FM. WIRELESS MIC (9V SINGLE STAGE)

PRODUCT DESCRIPTION

This FK702 wireless microphone utilizes a resonant coil pattern that is etched onto the PCB to simplify construction. Its small outline lends itself to use as a lapel microphone or security "bug". The FK 702 may be used with any FM radio receiver in public address applications.

- Power Supply : 9VDC @ 10mA max.
- Transmitting Frequency : 88MHz (Adjustable)
- PCB Dimensions : 1.64" x 1.1" x 0.6" (41.65mm x 28mm x 15mm)
- Recommended Housing : FB08



FK703

FM. WIRELESS MIC (TWO STAGE)

PRODUCT DESCRIPTION

This FK703 wireless microphone has two tuned stages for extra stability and gain. Construction is simplified by the adoption of etched resonant coils on the PCB. Its small outline lends itself to use as a lapel microphone or security "bug". The FK 703 may be used with any FM radio receiver in public address applications.

- Power Supply : 9VDC @ 10mA max.
- Transmitting Frequency : 88MHz (Adjustable)
- PCB Dimensions : 1.64" x 1.54" x 0.6" (41.65mm x 39.1mm x 15mm)
- Recommended Housing : FB08



FK707

SIMPLIFIED FM TUNER (88-108 MHz)

PRODUCT DESCRIPTION

By utilizing a single IC to carry out all of the detection, discrimination and AF output functions, the FK707 construction time is reduced to a minimum. This FM receiver is ideal as a class project and may be used with FM microphones and audio amplifiers from the Future Kit series.

- Power Supply : 4.5-9VDC @ 10mA
- PCB Dimensions : 2.38" x 1.68" x 2" (61mm x 42.7mm 50.8mm)
- Recommended Housing : FB03
- Download Manual [Click Here](#)



FK708

AM RADIO RECEIVER

PRODUCT DESCRIPTION

By utilizing a single IC MK484 to carry out all of the Tuning, detection and AF output functions, the FK708 construction time is reduced to a minimum. This AM receiver is ideal as a class project and may be used with its supplied speaker or with audio amplifiers from the Future Kit series.

- Power Supply : 4.5 - 9VDC @ 150mA max.
- PCB Dimensions : 2.61" x 1.98" x 2" (66.3 mm x 50.3mm 50.8mm)
- Recommended Housing : FB04



FK709

SIMPLIFIED AM RADIO WITH EARPHONE

PRODUCT DESCRIPTION

By utilizing a single IC to carry out the tuning, detection and AF output functions, the FK709 construction time and size is reduced to a minimum. This AM receiver is ideal as a class project and may be used with its supplied earphones or with audio amplifiers from the Future Kit series.

- Power Supply : 3VDC @45mA
- Output Load : Minimum 30 Ohms
- PCB Dimensions: 2.38" x 1.24" x 2"
- Recommended Housing : FB03



FK710

MINI AM RADIO WITH EARPHONE

PRODUCT DESCRIPTION

This tiny, economical AM radio utilizes a single IC to carry out the tuning, detection and AF output functions. FK710 construction time and size is reduced to a minimum. This AM receiver is ideal as a class project and may be used with its supplied earphones or with audio amplifiers from the Future Kit series.

- Power Supply : 3VDC @ 45mA
- Output Load : Minimum 30 Ohms
- PCB Dimensions : 1.71" x 1.18" x 0.6" (66.3mm x 50.3mm x 50.8mm)
- Recommended Housing : FB03,FB08



FK711

WALKY-TALKY RADIO 27 MHz

PRODUCT DESCRIPTION

The FK711 is a transmitter/receiver designed to operate over a distance of 150metres, when is commonly called, the "Citizen's Band" (CB) Thus, it may be subject to regulatory permits or licenses to operate in some countries.

- Power Supply : 9VDC @ 45mA
- Operational Current @ 9V : Stand-by 25mA, (RX) 35mA, (TX) 150mA
- PCB Dimensions : 2.29" x 2.43" x 1.2"
- Recommended Housing : FB07



FK713

AM RADIO IC RECEIVER EXPERIMENTAL BOARD WITH SPEAKER

PRODUCT DESCRIPTION

By utilizing a single IC TA 7642 to carry out both tuning and amplification of AM radio frequency, the construction time for FK713 is reduced to a minimum. This AM receiver is ideal for a class room project when connected to the supplied speaker. If more powerful signal output is required, many audio amplifiers from the Future Kit series can be conveniently applied.

- Power Supply : 6VDC
- Electric current consumption : 70 mA. (max.).
- IC board dimension : 3.51 in x 2.24 in.
- Recommended Housing : FB04



FK714

AM RECEIVER EXPERIMENTAL BOARD

PRODUCT DESCRIPTION

A basic circuit consisting of converter, IF, and amplifier of OTL type. It is valuable device for educational purpose.

- Power supply : 6VDC.
- Electric current consumption : 75mA. (max.)
- IC board dimension : 5.58 x 2.36 inch
- Recommended Housing : FB09



FK716

DSP AM/FM RADIO RECEIVER KIT

PRODUCT DESCRIPTION

This circuit is a DSP (Digital Signal Processing) radio circuit that uses selective adjustment. Stations by changing the voltage which is different from choosing a conventional station that uses adjustable the capacitance. This circuit uses only one controller IC, can operate as AM and FM radio, so the circuit can be easily built and assembled for newbies as well.

- Power supply : 4.5-6VDC.
- Electric current consumption : 200mA. (max.)
- There is a switch to choose to AM or FM stations.
- Use adjustable resistors To adjust the station selection.
- Use adjustable resistor In reducing the sound acceleration.
- Use the DSP radio receiver IC with internal receiver and controller.
- Has a power amplifier within 0.6 watts at 6 volts.
- PCB dimension : 2.85 in x 2.21 in
- Recommended Housing : FB15

Series 8 Regulator Equipment

Professionals, technicians and students will find the economy of the FKXX series qualifies them for the designer's choice for power regulation devices. These easy-build kits are also available as pre-constructed modules for rapid time-to-market. These units are available also as pre-assemblies under the FA prefix





FK801

REG. POWER SUPPLY 6-9-12V. 300mA

PRODUCT DESCRIPTION

The FK801 kit includes 220V -230V multi-tapped mains transformer, rectifier filters and an IC regulator for constant voltage applications. The low cost of this kit makes it an essential item in any technician's work shop. Voltage selection is via jumpers for inbuilt applications or via switch (not supplied) for portable applications.

- Power Supply : 220VAC
- Maximum Load : 300mA max.
- Output DC Voltages : 6V, 9V and 12V (Jumper Selected)
- PCB Dimensions : 1.66" x 1.16"
- Recommended Housing : FB04



FK802

MINI EMERGENCY LIGHT

PRODUCT DESCRIPTION

This circuit continually monitors the 230VAC mains voltage for a power failure. At that point the FK802 turns on a 6V filament lamp powered by 4 AA Alkaline cells. The circuit draws very little current.

- Operation Voltage : 220VAC
- PCB Dimensions : 1.60" x 1.19" x 0.8" (40.6mm x 30.22mm x 20mm)
- Recommended Housing : FB03



FK804

DC PWM MOTOR CONTROL

PRODUCT DESCRIPTION

To drive small DC Motors and lamp loads up to 20Watts the FK804 uses a PWM circuit to efficiently control the motor speed without compromising the torque. The Duty Cycle is adjustable from 1% to 99%.

- Power Supply : 12VDC
- Load : 1.5A @12VDC max.
- PCB Dimensions : 1.6" x 1.32" x 0.8" (44.7mm x 33.5mm x 20mm)
- Recommended Housing : FB03



FK805

12V TO 6-9V DOWN CONVERTOR

PRODUCT DESCRIPTION

This handy converter circuit features two jumper selectable regulated voltages 9V and 6V and can deliver 1 Amp into projects as a battery substitute.

- Power Supply : 12 - 15VDC
- Output Voltages : 6 and 9VDC (Jumper Selectable)
- Output Current : 1 Amp
- PCB Dimensions : 1.6" x 1.19" x 0.8" (44.7mm x 30.22mm x 20mm)
- Recommended Housing : FB06



FK807

REGULATED POWER SUPPLY 0-12VDC

PRODUCT DESCRIPTION

Designed as a variable bench supply the FK807 is economical and easy-to-build project suitable for hobby, school, laboratory, repair-shop and design departments. The voltage can be continuously varied by the on-board trimmer pot or by substituting a spindle pot when built into a case.

- Power Supply : 12-15VDC
- Maximum Load : 1A max.
- Output DC Voltages : 0-12V (Adjustable)
- PCB Dimensions : 1.28" x 1.22" x 0.9" (32.5mm x 31mm x 23mm)
- Recommended Housing : FB01



FK808

REGULATED POWER SUPPLY 0-30VDC

PRODUCT DESCRIPTION

For applications requiring higher voltages the FK808 is an economical and easy-to-build project suitable for hobby, school, laboratory, repair-shop and design departments. The voltage can be continuously varied by the on-board spindle pot making it suitable for building into a case.

- Power Supply : transformer 12-0-12VAC
- Maximum Load : 1A max.
- Output Voltages Range : 1.5-30VDC (Adjustable)
- PCB Dimensions : 2.4" x 1.65" x 0.9" (60.9mm x 41.9mm x 23mm)
- Recommended Housing : FB06



FK809

REGULATED POWER SUPPLY 0-30VDC 3A

PRODUCT DESCRIPTION

The FK809 is 0-30V power supply capable of delivering up to 3Amps into hobby, school, laboratory, repair-shop and design projects. The voltage can be continuously varied by the on-board spindle pot making it suitable for building into a case.

- Power Supply : Minimum 30VDC
- Maximum Load : 3A max.
- Output Voltage Range : 0 - 30V (Adjustable)
- PCB Dimensions : 3.08" x 1.95" x 0.9" (78.2mm x 49.5mm x 23mm)
- Recommended Housing : FB06



FK815

SWITCHED SELECTED REGULATOR 1.5,3,5,6,12V AT 1A

PRODUCT DESCRIPTION

The FK815 features 6 settings which equate to standard battery voltages used in a wide range of equipment. This power supply is capable of delivering up to 1Amps into hobby, school, laboratory, repair-shop and design projects. The long spindle on the switch makes this unit suitable for building into a case.

- Power Supply : Minimum 15VAC
- Maximum Load : 1A max.
- Output DC Voltages : 1.5, 3, 5, 6, 9, 12V (switch selectable)
- PCB Dimensions : 2.49" x 2.32" x 2.0" (62.4mm x 59mm x 50.8mm)
- Recommended Housing : FB18



FK816

REGULATED POWER SUPPLY 0-50VDC 3A

PRODUCT DESCRIPTION

The FK816, 0-50V power supply is capable of delivering up to 3Amps into hobby, school, laboratory, repair-shop and telecommunications projects. The voltage can be continuously varied by the on-board spindle pot making it suitable for building into a case.

- Power Supply : Requires a transformer with 24-18-0-18-24VAC @more than 4Amps
- Maximum Load : 3A max.
- Output Voltage Range : 0-50VDC (Adjustable)
- PCB Dimensions : 4.53" x 1.82" x 1.6" (115mm x 46.2mm x 40.6mm)
- Recommended Housing : FB06



FK817

TRANSFORMERLESS POWER SUPPLY 6-9-12V

PRODUCT DESCRIPTION

The FK817 circuit board will be at mains voltage so it is recommended that this unit be installed by experienced electrical trades personnel. For applications requiring up to 50mA FK817 is a low cost, compact and convenient power supply for built-in equipment. It features 3 selectable fixed voltages 6, 9, and 12VDC.

- Power Supply : 220VAC
- Maximum Load : 50mA max.
- Output Voltage Range : 6, 9, and 12VDC (Jumper selected)
- PCB Dimensions : 2" x 1.25" x 0.8" (50.8mm x 31.7 mm x 22mm)
- Recommended Housing : FB04



FK818

MOBILE EMERGENCY BATTERY CHARGER

PRODUCT DESCRIPTION

Here is the answer to that mid-sentence flat battery situation. The compact switch-mode FK818 can take any 3V supply such as two readily available AA Cells to recharge the 3.6Volt battery used in the majority of mobile phones. Especially useful in situations where there are no mains or 12V DC charger sources, the FK818 will find immediate application with students or professionals on the move.

- Power Supply : 3VDC or 2x1.5V AA battery.
- Power Consumption : 6mA. (stand-by),300mA. (charging)
- Output Charging Current : 80-160mA.
- Battery Voltage Compatibility : 3.6V mobile battery only.
- Protection : Reverse Current Protection Diode, Over-voltage Protection.
- PCB Dimensions : 1.87" x 1.23"x 08" (48mm x 31mm x 20mm)
- Recommended Housing : FB03



FK819

LITHIUM POLYMER (Li-Po) BATTERY CHARGER

PRODUCT DESCRIPTION

The reduced weight of the Li-poly cell makes them ideal for Radio Controlled Model Aircraft and portable appliances. The FK819 has been designed to charge Li-Po without overcharge by limiting the applied voltage to no more than 4.235 V per cell used in a series combination. This now means that enthusiasts can now recharge their model aircraft batteries in the field from a car accessory plug or other 12v-15V source. The 819 features an efficient switch-mode circuit, auto cut off at charge point, 1 or 2 cell charging and reverse-polarity protection.

- Power Supply : 12-15VDC @ more than 600mA.
- Charge Current : 400mA or 600mA (selectable).
- Battery Capacity : 1 or 2 cells.
- LED charge indication.
- Automatic charge cut-off circuit when battery is full.
- PCB Dimensions : 3.73" x 2.44" x 0.8" (95mm x 62mm x 20mm)
- Recommended Housing : FB04



FK820

VOLTAGE BOOSTER 12V TO 15-24V

PRODUCT DESCRIPTION

Most industrial control and monitoring systems are powered by 24VDC systems. However, battery backing up such systems requires complex battery charging and configuration. On the other hand, 12VDC battery back-up systems are low cost, easily maintained and are readily available. The compact, economical FK820 is an ideal bridge between the two systems and means that 24V systems can be powered from a 12V supply. Furthermore, voltages ranging from 15V, 18V, 19V, 20V, 22V or 24V at 3Amps may be selected. Applications include industrial controls, monitoring systems and distributed power networks.

- Power Supply : 12VDC @ more than 10A.
- Output voltage : 15V, 18V, 19V, 20V, 22V or 24V (selectable)
- Output Current : max. 3A.
- LED operation indication.
- Power supply polarity protected.
- PCB Dimensions : 3.36" x 2.56" x 0.8" (85.34mm x 65mm x 20mm)
- Recommended Housing : FB04



FK821

DC BOOST CONVERTER 3.3-5V. TO 12V. 100mA

PRODUCT DESCRIPTION

A boost converter (step-up converter) is a DC-to DC power converter with an output voltage greater than its input voltage. DC to DC converters are important in portable electronic devices such as cellular phones and laptop computers, which are supplied with power from batteries primarily.

- Power Supply : 3.3-5VDC, not less than 750mA.
- Output voltage : 12-13.8VDC (adjustable by VR1).
- Matrix of input & output parameter :
- input 5VDC./ 300mA. Output 12VDC./ 100mA.(max.)
- input 3.3VDC./ 660mA. Output 12VDC./ 50mA.(max.)
- Max. output current : 100mA.
- Switching frequency : 43kHz.
- Can be adjusted the output voltage.
- Status indicator with LED.
- IC board dimension : 1.83 in. x 1.22 in.
- Recommended Housing : FB29



FK822

1A. RECTIFIER

PRODUCT DESCRIPTION

This circuit will convert alternating current (AC), which periodically reverses direction, to direct current (DC), which flows in only one direction.

- Transformer : 3-24VAC, 1A.
- Maximum load : 1A. max.
- LED's status indicator.
- IC board dimension : 2.46 in x 0.91 in.
- Recommended Housing : FB18



FK823

DC PWM MOTOR SPEED CONTROL 12-50V. 5A

PRODUCT DESCRIPTION

This is a speed control circuit for a DC motor. Not only the speed of the motor can be controlled but the frequency also adjustable. (due to the application of Plus Width Modulation technique)

- Power supply : 12-50VDC. (jumper selection).
- Load voltage : 12-50VDC./ 5A. max.
- Motor speed (PWM) can be adjusted from 0% to 100%.
- Can be adjusted frequency 3 ranges (jumper selection) : Frequency range from 50Hz-1kHz., Frequency range from 240Hz- 13.84kHz., Frequency range from 1.9kHz-100kHz.
- IC board dimension : 3.01 in x 1.83 in.
- Recommended Housing : FB04



FK824

DC 24V TO 12V 300mA STEP-DOWN CONVERTER

PRODUCT DESCRIPTION

This step-down converter is a high performance switching regulator circuit. It also loses the input power less than other voltage reduction circuits. It is suitable for supplying power to the small circuits with currents up to 300mA.

- Input supply 24VDC to Output 5-12VDC
- Input supply 12VDC to Output 3-6VDC
- Output current : 300mA max.
- LED's input voltage status indicator.
- Can be adjusted the output voltage.
- IC board dimension : 2.02 in x 1.01 in
- Recommended Housing : FB03



FK825

12V 1A DC UPS

PRODUCT DESCRIPTION

This circuit is suitable for use with small electrical equipment. Using 12VDC and up to 1A., such as; security circuit, clock circuit and small water pump etc. Built in the charging system and cut-off system from load, when low battery voltage, for protect battery damage.

- Input supply 12VDC
- Output current : 1A max.
- Charging battery type : sealed lead-acid battery 12V 5-10A.
- Maximum charging current : 400mA.
- LED's input and output voltage status indicator.
- Disconnect the battery from load when the voltage of battery is lower than 10V.
- IC board dimension : 2.48 in x 2.59 in
- Recommended Housing : FB04



FK826

ATX 0-11V POWER SUPPLY ADAPTER BOARD

PRODUCT DESCRIPTION

This circuit is used to control the output voltage from 0-11VDC, 3 Amps at the input voltage of ATX computer power supply. In addition, the circuit also can be connected to a 24VDC input voltage to adjust the output voltage from 0-22VDC. This circuit uses IC as a controller for voltage and current. Makes the circuit can work with better performance.

- Power supply : 12/24VDC 3A. or above.
- At 12VDC input power, can adjust the output voltage 0-11VDC.
- At 12VDC input power, can adjust the output voltage 0-11VDC and at the maximum current, can adjust the output voltage 0-9VDC.
- At 24VDC input power, can adjust the output voltage 0-22VDC.
- Use the VOLTAGE REGULATOR IC as the controller.

Series 9

Generally Electronic Project

This is an interesting and varied range of devices which covers test and measurement, signal sources and environmental sensors. Teachers are presented with a wide array of economical, practical and easily constructed projects suited to science, environmental, and electronic technology





FK901

ELECTRONIC SHOCK GENERATOR (LOW POWER)

PRODUCT DESCRIPTION

This simple circuit converts 9VDC into a high frequency, high voltage output as found in most "Shocko" games such as Electric Shock Roulette or Wrestling Games. Touching the two outputs will give a tingling but safe shock due to the high circuit impedance. In class situations, students will use the following circuit elements. Multivibrator, current amplifier and a transformer used in low to high turns ratio mode.

- Power Supply : 9VDC @ 5mA max.
- PCB Dimensions : 2.33" x 1.20" x 0.8" (59.18mm x 30.48mm x 22.3mm)
- Recommended Housing : FB08



FK902

WATER LEVEL INDICATOR 3 LEVEL

PRODUCT DESCRIPTION

Here is an ideal project for students in areas of low rainfall, or away from town water supplies. This easily-constructed indicator shows three levels of water in a vessel or pool using red, amber and green LEDs. The FK902 demonstrates the principle of water conductivity and shows how, by using a High and Low probes and simple logic, 3 water levels may be displayed.

- Power : 9VDC @ 25mA max.
- PCB Dimensions : 1.24" x 1.74" x 0.6" (31.5mm x 44.2mm x 15mm)
- Recommended Housing : FB03



FK903

TWO TONE SIGNAL GENERATOR

PRODUCT DESCRIPTION

Often, in testing continuity or audio circuit function, where resistance measurement is not appropriate, an audio signal can be injected and picked up by the amplifier or radio under test or by monitoring the output using an amplifier and earpiece. The FK903 features two fixed output tones 500Hz and 1000Hz which are easily recognized against a background of other signals.

- Power Supply : 3VDC @ 1mA max.
- Output Frequency : 500Hz and 1,000Hz
- Signal Level : 2,600mA max.
- PCB Dimensions : 1.59" x 1.59" x 0.6" (40.4mm x 40.6mm x 15mm)
- Recommended Housing : FB03



FK904

RAIN ALARM

PRODUCT DESCRIPTION

Here is a very easily constructed and economical class project that demonstrates the conductivity of raindrops in a very practical way. Water falling onto the conductive strips on the PCB sets off an oscillator that then drives a speaker and an LED. Students will build something practical to alert parents to bring in the washing or close the windows in case of rain.

- Power Supply : 9VDC @ 150mA max.
- PCB Dimensions : 2.17" x 1.23" x 0.6" (55.1mm x 31.2mm x 15mm)
- Recommended Housing : FB03



FK907

IN CIRCUIT TRANSISTOR CHECKER

PRODUCT DESCRIPTION

There are times when removal of a transistor from a PCB to check its functionality is not practical. The FK907 transistor checker can examine both NPN and PNP transistors for basic operation whilst still in the PCB. Two on-board LEDs are used to identify the transistor type and also whether, or not, it is functional.

- Power Supply : 9VDC @ 85mA max.
- PCB Dimensions : 2.57" x 1.21" x 0.6" (62.28mm x 30.7mm x 15mm)
- Recommended Housing : FB03



FK908

SOIL MOISTURE INDICATOR

PRODUCT DESCRIPTION

This device measures the soil's conductivity as an indication of water content. The result is displayed in four levels using green, amber and red LED indicators. The fewer the LEDs displayed, drier the soil. Conversely, the higher of moisture content, the more LEDs will turn on. Students may also discuss other factors that affect soil conductivity.

- Power Supply : 9VDC @ 20mA max.
- Moisture Content (Conductivity) : 4 levels.
- PCB Dimensions : 1.59" x 0.84" x 0.6" (40.4mm x 21.3mm x 15mm)
- Recommended Housing : FB01



FK909

CONTINUITY METER

PRODUCT DESCRIPTION

The FK909 gives a rapid and audible indication of resistances in home appliances and industrial wiring between 1 ohm and 500 KOhm. The circuit resistance forms part of an oscillator circuit which level and frequency is inversely proportional to the circuit resistance. At low resistance the both volume and audio frequency coming from the in-built speaker will be high. At higher resistances both volume and audio frequency will be lower.

- Power Supply : 9VDC @ 150mA max.
- PCB Dimensions : 1.16" x 1.36" x 0.6" (29.46mm x 35.4mm x 15mm)
- Recommended Housing : FB03



FK910

WATER SENSOR ALARM

PRODUCT DESCRIPTION

This water sensor alarm will detect and alert people to the presence of spills, leakages and overflows in domestic, commercial and retail situations. For example, refrigerator malfunction leaking water onto the floor of supermarkets, washing machine overflows at home and the presence of water on the floor of storage areas are typical applications. This kit comes complete with loudspeaker.

- Power Supply : 9VDC @ 30mA max.
- PCB Dimensions : 1.59" x 1.07" x 0.6" (40.4mm x 27.17mm x 15mm)
- Recommended Housing : FB03



FK911

REFRIGERATOR DOOR-OPEN ALERT

PRODUCT DESCRIPTION

Accidentally leaving a refrigerator or cool room door open can be costly in terms of energy but even more expensive if a compressor motor should fail due to overheating. Losses arising from spoiled or unsalable stock add to the financial burden of such an accident. This simple circuit monitors the refrigerator door light and sounds a warning if it is on too long.

- Power Supply : 9-12VDC @ 20-25mA max.
- Alarm Delay : Adjustable from 5-50 seconds.
- PCB Dimensions : 2.22" x 1.33" x 0.6" (56.4mm x 33.8 mm x 15mm)
- Recommended Housing : FB03



FK912

SIMPLE LIGHT (LUX) METER

PRODUCT DESCRIPTION

This circuit uses a photo-transistor as the light measurement element. A transistor amplifier drives an array of 5 LEDs in proportion to the light intensity received. If measurement relative to background conditions is required, an on-board trimmer potentiometer is available to compensate for ambience.

