FUTURE KIT
HIGH QUALITY ELECTRONIC KITS

DEFTNESS GAME CODE 145
LEVEL 1

This citcuit is the electronic circuit at use the basic circuit to create. The metter is pass a small wire loop through a thread wire with a lot of bends and obstacles. The person who touches the thread wire with the wire loop, will have the beep tone continue. An interesting game for paties and for neverending evenings.

Technical specifications:

- power supply: 3VDC.
- consumption: 50mA max.
- PCB dimensions : 3.19 x 1.12 inch.

How to works:

When supply the power supply in the first time, C1 is both initially charged for protect to the circuit not work of the first time. While