- Power Supply : 9VDC @ 25mA max.
- PCB Dimensions : 1.92" x 1.16" x 0.6" (48.8mm x 29.5 mm x 15mm)
- Recommended Housing : FB03



FK914

TIMER ALARM 1-240 MIN

PRODUCT DESCRIPTION

The FK914 features a single long-term timer IC that, through a transistor amplifier/ tone generator, drives a loudspeaker to indicate the end of a process or time period.

- Power Supply : 9VDC @ 23mA.(working), 2mA.(stand by)
- Time Range : 22 sec. - 4hours (Switch selectable)
- PCB Dimensions : 2.43" x 1.53" x 0.6" (61.7mm x 38.9mm x 15mm)
- Recommended Housing : FB03



FK915

LOW BATTERY ALARM (FOR 12V)

PRODUCT DESCRIPTION

This circuit uses a photo-transistor as the light measurement element. A transistor amplifier drives an array of 5 LEDs in proportion to the light intensity received. If measurement relative to background conditions is required, an on-board trimmer potentiometer is available to compensate for ambience.

- Power Supply : 9VDC @ 25mA max.
- PCB Dimensions : 1.92" x 1.16" x 0.6" (48.8mm x 29.5 mm x 15mm)
- Recommended Housing : FB01



FK917

WHISPER AMPLIFIER

PRODUCT DESCRIPTION

Pick up the tiniest of sounds or whispered conversations with this miniature, high-gain amplifier and earphone set. The FK917 is easy to build and is fitted with an on-board condenser microphone. The amplifier gain is trimmer adjustable.

- Power Supply : 3VDC @ 40mA max.
- PCB Dimensions : 2.10" x 1.32" x 0.6" (53.3mm x 33.53mm x 15mm)
- Recommended Housing : FB03



FK918

MOSQUITO REPELLER

PRODUCT DESCRIPTION

This gadget works on the notion that, by sending out an ultrasonic sound, close to the frequency of a mosquito's wing motion, the insect will perceive the beat frequency to be a trap. Then avoids the area of the signal. The frequency characteristics of mosquitoes may vary across species and regions necessitating adjustment of the sound source. The FK918 uses a piezo transmitter to send out an ultrasonic signal which is adjustable in the 10-30KHz frequency range.

- Power Supply : 3VDC @ 20mA max.
- PCB Dimensions:1.60" x 1.39" x 0.6" (40.64mm x 35.3mm x 15mm)
- Recommended Housing : FB03



FK919

METAL DETECTOR PROJECT

PRODUCT DESCRIPTION

This circuit is a practical demonstration of the principles used in metal detecting equipment used by the military, police and security companies when searching for weapons. The same principle is used to locate embedded wires before drilling into walls, or to locate buried treasure! The FK919 will detect both ferrous metals such as iron and steel, and non ferrous metals such as copper, bronze, aluminum. The resonance of the coils is adjustable to optimize performance for differing locations and search criteria.

- Power Supply : 9VDC @ 40mA max. (working)
- Sensitivity : adjustable by potentiometer.
- Detection Range : 10mm max.
- Dimensions : 3.01" x 1.71" x 1.5" (76.5mm x 43.43mm x 38mm)
- Recommended Housing : FB04



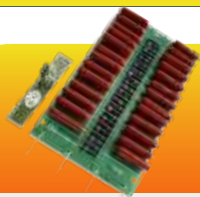
FK920

ANNOUNCER CHIME

PRODUCT DESCRIPTION

The electronic "Ding - Dong" chime signal, produced by the FK920, is inserted into the public address system just prior to the announcer's message when the microphone switch is first turned on.

- Power Supply : 9VDC @ 15mA max. (working)
- PCB Dimensions : 1.98" x 1.32" x 0.6" (50.3mm x 33.53mm x 15mm)
- Recommended Housing : FB03



FK921

AIR IONIZER 220VAC

PRODUCT DESCRIPTION

Air ionizers, that emit negative ions, are installed in air-conditioned areas to freshen the air by neutralizing the build-up of positive ions and by precipitating particulates such as smoke and dust.

- Power Supply : 220VAC
- PCB Dimensions : 4.89" x 2.78" x 0.6" (124.2mm x 70.6mm x 15mm)
- Recommended Housing : FB10



FK924

DIGITAL DC VOLTMETER

PRODUCT DESCRIPTION

This compact meter project uses a Large Scale Integrated circuit (LSI) to minimize the component count and assembly complexity. The FK 924 is scaled for the range 0-1000 VDC which is displayed on 4 Digit LED readout.

- Power Supply : 7-15VDC @ 120mA max. @ 12VDC
- PCB Dimensions : 2.66" x 2.70" x 0.6" (67.56mm x 68.58mm x 15mm) (main board) 2.66" x 1.01" x 0.6" (67.56mm x 25.65mm x 15mm) (display board)
- Recommended Housing : FB06



FK925

DIGITAL AC VOLTMETER

PRODUCT DESCRIPTION

This compact meter project uses a Large Scale Integrated circuit (LSI) to minimize the component count and assembly complexity. The FK 925 is scaled for the range 0-500 VDC which is displayed on 4 Digit LED readout.

- Power Supply : 7-15VDC @ 120mA max. @ 12VDC
- PCB Dimensions : 2.66" x 2.70" x 0.6" (67.56 mm x 68.58mm x 15mm) (main board) 2.66" x 1.01" x 0.6" (67.56mm x 25.65mm x 15mm) (display board)
- Recommended Housing : FB06



FK926

DIGITAL "UP" COUNTER 2 DIGIT

PRODUCT DESCRIPTION

The FK 926 is an easily assembled counter module designed to from 0 to 99. At the 99-00 transition, a carry pulse is available to drive a second or third FK926 module for counts of 9999 and beyond.

- Power Supply : 6-12VDC @ 150mA max. @ 12VDC
- Display : 2 digits (0.56" 7-segment LED)
- PCB Dimensions : 2.85" x 3.05" x 0.6"
- Recommended Housing : FB04



FK927

MUSCLE MASSAGE UNIT 9 VOLT

PRODUCT DESCRIPTION

This electro-massage device is used to relieve tight muscles and joint pain by the application of low energy, by stimulating voltages to the affected tissue through moistened pads placed on the skin. Both the intensity and the frequency of the pulses may be adjusted via two spindle pots, making the FK927 suitable for mounting into fixed and portable equipment.

- Power Supply : 9VDC @ 4mA max.
- PCB Dimensions : 2.31" x 1.43" x 0.8" (68.7mm x 36.3mm x 22mm)
- Recommended Housing : FB03



FK929

RAT AND COCKROACH BANISHER

PRODUCT DESCRIPTION

Ultrasonic sounds are believed to inhibit rat and cockroach infestations. The FK929 produces a penetrating signal of 10-33kHz which it disperses through an efficient piezo loudspeaker which is included in the kit.

- Power Supply : 9VDC @ 48mA max.
- Frequency : Adjustable over the range 10kHz-33kHz
- PCB Dimensions : 2.11" x 1.66" x 0.8" (53.6mm x 42.2mm x 22mm)
- Recommended Housing : FB01



FK930

HUMAN TO ROBOT VOICE CHANGER

PRODUCT DESCRIPTION

Sound like a "Dalek" or a "Darth Vader" at your next party, or make up a sound of your own. The FK930 converts your voice into something scary and unrecognizable - great fun at any time. This project includes a speaker.

- Power Supply : 9VDC @ 100mA max.
- PCB Dimensions : 1.88" x 3.07" x 0.6" (47.8mm x 77mm x 15mm)
- Recommended Housing : FB04



FK933

INFRARED REMOTE CHECKER

PRODUCT DESCRIPTION

Point your Remote Infrared appliance or TV controller at the IR sensor on the FK933. If the IR transmitter is working it will be acknowledged by a red LED on the FK933.

- Power Supply : 3-5VDC @ 500mA max (3VDC)
- PCB Dimensions: 1.61" x 0.89" x 0.6" (41mm x 22.6mm x 15mm)
- Recommended Housing : FB17



FK934

THERMOSTAT 0°C TO 100°C

PRODUCT DESCRIPTION

Control heaters and coolers to within +/-28C of the setting using the FK934. This easily built controller utilizes the constant current IC, LM335Z, for consistency and accuracy.

- Power Supply : 12VDC @ 50mA max.
- Set Point Range : Potentiometer Adjustment 08C - 1008C (scaled post assembly)
- PCB Dimensions : 3.68" x 1.99" x 0.8" (93.5mm x 50mm x 22mm)
- Recommended Housing : FB03,FB04



FK935

BODY TEMPERATURE MONITOR

PRODUCT DESCRIPTION

The FK935 is a useful, low-cost circuit that is set to a threshold of 38oC which, if exceeded, will sound an alarm. Three LEDs Green, Amber and Red are used to indicate the relative comfort of the monitored invalid or child. In a classroom situation, this device will prompt discussion about how electronics may be applied other health monitoring situations.

- Power Supply : 9VDC @ 38mA max.
- PCB Dimensions : 3.01" x 1.28" x 0.6" (76.5mm x 32.5mm x 15mm)
- Recommended Housing : FB02



FK936

DIGITAL UP-DOWN COUNTER 4 DIGIT

PRODUCT DESCRIPTION

A microprocessor programmed as an up-down counter and display driver, simplifies the construction of this useful device. The FK936 can also be user-programmed to give an output at any preset number programmed into counter. This feature can also be used to reset the counter to zero in a piece-part counting application. Use the FK936 with switched, optical, magnetic, sonic, inductive or capacitive signal inputs to monitor and control production, traffic or flow.

- Power Supply : 12VDC @ 76mA max.
- Count maximum : 0-9,999 (expandable by adding extra FK936)
- Count Functions : UP, DOWN, PRESET COUNT.
- PCB Dimensions : 2.70" x 3.14" x 0.6" (68.6mm x 79.8mm x 15mm)
- Recommended Housing : FB04



FK938

MORSE CODE SOUNDER WITH SPEAKER

PRODUCT DESCRIPTION

Here is an ideal unit for radio clubs and scouting groups to practice sending and interpreting messages using the historic "Morse Code". This kit includes a speaker and tact switch. keyer.

- Power Supply : 9VDC @ 35mA max.
- PCB Dimensions : 1.95" x 1.08" x 0.6" (68.6mm x 80mm x 15mm)
- Recommended Housing : FB17



FK939

12V BATTERY CHECKER 8 LED

PRODUCT DESCRIPTION

This checker is used for measuring the voltage of a 12V battery whilst under load conditions. In applications where fans, pumps and lights are powered by battery or are battery backed up, the FK939 gives a continuous readout of battery condition through its 8 LED display. This assists in detecting when batteries are discharging to critically low levels so that operators can take action to prevent battery damage from over-discharge. The FK939 incorporates short circuit protection and trimmer adjustment for each displayed voltage level.

- Power Supply : 12V @ 56mA max.
- PCB Dimensions : 3.79" x 2.47" x 0.6" (96.3mm x 62.7mm x 15mm)
- Display : 8 LEDs
- Recommended Housing : FB13



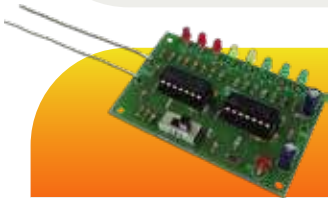
FK940

LIE DETECTOR

PRODUCT DESCRIPTION

This one is strictly for fun!! The FK940 uses the principle of reduced skin resistance due to elevated moisture levels. The FK940's two conductive pads detect the drop in the player's figure tip resistance if they are nervous or under pressure when telling a lie or withholding the truth. An array of four LEDs indicates the relative "stress" that the subject is under. Not to be taken seriously!!!

- Power Supply : 9VDC @ 32mA max.
- Sensitivity : Adjustable by potentiometer
- PCB Dimensions : 3.03"x1.75"x 0.6"
- Recommended Housing : FB03



FK944

WATER QUALITY CHECKER

PRODUCT DESCRIPTION

The FK944 works on the principle that the resistance of water reduces in accordance with the percentage of salt and other contaminants. The circuit displays the relative conductivity of a water sample or stream on an 8 point LED array. Here the green LEDs suggest a lower contaminate level than that displayed by the red LEDs. The FK944 is ideal for class discussion about the environment and for examining the salt levels in streams and lakes during school field trips.

- Power Supply : 9VDC @ 8mA. (Stand by), and 21mA. (working)
- Level Indication : 8 LEDs.
- Sensitivity : 3 Switch selected levels.
- PCB Dimensions : 2.78" x 1.79" x 0.6" (70.6mm x 45.5mm x 15mm)
- Recommended Housing : FB03



FK945

DIGITAL TEMPERATURE CONTROLLER

PRODUCT DESCRIPTION

A programmed microprocessor and a precise digital temperature probe element are used by the FK945 to indicate and control temperature. A relay output controls heating and cooling loads when a user defined preset temperature threshold is exceeded. Applications for the FK945 include automatic fan control, over or under temperature alarm in broiler sheds and temperature control in hatching machines.

- Power Supply : 12VDC @ 70mA.
- Indication and Set Point range : 0oC - 99oC
- Operation : Output can be used to connect or disconnect heating or cooling equipment when the measured exceeds the bounds of a preset temperature
- Maximum Relay Contact Loading : 1A. 220-240VAC
- PCB Dimensions : 2.21"x 3.43" x 0.8" (56.1mm x 87.12mm x 22mm)
- Recommended Housing : FB03



FK946

NON-CONTACT AC VOLTAGE DETECTOR

PRODUCT DESCRIPTION

Before cutting or drilling into a wall use the FK946 to check if there is any embedded live AC supply wires. This non-contact voltage detector circuit will detect if there is an AC voltage present up to a distance of 1cm. A bright red LED will blink or light up indicate the proximity of live wires.

- Power Supply : 9VDC @ 4mA(working), 1.2mA(standby)
- Detection Distance : 1 cm.
- Indicator : Red LED
- PCB Dimensions : 2.3" x 1.29" x 0.7" (58.4mm x 32.8mm x 17.8mm)
- Recommended Housing : FB02



FK947

AUTOMATIC SPRINKLER CONTROL

PRODUCT DESCRIPTION

This circuit is used to control the water pump to water plant or flower automatically. It measures the soil moisture in 3 levels with delay time.

- Power Supply : 12VDC @ 1mA max.
- Consumption : 46mA(working) and 25mA(standby).
- With 3 LEDs for showing 3 different levels of soil moisture.
- Delay time : 4-240 seconds.
- PCB Dimensions : 2.31" x 1.29"
- Recommended Housing : FB04



FK948

DIGITAL CLOCK

PRODUCT DESCRIPTION

This circuit uses IC FUJISU MB95F264 which is a new IC generation, small size, and provides memory upto 20 kilobytes. The circuit is suitable to utilize as a current time showing or apply with other application by re-programming an IC.

- Power supply : 12VDC. 90mA. max.
- Display in 24-hour format.
- There are two display formats ; Hour:Minute or Minute:Second operation.
- There is a connecting point with FUJISU programmer MB2146-08-E.
- PCB Dimension : 2.35 in x 2.94 inches.
- Recommended Housing : FB04



FK949

DIGITAL CLOCK & TIMER

PRODUCT DESCRIPTION

This circuit is used to show the current time and on-off timer. The circuit uses IC FUJISU MB95F264 which is a new IC generation, small size, and provided memory upto 20 kilobytes. In addition, to apply with other application, you can re-program an IC.

- Power supply : 12VDC. 90mA. max.
- Display in 24-hour format.
- There are two display formats; Hour : Minute or Minute : Second operation.
- Can be set 20 programs maximum for on-off timing.
- There is a connecting point with FUJISU programmer MB2146-08-E.
- PCB Dimension : 2.35 in x 3.75 inches.
- Recommended Housing : FB04



FK950

NON-CONTACT ALARM AC VOLTAGE DETECTOR

PRODUCT DESCRIPTION

This circuit is an alarm ammeter that can check whether the electric wire is connected to an AC power supply line. Just observe the display of an LED by placing the alarm ammeter close to a loaded electric wire if the LED blinks and/or simultaneously turns on with beeps meaning there is an AC power on the supply line.

- Power supply : 9VDC.
- Electric current consumption : 25mA.
- Its detection distance is about 1 cm. from the electric wire.
- It is equipped with an LED display and a loudspeaker for detection.
- PCB Dimension : 3.44 in x 1.23 inches.
- Recommended Housing : FB02



FK951

TEMPERATURE CONTROLLER -25 TO 100°C

PRODUCT DESCRIPTION

A programmed microprocessor and a precise digital temperature probe element are used by the FK951 to indicate and control temperature. A relay output controls heating and cooling loads when a user defined preset temperature threshold is exceeded. Applications for the FK951 include automatic fan control, over or under temperature alarm in broiler sheds and temperature control in hatching machines.

- Power supply : 12VDC./max. 100mA.
- Can be set to detect the temperature from -25 C to 100 C.
- Cut-off circuit when the actual temperature is lower or higher than the set temperature.
- Maximum Contact : 1A./220VAC.
- Maximum delay time of operation : 9.59 minutes.
- There is a second connector for another temperature sensor (not including in the kit).
- IC board dimension : 2.35 in x 3.73 in.
- Recommended Housing : FB04



FK952

DIGITAL TIMER OPERATION 1 SECOND - 9999 HOURS

PRODUCT DESCRIPTION

This unit can be used to provide timing for many of activities as well as the generation of start & stop action on all electrical devices.

- Power supply : 12VDC./ max. 90mA.
- Time can be set to start or stop the operation of the circuit.
- Timer can be set from 1 second to 9999.59.59 hours.
- Loading : 1A.
- PCB dimensions : 2.35x3.85 inches.
- Recommended Housing : FB04



FK953

PROGRAMMABLE TIMER (4 CH. 40 PROGRAMMABLE)

PRODUCT DESCRIPTION

Here is a digital Time of Day Clock and Programmable Preset time in one economical package. There are 40 sets of on-off action that can be programmed to control 4 electrical devices at the same time. Programs may be one-time, daily repeat or set to omit operation on Sundays or Saturdays and Sundays. Correct time is maintained during blackouts by a back-up battery feature. The MXA114 will find application in schools, sports clubs and industry to indicate start/stop times for lessons or work periods, lunch times and rest breaks. It can also be used to control public and shop lighting and advertising signs.

- Power supply : 12VDC./max. 180mA.
- Back-up battery current consumption : 700mA.
- Max. load for each relay : 300W at 220VAC.
- Total number of programmable events for on-off actions : 40.
- The operation can be divided into 11 modes.
- In the free mode, the on-off action can be programmed to happen within 1 week period.
- When out off electric, the time is walking but the display isn't showing.
- PCB dimensions : 1.16 in x 2.35 in. (display board), 4.55 in x 3.14 in. (control board)
- Recommended Housing : FB05



FK954

80 SECOND 4 MESSAGE SOUND RECORDER

PRODUCT DESCRIPTION

FK954's voice recorder IC can record and playback messages or music passages over 1 million cycles and store a message for an estimated 100 years, corruption free and without a back-up power supply. An on-board microphone is included.

- Power supply : 5-6VDC.
- Number of the recorded messages : 1 or 4 messages.
- Electric current consumption : 50mA (max.)
- Can be select the input sources.
- Recording time : 40-80 sec.
- IC board dimension : 2.94 in x 2.08 inches.
- Recommended Housing : FB28



FK955

80 SECOND VOICE DONATION WITH 8W AMPLIFIER

PRODUCT DESCRIPTION

This circuit is a Digital Audio Player which can be activated by the passing of the object through the sensor. This circuit can be incorporated with the donation box to give out some gratitude message or music etc., every time the donation was granted through the sensor.

- Power supply : 12VDC.
- At standby stage the circuit consumes about 15mA and at working stage about 250mA. at speaker 8-ohm 0.25W.
- Time record : max. 80 seconds.
- Select record signal from MIC or the external signal.
- Build-in on-board audio power amplifier.
- PCB dimensions of RX sensor unit : 1.41 in x 2.00 in.
- PCB dimensions of TX sensor unit : 0.44 in x 2.00 in.
- PCB dimensions of voice recorder unit : 2.00 in x 3.49 in.
- Recommended Housing : FB04



FK956

4 DIGIT UP-DOWN COUNTER WITH MEMORY

PRODUCT DESCRIPTION

A microprocessor programmed as an up-down counter and display driver, simplifies the construction of this useful device. The user can be setting the operation of circuit to count up or count down. The circuit has backup the count value automatically.

- Power supply : 12VDC.
- Electric current consumption : 40mA (max.)
- Count maximum : 0-9,999 (can be add the other board for adding digit.)
- Can be set the circuit for count up or count down.
- There is saving the count value automatically.
- PCB dimensions : 2.73 in x 4.13 inches.
- Recommended Housing : FB04



FK957

TEMPERATURE AND HUMIDITY CONTROLLER WITH SENSOR

PRODUCT DESCRIPTION

This temperature and humidity controller can be applied to many operation following the user such as Temperature and Humidity control room, Oven, Mushroom Houses etc.

- Power supply : 12VDC.
- Electric current consumption : 150mA (max.)
- Display range : Temperature 0-50°C ; Humidity 20-90% RH
- Measurement accuracy : Temperature $\pm 2^{\circ}\text{C}$, Humidity $\pm 10-15\%$ RH
- Can be select the display showing between temperature and humidity.
- Can be set the upper and the lower operation of temperature and humidity.
- Two control outputs, RELAY1 for Humidity and RELAY2 for Temperature.
- Control output : Two relay output, contact capacity 1A/250VAC.
- Can be used with DHT11 (included), DHT22 or AM2302 (excluded).
- PCB dimensions : 2.73 in x 4.37 inches.
- Recommended Housing : FB04



FK958

2-CHANNEL 20-PROGRAM DIGITAL CLOCK

PRODUCT DESCRIPTION

This programmable clock circuit has the special properties in easy programming because of the complete set of numeric keypads. It can be programmed to ON-OFF and Time Delay Off automatically. According to these properties this circuit can be used in various areas.

- Power Supply : 12 VDC @ 150 mA max.
- Programmed Steps : 20 (Max)
- 9 Working programs in the week.
- 2 Channels for electrical appliances control
- PCB Display Size : 2.10 x 2.10 inches
- PCB Dimension : 2.10 x 4.90 inches
- Recommended Housing : FB04



FK959

1 SEC-99 HOUR UP-DOWN STOPWATCH

PRODUCT DESCRIPTION

This stopwatch circuit is suitable for use in the timing of sports events. Can count up or down by selecting the operating mode. In addition, it has a large number of driving circuits which can create numbers from 1 inch to 10 inches.

- Power supply : 12VDC. @ 120mA (max.)
- Can set the function of operation for count up or count down.
- Timer can be set from 1 second to 99 hours.
- Can be connected directly up to 10" big display.
- Can be selected the showing display 2 types : hour:minute or minute:second.
- Maximum relay contact loading : 200W at 220VAC.
- PCB board dimension : 2.75 in x 4.59 in.
- Recommended Housing : FB05



FK960

4x4 KEY SWITCH 4 DISPLAY WITH DRIVER

PRODUCT DESCRIPTION

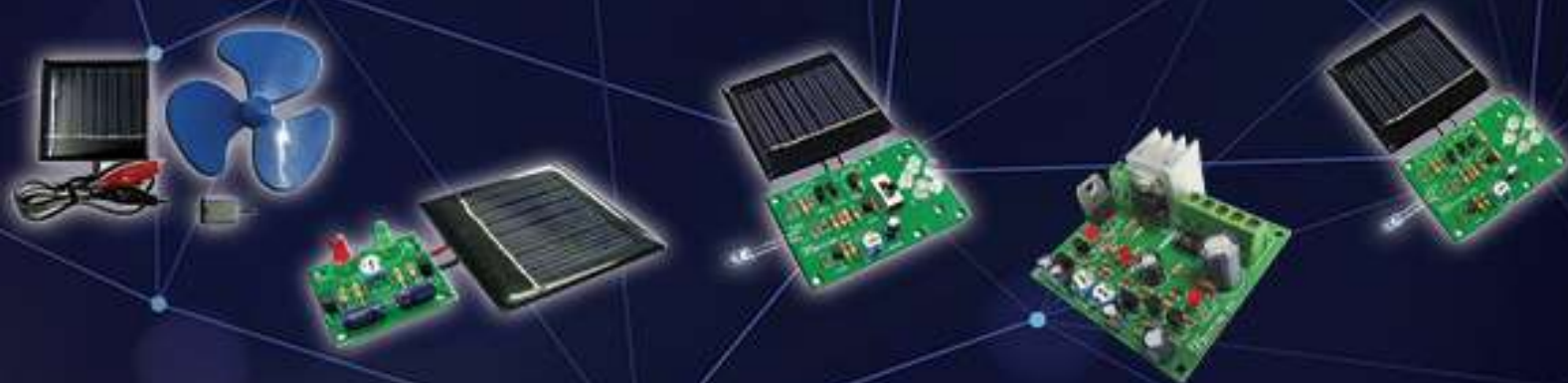
This display circuit is suitable for use in the showing the price of product such as; oil price, gold price, various purchase prices, etc. In addition, it has a large number of driving circuits which can create numbers from 1 inch to 10 inches. The circuit can also be connected. To expand the number set to be able to display multiple sets with a maximum of 9 sets.

- Power supply : 12VDC. @ 50mA (max.)
- There are up to 4 digits of display numbers (0.56 inches in height).
- Can set the position of the decimal point.
- Can be connected directly up to 10" big display.
- Can connect the control panel together. To add up to 9 sets.
- There is a system to record numerical values. Even if the power goes out the original numerical value remains.
- PCB board dimension (Control Board) : 2.74 in x 4.13 in.
- PCB board dimension (Keyboard) : 1.67 in x 2.31 in.
- Recommended Housing : FB05

SERIES 10

Solar Energy Project

Solar energy is high on the agenda for most governments and instrumentalities. As the price of photovoltaic cells drops, the more the sun will be seen as the energy source of choice. In the mean-time solar generated electricity is powering lighting, radio links and security in areas not served by the utility companies. The FK10XX is an easily implemented and understood deries of solar powered devices. The principles experienced with these projects will serve the student well in discovering the adaptability of solar energy. These units are available also as pre assemblies under the FA prefix.





FK1001

SOLAR DRIVEN FAN

PRODUCT DESCRIPTION

The FK1001 uses a silicon solar cell a device to convert sunlight energy into electrical energy to drive a fan. It is a tangible demonstration of double energy conversion from light to electricity and electricity to motive power. Further, it demonstrates substitution solar power for battery or mains derived power.

- Solar Panel Output : 4VDC 60mA.
- Solar panel dimensions : 6 x 6 cm.



FK1002

SOLAR GARDEN LIGHT 5 LED

PRODUCT DESCRIPTION

Working on the same principle as commercially available solar garden lights, the FK 1002 gives students the opportunity to build and equivalent and to relate their project to practical, alternative energy production and application. The FK1002 features a solar battery charger to charge the batteries and at dusk, it can be set to automatically turn on 5 bright LEDs to guide people along pathways at night. The FK1002 options switch also allows for the unit to be turned off or to turn the LEDs on manually as required.

- Power Supply : Solar Recharged Batteries (AA x 3pcs. - not included)
- Power Consumption : 2.5mA (stand-by in sensor mode), 80mA (working in sensor mode), 100mA. (ON mode)
- Solar Panel Output : 4VDC 60mA.
- Operation Modes : Standby - Sensor Mode - ON Powering LEDs Light Threshold
- Sensitivity : Adjusted by potentiometer.
- Solar panel dimensions : 6 x 6 cm.
- PCB Dimensions : 2.64" x 1.70" x 0.6" (67.05mm x 43.2mm x 15mm)
- Recommended Housing : FB03



FK1003

SOLAR WARNING LIGHT 5 LED

PRODUCT DESCRIPTION

The FK504 detects a sudden change in the vehicle's 12v electrical system, such as that caused by a door opening, turning on the interior light, starting the car or by wire tampering. Unless disabled by using a secret switch within 10 seconds of entry, the FK504 will initiate an alarm signal through the car's horn circuit or other warning device.

- Power Supply : 12VDC @ 50mA (working)
- Power on delay : approximately 10 seconds
- Off delay (adj.): from 10 seconds to 3 minutes
- PCB dimensions : 2.27" x 1.70" x 0.8" (57.6mm x 43.2mm x 20mm)
- Recommended Housing : FB03



FK1004

SOLAR NIGHT LIGHT 5 LED

PRODUCT DESCRIPTION

Working on the same principle as commercially available solar garden lights, the FK 1004 gives students the opportunity to build and equivalent and to relate their project to practical, alternative energy production and application. The FK1004 features a rechargeable battery charger supplied by a solar cell. This charges batteries by ambient light and at dusk, it turns on 5 bright LEDs to guide people along pathways at night.

- Power Supply : Solar Recharged Batteries (AA x 3pcs. - not included)
- Power Consumption : 2.5mA(stand-by in sensor mode), 80mA (working in sensor mode), 100mA.(ON mode).
- Solar Panel Output : 4VDC. 60mA.
- Operation Modes : Standby - Sensor Mode
- Manual control of LEDs
- Light Threshold Sensitivity : Adjusted by potentiometer.
- Solar panel dimensions : 6 x 6 cm.
- PCB Dimensions : 2.39" x 1.70" x 0.6" (67.05mm x 43.2mm x 15mm)
- Recommended Housing : FB03



FK1005

SOLAR FLASHER 2 LED

PRODUCT DESCRIPTION

Here is a low cost and quickly assembled project that is an ideal introduction to the basics of both multivibrator flasher circuits and the practical application of solar power as a substitute source of electricity. The FK1005 flasher features two alternately blinking LEDs which flash rate is potentiometer adjustable.

- Power of solar panel : 4VDC @60mA.
- Solar panel dimensions : 6 x 6 cm.
- PCB Dimensions : 1.39" x 1.27" x 0.6" (35.3mm x 30.5mm x 15mm)
- Recommended Housing : FB03



FK1006

SOLAR CHARGER CONTROLLER 5-30W

PRODUCT DESCRIPTION

This solar charge controller is suitable for using with DC electrical appliances such as bulb, etc. where there is not access by electricity or need energy conservation. It regulates the voltage and current coming from the solar panels going to the battery. Maintain peak battery power and protect battery from overcharged and over-discharged to increase battery service life.

- Battery required : 12V. 7A.
- Solar Panel required : 16-22V. 5-30W.
- Max. working current : 1.6A. @ 18V. of solar panel.
- Max. load current : 5A.
- Auto charge and cut-off power when battery is full or low.
- Cut off the circuit operation when battery voltage is less than 10V., and reconnect when the voltage rise up to 12V.
- There are the LED status; Power, Load and Charge.
- There are 2 point for connect the solar panel; has diode protect and no has the diode protect.
- IC board dimension : 2.50 x 2.67 inch.
- Recommended Housing : FB03

Serie 11 Robot Kit

This series uses the spindle driven method to reduce the cost of driving these robots over paper - smooth surfaces. All of the robots in the series feature a common plug-in interface so that the control boards may be interchanged or be substituted by student or hobbyist designs. Furthermore, by adopting the common interface, experimenters and designers have a predictable platform on which to build their own sensor and control arrays. These units are available also as pre-assemblies under the FA prefix.



(A)SPINDLE,DRIVEN, GEAR-DRIVEN, AND MICROPROCESSOR CONTROLLED ROBOTS



FK1101

LICON LIGHT SEEKING ROBOT

PRODUCT DESCRIPTION

This spindle-driven "photo-vore" (light eating) robot will start moving forward when either of its sensors detect light. It will tend to run towards the light of greatest intensity.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Light detection threshold : Trimmerpot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)



FK1102

DACON DARK CONTROL ROBOT

PRODUCT DESCRIPTION

Turn the light off and this photo-phobic (light fearing) robot will start moving forward. Shine a torch at either of its sensors and it will shy away from the source of the light at a speed proportional to the light's intensity.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA. max.
- Light detection threshold : Trimmer pot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)



FK1103

FACON SOUND FOLLOW ROBOT

PRODUCT DESCRIPTION

Whenever the FACON's condenser microphone detects a sound, the robot will move forward and continue to do so while the sound continues. It will stop a few seconds after the sound subsides.

- Power supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA. max.
- Sound detection threshold : Trimmer pot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)



FK1104

SECON SOUND START-STOP CONTROLLED ROBOT

PRODUCT DESCRIPTION

Make a sharp sound and the SECON will start moving forward, make another sound and the SECON'S in-built microphone will bring the robot to a halt. Every second sound signal will cause the robot to start and stop alternately.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA. max.
- Sound detection threshold : Trimmer pot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)



FK1105

TACON LINE FOLLOWING ROBOT

PRODUCT DESCRIPTION

The FK1105 TACON will follow a 1cm wide black line drawn on a white background. The TACON's Infrared sensors detect the black/white boundary and adjust the drive motors to restore the robot's movement to the line's centre.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA. max.
- Infrared detection Threshold : Trimmer pot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)
- Recommended Housing : FB03



FK1106

LICON GEARED-DRIVE LIGHT SEEKING ROBOT

PRODUCT DESCRIPTION

This gear driven photo-vore robot will start moving forward when either of its sensors detect light. It will tend to run towards the light of greatest intensity. Its large wheels feature tyres that grip to give the FK1106 greater traction over a range of surfaces.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA.
- Light detection threshold : Trimmer pot adjustable.
- Robot Dimensions : 5" x 4.75" x 2.75" (130mm x 125mm x 70mm)



FK1107

DACON GEARED-DRIVE DARK CONTROL ROBOT

PRODUCT DESCRIPTION

Turn the light off and this geared-drive photo-phobia robot will start moving forward. Shine a torch at either of its sensors and it will shy away from the source of the light at a speed proportional to the light's intensity. Its large wheels feature tyres that grip to give the FK1107 greater traction over a range of surfaces.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA.
- Light detection threshold : Trimmer pot adjustable.
- Robot Dimensions : 5" x 4.75" x 2.75" (130mm x 125mm x 70mm)



FK1108

TACON GEARED-DRIVE LINE FOLLOWING ROBOT

PRODUCT DESCRIPTION

The FK1108 TACON will follow a 1cm wide black line drawn on a white background. The TACON's Infra Red sensors detect the black/white boundary and adjust the drive motors to restore the robot's movement to the line's centre.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA.
- Infrared detection Threshold : Trimmer pot adjustable.
- Robot Dimensions : 5" x 4.75" x 2.75" (130mm x 125mm x 70mm)



FK1109

AVR1 SUPER SUMO ROBOTS

PRODUCT DESCRIPTION

These AVR1- powered robots are built to attack and retreat like their human counterparts. Two SUMOS move about the ring, sensing the border and retreating towards the centre. If one SUMO encounters another in its pathway it charges it in attempt to push it out of the ring. If the second SUMO is facing away from the first, when it is charged it senses the perimeter and pushes back to avoid getting ejected.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 80mA.
- Robot Dimensions : 5.35" x 4.75" x 2.7



FK1110

AVR2 OBSTACLE-AVOIDING ROBOT

PRODUCT DESCRIPTION

The FK1110 robot sets off on its way until either of its photo sensors encounters an obstacle. Its AVR2 microprocessor then directs evasive action by reversing and turning the robot until it finds its way around the object or barrier in its way.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 60mA. max.
- Infrared detection Threshold : Trimmer pot adjustable.
- Robot Dimensions : 5" x 4.75" x 2.75" (130mm x 125mm x 70mm)



FK1111

PIC1 OBSTACLE-AVOIDING ROBOT

PRODUCT DESCRIPTION

The FK1111 robot sets off on its way until either of its photo sensors encounters an obstacle. Its in-built PIC1 microprocessor then directs evasive action by reversing and turning the robot until it finds its way around the object or barrier in its way.

- Power Supply : 4 alkaline or rechargeable AA batteries (not included).
- Consumption : 80mA. max.
- Robot Dimensions : 5" x 4.75" x 2.75"



FK1112

AVR3 TREASURE FINDER ROBOT

PRODUCT DESCRIPTION

When the AVR- controlled FK1112 detects any metal in its pathway, it will stop and give three beeps to alert its user. It will continue on its way until it detects a new "lode".

- Power Supply : 4 alkaline or rechargeable AA batteries (not included).
- Consumption : 220mA. max.
- Detection Range : 0.5-1 cm. (depends upon the size and nature of the metal particle)
- Robot Dimensions : 5" x 4.75" x 2.75" (130mm x 125mm x 70mm)



FK1113

PIC SUPER SUMO ROBOT

PRODUCT DESCRIPTION

This PIC super sumo can be controlled to attack or retreat and ready for battle with opponent. This robot is using the PIC microcontroller, so the user can re-program into IC for getting new applications.

- Power Supply : 4 AA batteries (not included).
- Consumption : 80mA.
- PCB Dimensions: 2.54" x 1.18" (sensor board) 2.54" x 2.60" (control board)



FK1120

PIC SUPER SUMO ROBOT

PRODUCT DESCRIPTION

This PIC super sumo can be controlled to attack or retreat and ready for battle with opponent. This robot is using the PIC microcontroller, so the user can re-program into IC for getting new applications.

- Power Supply : 4 AA batteries (not included).
- Consumption : 80mA.
- PCB Dimensions: 2.54" x 1.18" (sensor board) 2.54" x 2.60" (control board)

(B)CONTROL BOARD



FK1101C

LICON LIGHT FOLLOWER CONTROLLER KIT

PRODUCT DESCRIPTION

Add the LICON photo-vore (light eating) function to your collection of robot "personalities" to economically expand the feature set of your motor drive chassis.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Light detection threshold : Trimmer pot adjustable.
- PCB Dimensions : 2.18" x 2.63"



FK1102C

DACON LIGHT AVOIDING CONTROLLER KIT

PRODUCT DESCRIPTION

Add the DACON photo-phobia (light fearing) function to your collection of robot "personalities" to economically expand the feature set of your motor drive chassis.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Light detection threshold : Trimmer pot adjustable.
- PCB Dimensions : 2.18" x 2.63"



FK1103C

FACON SOUND CONTROL KIT (TOGGLE)

PRODUCT DESCRIPTION

Add the FACON sound control (toggle action) function to your collection of robot "personalities" to economically expand the feature set of your motor drive chassis.

- Power supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Sound detection threshold : Trimmer Pot Adjustable.
- PCB Dimensions : 2.18" x 2.63"



FK1104C

SECON SOUND CONTROL KIT (TIMER)

PRODUCT DESCRIPTION

Add the SECON sound control (delayed stop) function to your collection of robot "personalities" to economically expand the feature set of your motor drive chassis.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Sound detection threshold : Trimmer Pot Adjustable.
- PCB Dimensions : 2.18" x 2.63"



FK1105C

TACON LINE TRACKING CONTROL KIT

PRODUCT DESCRIPTION

Add the TACON line following function to your collection of robot "personalities" to economically expand the feature set of your motor drive chassis.

- Power supply : 2 alkaline or rechargeable AA batteries (not included).
- Current Consumption : 150mA. max.
- Infrared detection threshold : Trimmer Pot Adjustable
- PCB Dimensions: 2.18" x 2.63"



FK1109C

AVR1 SUPER SUMO CONTROLLER KIT

PRODUCT DESCRIPTION

Whenever the FACON's condenser microphone detects a sound, the robot will move forward and continue to do so while the sound continues. It will stop a few seconds after the sound subsides.

- Power Supply : 4 AA batteries (not included).
- Consumption : 80mA.
- PCB Dimensions: 2.54" x 1.18" (sensor board) 2.54" x 2.60" (control board)



FK1110C

AVR2 OBSTACLE AVOIDING CONTROLLER KIT

PRODUCT DESCRIPTION

Convert other robots from the AVR series into an Obstacle Avoiding Robot using this control module developed for the FK1110. This kit works with the FK1110S two-point sensor board.

- Power Supply : 3V
- Current consumption : 60mA. @ 3V
- PCB Dimensions : 2.54" x 2.70"



FK1111C

PIC1 OBSTACLE - AVOIDING ROBOT CONTROLLER

PRODUCT DESCRIPTION

Convert other robots from the PIC series into an Obstacle Avoiding Robot using this control module developed for the FK1111. This kit works with the FK1111S three-point sensor board .

- Power Supply : 6V
- Current consumption : 15mA. @ 6VDC (unload)
- PCB Dimensions : 2.54" x 2.60"

(C)INFRARED SENSOR BOARD



FK1109S

3 POINTS INFRARED SUPER SUMO SENSOR BOARD

PRODUCT DESCRIPTION

This 3 points infrared super sumo sensor can be used with FK1109 AVR1 super sumo robot. It has 3 sets (left set, right set and center set), in set as transmitter and receiver of infrared light. The user can be used with the other application.

- Power supply : 3-6VDC.
- Data consumption : 20mA. @ 6VDC
- PCB dimensions : 2.54 in x 1.18 in.



FK1110S

2 POINTS INFRARED SENSOR BOARD

PRODUCT DESCRIPTION

The FK1110S 2-point infrared sensor board is designed to provide obstacle detection signals for the AVR2 obstacle-avoiding robot. It has 2 sets of infra-red transmitter/receiver (left and right) to detect obstacles in the robot's pathway. The FK1110S will also find application in robots requiring rear-vision detection whilst reversing, or to initiate an acceleration burst to avoid pursuing robots.

- Power Supply : 3-6VDC
- Consumption : 18mA. @ 6VDC
- PCB Dimensions : 2.54" x 1.18"



FK1111S

3-POINTS INFRARED SENSOR BOARD

PRODUCT DESCRIPTION

This 3 point infra-red sensor board is designed to provide obstacle detection signals for the PIC1 obstacle-avoiding robot FK1111. It features three sets of IR transmitter receiver (left, right and center set) and can be used to provide additional "vision" and object detection features in other robotic or automation applications.

- Power Supply : 3-6VDC
- Consumption : 20mA. @ 6VDC (unload)
- PCB Dimensions : 2.54" x 1.18"

Serie 12

Beginner Solder Kit

This series of easily-assembled kits are ideal classroom projects. New users and students will be introduced to some of the basics of electronics in a visually and aurally demonstrative way. Accompanying assembly drawings, notes and discussion points will add to the novice's learning experience and reinforce the instructors'



• • •

(A) SOLDERING KITS



FK1201

LED FLASHER 6 LED

PRODUCT DESCRIPTION

This project incorporates the following elements: Multivibrator with variable resistance frequency control, series LED configuration with current limit. The FK1201 project notes also include graphic assembly instructions and soldering techniques.

- Power Supply : 9VDC.
- Consumption : 12mA.
- Display : 3 Red LEDs and 3 Green LEDs flashing alternately.
- Flashing Rate : Adjustable by potentiometer.
- PCB Dimensions : 2.04" x 1.60"



FK1202

POLICE SIREN WITH LED FLASHER 2 LED

PRODUCT DESCRIPTION

The FK1202 incorporates the following elements: A multivibrator with variable resistance frequency control, LED configuration with current limit plus sound generation using a frequency controlled multivibrator. A speaker is provided. The FK1202 project notes also include graphic assembly instructions and soldering techniques.

- Power Supply : 9VDC
- Consumption : 38mA.
- Display : 2 LEDs.
- PCB Dimensions : 3.64" x 1.60"

(B) SOLDERLESS KITS



FK1221

4 LED FLASHER

PRODUCT DESCRIPTION

This kit is an Astable Multi vibration oscillator principle which can generate frequency. the FK1221 is a flashing light circuit of 4 LEDs which alternately turns 2 sets of 4 LEDs ON and OFF. In addition, the flasher rate is able to be adjusted by trimmer potentiometer.

- Power Supply : 9VDC
- Current Consumption : 18mA.
- PCB Dimensions : 2 x 1.5 in.



FK1222

3 LED DUAL COLOR FLASHER

PRODUCT DESCRIPTION

The FK1105 TACON will follow a 1cm wide black line drawn on a white background. The TACON's Infrared sensors detect the black/white boundary and adjust the drive motors to restore the robot's movement to the line's centre.

- Power Supply : 2 alkaline or rechargeable AA batteries (not included).
- Consumption : 150mA. max.
- Infrared detection Threshold : Trimmer pot adjustable.
- Robot Dimensions : 3.8" x 2.95" x 1.75" (100mm x 75mm x 45mm)



FK1223

7 LED CIRCULAR CHASING LIGHT

PRODUCT DESCRIPTION

This kit is an Astable Multi vibration oscillator principle which can generate frequency by 3 transistors. the FK1223 controls 6 LEDs' running in a couple of LEDs in a circular pattern correlatively, with remaining an LED light up in the center without generating frequency.

- Power Supply : 9VDC
- Current Consumption : 47mA.
- PCB Dimensions : 2.2 x 2.5 in.



FK1224

2 LED NIGHT LIGHT

PRODUCT DESCRIPTION

This kit is designed on the principle of ambient light falling on the light sensitive junction of the photo transistor. the FK1224 is able to automatically turn ON the light in night time. On the other hand, it can turn OFF the light in day time. The 2 LEDs work when the circuit turns ON and OFF in sequence. In addition, the sensitivity value of the photo transistor is able to be adjusted by trimmer potentiometer 500K.

- Power Supply : 9VDC
- Current Consumption : 15mA.
- PCB Dimensions : 2 x 1.5 in.



FK1225

LIGHT ACTIVATED MELODY KIT

PRODUCT DESCRIPTION

This kit is designed on the principle of ambient light falling on the light sensitive junction of the photo transistor. The FK1225 is able to automatically turn ON the music in day time. On the other hand, it can turn OFF the music in night time in sequence. In addition, the sensitivity value of the photo transistor is able to be adjusted by trimmer potentiometer.

- Power Supply : 3VDC
- Standby Current Consumption : 1.8mA.
- Max Current Consumption : 135mA.
- PCB Dimensions : 2 x 1.5 in.



FK1226

ELECTRONIC SIREN WITH LED

PRODUCT DESCRIPTION

This kit is designed on the principle of 2 transistors which can generate frequency when pressing and holding the switch for turning ON this circuit, then it gives out a demanding of single siren sound through its included speaker, and LED light up, making it suitable for alarm-system device.

- Power Supply : 9VDC
- Current Consumption : 45mA.
- PCB Dimensions : 2 x 1.5 in.



FK1227

HAPPY BIRTHDAY MELODY KIT

PRODUCT DESCRIPTION

This kit can generate a melody by IC No.M66, and the transistor oscillator provides frequency for driving the speaker device and then the LED is turned ON.

- Power Supply : 9VDC
- Current Consumption : 55mA.
- PCB Dimensions : 1.6 x 1.4 in.



FK1228

RAIN ALARM WITH LED

PRODUCT DESCRIPTION

This kit a rain detector circuit, working on the water falling on to the conductive strips on the PCB, which will set off an oscillator of the transistors is to turn ON the speaker and LED. After you wiped out the water on the conductive strip's surface, the Speaker and LED are turned OFF.

- Power Supply : 9VDC
- Current Consumption : 28mA.
- PCB Dimensions : 2 x 1.5 in.



FK1229

WATER & FLOOD ALARM

PRODUCT DESCRIPTION

This kit is a rain detector circuit regarding the water overflowing which works on the conductive principle of the conductive rod sensors which alarm with a single siren when detected the water overflowing in a limited level.

- Power Supply : 9VDC
- Current Consumption : 28mA.
- PCB Dimensions : 2 x 1.5 in.



FK1230

COCK, DOG, CAT VOICE

PRODUCT DESCRIPTION

This kit is programmed by using one-time programming IC with four jumpers for changing voice.

- Power Supply : 3VDC
- Current Consumption : 150mA.
- PCB Dimensions : 2 x 1.5 in.

Serie 13

IC OTP VOICE GENERATOR

The Future Kit range of sounding devices uses technology from digitally recorded sound ICs. Applications for 13XX Series sound devices range from toys through to advertising and hobby sound effects. These units are available also as pre-assemblies under the FA prefix.





FK1301

POWER AMPLIFIER 8W FOR VOICE IC OTP

PRODUCT DESCRIPTION

There is a voltage output point for the OTP IC voice circuit (FK 13XX)The power amplifier circuit uses IC Power Amp No. TDA2030, an OTL operation. This circuit is able to amplify signal from the OTP IC voice circuit.

- Power supply : 12VDC.
- Consumption : 800mA.max.
- Output power : 8W PMPO @ 4ohm
- Sound level is adjustable by trimmer potentiometer.
- S/N ratio : 94dB (A weighted)
- Total harmonic distortion : 0.03% (0.1-14W/1kHz)
- Frequency response : 20Hz to 20kHz (-3dB)
- There is a voltage output point for the OTP IC voice circuit (FK13XX).
- PCB dimensions : 2.19 x 1.58 in.
- Recommended Housing : FB03



FK1302

3-CHICKEN SOUND-IC OTP (COCK, CHICKEN, HEN)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice
- Recommended Housing : FB28



FK1303

3 DOG SOUND (BARKING DOG, HOWLING DOG, HURT DOG)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice.
- Recommended Housing : FB28



FK1304

3-CONGRATULATE SOUND (CLAP,LAUGH,YELL)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice
- Recommended Housing : FB28



FK1305

3-BIRD SOUND-IC OTP (DOVE, ASIAN KOEL, ORIOLE)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice.
- Recommended Housing : FB28



FK1306

3-WEAPON SOUND (BOMB,M16,LASER)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice.
- Recommended Housing : FB28



FK1307

3-ENGINE SOUND-IC OTP (HELICOPTER, JET, CAR RACING)

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice.
- Recommended Housing : FB28



FK1308

LIGHT-ACTIVATED ALARM (COCK, HEN, BIRD)

PRODUCT DESCRIPTION

The circuit was programmed by using the IC OTP type (One-Time Programmable) which can be record the three voice. It can be selected the voice at your want. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3VDC.
- At standby stage, its maximum power consumption is about 30uA.
- At working stage, its maximum power consumption is about 280mA.
- Three sounds are provided for your selection, including cock, hen and bird).
- IC board dimension : 1.47 in x 1.80 in.
- Recommended Housing : FB28



FK1309

NIGHT-ACTIVATED ALARM (WOLF,WITCH,GHOST)

PRODUCT DESCRIPTION

The circuit was programmed by using the IC OTP type (One-Time Programmable) which can be record the three voice. It can be selected the voice at your want. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3VDC.
- At standby stage, its maximum power consumption is about 30uA.
- At working stage, its maximum power consumption is about 280mA.
- Three sounds are provided for your selection.
- IC board dimension : 1.47 in x 1.80 in.
- Recommended Housing : FB28



FK1313

3-BELL SOUND-IC OTP

PRODUCT DESCRIPTION

The circuit creates voice. The IC is OTP type (One-Time Programmable) so it can be programmed to generate a predetermine voice (usually reside in the IC itself). It is suitable for toy or other low audible volume circuit design.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice.
- Recommended Housing : FB28



FK1314

3-LAUGHTER VOICE

PRODUCT DESCRIPTION

The circuit was programmed by using the IC OTP type (One-Time Programmable) which can be record the three voice. It can be selected the voice at your want. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3VDC.
- At standby stage, its maximum power consumption is about 30uA.
- At working stage, its maximum power consumption is about 280mA.
- Three sounds are provided for your selection.
- IC board dimension : 1.47 in x 1.80 in.
- Recommended Housing : FB28



FK1315

3-MONKEY VOICE (GIBBON, MONKEY, GORILLA)

PRODUCT DESCRIPTION

The 3 laugter voices of the FK1314, 3 monkey voices of the FK1315 was programmed by using the IC OTP type (One-Time Programmable). This circuit can make louder sound by connecting with the amplifier FK1301. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3-6VDC.
- Consumption : 18mA. (standby), 280mA.(working) @ 4.5VDC.
- Using FK1301 as an amplifier.
- PCB dimensions : 1.57 x 2.19 in.
- Recommended Housing : FB28



FK1317

POWER AMPLIFIER 1W.

PRODUCT DESCRIPTION

This is an economical mono amplifier an ideal for class room project. The FK1317 can be used with FK13xx IC OTP voice generator and other audio projects.

- Power supply : 3-5VDC.
- Power consumption : 260mA @ 5VDC., 8 , 0.25W loudspeaker
- Output Power : 1 watt @ 5VDC., 4 .
- Volume control is equipped
- S/N ratio : 70dB
- IC board dimension : 1.58 in x 1.14 in
- Recommended Housing : FB28



FK1318

5-ANIMAL VOICE (DUCK, HEN, PARROT, ROOSTER, ASIAN KOEL)

PRODUCT DESCRIPTION

The 5 animal voices of the FK1318, FK1319 was programmed by using the IC OTP type (One-Time Programmable). This circuit can make louder sound by connecting with the amplifier FK1301. It is suitable for toy, novelty and entertainment applications.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA. (working).
- Using FK1301 as an amplifier.
- PCB dimensions : 1.57 in. x 2.19 in.
- Recommended Housing : FB28



FK1319

5-ANIMAL VOICE (FROG, HORSE, SHEEP, MONKEY, WOLF)

PRODUCT DESCRIPTION

The 5 animal voices of the FK1318, FK1319 was programmed by using the IC OTP type (One-Time Programmable). This circuit can make louder sound by connecting with the amplifier FK1301. It is suitable for toy, novelty and entertainment applications.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA. (working).
- Using FK1301 as an amplifier.
- PCB dimensions : 1.57 in. x 2.19 in.
- Recommended Housing : FB28



FK1320

8-BIRD SOUND

PRODUCT DESCRIPTION

The 8-bird sound of the FK1320 was programmed by using the IC OTP type (One-Time Programmable) (Eagle, Hawk, Falcon, Vulture, Crow, Woodpecker, Gull and penguin sound). This circuit can make louder sound by connecting with the amplifier FK1301. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3-5VDC.
- Consumption : 0mA. (standby), 150mA. (working).
- Using FK1301 as an amplifier.
- PCB dimensions : 1.82 in. x 2.23 in
- Recommended Housing : FB28



FK1321

8-DOOR BELL SOUND

PRODUCT DESCRIPTION

The 8-doorbell sound of the FK1321 was programmed by using the IC OTP type (One-Time Programmable). This circuit can make louder sound by connecting with the amplifier FK1301. It is suitable for toy, novelty and entertainment applications.

- Power supply : 3-5VDC.
- Consumption : 0mA. (standby), 150mA. (working).
- Using FK1301 as an amplifier.
- PCB dimensions : 1.82 in. x 2.23 in.
- Recommended Housing : FB28

Serie 14

Experiment Board For Microcontroller

Products in this group suit for anyone who wants to learn about programming to make the circuit work on demand, which consist of boards that are connected to the Arduino UNO R3 board, various sensor kits, and a relay card.





FK1410

12-LED AND 3-BUTTON SHIELD

PRODUCT DESCRIPTION

This is the experimental board for receiving and transmitting data from the port of microcontroller. The function of FK-FA1401 is fundamental programming before turning to the higher level. This circuit is adaptable to the other form of circuit such as Light ON/OFF circuit, Priority Testing Game circuit, LED Flasher circuit, LED Running Light circuit.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- 12-LED size 3 mm. and 3-Tact Switch.
- PCB dimension : 3.15" x 1.14"



FK1411

MULTI-FUNCTION RGB LED DRIVER SHIELD

PRODUCT DESCRIPTION

This circuit board is for RGB LED Driver Shield experiment as the fundamental programming to control the LED RGB screen. It can be used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Distance measurement circuit, Moisture Indicator.

- Power Supply direct from Microcontroller Board. (For LED RGB Driver circuit, can be used the 12VDC external power supply)
- Maximum LED driving current is 16 mA.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed with 3 sets which are 1 piece of LED RGB Driver, 3 pieces of Switch and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.17" x 2.05"



FK1412

MULTI-FUNCTION 6-LED AND 6-BUTTON SHIELD

PRODUCT DESCRIPTION

This circuit board is for LED Driver Shield experiment as the fundamental program controlling. It can Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Distance measurement circuit, Moisture Indicator.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed with 3 sets which are 6 sets of LED, 6 Switches and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.80" x 2.07"



FK1413

MULTI-FUNCTION ONE CHANNEL RELAY SHIELD

PRODUCT DESCRIPTION

This is the experimental board for Relay Controller as the fundamental controlling programming. It can be used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Distance measurement circuit, Moisture Indicator.

- Power supply : 4.5VDC.
- Consumption : 18mA. (standby), 280mA.(working).
- The circuit can be connect FK1301 for increase the voice
- PCB dimensions : 2.15 in. x 2.07 in.



FK1414

MULTI-FUNCTION TWO CHANNEL RELAY SHIELD

PRODUCT DESCRIPTION

This is the experimental board for Relay Controller as the fundamental controlling programming. It can be used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Electronic Timer.

- Power Supply direct from Microcontroller Board. (On the Relay circuit, it can be connected with internal power supply at 12VDC [from Arduino Board] or with external power supply.)
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed with are 2 piece of Relay circuit, 3 pieces of Switch and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.92" x 2.08"



FK1415

MULTI-FUNCTION 7-SEGMENT 4 DIGIT SHIELD

PRODUCT DESCRIPTION

This is the experimental board for Multi-Function 7-Segment 4 Digit Shield as the fundamental controlling programming. It can be used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Temperature Controller.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed of 3 sets which are Multi-Function 7 Segment 4 Digit Shield, 3 pieces of Switch and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.62" x 2.24"



FK1416

MULTI-FUNCTION 16x2 LCD SHIELD

PRODUCT DESCRIPTION

This is the experimental board of Multi-Function 16x2 LCD Shield as the fundamental programming about the digits, alphabets and symbols. It can be used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable and is able to upgrade to the other form of circuit such as Temperature Controller, Multi-Function LCD SHIELD.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed of 4 sets which are 16x2 LCD shield, 3 pieces of Switch, 2 LCDs and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 3.27" x 2.28"



FK1417

MULTI-FUNCTION RTC SHIELD

PRODUCT DESCRIPTION

This is the experimental board for Time-Base or we call REAL TIME CLOCK (RTC). This circuit is well-known in recording the data of time and date as the history of period of times. It can be also used to connect with sensors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable to the other forms of circuits such as DATA LOGGER, Time and Temperature Recorder.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit board is composed of 4 sets which are 1 pieces of RTC, 3 pieces of Switch, 2 LCDs and Sensor Connector such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.15" x 2.05"



FK1418

INFRARED, TEMPERATURE, HUMIDITY SHIELD

PRODUCT DESCRIPTION

This is the experimental board for sensor connectors as the fundamental controlling programming. It can be used with many types of sensor connectors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module, Ultrasonic Module. This circuit is adaptable or is able to upgrade to the other forms of circuits such as Moisture Indicator, Temperature Controller.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit is composed of sensor connectors such as Temperature Controller, Moisture Indicator, Infrared Receiver Module.
- PCB dimension : 2.15" x 1.20"



FK1419

VOICE AND SPEAKER SHIELD

PRODUCT DESCRIPTION

This is the experimental board for Sound Generator and Voice circuit as the fundamental controlling programming. This circuit is adaptable or is able to upgrade to the other forms of circuits such as Melody Generator, Voice Controller.

- Power Supply direct from Microcontroller Board.
- The circuit can be used with Microcontroller Board such as Arduino UNO R3.
- The circuit is composed of Speaker Driver circuit and Microphone circuit.
- PCB dimension : 2.28" x 1.34"

MAXXTRONIC

The broadening range of Maxx Tronic modules affords to the manufacturer, systems designer and student, a range of stand-alone functions commonly used in security, process control, sport and education. These modules are designed to work in isolation, together or to be integrated into the end user's system.



DC Speed Control



Counter and Measurement



Switch Electronic and Relay Board



Voice Recorder and Accessory



Timer and Game



Control and Power Supply



Dectector, Alarm and Burglar



Stopwatch and Digital Clock



Jumbo Display, Driver and Flasher Light



MAXXTRONIC

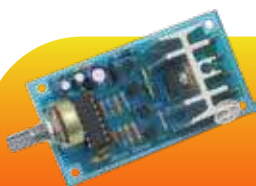
(A) DC Speed Control

(B) Counter and Measurement



(A) DC Speed Control





MXA033

DC MOTOR SPEED CONTROL (15A 12/24V)

PRODUCT DESCRIPTION

Pulse Width Modulation (PWM) offers an efficient way of controlling the average current in DC loads. In DC motors, PWMs can eliminate the need for gear boxes and can drive DC motors at low speeds with minimal loss of torque. Applications include DC motor speed control, LED and incandescent lamp dimming, and current control in hydroxyl or HHO generators. This economical and powerful little unit controls 15Amps 12/24DC and runs at a modest 100Hz. The current control range is 0-100%

- Power Supply : 12/24 VDC
- Load Voltage : 12/24 VDC
- Load Current : 15A max.
- Duty Cycle Range : 0-100 %
- PCB Dimensions : 3.28"x1.82" (78mm x 42mm)
- Recommended Housing : FB04



MXA066

DC MOTOR SPEED CONTROL 30 AMP

PRODUCT DESCRIPTION

Pulse Width Modulation (PWM) offers an efficient way of controlling the average current in DC loads. In DC motors, PWMs can eliminate the need for gear boxes and can drive DC motors at low speeds with minimal loss of torque. Applications include DC motor speed control, LED and incandescent lamp dimming, and current control in hydroxyl or HHO generators. This economical and powerful unit controls 30Amps 12/24DC and runs at a modest 100Hz. The current control range is 0-100%.

- Power Supply : 12/24 VDC
- Load Voltage : 12/24 VDC
- Load Current : 30A max.
- Duty Cycle Range : 0-100 %
- Module Dimensions: 3.85" x 1.59" (100mm x 42mm)
- Recommended Housing : FB04



MXA067

DC MOTOR SPEED CONTROL 30 AMP ADJUSTABLE FREQUENCY

PRODUCT DESCRIPTION

The MXA067 offers an increased level of flexibility in control systems where adjustable frequency is required. Increase heatsink mass and heavy duty MOSFETs ensure reliable performance in continuous operation applications. Applications include DC motor speed control, LED and incandescent lamp dimming, and current control in hydroxyl or HHO generators.

- Power Supply : 8-30VDC
- Load Voltage : 8-30VDC
- Load Current : 30A max.
- Fixed Operation Frequency : 100Hz
- Adjustable Frequency Range : 400Hz - 3kHz. (PWM) Duty Cycle : Adjustable from 0% - 100%.



MXA068

DC MOTOR SPEED CONTROL 50 AMP ADJUSTABLE FREQUENCY

PRODUCT DESCRIPTION

In response to the demand for higher current control in automotive and electric vehicle applications, the MXA068 offers a 50Amp capability. Increase heatsink mass and heavy duty MOSFETs ensure reliable performance in continuous operation applications. Applications include DC motor speed control, LED and incandescent lamp dimming, and current control in hydroxyl or HHO generators in trucking and stationary diesel situations.

- Power Supply : 8-30VDC
- Load Voltage : 8-30VDC
- Load Current : 50A max.
- Fixed Operation Frequency : 100Hz
- Adjustable Frequency Range : 400Hz - 3kHz.
- (PWM) Duty Cycle : Adjustable from 0% - 100%.
- Indicator : LED power ON 5" x 3.45" (121mm x 87mm)



MXA087

DC MOTOR SPEED CONTROL 30 AMP (DIGITAL CONTROL)

PRODUCT DESCRIPTION

- Power supply : 12/24VDC.
- Load voltage : 12/24VDC. / 30A. max.
- Motor speed : Using PWM (Pulse With Modulation) principle for motor speed control.
- Speed recording level : 3 levels.
- One second built-in soft start.
- Adjustable frequency range : 100Hz, 500Hz, 1kHz, 2kHz, 4kHz and 8kHz.
- PWM duty cycle : adjustable from 0% to 100%
- PCB dimensions : 3.43 x 1.54 in.



MXA089

DC PWM MOTOR SPEED CONTROL 30 AMP WITH SOFT START

PRODUCT DESCRIPTION

This uniquely designed circuit uses IC microcontroller for controlling the operation with a built-in soft-start to prevent electric shock. In addition, voltage control and mosfet driver circuits are provided to increase working efficiency in both high and low frequency plus resistant to noisy signal.

- Motor speed : Using IC microcontroller PWM (Pulse With Modulation) for motor speed control.
- Built-in soft start for protecting electric shock when supply the voltage.
- There is the limit voltage circuit at the gate of mosfet for protecting the over voltage and noisy signal.
- Using the mosfet driver circuit to greatly increase working efficiency of the circuit in the low-high frequency to 12.8kHz.
- Power supply : 8-30VDC. (select by jumper and motor).
- Load voltage : 8-30VDC./ 30A. max.
- PWM duty cycle : adjustable from 0% to 100%.
- PCB dimensions : 3.83 x 1.57 in.

(B) Counter and Measurement





MXA009

DIGITAL UP/DOWN COUNTER 1 DIGIT (WITH PRESET)

PRODUCT DESCRIPTION

This single digit counter features a 0.7" seven segment display and is driven from a wide voltage range power supply. The MXA009 is stackable to many digits as required making it suitable for product counting, store traffic or event recording.

On-board display drivers allow the MXA009 to drive external displays in either common cathode or common anode mode. The counter is presettable for applications requiring counts to a predetermined number. A common reset is provided.

- Power Supply : 5 -12VDC 80mA max. @12VDC
- Input frequency : 15 KHz max.
- Count Direction : UP/DOWN (Selectable)
- Display Dimensions : 40.4mm x 32.8mm
- Control Board : 85.34mm x 32.18mm
- Recommended Housing : FB04



MXA019

DIGITAL TACHOMETER

PRODUCT DESCRIPTION

This large 5 digit display module is uses reflected Infrared, inductive, photo interrupter, capacitive detector or hall-effect pulses to calculate the number of revolutions per minute of shafts, wheels and other rotating objects. High and low rotation rates may be preset using on-board switches. A logic HIGH signals are available for supervisory or control purposes if the detected rate is above or below preset levels.

- Power Supply : 12 VDC
- Rotational Speed Ranges (RPM) : 100 - 60,000
- PCB Display : 3.43" x 1.59"
- PCB Dimension : 3.43" x 3.22" (87.2mm x 81.8mm)
- Distance between the photo reflective infrared sensor and reflector 3cm.
- Recommended Housing : FB05



MXA069

DIGITAL UP-DOWN COUNTER 4 DIGIT WITH DRIVER

PRODUCT DESCRIPTION

Here is a multi-purpose up-down digital counter for counting traffic, head count, car park availability, production monitoring, feed-stock control and motor slow-down control. A special feature is a display driver suitable for multiplexing large scale displays up to MXA004. The MXA069 may be preset to any digit to reset or initiate an automation action.

- Power Supply : 12VDC @ 65mA. (Max)
- Count : 0-9999 (Extendable by 104 using additional MXA069 units)
- Count Mode : Up or Down
- Preset : On Board Switch
- Outputs : Preset "Coincidence" Signal, Carry Signal to drive additional MXA069
- PCB Dimensions : 4.49" x 2.46" x 55" (114mm x 62.5mm x 13mm)



MXA084

DIGITAL TEMPERATURE AND ALARM -55 TO 125 oC WITH DRIVER

PRODUCT DESCRIPTION

MXA084 is used for detect high vary temperature between -55 to 125oC, besides there is a warning alarm where temperature has been set.

- Power Supply : 12 VDC 70mA.
- The circuit able to drive numeric of Maxx Tronic with maximum inches at 10.
- Able to set the alarm where temperature is too high or too low than has been set.
- Can be measured the temperature from -55 to 125oC
- Dimensions : 2.64" x 4.08



MXA088

INFRARED SENSOR DIGITAL COUNTER 6 DIGIT

PRODUCT DESCRIPTION

This circuit is a digital counter for objects or people which can be applied to count people entering into the room, counting the number of product, and etc.

- Power supply : 12 VDC. With maximum 90mA.
- Can be connected directly up to 10" big display of MaxxTronic.
- Using the infrared sensor for detecting.
- Maximum detecting distance : 6 meters (when receiver and transmitter are vis-a-vis).
- Maximum velocity : 0.5 second/time.
- Maximum count : 999,999.
- Dimensions : 3.55" x 4.45"
- The counting value will remain after turn off the circuit.



MXA128

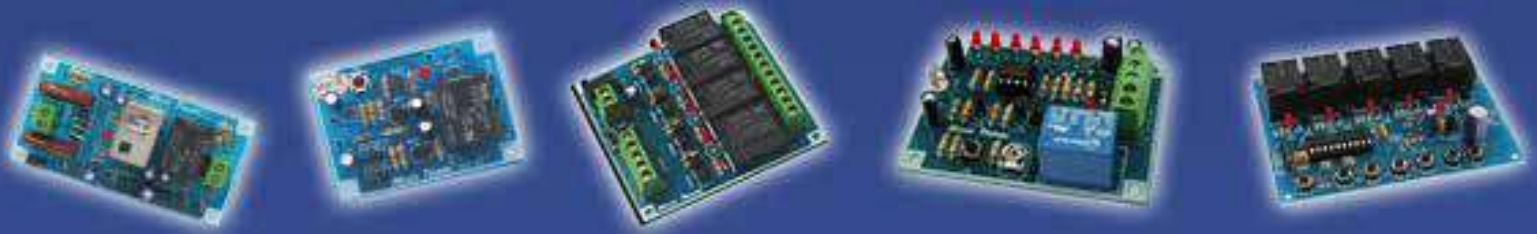
DIGITAL COUNTER 4 DIGIT WITH REMOTE CONTROL

PRODUCT DESCRIPTION

- It is multi-purpose digital counter for counting traffic, people (head counts), motor-car or any other objects.
- Power supply : 12VDC. With maximum 100mA.
- can be connected directly to big display not more than 9".
- Maximum count from 0-9999.
- There is a remote control in the frequency 433.92MHz as a control function
- The control distance of the remote control is about 20 meters in the open area.
- Can set up 3 working modes which are each digit control, 2 digit control 2 sets and 4 digit counting.
- The values are recorded automatically during operation. Causing when the power goes out The original value will remain.
- PCB dimensions : 2.74" x 4.30".

MAXXTRONIC

Switch Electronic and Relay





MXA014

INFRARED REMOTE SWITCH (FOR UNIVERSAL REMOTE)

PRODUCT DESCRIPTION

This mains powered switch is designed to be built into appliances and lighting fixtures so that they may be remotely turned on and off using a universal infrared transmitter. An additional push ON - push OFF circuit is incorporated to facilitate operation using conventional switches.

- Power Supply : 110 VAC or 220VAC Jumper Selectable (50Hz-60Hz)
- Relay Contact Load : 500 Watt
- PCB Dimensions : 3.42" x 1.79" (86.9mm x 46.5mm)
- Recommended Housing : FB04



MXA016

RELAY CARD 1 CH (WITH TOGGLE MODE)

PRODUCT DESCRIPTION

This handy module is designed as a high impedance interface between low-powered control signals and loads up to 500Watts. The switching modes are: Momentary i.e. output is ON whilst input signal is present or, Toggle (or alternating) action where each alternate signal changes the state of the Output relay. The input of the MXA016 is compatible with the outputs of the MXA015 RX or the MXA013 10 Channel Decoder module.

- Power Supply : 12VDC @ 40mA(max)
- Relay Operation Indication : LED
- Relay Contact Load : 500 Watt
- Operation Modes : Momentary or Toggle Action
- PCB Dimension : 2.28" x 1.69" (57.9mm x 42.9mm)
- Recommended Housing : FB04



MXA017

RELAY CARD 4 CH

PRODUCT DESCRIPTION

This module provides 4 high impedance interfaces between TTL type signals and relay loads up to 500watts. Applications include PC output to power adaptation, microcontroller interface and as a one-to-four control channel device.

- Power Supply : 12VDC @ 160mA (max)
- Indicator : LED Relay ON
- Output : 4 relays
- Relay Contact Load : 500 Watt
- PCB Dimension : 2.99" x 3.10" (76mm x 78.7mm)
- Recommended Housing : FB04



MXA061

NIGHT ACTIVATED SWITCH WITH TIMER OFF 1-12 HOUR

PRODUCT DESCRIPTION

The MXA061 is designed to suit built-in applications for the time control of out-door lighting, security access/denial and processes requiring long time intervals at night. A photo transistor detects the low light threshold and initiates a timer. Presetting of time intervals is via a single tact switch which allows the operator to step through 12 hourly time-out intervals which are displayed using a matrix of 6 LEDs.

- Power Supply : 12 VDC @ 50mA max.
- Display : 6 x 3mm LED's showing 12 hourly intervals
- Anti-Transient Delay : 5 Seconds Delay at Light-ON
- Module Dimensions : 2.76" x 2.15" (44mm x 54,61mm)



MXA076

5 CHANNEL MULT-IFUNCTION SWITCH

PRODUCT DESCRIPTION

This 5 channel multifunction switch is used to control the electrical appliances and priority testing game.

- Power Supply : 12VDC
- Consumption : 200mA
- There are 3 operational modes, ON-OFF or Push-on Push-off switch, one channel working (channel changeable), and one channel working (other channel not work).
- Loading : 300W per channel.
- PCB Dimensions : 3.82" x 2.95"



MXA107

2 CHANNEL UHF REMOTE CONTROL

PRODUCT DESCRIPTION

It is a UHF remote control circuit compatible with electric appliances, composed of two channels for turning on and off, for instances, light, electric fan etc.

- Power supply : 12VDC.
- At standby stage the circuit consumes about 15mA and at working stage about 80mA.
- UHF wave is the medium of control.
- For outdoor use, and with an antenna, the control capability ranges up to 30m.
- Two channels are provided for controlling two electric appliances. The highest power consumption for each channel is 1A.
- Five optional modes of control can be set ; Mode on, Mode off, Mode push-on push-off, Mode alternatively work and Mode push-on release-off.
- Can be used with the remote control MAXXTRONIC MXA108.
- PCB dimensions of control unit : 2.04 in x 2.27 in.



MXA108

UHF WIRELESS REMOTE CONTROL TRANSMITTER

PRODUCT DESCRIPTION

It is designed with small size, beautiful exterior , Sound wave resonator (SAW) is used for stabilizing frequency, It is applied for MAXXTRONIC MXA107 UHF Remote Control 2 Channel 30 Meter. Using High stability, SMT components, SAW (sound wave resonator).

- Operating frequency : 433.92MHZ
- Operating voltage : DC12V (23A size 12V battery, not included)
- Modulation mode : ASK
- Quiescent current : 0uA
- Operating current : 8-10mA
- Encoding Type : Fixed Code
- Transmitting power : 8-10mW
- Transmitting distance : 30 meters (open space , receiving sensitivity : -108dBm)
- Dimension of remote control : 52 x 40 x 16 mm



MXA109

OPTO RELAY 1 CHANNEL

PRODUCT DESCRIPTION

This relay driver circuit has multiple utility. It can be integrated to other circuits for a specific application.

- Power supply : 12VDC./ 45mA.
- LED to indicate the operation of relay.
- Maximum output load : 300W.
- PCB dimensions : 2.12 in x 0.89 in



MXA117

RF REMOTE CONTROL 6 CHANNEL

PRODUCT DESCRIPTION

It is a UHF remote control circuit compatible with electric appliances, composed of six channels for turning on and off, for instances, light, electric fan etc.

- Power supply : 12VDC.
- At standby stage the circuit consumes about 15mA and at working stage about 250mA.
- UHF wave is the medium of control.
- For outdoor use, and with an antenna, the control capability ranges up to 30m.
- Six channels are provided for controlling six electric appliances. The highest power consumption for each channel is 1A.
- Six optional modes of control can be set ; Mode on, Mode off, Mode push-on push-off, Mode alternatively work, Mode push-on release-off and Mode off all.
- Can be used with the remote control MAXXTRONIC MXA108.
- PCB dimensions of control unit : 3.87 in x 4.38 in.

MAXXTRONIC

Voice Recorder and Accessory





MXA043

MINI SURROUND SOUND 5 CH

PRODUCT DESCRIPTION

Add dimension to your HDTV viewing. This compact unit decodes the input signal into its four directional channel outputs plus a sub woofer 5th channel for increased ambience. The MXA043 output signals are compatible with most power amplifiers. Applications include home theatre or listening room. A volume control and push-on push-off switch is provided.

- Power Supply : 12V @ 11mA
- Outputs : Front Left and Right, Rear Left and Right and sub woofer.
- Sub Woofer output : Adjustable 50Hz - 180Hz
- PCB Dimensions: 3.53" x 2.32" (89.7mm x 59mm)
- Recommended Housing : FB05



MXA044

KARAOKE MIC MIXER 3 CH

PRODUCT DESCRIPTION

The compact MXA044 incorporates a 3 microphone mixer, echo effect and music inputs for a full karaoke effect.

- Power Supply : 12V @ 45mA
- Mixer : 3 Channels (mono) with pre-amp-each channel individually controlled.
- Music Input : Separately Controlled (suit radio, CD tape etc)
- Echo mixer amplifier : Incorporates output level control.
- PCB Dimensions : 6.47" x 2.50" (164.3mm x 63.5mm)
- Recommended Housing : FB06



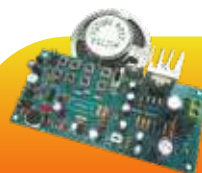
MXA075

DIGITAL VOICE RECORD 20-60 SEC WITH 8 WATT AMPLIFIER

PRODUCT DESCRIPTION

It is a digital voice recorder IC that can record and store messages without a back-up power supply. It is suitable for recording a short message. With a connection of MXA074 (Movement Detector Circuit), makes it suitable for use in advertising and safety system.

- Power supply : 12VDC.
- Consumption : 48mA (standby), 850mA (working)
- Time record : 20-60 seconds.
- Audio power amplifier build-in on-board, output power 8W.
- Select record signal from MIC or LINE IN.
- With connector point for MXA074 (Movement Detector Circuit).
- PCB dimensions : 3.72x2.64 in.



MXA113

VOICE RECORDER 680 SEC 8 MESSAGES WITH 8W AMPLIFIER

PRODUCT DESCRIPTION

This circuit can record (in digital format) and play back any voices which were then stored in the IC (APR33AX_C2). The playing back voices can be used in public relations and advertising campaigns as well as the humanization of a donation box.

- Power supply : 12VDC.
- Current consumption (with 8-ohm, 0.25W. loud speaker) : 20mA. (standby mode), 160mA. (working mode).
- Maximum number of the recorded messages : 8 messages.
- Time duration : 680 seconds.
- Input sources : 1) external line 2) MIC.
- Build-in audio power amplifier 8 watts.
- PCB dimensions : 2.00 in x 4.29 in.



MXA114

VOICE DONATION BOX WITH SENSOR AND 8W AMPLIFIER

PRODUCT DESCRIPTION

This circuit is a Digital Audio Player which can be activated by the passing of the object through the sensor. Any voice not more than 680 seconds in duration can be digitally recorded on to the IC1 via MIC or external signal input. This circuit can be incorporated with the donation box to give out some gratitude message or music etc., every time the donation was granted through the sensor.

- Power supply : 12VDC.
- At standby stage the circuit consumes about 30mA and at working stage about 190mA. at speaker 8-ohm 0.25W.
- Time record : max. 680 seconds.
- Select record signal from MIC or the external signal.
- Build-in on-board audio power amplifier 8 watts.
- PCB dimensions of RX sensor unit : 1.41 in x 2.00 in.
- PCB dimensions of TX sensor unit : 0.44 in x 2.00 in.
- PCB dimensions of voice recorder unit : 2.00 in x 4.29 in.



MXA115

10-SOUND MP3 PLAYER

PRODUCT DESCRIPTION

This circuit is a MP3 player which can be connect the sensor for control the operation of circuit. This circuit can be installed to a variety of tasks such as alarm circuit, reception circuit, etc.

- Power supply : 5VDC.
- At standby stage the circuit consumes about 25mA and at working stage about 300mA. at speaker 8-ohm 0.25W.
- There are two types of message play: Play Only the message no.1 and Play the message One to One Click (sort).
- It can be connect the external sensor for start the operation of circuit.
- Support MP3 and WMV file (FAT16 and FAT32 file system)
- Maximum support 32GB of the micro SD card.
- Build-in on-board audio power amplifier 3 watts.
- There is the external signal connector for connect the external amplifier.
- PCB dimensions : 2.45 in x 3.01 in.(mainboard)



MXA116

PIR MOTION ACTIVATED MP3 PLAYER

PRODUCT DESCRIPTION

This circuit is a MP3 player which can be connect the sensor for control the operation of circuit. This circuit can be installed to a variety of tasks such as alarm circuit, reception circuit, etc.

- Power supply : 5VDC.
- At standby stage the circuit consumes about 25mA and at working stage about 300mA. at speaker 8-ohm 0.25W.
- There are two types of message play: Play Only the message no.1 and Play the message One to One Click (sort).
- It can be connect the external sensor for start the operation of circuit.
- Support MP3 and WMV file (FAT16 and FAT32 file system)
- Maximum support 32GB of the micro SD card.
- Build-in on-board audio power amplifier 3 watts.
- There is the external signal connector for connect the external amplifier.
- PCB dimensions : 2.45 in x 3.01 in.(mainboard), 1.21 in x 1.01 in



MXA118

80 SECOND VOICE RECORDER WITH 5 WATT AMPLIFIER

PRODUCT DESCRIPTION

This circuit is a Digital Audio Recorder and low consumption current when standby about 128uA. It can use the battery for supply the circuit. This circuit can be connected MXA119 PIR sensor for giving the word "Thank you". If connect with MXA112 infrared sensor, user have to use the adaptor 5VDC to supply the circuit.

- Power supply : 5-6VDC.
- Consumption : 128uA (standby), 250mA (working) at speaker 8-ohm 0.25W.
- It can be connected the external sensors for starting the operation of circuit.
- Build-in on-board audio power amplifier 5 watts.
- Can select external sources for recording.
- PCB dimensions : 3.55 in x 2.12 in.



MXA121

VOICE ELECTRONIC ESIIMSI

PRODUCT DESCRIPTION

This circuit is a MP3 audio playback circuit. It has special features that can be used in many applications such as esiimsi, bingo and prayer voice, etc. and can also be connected to various sensor sets such as MXA119 PIR sensor, MXA112 infrared sensor etc.

- Power supply : 12VDC.
- Consumption : 33mA (standby), 180mA (working) at speaker 8-ohm 0.25W.
- Can be selected the operation of circuit 3 types : 28 messages esiimsi, 99 messages bingo game and one message only such as prayer voice or welcome voice, etc.
- It can be connected the external sensors for starting the operation of circuit.
- It can be connected the external amplifier.
- Maximum supports 32GB Micro SD Card or TF Card.
- Build-in on-board audio power amplifier 3 watts.
- PCB dimensions : 2.29 in x 2.29 in.



MXA126

5 SOUND MP3 MODULE

PRODUCT DESCRIPTION

MXA126 is a sound recording circuit with 5 active connection points. It can be connected to various sensors, such as MXA119 PIR motion detector, MXA112 Sensor kit of the donation cabinet (MXA114) and FK520 Tilt detection sensor. To say Thank you, welcome speech, voice from the donation cabinet and audio advertising various products etc.

- Power supply : 12VDC.
- Current consumption (working) : 300mA @ Speaker 8 ohms 0.25W.
- There are 5 switches to select various sounds.
- Can be connected to external sensors to start the operation of circuit.
- Can be connected to external amplifier.
- Build-in on-board 3 watts audio amplifier.
- Internal memory : 2MB max.
- Duration of recording : 75 second @ Sampling rate 128kHz and 300 second @ Sampling rate 48kHz.
- Can use voice recording software via computer.
- PCB dimensions : 2.30 in. x 1.79 in.

MAXXTRONIC Timer and Game





MXA024

GAME TIMER SWITCH 0-99SEC/MIN (WITH TIME ADDING)

PRODUCT DESCRIPTION

The MXA024 module can be added to games machines to link with coin-op circuits. Preset games or event times are stored in EEPROM and the remaining time available is displayed on a two digit LED Display. The display output can be used to drive Large Scale displays using the MXA008 multiplexed driver for 3", 5", 7" or 9" Displays.

- Power Supply : 12VDC @ 250mA
- Time ranges : 0-99 seconds or 0-99 minute, Count : UP or DOWN
- Relay output 500Watt @ 230VAC
- PCB Display Size : 2.91" x 1.47"
- PCB Dimension : 2.91" x 3.36" (73.9mm x 85.3mm)
- Recommended Housing : FB04



MXA041

WINDSHIELD WIPER TIMER

PRODUCT DESCRIPTION

Although designed for vehicle use, this timer can also be used in applications requiring repeated power cycles. Typical of such applications are, irrigation, dross and residue sweepers and lighting displays.

- Power Supply : 12VDC @ 40mA (max)
- Time Interval : Adjustable from 3 to 30 seconds.
- PCB Dimensions : 2.64" x 2.22" or 67mm x 56mm
- Recommended Housing : FB03



MXA046

DELAY OFF SWITCH 0-10 MIN

PRODUCT DESCRIPTION

This transformer-less mains powered switch has a 500W output relay and will "hold on" from 15 seconds up to 10 minutes after the mains power is removed.

- Power Supply : 220-240 VAC
- Delay time : Adjustable from 15 seconds to 10 minutes.
- Relay Contact Load : 500 W
- Indicator : Operation OK LED
- PCB Dimensions : 3.23" x 2.24" (82mm x 57mm)
- Recommended Housing : FB14



MXA060

KITCHEN TIMER 1-180 MINUTE

PRODUCT DESCRIPTION

This attractive compact timer emulates the traditional dial-set spring timers by using 12 LEDs in a circle to indicate the timer setting and timer progress. All ON/OFF control and time presetting is achieved via a single pushbutton. The time out point is indicated by a buzzer. Applications include domestic and industrial process monitoring and control. the MXA060 automatically powers down to a power-save mode. This reduces battery consumption to micro-amps.

- Power Supply : 3VDC @ 2.5mA (when two LEDs are ON), (20mA when the buzzer is sounding).
- Module Dimensions : 1.73" x 1.57"



MXA062

DIGITAL TIMER 0-99 HOUR

PRODUCT DESCRIPTION

This two-part timer is suitable for building into equipment. The 2 digit, seven segment display board may, if required, be mounted remotely from the control board to facilitate easier assembly. The MXA062 features timing intervals, switch selected and set from 1 second to 99 hours in three ranges, 1-99 seconds, 0-99minutes and 0-99hrs. A single switch provides the START/STOP signals. An on-board buzzer provides an alarm signal to indicate the end of a timer period and a relay is fitted to control external loads.

- Power Supply : 9-12 VDC @ 85mA max.
- Minimum Time Interval : 1second
- Maximum Time Interval : 99 hours
- Maximum Relay Contact Load : 500Watts @ 240VAC.
- Dimensions Display board : 1.48" x 0.94" (37.6mm x 23.8mm)
- Dimensions Control board : 1.48" x 3.17" (37.6mm x 80.5 mm)



MXA071

ALTERNATIVE TIMER 1 SEC - 9.59 HOUR

PRODUCT DESCRIPTION

This on/off alternative circuit can be used as a multipurpose time setting device or as an automatic circuit controller of electrical appliances for energy saving.

- Power Supply : 12VDC @ 65mA. max.
- On/off time setting programme : 5 programmes.
- Time setting range : 1 second - 9.59 hours.
- Connecting load : not more than 1A. or 200W electrical appliances.
- PCB Dimensions : 2.23" x 4.01"



MXA082

DELAY OFF SWITCH 220V 1-180 MINUTES

PRODUCT DESCRIPTION

This circuit can be used in many applications for example off pavement, off ventilators when we left the room, users can automatically schedule with maximum minutes at 180.

- Mains voltage : 220-240VAC.
- Max. load : 1A. or 200W.
- Delay time (without modifications) : adjustable from 0.5 seconds to 180 minutes.(select from range).
- LED indication for operation.
- It can be set by 2 operations : delay time off when ON switch and delay time off when OFF switch.
- PCB Dimension : 2.99"x2.36"



MXA083

BINGO ELECTRONIC AND RANDOM NUMBER

PRODUCT DESCRIPTION

This circuit can be applied to many games such as, random the numeric 3 digits game, bingo game, random gift number etc. In addition, the circuit can also be connected with big display as well.

- Power supply : 12 VDC 70mA.
- The circuit able to drive numeric of Maxx Tronic with maximum inches at 10.
- Can be selected by 2 operations:
Mode 1 random number 3 digits (000-999)
Mode 2 random number (set by user : 001-120)
- Dimensions : 2.50" x 4.19"



MXA105

1-120 MINUTE DELAY OFF SWITCH

PRODUCT DESCRIPTION

This circuit is versatile in applications : turning off walkway light, automatically turning off ventilator right after leaving the room by setting switch-off time in delay up to 120 minutes.

- Power supply : 12VDC 45mA.
- Compatible with load up to 1A / 200W.
- Cut-off delay time is adjustable from a minute to 120 minutes (up to your choice).
- Timer starting when the signal at H point and L point stop trigger.
- Equipped with an LED bulb to indicate the status of circuit performance.
- Signal of another circuit can be connected for starting up the circuit.
- PCB dimensions : 1.77 in x 2.54 in.



MXA122

VENDING TIMER 2 DIGIT 2 RELAY

PRODUCT DESCRIPTION

This timer circuit can be used for vending machine such as; water, game, rides house, etc.

- Power Supply : 12VDC./max. 150mA
- Can set the start of the circuit in 3 ways, which is type 1, press start and stop button, type 2, press start button only and type 3 works immediately.
- Can set the number of coins to drop.
- Maximum time setting range : 99 hours 59 minutes 59 seconds.
- PCB Dimension : 2.24 in. x 4.37 in.

MAXXTRONIC Control and Power Supply





MXA018

EMERGENCY LIGHT SYSTEM (FOR 12V 7A BATTERY)

PRODUCT DESCRIPTION

The MXA018 features mains failure detection, load control relay, a battery charger and a battery safety cut-out to prevent over draining. Applications include emergency and safety lighting, security and control system back-up. The MXA018 may also be wired to automatically default to battery supply if mains is not available to run portable equipment. An in-built LDR can be used to detect ambient light to prevent battery drain during power outages when lighting is not needed. A test switch is provided on-board.

- Power Supply : 15VAC @ 3Amps
- Battery : 12V 7Ampere Hour
- Load : 50Watts @ 12VDC
- Back-up Time : Approximately 90minutes
- Battery Protection : Load disconnection if the battery voltage falls below 9V
- PCB Dimension : 3.90" x 2.94" (99mm x 77mm)
- Recommended Housing : FB05



MXA028

HIGH VOLTAGE DC GENERATOR

PRODUCT DESCRIPTION

The MXA028 is a compact high voltage generator that runs from a 9-15VDC power supply. Its 7-8KV output voltage is sufficient to jump an adjustable spark gap of 10mm. Applications include electric fences, classroom demonstration of a spark gap characteristics under differing atmospheric conditions and an igniter for gas barbecues.

- Power Supply : 9-15 VDC @ 350mA (Max)
- Output Voltage Across Gap : Approx. 7,000-8,000 volts (no load)
- PCB Dimension : 4.78" X 1.60" (121.4mm x 40.6mm)
- Recommended Housing : FB04



MXA051

FLUORESCENT LAMP DRIVER 12V 10-40W

PRODUCT DESCRIPTION

This low cost, compact module can be built into caravans and trailers to power fluorescent lighting from a 12V supply. Suitable for camping, marine or emergency lighting (not for CFL Lights)

- Power Input : 9 - 14VDC
- Load Ratings.
When driving a 10Watt Tube Current is 0.7Amp
When driving an 18Watt Tube Current is 0.9Amp
When Driving a 36Watt Tube Current is 1.5Amp
- Working frequency : 12 kHz.
- PCB Dimensions : 1.84" x 2.69" or 47mm x 68mm
- Recommended Housing : FB03



MXA056

ELECTRONIC DIMMER 4,000W

PRODUCT DESCRIPTION

A large insulated Triac mounted on a heavy-duty heatsink gives this controller additional power handling capability. Suitable for controlling appliances, heaters and incandescent lights dimming and commutated AC electric motors.

- Power Supply : 110-120 VAC or 220-240 VAC
- Max. Load : 2,000 W @ 110VAC and 4,000 W @ 220VAC
- PCB Dimensions : 3.55" x 4.30" or 90mm x 109mm
- Recommended Housing: FB05



MXA057

SEALED LEAD-ACID BATTERY CHARGER 0-2A.

PRODUCT DESCRIPTION

This prebuilt module is suitable for building into OEM equipment or as a stand-alone charger. It features, auto trickle charge (150mA) Output polarity protection, LED indication of power, charge and trickle charge.

- Power Supply : 15V-18VDC @3Amp
- Charge Current : 150mA-2Amps (adjustable)
- Battery Types : Lead Acid (wet) or Sealed Lead Acid (SLA)
- Protection : Auto Reverse Polarity
- Indicator : LED Power ON
- Automatic trickle charging : 150mA.
- Power Supply : 15 VAC @ 3A. or 18 VDC @ 3A.
- Module Dimensions : 2.95" x 3.82" (75mm x 97mm)
- Recommended Housing : FB04



MXA059

VOLTAGE INVERTER 12VDC TO 110V/220V AC 200WATTS

PRODUCT DESCRIPTION

The MXA059 is a compact voltage inverter which can convert 12VDC to AC for lighting and appliance operation up to 0.8 at 220VAC. Note: the output requires an appropriate user-supplied 200VA transformer with a 10.5V-0-10.5V split primary. The secondary voltage is user matched to requirements. Applications include camping and in-field laboratories.

- Power Supply : 12VDC 20A. @full load of 200W.
- Power Output : 200W.
- Current Limit : 20Amp
- Low Battery Disconnect : Automatically invoked if the battery voltage falls below 10V,
- Module Dimensions : 3.81" x 2.85" (96.8mm x 72.4mm x 25.4mm)



MXA080

SOLAR CHARGE CONTROLLER

PRODUCT DESCRIPTION

This solar charge controller is suitable for using with DC electrical appliances such as bulb, radio, fan, television, etc. where there is not access by electricity or need energy conservation. It regulates the voltage and current coming from the solar panels going to the battery. Maintain peak battery power and protect battery from overcharged and over-discharged to increase battery service life.

- Battery require : 12V
- Solar Panel require : 16-22V 5-60W
- Max. working current : 5 Amp.
- Max. load current : 5 Amp.
- Auto charge and cut-off power when battery is full or low.
- Cut off the circuit operation when battery voltage is less than 10.5V., and reconnect when the voltage rise up to 12V.
- PCB Dimensions : 3.98" x 3.00"



MXA102

12-VOLT 24-LED EMERGENCY LIGHT

PRODUCT DESCRIPTION

- Power supply : 12VDC. 7A. (Battery)
- Compatible with a 15VAC 1A. adapter or an 18V 5-10W solar cell.
- Equipped with built-in 24-LED white bulbs.
- Equipped with a test switch for circuit testing.
- Equipped with a light detecting sensor in case of blackout in daytime i.e. the circuit stops working.
- If the emergency light circuit works the power supply from the battery is lower than 10VDC; the circuit will stop working and immediately supply no power to the LED bulbs.
- Equipped with a built-in battery charger. Extra LED bulbs can be connected by means of MAXXTRONIC circuit (code MXA104).It is a set of emergency lighting for multipurpose application
- lighting for emergency exit and walkway at night etc. The circuit works automatically in case of blackout at night or in dark places. Its superb characteristic is that it contains a built-in battery charger. Moreover, it is compatible with a solar cell if power supply is out of reach.
- PCB Dimensions : 2.30 in x 4.33 in



MXA125

OVER CURRENT PROTECTION 220VAC 1A

PRODUCT DESCRIPTION

This circuit is suitable for connecting to a circuit that operates continuously for a long time. When the load is short-circuited or malfunction until it consuming too much current. The circuit will cut off power supply, to prevent the burning of loads such as fans or motors etc.

- Power supply : 12VDC.
- Current consumption : 60mA.
- Max. load : 200W.
- PCB dimensions : 3.29 in. x 1.78 in.



MXA129

TEMPERATURE CONTROL WITH TIMER 1-99 HOUR

PRODUCT DESCRIPTION

MXA129 is an economical temperature indicator and controller for household and industrial use. It can set the time for the cycle to work at the time that we want, from 1 minute to 99 hours. Applications include electric oven, climate control, over temperature alarm in cold storage units, lab monitoring, LED.

- Power supply : 12VDC. with maximum 150mA.
- Timing intervals :1 minute to 99 hours.
- Temperature range : 1-110 degrees celsius.
- Each output relaycontact load : 200 watts at 220VAC.
- PCB dimensions (display) : 2.10" x 1.17".
- PCB dimensions (main board) : 2.10" x 4.16".

MAXXTRONIC Detector, Alarm and Burglar



futurekit.com



+662-9497366-7



hobby@futurekit.com



MXA011

INFRARED SENSOR 30 ft. (TX/RX)

PRODUCT DESCRIPTION

- Power supply for transmitter = 12Vdc./20mA.max.
- Power supply for receiver = 12Vdc. has signal ~ 15 mA. and has not signal = 50mA.
- The OUT-point output is active "HIGHT" when the RX has signal and is active "LOW" when the TX has not to signal.
- Delay timer : adjustable between 1 to 10 second.
- The operation can be choose reflective or barrier.
- Detecting distance for reflective approximate 3 ft.
- Detecting distance for barrier approximate 10-30 ft.
- PCB dimensions : 2.33x2.33 inch. For TX (Transmitter) 2.77x2.38 inch. For RX (Receiver)



MXA012

INFRARED SENSOR 80 ft. (TX/RX)

PRODUCT DESCRIPTION

- Power supply for transmitter = 12Vdc./20mA.max.
- Power supply for receiver = 12Vdc. has signal ~ 15 mA. and has not signal = 50mA.
- The OUT-point output is active "HIGHT" when the RX has signal and is active "LOW" when the TX has not to signal.
- Delay timer : adjustable between 1 to 10 second.
- The operation can be choose reflective or barrier.
- Detecting distance for reflective approximate 3 ft.
- Detecting distance for barrier approximate 10-80 ft.
- PCB dimensions : 2.35x2.33 inch. For TX (Transmitter) 2.17x2.38 inch. For RX (Receiver)



MXA040

MOTORCYCLE BURGLAR ALARM

PRODUCT DESCRIPTION

- PCB dimensions : 2.37x2.03 in.
- Recommended Housing : FB03
- Power supply: 12 VDC./ max. 35 mA.
- Detects voltage drops of the battery.
- LED indication for operation of relay.
- Delay time: 10 seconds.
- Max. load of relay: 500 W.



MXA042

FLAME DETECTOR CIRCUIT

PRODUCT DESCRIPTION

This prebuilt module is suitable for building into OEM equipment or as a stand-alone charger. It features, auto trickle charge (150mA) Output polarity protection, LED indication of power, charge and trickle charge.

- Power Supply : 15V-18VDC @3Amp
- Charge Current : 150mA-2Amps (adjustable)
- Battery Types : Lead Acid (wet) or Sealed Lead Acid (SLA)
- Protection : Auto Reverse Polarity
- Indicator : LED Power ON
- Automatic trickle charging : 150mA.
- Power Supply : 15 VAC @ 3A. or 18 VDC @ 3A.
- Module Dimensions : 2.95" x 3.82" (75mm x 97mm)
- Recommended Housing : FB04



MXA049

NIGHT-ACTIVATE SWITCH (DELAY ON-OFF)

PRODUCT DESCRIPTION

- PCB dimensions : 3.25x1.83 inch.
- Recommended Housing : FB04
- Power supply : 12 VDC. / 46 mA max.
- Max. load : 500 watts.
- Delay time : approximate 30 seconds.
- LED indication for LDR and relay.
- Light sensitivity : adjustable.



MXA054

DIGITAL CODE SWITCH (1-10 DIGIT)

PRODUCT DESCRIPTION

- PCB dimensions : 3.56x3.98 inch.
- Recommended Housing : FB04
- Power supply : 12VDC./ max. 80 mA.
- A choice can be made from over 1,000,000 codes.
- The operation function is divided into three major functions; enter password to correct-ON and enter password to correct-OFF, push any key-ON and enter password to correct-OFF, and enter password to correct-ON and push any key-OFF.
- Relay output : max. 5A. at 12VDC.
- Keypad operation with audible indicator beep ON/OFF.
- ALARM OUT for external siren or other equipment.
- LED power, relay, alarm and function indication.
- IC MEMORY for protect data in memory to lose without battery backup.



MXA077

TIME DELAY DOOR ALARM

PRODUCT DESCRIPTION

This circuit is used to alarm when you leave the door or window open everywhere such as the air-conditioned room, car door, etc.

- Power Supply : 9-12VDC
- Consumption : 1.9uA (standby) @ 9VDC, 60mA (working) @ 9VDC
- Duration of delay time before alarm : 10-60 seconds.
- Included the magnetic switch in this set.
- PCB Dimensions : 2.81" x 1.84"



MXA081

5 ZONE BURGLAR ALARM WITH MICROCONTROLLER

PRODUCT DESCRIPTION

This circuit is used for protecting property. The advantage of this circuit is small-scale, easily installed and used. Suitable for used with small and medium size of house which window or door is not too much.

- Power Supply : 12 VAC 1A.
- Maximum charge current : 7A.
- There is 12V out-point to use with alarm devices.
- Delay entry/exit time is approximately 10 minutes at maximum.
- Dimensions : 3.08" x 3.00"



MXA085

5-NUMBER SECURITY AUTO VOICE DIALER

PRODUCT DESCRIPTION

MXA085 is an automatic emergency call circuit which working with the sensors, such as Magnetic switches. This circuit will make a phone call to the numbers that have been set automatically when the sensor is working. This circuit is suitable to be installed in high security location; for example, shelter, factory etc.

- Power supply : 12VDC 70mA.
- Current consumption at standby : 17mA. @ 9VDC, 60mA (working) @ 9VDC.
- Current consumption at working : 45mA. (connect the sound recorder circuit) and 30mA. (disconnect the sound recorder circuit).
- Use with the telephone tone system only.
- It can be set the alarm time maximum 3 minutes.
- It can be set the number of redial maximum 9 times.
- Use with the digit telephone number from 1 to 12 digits, and able to set up 5 maximum numbers.
- There is a connector point for FK941 to send a voice message about 20-60 sec.
- PCB dimensions : 3.59x2.99 in.



MXA103

12-LED AUTOMATIC NIGHT LIGHT

PRODUCT DESCRIPTION

It is a set of night lighting for multipurpose application-lighting for walkway at night, indoor decorating light etc. The circuit contains a sensor detecting light from outside. Once the blackout occurs or the darkness covers the circuit will work automatically. This economizes the energy. Moreover, extra LED bulbs can be connected by means of MAXXTRONIC circuit (code MXA104).

- Power supply : 12VDC.
- At standby stage the circuit consumes about 2 mA and at working stage about 60 mA.
- Equipped with built-in 12-LED white light bulbs that can be connected to some extra LED bulbs of MAXXTRONIC circuit (code MXA104).
- Equipped with a light detecting sensor for automatic performance of the circuit in case blackout or darkness.
- Sensitivity of the light detecting sensor can be calibrated.
- PCB dimensions : 1.56 in x 2.90 in.



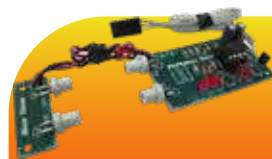
MXA104

12 LED LAMP (ACCESSORIES FOR MXA102 AND MXA103)

PRODUCT DESCRIPTION

This circuit is option for MAXXTRONIC MXA103 LIGHT ACTIVATED 12-LED NIGHT LIGHT.

- Power supply : 12VDC.
- Electric current consumption : 60mA. max.
- Use 12-LED white light bulbs and can be add the LED to MAXXTRONIC MXA102 and MXA103.
- There is the point to add the LED (parallel connection).
- PCB dimensions : 1.06 in x 1.57 in.



MXA112

SENSOR CIRCUIT (ACCESSORIES FOR MXA114)

PRODUCT DESCRIPTION

This sensor circuit features a modulated integrated signal to reduce the effects of incidental lighting. Ideal for use with voice recording (such as MXA114) and advertising media system.

- Power supply : 5-12VDC.
- Consumption : 24 mA (standby), 29 mA (working) at 12VDC.
- Detection range : 2 cm. max.
- PCB dimensions : 1.41 x 2.00 in. (RX sensor board) 0.44 x 2.00 in. (TX sensor board)



MXA123

LASER SENSOR

PRODUCT DESCRIPTION

This laser sensor circuit can be applied in many ways. Such as for detecting work, counting and security work.

- Power supply of TX : 12VDC./ max. 30mA.
- Power supply of RX : 12VDC./ max. 50mA.
- Distance for detecting : 10 centimeters to 8 meters.
- PCB dimensions of TX : 1.50 in. x 0.99 in.
- PCB dimensions of RX : 4.28 in. x 1.46 in.



MXA124

TILT SENSOR SECURITY SYSTEM

PRODUCT DESCRIPTION

This circuit can be used to various alarm applications such as theft of motorcycle, car and other assets or equipments that are moving or vibrating.

- Power supply : 12VDC./ max. 60mA.
- Delay entry : 0-60 seconds.
- Duration of delay time before alarm : 0-60 seconds.
- Operation time of relay : 1-300 seconds.
- PCB dimensions : 2.37 in. x 1.42 in.



MXA127

4 ZONE HOME SECURITY SYSTEM WITH REMOTE CONTROL

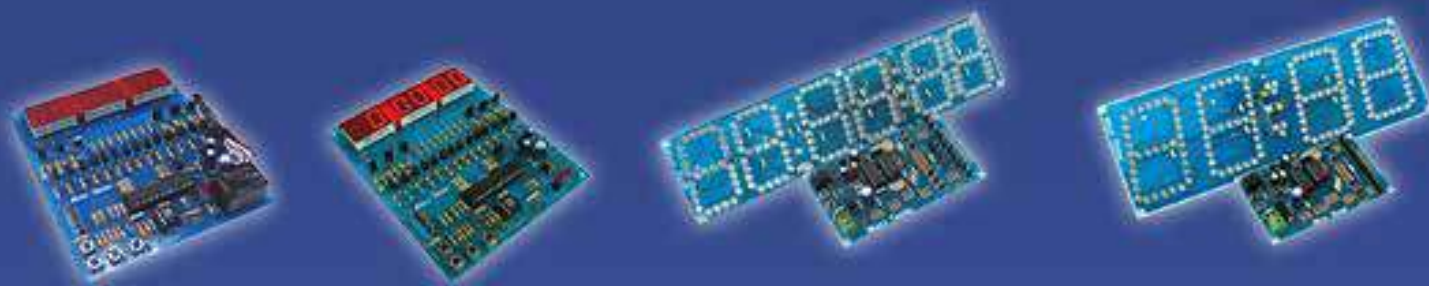
PRODUCT DESCRIPTION

Anti-theft circuit set this is a circuit that is used for anti-theft in the home. The advantage of this circuit is that it is small, easy to install, not complicated, but also has a remote control for controlling the circuit. Makes it easier to use as well, suitable for use in small houses and medium-sized houses with not many windows or doors.

- Power supply : 12VAC 1A.
- There is a 12V backup battery point and can charge the battery up to 7 A.
- There is a remote control for controlling the operation of the circuit. (Max. 4 controls).
- There are 4 active zones (only Zone 1 with delay in / out).
- Can delay the entrance up to 10 minutes (Zone 1 only).
- There is a connection point for the siren speaker and the light. (Can control the power from the remote control).
- Can control the circuit from a maximum of 4 remote controls.
- PCB dimensions : 4.52" x 3.67"

MAXXTRONIC

Stopwatch and Digital Clock





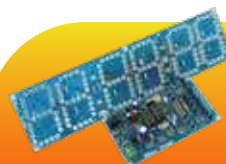
MXA025

STOP-WATCH/DIGITAL CLOCK (4 DIGIT 3")

PRODUCT DESCRIPTION

The LED display on the MXA025 utilizes high brightness LEDs making it suitable for outdoor use in event timing or public time-of-day clocks. In clock mode the MXA025 will measure down to 1 minute. In timer mode the MXA025 will measure up to 99hrs 59 minutes and 59 seconds. The driver can also be adapted to larger displays using the MXA008 multiplexed driver.

- Operation Modes : Clock Time of Day-Stopwatch
- Preset Time Minimum Time interval in the elapsed time mode : Up to 1/100 second
- Preset : Up to 99 hours (max)
- Display : 3" Seven Segment High Brightness LED
- Stand-by Power : 15mA from batteries
- Charger : Suitable for 3x1.2V 200-600mAH rechargeable
- Power supply : 12VDC @ 250mA (max).
- (264mm x 94.5mm)batteries
- PCB Display Size : 10.00" x 3.00" (254mm x 76.2mm)



MXA026

STOP-WATCH/DIGITAL CLOCK (6 DIGIT 60MM)

PRODUCT DESCRIPTION

The LED display on the MXA026 utilizes high brightness LEDs making it suitable for outdoor use in event timing or public time-of-day clocks. In clock mode the MXA026 will measure down to 1 minute. In timer mode the MXA026 will measure up to up to 99hrs 59 minutes and 59.99 seconds. Up to 20 program events may be set. Programs may be one-time, daily repeat or set to omit operation on Sundays or Saturdays and Sundays.

- Operation Modes : Clock Time of Day-Stopwatch
- Preset Time Minimum Time interval in the elapsed time mode: Up to 1/100 second.
- Preset : Up to 99 hours (max)
- Display : 6 Digits 3" Seven Segment High Brightness LED
- Stand-by Power : 11mA from batteries
- Charger : Suitable for 3x1.2V 200-600mAH rechargeable batteries
- Power Supply : 12VDC @ 200mA (max).
- PCB Display Size : 10.32" x 2.30"



MXA070

DIGITAL CLOCK/STOPWATCH 6 DIGIT WITH DRIVER

PRODUCT DESCRIPTION

Imagine, a Digital Clock, Stop Watch and Programmable Preset Timer all in one package. The MXA070 will find application in schools, sports clubs and industry. It will time down to 1/100ths of a second in stopwatch mode. Up to 20 program events (10 ON and 10 OFF) may be set for each channel. Programs may be one-time, daily repeat or set to omit operation on Sundays or Saturdays and Sundays. The MXA070 is also fitted with high current, multiplexed drivers to drive external 7 segment displays like the 9" MXA004 units. Also available, on request, are DEMUX modules to power high brightness displays in direct drive mode for daylight applications such as sporting events. Correct time is maintained during blackouts by a back-up battery feature.

- Power Supply : 12VDC @ 115mA (max)
- Battery Back-up : 0.5mA 3V
- Timing Modes : Time of Day, Stop Watch, Timer Control (up to 23:59.59Hours).
- External Display Driver : Multiplexed up to MXA004 (9")
- Output Signals : 2 x 50mA open collector.
- PCB Dimensions : 4.70" x 3.90" x 0.55" (120mm x 110mm x13mm)



MXA073

DIGITAL CLOCK/STOPWATCH/THERMOMETER 6 DIGITS

PRODUCT DESCRIPTION

This circuit is can be use the stopwatch for competed besides the circuit has temperature sensor for indicate current temperature. The user can be apply the circuit following at your want.

- Power supply : 12VDC./ max. 150mA.
- With built-in circuit driver for connecting to big display not more than 9".
- The operation mode is divided into 5 major modes, current time mode, count up timer mode, count down timer mode (the maximum timer is 23:59:59 hours), temperature mode, alternating between current time and temperature mode (time of alternating 5-25 seconds).
- Loading : 1A.
- With memory back-up battery connector for keeping timing without display while the electricity is out by using 3 volts button battery or 2 AA battery.
- PCB dimensions : 3.90x4.70 inches.



MAXXTRONIC

Jumbo Display, Driver and Flasher Light





MXA001

SEVEN SEGMENT DISPLAY (3"ULTRA-BRIGHT LEDs) SC

PRODUCT DESCRIPTION

This 3" single-digit, 7-segment, display, features ultra-bright, red, LEDs for excellent outdoor visibility in score boards, timers and pricing systems.

- Digit Size : 46mm x 75mm or 1.78" x 3"
- Each segment comprises 5 LEDs and one LED for the decimal point.
- Drive Current at 12V : Segment or Decimal Point 15mA.
- Total Load : 120mA.
- PCB Dimensions : 63mm x 85mm (Available also as an indoor module MXA034 featuring Wide-Angle High-Brightness Red LEDs)



MXA002

SEVEN SEGMENT DISPLAY (5"ULTRA-BRIGHT LEDs) SC

PRODUCT DESCRIPTION

MXA002 is a 5" single-digit, 7-segment, display, featuring ultra-bright, red, LEDs for excellent outdoor visibility in score boards, timers and pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 10 LEDs and 3 LEDs for the decimal point.

- Digit Size : 72mm x126mm or 2.8" x 5"
- Drive Current at 12V : Segment 30mA or Decimal Point 15mA.
- Total Load : 225mA
- Drive Current at 24V : Segment or Decimal Point 15mA.
- Total Load : 120mA.
- PCB Dimensions : 90mm x 140mm (Available also as an indoor module - MXA035 featuring Wide-Angle High-Brightness Red LEDs)



MXA003

SEVEN SEGMENT DISPLAY (7"ULTRA-BRIGHT LEDs) SC

PRODUCT DESCRIPTION

The MXA007 is ideal for long distance visibility in daylight situations. This 7" single-digit, 7-segment, display features ultra-bright, red, LEDs making it suitable for score boards, event timers, production counters and retail pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 20 LEDs and 5 LEDs for the decimal point.

- Digit Size : 100mm x 180mm or 4" x 7"
- Drive Current at 12V : Segment 60mA, Decimal Point 15mA.
- Total Load : 435mA
- Drive Current at 24V : Segment 30mA, Decimal Point 15mA.
- Total Load : 225mA
- PCB Dimensions : 136mm x 192mm (Available also as an indoor module MXA036
- featuring Wide-Angle High-Brightness Red LEDs)



MXA004

SEVEN SEGMENT DISPLAY (9"ULTRA-BRIGHT LEDs) SC

PRODUCT DESCRIPTION

Where visibility over 100metres in daylight situations is required, the MXA004 is ideal. This 9" single-digit, 7-segment, display features ultra-bright, red, LEDs making it suitable for score boards, event timers, production counters and retail pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 20 LEDs and 5 LEDs for the decimal point.

- Digit Size : 147mm x 229.80mm or 5.8" x 9"
- Drive Current at 12V : Segment 60mA, Decimal Point 15mA.
- Total Load : 435mA
- Drive Current at 24V : Segment 30mA, Decimal Point 15mA.
- Total Load : 225mA.
- PCB Dimensions : 162mm x 241mm (Available also as an indoor module MXA037
- featuring Wide-Angle High-Brightness Red LEDs.)



MXA006

4 DIGIT SEVEN SEGMENT DISPLAY (3"ULTRA-BRIGHT LED_s) SC

PRODUCT DESCRIPTION

Designed for applications such as clocks, stopwatches and timers in indoor or outdoor applications, the MXA006 features 4 Digits of 3" Ultra Bright 7 Segment LED Displays with colons and decimal points. The display may be directly driven or multiplexed as required.

- Display Dimensions : 46mm x 75mm
- Current drain at 12V : Per segment 15mA and 15mA for the decimal - point and colon. Total Load : 495mA.
- PCB Dimensions : 250mm x 85mm (Available also as an indoor module MXA039featuring Wide-Angle High-Brightness Red LEDs.)



MXA007

SEVEN SEGMENT DRIVER

PRODUCT DESCRIPTION

This module is a direct drive unit designed to reduce the complexity of interfacing large scale displays with microprocessors and low powered drivers. The MXA007 is suitable for use with MXA001, 002, 003, 004, 006, 034, 035, 036, 037, 039, 078, and 079. Displays in Common Cathode or Common Anode Drive configurations.

- Input Requirements : 4.5V (suitable for TTL drive)
- Output capability : 12V or 24V @ 120mA
- PCB Dimensions : 59mm x 50mm x 18mm



MXA008

4 DIGIT SEVEN SEGMENT MULTIPLEX DRIVER

PRODUCT DESCRIPTION

The MXA008 is a multiplex drive module designed to reduce the complexity of interfacing large scale displays with microprocessors and low powered drivers.The MXA008 is suitable for use with MXA001, 002, 003, 004, 006, 034, 035, 036, 037, 039, 078, and 079. Displays in Common Anode Drive configurations.

- PCB Dimensions : 93mm x 80mm or 3.67" x 3.14"
- Input Requirements : 4.5V (suitable for TTL drive).
- Output (Digit) : 12V @0.5Amp Output (Segments) : 240mA
- PCB Dimensions : 59mm x 50mm



MXA034

SEVEN SEGMENT DISPLAY 3"

PRODUCT DESCRIPTION

This 3" single-digit, 7segment, display, features wide-angle viewing, high-brightness, red, LEDs for excellent indoor visibility in score boards, timers and pricing systems.Each segment comprises 5 LEDs and one LED for the decimal point.

- Digit Size: 46mm x 75mm. or 1.78" x 3"
- Drive Current at 12V : Segment or Decimal Point 15mA.
- Total Load : 120mA.
- PCB Dimensions : 63mm x 85mm or 2.5" x 3.3"
- Also available as an outdoor visible module MXA001 featuring Ultra-Brightness Red LEDs



MXA050

DC FLASHER 15A. (MOSFET DRIVE)

PRODUCT DESCRIPTION

- PCB dimensions : 1.84x2.69 inch.
- Recommended Housing : FB03
- Power supply : 12 to 24 VDC.
- Lamp connection : 15A. max.
- Flash period : adjustable.
- Flashing / rest relation : approx. 50 : 50 %



MXA055

RUNNING LIGHT 4 CH. 4,000W. 32 PROGRAM (10 PROGRAMMABLE)

PRODUCT DESCRIPTION

- Power supply : 12VDC./max. 60mA.
- 4 triac output : max. 12A. each (1,000W at 220VAC or 500W at 110VAC)
- 42 programs (fix by the factory to 32 programs and new edit by user to 10 programs).
- Max. step for the new edit of programs : 16 steps per program.
- Supply voltage for the lights : 24VAC to 240VAC.
- Can be select the operation to the running light or ON/OFF switch.
- Running speed (without modifications) : adjustable to 256 steps.
- LED indication for power ON/OFF, running light pattern and number of program.
- Memory back-up with IC memory, protected the running light and speed of program.
- PCB dimensions : 4.47 x 3.18 inch.



MXA120

AC FLASHER 2 CH 220V 2000W

PRODUCT DESCRIPTION

- Power supply : 12VDC
- Consumption : 35mA max.
- Maximum output load : 1,000W per channel
- Flash period : adjustable 0.3-5 seconds
- There is the opto isolator to protect electric shock while adjusting the time of flashing.
- PCB dimensions : 3.48 in. x 1.88 in



MXA035

SEVEN SEGMENT DISPLAY 5"

PRODUCT DESCRIPTION

MXA035 is a 5" single-digit, 7segment, display, featuring wide-angle viewing, high-brightness, red, LEDs for excellent indoor visibility in score boards, timers and pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 10 LEDs and 3 LEDs for the decimal point.

- Digit Size : 72mm x 126mm. or 2.8" x 5"
 - Drive Current at 12V : Segment 30mA or Decimal Point 15mA. Total Load : 225mA
 - Drive Current at 24V : Segment or Decimal Point 15mA. Total Load : 120mA.
 - PCB Dimensions : 90mm x 140mm or 3.5" x 5.5"
- Available also as an outdoor visible module MXA002 featuring Ultra-Brightness Red LEDs



MXA036

SEVEN SEGMENT DISPLAY 7"

PRODUCT DESCRIPTION

Where long distance visibility in indoor and indirect daylight situations is required, the MXA036 is ideal. This 7" single-digit, 7segment, display features wide-angle viewing, high-brightness, red, LEDs making it suitable for score boards, event timers, production counters and retail pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 20 LEDs and 5 LEDs for the decimal point.

- Digit Size : 100mm x 180mm. or 4" x 7"
 - Drive Current at 12V : Segment 60mA, Decimal Point 15mA. Total Load : 435mA
 - Drive Current at 24V : Segment 30mA, Decimal Point 15mA. Total Load : 225mA.
 - PCB Dimensions : 136mm x 192mm. or 5.4" x 7.7"
- Available also as an outdoor, direct daylight module MXA003 featuring Ultra-Brightness Red LEDs.



MXA037

SEVEN SEGMENT DISPLAY 9"

PRODUCT DESCRIPTION

Where visibility over 100metres in indirect daylight or indoor situations is required, the MXA037 is ideal. This 9" single-digit, 7segment, display features wide-angle viewing, high-brightness, red, LEDs making it suitable for score boards, event timers, production counters and retail pricing systems. Operation voltage is jumper selectable for 12V or 24V. Each segment comprises 20 LEDs and 5 LEDs for the decimal point.

- Digit Size : 147mm x 230mm. or 5.8" x 9"
 - Drive Current at 12V : Segment 60mA, Decimal Point 15mA. Total Load : 435mA
 - Drive Current at 24V : Segment 30mA, Decimal Point 15mA. Total Load : 225mA.
 - PCB Dimensions : 162mm x 241mm. or 6.4" x 9.5"
- Available also as an outdoor direct, daylight module MXA003 featuring Ultra-Brightness Red LEDs.



MXA039

4 DIGIT SEVEN SEGMENT DISPLAY 3"

PRODUCT DESCRIPTION

Designed for applications clocks, stopwatches and timers in indoor or outdoor applications, the MXA039 features 4 Digits of 3" Ultra Bright 7 Segment LED Displays with colons and decimal points. The display may be directly driven or multiplexed as required.

- Display Dimensions : 46mm x 75mm. or 1.78" x 3" @ 1 digit
 - Current drain at 12V : Per segment 15mA and 15mA for the decimal point and colon. Total Load : 495mA.
 - PCB Dimensions : 250mm x 85mm. or 9.85" x 3.35"
- Available also as an outdoor direct, daylight module MXA004 featuring Ultra-Bright Red LEDs.

MICROBOT KIT

The MircoBot Kit is a complete circuit kit for anyone who wants to learn about programming to control devices. The program that will be used to practice writing is a C language program which is very easy to study. In addition, it also studied about mechanical systems as well.

The MicroBot Kit also offers a wide variety of circuit kits. For those who are interested can choose to use as well, such as a robot kit that we can program for a variety of control, such as control via WiFi, control via BlueTooth, etc. robot spare parts kit test board set that can be connected to many devices.

SERIES 1XX MICROCONTROLLER BOT
SERIES 2XX CONTROL ROBOT SET
SERIES 3XX ACCESSORY ROBOT
SERIES 5XX EXPERIMENT BOARD
SERIES 6XX INPUT/OUTPUT BOARD
SERIES 7XX SENSOR BOARD



futurekit.com



+662-9497366-7



hobby@futurekit.com



SERIES 1XX MICROCONTROLLER BOT

MB101



WIRED ROBOT CONTROL CIRCUIT

PRODUCT DESCRIPTION

This circuit is a simple control circuit that is suitable for beginners learning about robots. Both in electronic circuits and the mechanics.

- Power supply : 2 rechargeable AA batteries (not included).
 - Electric current consumption : 155mA.
 - PCB dimension : 3.94 in x 2.08 in. (Control circuit)
 - Body dimension (WxLxH) : 120 x 130 x 70 mm.
 - Weight (batteries not included) : 175g.
 - Use a 2WD drive system.
 - The robot body uses ABS plastic.
 - Use all 2 gear motors.
- Features of geared motors used :
 - 1.Voltage size: 3VDC, 100mA (without load).
 - 2.Maximum speed of gear motor (without load) : 120rpm/min.
 - 3.Gear Ratio : 1:48.

MB102



MICROBOT CONTROLLED BY MOBILE PHONE (WiFi)

PRODUCT DESCRIPTION

This robot kit uses the NodeMCU 1.0 board as the robot controller. Inside the board is a ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module as well. Made it possible to send and receive data or command control of various devices such as the operation of robot control, switch on and off of tubes, and control watering of plants, etc. In addition, the NodeMCU 1.0 board also has a CP2102 IC for converting USB signals to UART, for use in connection with a computer for loading the driver we wrote. Users can write control programs through Arduino IDE or LUA programming with the aforementioned features. Therefore, it can be developed to order work through the Internet. Or as we can call it the Internet of Things (IoT).

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots, and learn the operation of electronic circuits.

- Power supply : 6VDC.
 - Electric current consumption : 500mA.
 - Applications can be used on mobile phone to control robot via Wi-Fi.
 - There are 3 LEDs for display.
 - Applications made available on ANDROID mobile phones up to version 10.
 - IC board dimension : 2.54 in x 3.09 in.
 - Body dimension (WxLxH) : 120 x 130 x 70 mm.
 - Weight (batteries not included) : 195g.
- Use a 2WD drive system.
 - The robot body uses ABS plastic.
 - Use all 2 gear motors.
 - Features of geared motors used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of gear motor (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB103

MICROBOT CONTROLLED BY MOBILE PHONE (BLUETOOTH)



PRODUCT DESCRIPTION

This robot is controlled wirelessly by using a Bluetooth signal as the medium of operation. The advantage of Bluetooth is that it consumes less power than wireless WiFi and is also popular when communicating with mobile phones. Besides that, programming and app control work is also easier than the WiFi system. Therefore, it is very suitable for those who are starting to learn wireless. If JDY33 was chosen as the Bluetooth module because it communicates with a wide variety of devices such as computers, Android mobile phones and IOS systems. The Bluetooth version is 3.0 SPP + BLE4.2 and operates at a frequency of 2.4GHz. SPP transmission speed is up to 16K bytes/s and BLE type, up to 4 bytes/s. Transmission distance up to 20 meters (in open air), maximum transmit power 6db, and receiving sensitivity -96dbm.

Nano V3.0 with the microcontroller IC was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a CH340 IC for converting the USB to UART signal to be used to connect to the computer for loading the driver that we wrote. Users can write programs through the Arduino IDE program. With the aforementioned features, it can eventually be developed to operate via the Internet or as we call the Internet of Things or IoT. Regarding the programming of the drivers, users also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots and learn how to operate electronic circuits.

- Power supply : 6VDC.
- Electric current consumption : 500mA.
- Applications can be used on mobile phone to control robot via Bluetooth.
- Use JDY33 bluetooth module to connect signal.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.56 in x 2.76 in.
- Body dimension (WxLxH) : 120 x 130 x 90 mm.
- Weight (batteries not included) : 195g.
- Use a 2WD drive system.
- The robot body uses ABS plastic.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB104

SUMO MICROBOT CONTROLLED BY MOBILE PHONE (WiFi)



PRODUCT DESCRIPTION

This robot kit uses the NodeMCU 1.0 board as the robot controller. Inside the board is a ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module as well. Made it possible to send and receive data or command control of various devices such as the operation of robot control, switch on and off of tubes, and control watering of plants, etc. In addition, the NodeMCU 1.0 board also has a CP2102 IC for converting USB signals to UART, for use in connection with a computer for loading the driver we wrote. Users can write control programs through Arduino IDE or LUA programming with the aforementioned features. Therefore, it can be developed to order work through the Internet. Or as we can call it the Internet of Things (IoT).

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots, and learn the operation of electronic circuits.

- Power supply : 6VDC.
- Electric current consumption : 500mA.
- Applications can be used on mobile phone to control robot via Wi-Fi.
- There are 3 LEDs for display.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.54 in x 3.09 in.
- Body dimension (WxLxH) : 143 x 140 x 70 mm.
- Weight (batteries not included) : 230g.
- Use a 2WD drive system.
- The robot body uses ABS plastic.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB105



MICROBOT OBSTACLE-AVOIDING ROBOT

PRODUCT DESCRIPTION

The obstacle dodging robots consists of 3 sets of detectors: front, left and right. The detection sensitivity can be adjusted. One set of sensors consists of LED that sends infrared light to reflect on the object. With the Photo Transistor as the receiver of the reflected light back.

The Nano V3.0 with no. ATMEGA328 microcontroller IC was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a CH340 for converting USB to UART signals to be used to connect to the computer for loading the driver we wrote. Users can write programs through the Arduino IDE program.

On the main board there is a connection for the bluetooth module. The JDY33 can be put into the Bluetooth module for the development of the robot to be controlled via Bluetooth. SW1 and SW2 switches are also available for users to write additional programs.

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots, and learn how to work electronic circuits.

- Power supply : 4 AA batteries (not included).
- Electric current consumption : 500mA.
- There is a connection point for the JDY33 BLUETOOTH module (not included).
- IC board dimension : 2.56 in x 1.28 in. (sensor board), 2.56 in x 2.76 in. (control board)
- Body dimension (WxLxH) : 120 x 130 x 90 mm.
- Weight (batteries not included) : 210g.
- Use a 2WD drive system.
- The robot body uses ABS plastic.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB106



MICROBOT LINE FOLLOW ROBOT

PRODUCT DESCRIPTION

The Line following robot consist of 4 sets of sensors used to detect lines, two sets on the left and on the right. The detection sensitivity can be adjusted sensor has a LED indicator for detection. Makes it easy to monitor sensor activity. The sensor operates from infrared light transmission and reception data. Which is caused by uneven reflection of light between white and black. Where black is less reflective than white. Allowing users to learn about the functioning of the sensor as well.

The Nano V3.0 with no. ATMEGA328 microcontroller IC was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a CH340 for converting USB to UART signals to be used to connect to the computer for loading the driver we wrote. Users can write programs through the Arduino IDE program.

On the main board there is a connection for the bluetooth module. The JDY33 can be put into the Bluetooth module for the development of the robot to be controlled via Bluetooth. SW1 and SW2 switches are also available for users to write additional programs.

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots, and learn how to work electronic circuits.

- Power supply : 4 AA batteries (not included).
- Electric current consumption : 300mA.
- There is a connection point for the JDY33 BLUETOOTH module (not included).
- IC board dimension : 2.76 in x 0.87 in. (sensor board), 2.56 in x 3.94 in. (control board)
- Body dimension (WxLxH) : 120 x 143 x 90 mm.
- Weight (batteries not included) : 220g.
- Use a 2WD drive system.
- The robot body uses ABS plastic.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB107

4WD MICROBOT CONTROLLED BY MOBILE PHONE (BLUETOOTH)



PRODUCT DESCRIPTION

This robot is controlled wirelessly by using a Bluetooth signal as the medium of operation. The advantage of Bluetooth is that it consumes less power than wireless WiFi and is also popular when communicating with mobile phones. Besides that, programming and app control work is also easier than the WiFi system. Therefore, it is very suitable for those who are starting to learn wireless. If JDY33 was chosen as the Bluetooth module because it communicates with a wide variety of devices such as computers, Android mobile phones and IOS systems. The Bluetooth version is 3.0 SPP + BLE4.2 and operates at as frequency at 2.4GHz. SPP transmission speed is up to 16K bytes/s and BLE type, up to 4 bytes/s. Transmission distance up to 20 meters (in open air), maximum transmit power 6db, and receiving sensitivity -96dbm.

Nano V3.0 with the microcontroller IC was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a CH340 IC for converting the USB to UART signal to be used to connect to the computer for loading the driver that we wrote. Users can write programs through the Arduino IDE program. With the aforementioned features, it can eventually be developed to operate via the Internet or as we call the Internet of Things or IoT. Regarding the programming of the drivers, users also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots and learn how to operate electronic circuits.

- Power supply : 6VDC.
- Electric current consumption : 500mA.
- Applications can be used on mobile phone to control robot via Bluetooth.
- Use JDY33 bluetooth module to connect signal.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.56 in x 2.76 in.
- Body dimension (WxLxH) : 130 x 190 x 100 mm.
- Weight (batteries not included) : 390g.
- Use a 4WD drive system.
- The robot body uses Epoxy PCB.
- Use all 4 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB108

4WD MICROBOT CONTROLLED BY MOBILE PHONE (WiFi)



PRODUCT DESCRIPTION

This set of robot that uses 4 motors to control the movement. Makes forward-backward motion and turning left and right more flexible, and more fun to play than the robot that uses 2 motors. The robot controller uses a NodeMCU 1.0 board. Inside the board is a ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module as well. Made it possible to send and receive data or command control of various devices such as the operation of robot control, switch on and off of tubes, and control watering of plants, etc. In addition, the NodeMCU 1.0 board also has a CP2102 IC for converting USB signals to UART, for use in connection with a computer for loading the driver we wrote. Users can write control programs through Arduino IDE or LUA programming with the aforementioned features. Therefore, it can be developed to order work through the Internet. Or as we can call it the Internet of Things (IoT).

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors, learn how to create applications to control robots, and learn the operation of electronic circuits.

- Power supply : 7.4-8.4VDC. (2 pieces of 18650 batteries).
- Electric current consumption : 800mA.
- Applications can be used on mobile phone to control robot via Wi-Fi.
- There are 3 LEDs for display.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.76 in x 3.23 in.
- Body dimension (WxLxH) : 130 x 190 x 90 mm.
- Weight (batteries not included) : 390g.
- Use a 4WD drive system.
- The robot body uses Epoxy PCB.
- Use all 4 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB109

MICROBOT PROGRAMMABLE TANK TRACK ROBOT SMART BLUETOOTH



PRODUCT DESCRIPTION

This robot is wirelessly controlled using a crawler propulsion system that allows it to be maneuvered in difficult terrain. Users will learn about driving power transmission belt which is different from a wheel drive system. Also learned about using a Bluetooth signal as a medium in working control. The advantage of Bluetooth is that it consumes less power than wireless Wi-Fi and is also popular for communicating with mobile phones. Besides that, programming and app control work is also easier than the WiFi system. Therefore, it is very suitable for those who are starting to learn wireless. The JDY33 was chosen as the Bluetooth module because it communicates with a wide variety of devices such as computers, Android mobile phones and IOS systems. The Bluetooth version is 3.0 SPP + BLE4.2 and operates at 2.4GHz frequency. SPP transmission speed is up to 16K bytes/s and BLE type, up to 4 bytes/s. Transmission distance up to 20 meters (in open air), maximum transmit power 6db, and receiving sensitivity -96dbm.

Nano V3.0 board with the microcontroller IC No. ATMEGA328 was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a IC for converting the USB to UART signal to be used to connect to the computer for loading the driver that we wrote. Users can write programs through the Arduino IDE program. With the aforementioned features, it can eventually be developed to operate via the Internet or as we call the Internet of Things or IoT. Regarding the programming of the drivers, users also learn about mechanics such as the operation of gear motors and power transmission belt, learn how to create applications to control robots and learn how to operate electronic circuits.

- Power supply : 7.4-8.4VDC. (2 pieces of 18650 batteries).
- Electric current consumption : 760mA.
- Applications can be used on mobile phone to control robot via Bluetooth.
- Use JDY33 bluetooth module to connect signal.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.56 in x 2.76 in.
- Body dimension (WxLxH) : 172 x 180 x 95 mm.
- Weight (batteries not included) : 350g.
- Use a tank track drive system.
- The robot body uses Epoxy PCB.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB110

MICROBOT PROGRAMMABLE TANK TRACK ROBOT SMART WiFi



PRODUCT DESCRIPTION

This robot uses a crawler propulsion system that allows it to be maneuvered in difficult terrain. Users will learn about belt drives, unlike a wheel drive system. For the control unit, the NodeMCU 1.0 board is used as the robot controller. Inside the board is a ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module as well. Made it possible to send and receive data or command control of various devices such as the operation of robot control, switch on and off of tubes, and control watering of plants, etc. In addition, the NodeMCU 1.0 board also has a CP2102 IC for converting USB signals to UART, for use in connection with a computer for loading the driver we wrote. Users can write control programs through Arduino IDE or LUA programming with the aforementioned features. Therefore, it can be developed to order work through the Internet. Or as we can call it the Internet of Things (IoT).

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors and power transmission belt, learn how to create applications to control robots, and learn the operation of electronic circuits.

- Power supply : 7.4-8.4VDC. (2 pieces of 18650 batteries).
- Electric current consumption : 760mA.
- Applications can be used on mobile phone to control robot via Wi-Fi.
- There are 3 LEDs for display.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.76 in x 3.23 in.
- Body dimension (WxLxH) : 172 x 180 x 85 mm.
- Weight (batteries not included) : 350g.
- Use a tank track drive system.
- The robot body uses Epoxy PCB.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 3-6VDC, 120mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 120-240rpm/min.
 - 3.Gear Ratio : 1:48.

MB111

MICROBOT PROGRAMMABLE TANK TRACK ROBOT SMART WiFi (CHASSIS METAL)



PRODUCT DESCRIPTION

This set of robots uses a metal body. This makes it stable, strong and can be easily installed with additional equipment by drilling. The drive system uses a crawler design, which makes maneuvering in difficult terrain. Users will learn about belt drives, which are different from wheel drives. For the control unit, the NodeMCU 1.0 board is used as the robot controller. Inside the board is a ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module as well. Made it possible to send and receive data or command control of various devices such as the operation of robot control, switch on and off of tubes, and control watering of plants, etc. In addition, the NodeMCU 1.0 board also has a CP2102 IC for converting USB signals to UART, for use in connection with a computer for loading the driver we wrote. Users can write control programs through Arduino IDE or LUA programming with the aforementioned features. Therefore, it can be developed to order work through the Internet. Or as we can call it the Internet of Things (IoT).

Besides that, users have learned how to write driver programs. Also learn about mechanics such as the operation of gear motors and power transmission belt, learn how to create applications to control robots, and learn the operation of electronic circuits.

- Power supply : 11.1-12.6VDC. (3 pieces of 18650 batteries).
- Electric current consumption : 700mA.
- Applications can be used on mobile phone to control robot via Wi-Fi.
- There are 3 LEDs for display.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.76 in x 3.23 in.
- Body dimension (WxLxH) : 178 x 190 x 95 mm.
- Weight (batteries not included) : 550g.
- Use a tank track drive system.
- The robot body is a metal body.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 6-12VDC, 100mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 170-350rpm/min.

MB112

MICROBOT PROGRAMMABLE TANK TRACK ROBOT SMART BLUETOOTH (CHASSIS METAL)



PRODUCT DESCRIPTION

This robot is wirelessly controlled uses a metal body. This makes it stable, strong and can be easily installed with additional equipment by drilling. The drive system uses a crawler design, which makes maneuvering in difficult terrain. Users will learn about belt drives, which are different from wheel drives. Also learned about using a Bluetooth signal as a medium in working control. The advantage of Bluetooth is that it consumes less power than wireless Wi-Fi and is also popular for communicating with mobile phones. Besides that, programming and app control work is also easier than the WiFi system. Therefore, it is very suitable for those who are starting to learn wireless. The JDY33 was chosen as the Bluetooth module because it communicates with a wide variety of devices such as computers, Android mobile phones and IOS systems. The Bluetooth version is 3.0 SPP + BLE4.2 and operates at 2.4GHz frequency. SPP transmission speed is up to 16K bytes/s and BLE type, up to 4 bytes/s. Transmission distance up to 20 meters (in open air), maximum transmit power 6db, and receiving sensitivity -96dbm.

Nano V3.0 board with the microcontroller IC No. ATMEGA328 was selected as a board to control the operation. It has 32KB SRAM 2KB EEPROM 1KB flash memory. The board also has a IC for converting the USB to UART signal to be used to connect to the computer for loading the driver that we wrote. Users can write programs through the Arduino IDE program. With the aforementioned features, it can eventually be developed to operate via the Internet or as we call the Internet of Things or IoT. Regarding the programming of the drivers, users also learn about mechanics such as the operation of gear motors and power transmission belt, learn how to create applications to control robots and learn how to operate electronic circuits.

- Power supply : 11.1-12.6VDC. (3 pieces of 18650 batteries).
- Electric current consumption : 700mA.
- Applications can be used on mobile phone to control robot via Bluetooth.
- Use JDY33 bluetooth module to connect signal.
- Applications made available on ANDROID mobile phones up to version 10.
- IC board dimension : 2.56 in x 2.76 in.
- Body dimension (WxLxH) : 178 x 190 x 115 mm.
- Weight (batteries not included) : 550g.
- Use a tank track drive system.
- The robot body is a metal body.
- Use all 2 motor gearboxes.
- Features of motor gearboxes used :
 - 1.Voltage size: 6-12VDC, 100mA@6VDC (without load).
 - 2.Maximum speed of motor gearbox (without load) : 170-350rpm/min.



SERIES 2XX CONTROL ROBOT SET



MB201

WIFI REMOTE CONTROL

PRODUCT DESCRIPTION

This circuit is designed to use a WiFi system to control the robot without the need for a mobile phone. The robots that can be controlled using this circuit include MicroBot MB102 (MicroBot controller by mobile phone (WiFi), and MB104 SUMO MicroBot controller by mobile phone (WiFi).

This circuit works just like a normal wireless remote. To control the robot, use the 4 buttons, just like a mobile app; forward, backward, turn left, turn right. It's also possible to set up to 5 WiFi names: test1-test5.

The advantages of this remote are the ease of use, more stable and quick control.

- Power supply : 4 rechargeable AA batteries (not included).
- Electric current consumption : 300mA.
- Can be used as a controller for electrical equipment via WiFi system.
- There are 5 control buttons.
- There is LED showing the status of pressing buttons and lights entering the circuit.
- Can be used with MB102 and MB104 models.
- PCB dimension : 2.37 in x 4.28 in.



MB202

CHECKPOINT CIRCUIT

PRODUCT DESCRIPTION

This circuit is used as a checkpoint for competition in the robot field, which can choose to display 2 types, light or sound.

- Power supply : 2 rechargeable AA batteries (not included).
- Electric current consumption : 100mA.
- Detection : Micro switch.
- Display : LED or Buzzer sound or both.
- There is a stop switch when the circuit works.
- PCB dimension : 2.92 in x 1.25 in.



SERIES 3XX ACCESSORY ROBOT



MB301

ROBOT WHEEL 69x7 mm FOR MINI GEAR BOX (2 WHEELS)

PRODUCT DESCRIPTION

This set of robot wheels is a set of wheels that can be adapted to be used in many forms of robots. In addition to that, inside the set there are also various mounting kits that are supplied as well.

- Wheel diameter 69 mm (tire included).
- Can be used with a gear motor set immediately.
- Includes 1 pair of wheels, 1 pair of right angle joints, 1 pair of 135 degree bend joints, 1 pair of motor brackets and 6 2x1/4 screws.



MB302

ROBOT WHEEL 65x25 mm FOR MINI GEAR BOX (2 WHEELS)

PRODUCT DESCRIPTION

This circuit is used as a checkpoint for competition in the robot field, which can choose to display 2 types, light or sound.

- Power supply : 2 rechargeable AA batteries (not included).
- Electric current consumption : 100mA.
- Detection : Micro switch.
- Display : LED or Buzzer sound or both.
- There is a stop switch when the circuit works.
- PCB dimension : 2.92 in x 1.25 in.



MB303

CASTER WHEEL WITH METAL BALL

PRODUCT DESCRIPTION

This robot rear wheel kit is a compact yet lightweight rear wheel assembly. Suitable for robots that are not very large. Inside the kit is powered by a 12 mm steel ball bearing, with a small ball bearing to facilitate smooth movement of the rear wheels For the mounting points between the rear wheel unit and the robot, bolts are used to make fixing easily.

- Main drive wheel set Use a 12 mm ball bearing.
- Dimensions of the rear wheel set : 16 x 22 x 18.5 mm.
- Mounting Thread Length : 9 mm.
- Suitable for robots that are not very large.



MB304

ROBOT ACCESSORY PART

PRODUCT DESCRIPTION

This set of mounting brackets is a set of mounting brackets used to hold various devices. Used with the robot body such as gear motor, bumper plate, various sensor assemblies, etc.

- Angle joints and 135 degree bend joints are used for fixing various devices.
- That needs to be assembled with the robot Motor bracket to use with gear motor set size 7 x 2.2 x 1.9 cm.
- The kit contains 1 pair of right angle joints, 1 pair of 135 degree bend joints, 1 pair of motor mounting brackets and 6 2x1/4 screws.



MB305

DC MOTOR GEAR BOX 1:48

PRODUCT DESCRIPTION

This robot motor kit It is a set of motors that have a gear reducer inside. This gives the motor the power to drive the robot or to be used in any other way that requires power.

- Motors can use direct power from 3-6 volts.
- Gear ratio (no load speed) : 1:48.
- Maximum torque : 800gf.cm. min @ 3VDC.
- Gear motor size: 7 x 2.2 x 1.9 cm.
- Suitable for a wide variety of applications such as robot kits, mechanical arms, etc.
- The kit includes 1 gear motor, 1 motor bracket and 2 2x1.4" screws.



SERIES 5XX EXPERIMENT BOARD



MB501

ELECTRONIC PART SET

PRODUCT DESCRIPTION

This electronic spare parts kit is a comprehensive and versatile replacement kit. Making it possible to use as a test spare part. When finished, you can use it for the next time. All spare parts are packed in a strong plastic box.



MB502

BASIC ELECTRONIC EXPERIMENT

PRODUCT DESCRIPTION

1.LED FLASHER 2 DOT

This flasher circuit is a fundamental circuit suitable for those who are interested in studying electronics as well as its performances. It is a low-cost product composed of few components: two alternate LED flashers of which flash frequencies are adjustable.

- Power supply : 9-12VDC.
- Electric current consumption : 16-22mA (max.)
- Flash frequency is adjustable with a horseshoe.
- IC board dimension : 1.39 in x 1.22 in

2.6 ALARM SOUND SIREN

The six digitized alarm sounds of the FK278 are held permanently in a masked Read Only Memory (ROM) in a decoder IC. A transistor output amplifier drives the supplied 8 ohm 0.25W speaker for a demanding sound suitable for toys and novelty applications.

- Power supply : 3VDC.
- Electric current consumption : 105mA. (max.)
- IC board dimension : 1.13 in x 1.00 in.



MB504

WiFi NODEMCU EXPERIMENTAL BOARD

PRODUCT DESCRIPTION

This is an excellent demo board for beginners learning to write control program with C++ language through the Arduino program. Objective can be used to order or control the circuit directly through the board. And can also learn about wireless data transmission and control via WiFi. In addition, it can eventually lead to the development of the command via the Internet, or as we call the Internet of Things or IoT.

This experimental board uses the NodeMCU 1.0 board as a controller. The board contains an ESP8266 module, which has a 32-bit microcontroller IC, 4MB of flash memory and a WiFi module. Make it possible to send and receive data or command control of devices such as the operation of switch robot control, control on and off the lamp or control watering of plants. In addition, the board NodeMCU 1.0 also has a CP2102 IC for converting USB to UART signals for use in Connecting to the computer for loading the drivers we wrote. User can write control program through Arduino IDE program or LUA language program.

Besides that, users have learned how to write driver programs. Also learned about creating applications, and learn how to operate electronic circuits.

- Power supply : 5VDC.
- Electric current consumption : 500mA.
- Applications can be used on mobile phones to control the experimental board via Wi-Fi.
- There are 6 LEDs for display and there are 3 switches for control (the user can be select LED or switch via jumper).
- There is 1 photo transistor.
- There are buzzer speakers for testing.
- It can be used together with MB601 relay card 1 channel and MB602 relay card 6 channels.
- IC board dimension : 2.98 in x 3.10 in.



MB505

UNO BEGINNER STARTER KIT

PRODUCT DESCRIPTION

This set of basic learning is an experimental set suitable for learning the operation of a microcontroller. Including studying programming with C language which is the basis for programming of various families of microcontrollers. The set includes a set of different sensors to study making it suitable for students from high school to university level.

- 1 x UNO R3 SMD Board
- 1 x USB A to B Cable
- 1 x IDE Pin 40 pins
- 1 x 6 Switch Board
- 1 x 10 LEDs Module
- 1 x Photo Transistor
- 1 x Deftness Game Line
- 1 x Rain Detector PCB
- 1 x Speaker
- 1 x 9V Battery Snap



MB506

UNO ELEMENTARY STARTER KIT

PRODUCT DESCRIPTION

This set of basic learning is an experimental set suitable for learning the operation of a microcontroller. Including studying programming with C language which is the basis for programming of various families of microcontrollers. The set includes a set of different sensors to study making it suitable for students from high school to university level.

- 1 x UNO R3 SMD Board
- 1 x USB A to B Cable
- 1 x IDE Pin 40 pins
- 1 x 6 Switch Board
- 1 x 10 LEDs Module
- 1 x Photo Transistor
- 1 x Deftness Game Line
- 1 x Rain Detector PCB
- 1 x Speaker
- 1 x 9V Battery Snap
- 1 x BreadBoard 100 Points
- 5 x Tact Switch
- 1 x 7'Segment 1 Digit
- 50 x Resistor 1/4W
- 1 x LED RGB 5 mm.
- 15 x LED 5 mm.
- 1 x 10CM M-M Jumper Cable 40 pins
- 1 x 10CM M-F Jumper Cable 5 pins
- 1 x 20CM M-M Jumper Cable 40 pins
- 1 x 20CM M-F Jumper Cable 20 pins



MB507

UNO INTERMEDIATE STARTER KIT

PRODUCT DESCRIPTION

This set of basic learning is an experimental set suitable for learning the operation of a microcontroller. Including studying programming with C language which is the basis for programming of various families of microcontrollers. The set includes a set of different sensors to study making it suitable for students from high school to university level.

- 1 x UNO R3 SMD Board
- 1 x USB A to B Cable
- 1 x IDE Pin 40 pins
- 1 x 6 Switch Board
- 1 x 10 LEDs Module
- 1 x Photo Transistor
- 1 x Deftness Game Line
- 1 x Rain Detector PCB
- 1 x Speaker
- 1 x 9V Battery Snap
- 1 x BreadBoard 100 Points
- 5 x Tact Switch
- 1 x 7'Segment 1 Digit
- 50 x Resistor 1/4W
- 1 x LED RGB 5 mm.
- 15 x LED 5 mm.
- 1 x 10CM M-M Jumper Cable 40 pins
- 1 x 10CM M-F Jumper Cable 5 pins
- 1 x 20CM M-M Jumper Cable 40 pins
- 1 x 20CM M-F Jumper Cable 20 pins
- 1 x TM1637 Module
- 1 x DHT11 Sensor
- 1 x 100K Potentiometer
- 1 x Vibration/Tilt SW Sensor SW-520D
- 1 x Ultrasonic Module US-26
- 1 x IR Remote TX and RX
- 1 x IR Obstacle Detector Module



SERIES 6XX INPUT-OUTPUT BOARD



MB601

ROBOT WHEEL 69x7 mm FOR MINI GEAR BOX (2 WHEELS)

PRODUCT DESCRIPTION

This Relay Card circuit is the module connect to microcontroller board or various experimental board such as ARDUINO, PIC or AVR. The voltage released of about 5-12 volts will cause the relay to work as programmed in IC memory. Opto-Coupler device is the main advantage of this circuit. It is used to separate ground between microcontroller board and the relay card board. Making it possible to control noise and prevents damage to the microcontroller board.

- Power Supply : 12 VDC @ 80 mA max.
- Signal Control : 5-12V from the microcontroller board
- Output : 1 relay
- PCB Dimensions : 0.91 x 2.32 inches.



MB602

6-CHANNEL RELAY CARD

PRODUCT DESCRIPTION

This Relay Card circuit is the module connect to microcontroller board or various experimental board such as ARDUINO, PIC or AVR. The voltage released of about 5-12 volts will cause the relay to work as programmed in IC memory. Opto-Coupler device is the main advantage of this circuit. It is used to separate ground between microcontroller board and the relay card board. Making it possible to control noise and prevents damage to the microcontroller board.

- Power Supply : 12 VDC or VAC, @ 460 mA max.
- Signal Control : 5-12V from the microcontroller board
- Output : 6 relays, 2 groups ground separate.
- PCB Dimensions : 1.6 x 2.20 inches.



MB603

5 CH TRANSISTOR CURRENT AMPLIFIER 12V 5A

PRODUCT DESCRIPTION

MB603 is a circuit that adds current to the load. Which has 5 distribution channels in total. Each channel can supply up to 1A, allowing for a more versatile use such as connecting to a microcontroller. Which makes it possible to control devices that consume high current.

- Power supply : 12-15VDC.
- Input voltage : 5-12VDC.
- Output voltage : 12-15VDC (depends on the power supply).
- Output current : 1A max. per channel @ input 12VDC and 500mA max. per channel @ input 5VDC.
- LED's output status indicator.
- PCB dimension : 3.02 in x 1.46 in.



SERIES 7XX SENSOR BOARD



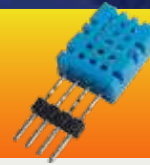
MB701

ROBOT WHEEL 69x7 mm

PRODUCT DESCRIPTION

The DS18B20 IC Digital Thermometer provides -55°C to $+125^{\circ}\text{C}$. Each DS18B20 has IC 3-pin and used one cable for responding and transmission.. The temperature measurements are stored in 16-bit register and will require a microcontroller for display. Applications that can benefit from this sensor include HVAC environmental controls, temperature monitoring systems inside buildings, equipment or machinery, and process monitoring and control systems.

- Can be powered from data line. Power supply range is 3.0V to 5.5V
- Available in 3-pin TO-92 packages
- Measure temperatures from -55°C to $+125^{\circ}\text{C}$
- 0.5 C accuracy from -10°C to $+85^{\circ}\text{C}$
- Thermometer resolution is user-selectable from 9 to 12 bits
- Convert temperature to 12-bit digital word in 750ms (max.)
- Each device has a unique 64-bit serial code stored in an onboard ROM



MB702

DHT11 HUMIDITY SENSOR

PRODUCT DESCRIPTION

DHT11 digital humidity sensor, can measured humidity 20 to 90%, modules has 3-pin and used one cable for responding and transmission. DH11 also can be a thermometer, with temperature range of 0 - 50°C (but not popular for use). The humidity measurements are stored in a 16-bit registers and will require a microcontroller for processing and display.

- Measures humidity from -20 to 90% RH, accuracy at $\pm 5\%$
- Measures temperatures from 0°C to 50°C , accuracy at $\pm 2^{\circ}\text{C}$
- Power supply range is 3.0V to 5.5V, 1 mA (Max)
- 16-bit serial data transmission, the two panels. By using a single cable read the signs (Sample Rate) every one second.



MB703

RM952 IR REMOTE CONTROL

PRODUCT DESCRIPTION

This remote control is a finished goods product. Serving as infrared transmitter, has the frequency around 40 KHz for circuit Infrared sensor. TSOP4838 (MB704) require controller for decoding the command. And remote controller MB704 also can compatible or replacement circuits electronic as follows:

FK-FA440 Single Channel Infrared Remote Control
 FK-FA441 Single Channel Infrared Remote Controlled Receiver
 FK-FA442 Five Channel Infrared Remote Control
 FK-FA443 Five Channel Infrared Remote Controlled Receiver

- Power supply : Battery AAx2 pcs.
- Consumption : 25 mA max, stanby 1mA
- Transmission standard : SONY RC5 12 bit
- Dimensions : 54 x142 x32 mm.



MB704

TSOP4838 IR RECEIVER MODULE

PRODUCT DESCRIPTION

The TSOP4838 Infrared receiver module, it has 3-pin. Receivers PCM frequency from infrared remote control and take interference filter, detector signal, and require a microcontroller for display.

- Power supply range is 4.5V to 5.5V, consumption 5 mA
- Receiver center frequency 38 kHz
- Output active low.
- Has circuit filters inside.

FUTUREBOX

(A) OPAQUE BOX (BLACK&WHITE)

(B) CLEAR BOX



FB01

MULTIPURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 60*65*25 mm.
- Internal dimension 55*61*22 mm.
- 2 points to hold screw.
- It is able to support 2.25 inch of speaker.
- It is fit with burglar alarm circuit.

BLACK



WHITE



FB02

SKINNY BOX

PRODUCT DESCRIPTION

- Dimension 36*118*21 mm.
- Internal dimension 33*116*17 mm.
- 2 points to hold screw.
- It is fit with logic probe circuit.
- It is able to support infrared remote.
- It is able to support wireless MIC circuit.
- Available black and white color.

BLACK



WHITE



FB03

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 68*104*38 mm.
- Internal dimension 64*100*34 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom.
- A socket for PCB.
- Available clear, black and white color.

BLACK



WHITE



TRANSLUCENT



FB04

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 89*134*45 mm.
- Internal dimension 84*128*41 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom.
- A socket for PCB.
- Available black and white color.

BLACK



WHITE



FB05

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 103*150*58 mm.
- Internal dimension 98*145*54 mm.
- 8 points to hold screw on bottom.
- It is able to support a transformer 500 ma.
- It is fit with the mid-size circuit.
- 4 legs support rubber.
- Available black, white and clear color

BLACK



WHITE



TRANSLUCENT



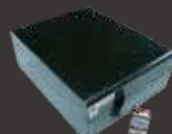
FB06

INSTRUMENT BOX

PRODUCT DESCRIPTION

- Dimension 215*168*78 mm.
- Internal dimension 209*156*72 mm.
- 12 points to hold screw on top.
- 8 points to hold screw on bottom.
- A socket for PCB.
- 4 legs support rubber.
- It is able to separate all cover top, bottoms, front and back
- Available black and gray color.

BLACK



WHITE



FB07

"WALKY TALKY" BOX

PRODUCT DESCRIPTION

- Dimension 64*164*36 mm.
- Internal dimension 60*159*31 mm.
- 4 points to hold screw on bottom.
- It is fit with walky-talky circuit.
- It is able to support 2.25 inch of speaker.
- It is able to support 9V battery.
- Available black color only.

BLACK



FB08

MICROPHONE BOX

PRODUCT DESCRIPTION

- Dimension 50*140*25 mm.
- Internal dimension 49*135*19 mm.
- 5 points to hold screw on top.
- It is fit with wireless MIC circuit.
- Available black color only.

BLACK



FB09

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 130*193*64 mm.
- Internal dimension 124*188*60 mm.
- 12 points to hold screw on bottom.
- It is able to support a transformer 1 AMP.
- It is fit with the big-size circuit.
- 4 lets support rubber.
- It is fit with burglar alarm circuit.
- Available black and white color

BLACK



WHITE



FB10

INSTRUMENT BOX

PRODUCT DESCRIPTION

- Dimension 146*157*67 mm.
- Internal dimension 139*140*60 mm.
- 13 points to hold screw on top.
- 9 points to hold screw on bottom.
- 4 legs support rubber.
- It is able to separate all cover top, bottoms, front and back.
- Available black and white color.

BLACK



WHITE



FB11

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 32*47*25 mm.
- Internal dimension 30*45*20 mm.
- It is none hold for screw.
- Using the glue to hold all up.
- It is suitable with small circuit or small module.
- Available black and white color.

BLACK



WHITE



FB12

BULKHEAD BOX (WITH SCREW HOLDER)

PRODUCT DESCRIPTION

- Dimension 40*55*25 mm.
- Internal dimension 35*50*20 mm.
- Having the wings on both sizes for hold screw.
- It is able to hold on the wall.
- It is suitable with all sensor circuit or small circuit.
- Available black, white and clear color.

BLACK



WHITE



TRANSLUCENT



FB13

BULKHEAD BOX (WITH SCREW HOLDER)

PRODUCT DESCRIPTION

- Dimension 70*105*27 mm.
- Internal dimension 65*100*24 mm.
- Having the wings on both sizes for hold screw.
- 4 points to hold screw on bottom.
- Available black and white color.

BLACK



WHITE



FB15

INTERCOM BOX (FOR BATTERY UM 2X3 Pcs)

PRODUCT DESCRIPTION

- Dimension 107*158*35 mm.
- Internal dimension 101*152*30 mm.
- 6 points to hold screw on top.
- 5 points to hold screw on bottom.
- It is able to support 2.25 inch of speaker
- UM 2 : 3 batteries.
- Having anode and cathode for battery and cover battery.
- 2 hold on the cover bottom for hanging.
- Available black and white color

BLACK



WHITE



FB16

INSTRUMENT BOX

PRODUCT DESCRIPTION

- Dimension 140*110*42 mm.
- Internal dimension 131*101*36 mm.
- 10 points to hold screw on top.
- 6 points to hold screw on bottom.
- 4 legs support rubber.
- It is able to separate all cover top, bottoms, front and back.
- Available black and white color.

BLACK



WHITE



FB17

MULTIPURPOSE BOX

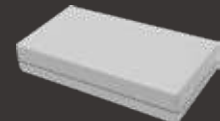
PRODUCT DESCRIPTION

- Dimension 63*115*23 mm.
- Internal dimension 59*112*18 mm.
- 4 points to hold screw on top.
- 2 socket for PCB.
- It is able to support 2.25 inch of speaker.
- It is able to support 3 battery on AA size.
- It is able to support 9V. battery.
- Suitable with all sound remote control (TX)
- Available black and white color.

BLACK



WHITE



FB18

GENERAL PURPOSE BOX

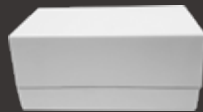
PRODUCT DESCRIPTION

- Dimension 71*138*65 mm.
- Internal dimension 68*135*60 mm.
- 6 points to hold screw on bottom.
- 4 socket for PCB
- 4 legs support rubber.
- It is able to support a transformer 1 AMP.
- Available black and white color.

BLACK



WHITE



FB19

MICRO BOX

PRODUCT DESCRIPTION

- Dimension 27*48*10 mm.
- Internal dimension 24*44*7 mm.
- 2 points to hold screw on bottom.
- It is suitable with small circuit.
- Available black and gray color.

BLACK



WHITE



FB20

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 50*76*20 mm.
- Internal dimension 48*73*17 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom
- It is suitable with small circuit.
- It is able to support 9V. battery.
- Available black and gray color.

BLACK



WHITE



FB21

MULTIPURPOSE BOX (HAVING A BATTERY HOLE)

PRODUCT DESCRIPTION

- Dimension 111*111*24 mm.
- Internal dimension 107*107*20 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom
- It is suitable with small circuit.
- It is able to support 4 battery on AA size, and including spring pole and cover battery.
- Available black and gray color

BLACK



WHITE



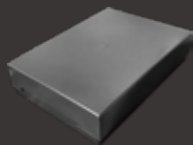
FB22

MULTIPURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 164*234*(54,57) mm.
- Internal dimension 158*228*(48,51) mm.
- Nice curve for cover top
- 4 points to hold screw on bottom
- 2 hold on the cover bottom for hanging on the wall
- It is suitable for large circuit
- It is able to support a transformer 500 mA
- Available black and white color.

BLACK



WHITE



FB23

MULTIPURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 77*107*(42,30) mm.
- Internal dimension 72*102*(37,25) mm.
- To incline for cover top
- 4 points to hold screw on top
- 4 points to hold screw on the corner of cover top-bottom
- It is suitable for "Regurate circuit"
- It is able to support a transformer 300 mA
- Available black and gray color.

BLACK



WHITE



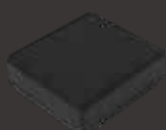
FB24

COMPACT HANDY BOX

PRODUCT DESCRIPTION

- Dimension 42*45*16 mm.
- Internal dimension 39*42*13 mm.
- It is suitable for small circuit
- 4 points to hold screw on the corner of cover top-bottom
- Available black and gray color

BLACK



WHITE



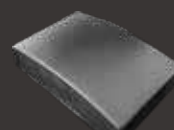
FB25

MULTIPURPOSE BOX

PRODUCT DESCRIPTION

- Dimension 95*139*(42,34) mm.
- Internal dimension 90*134*(37,29) mm.
- Nice curve for cover top
- 4 points to hold screw on bottom
- 2 hold on the cover bottom for hanging on the wall
- Available gray and black color.

BLACK



WHITE



FB26

GENERAL PURPOSE BOX (WITH SCREW HOLDER)

PRODUCT DESCRIPTION

- Dimension 89*134*43 mm.
- Internal dimension 84*128*39 mm.
- A wing nut to hold the second side wall.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom.
- A socket for PCB.
- Available black and gray color.

BLACK



WHITE



FB27

GENERAL PURPOSE BOX (WITH SCREW HOLDER)

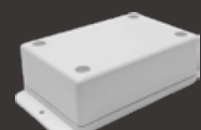
PRODUCT DESCRIPTION

- Dimension 60*65*25 mm.
- Internal dimension 55*61*22 mm.
- 2 points to hold screw.
- It is able to support 2.25 inch of speaker.
- It is fit with burglar alarm circuit.

BLACK



WHITE



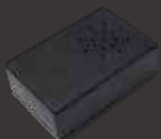
FB28

GENERAL PURPOSE BOX (FOR SPEAKER)

PRODUCT DESCRIPTION

- Dimension 70*105*39 mm.
- Internal dimension 65*100*35 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom.
- A socket for PCB and support speaker.
- Available black and white color.

BLACK



WHITE



FB29

HANDY BOX (WITH SCREW HOLDER)

PRODUCT DESCRIPTION

- Dimension 89*134*45 mm.
- Internal dimension 84*128*41 mm.
- 4 points to hold screw on top.
- 4 points to hold screw on bottom.
- A socket for PCB.
- Available black and white color.

BLACK



WHITE



FB30

GENERAL PURPOSE BOX (WITH SCREW HOLDER)

PRODUCT DESCRIPTION

- Internal dimension 98*145*50 mm.
- Dimension 105*150*57 mm.
- A wing nut to hold the second side wall.
- 8 points to hold screw on bottom.
- Available black and white color.

BLACK



WHITE



FB31

GENERAL PURPOSE BOX

PRODUCT DESCRIPTION

- Internal dimension 71*102*39 mm.
- Dimension 75*106*44 mm.
- 6 points to hold screw on bottom.
- Available black and white color.

BLACK



WHITE



FB32

HANDY BOX (WITH SCREW HOLDER)

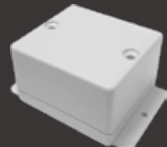
PRODUCT DESCRIPTION

- Internal dimension 54*60*36 mm.
- Dimension 60*66*41 mm.
- 2 points to hold screw on bottom.
- Available black and gray color.

BLACK



WHITE



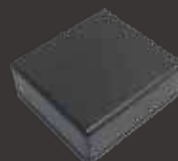
FB33

GENERAL PURPOSE BOX

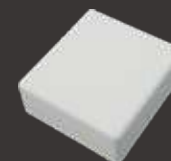
PRODUCT DESCRIPTION

- Dimension 43*46*19 mm.
- Internal dimension 37*40*15 mm.
- 2 points to hold screw.

BLACK



WHITE



FB34

GENERAL PURPOSE BOX (WITH SCREW HOLDER)

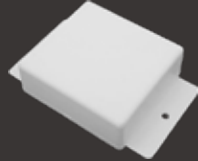
PRODUCT DESCRIPTION

- Dimension 43*46*19 mm.
- Internal dimension 37*40*15 mm.
- 2 points to hold screw.
- Having the wings on both sizes for hold screw.

BLACK



WHITE



FB35

GENERAL PURPOSE BOX (WITH SCREW HOLDER)

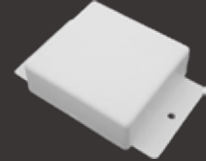
PRODUCT DESCRIPTION

- Dimension 60*65*25 mm.
- Internal dimension 55*61*22 mm.
- 2 points to hold screw.
- It is able to support 2.25 inch of speaker.
- It is fit with burglar alarm circuit.

BLACK



WHITE



Assembly Set Production (Future Kit & Maxxtronic)



Kit Set Production (FUTURE KIT)



Future Kit Technology Kit Set

For Education And Academic Studies

For Inventing And Experimental Project

For Skill Training And Improving Learning Experience

For Hobby And Fun Building

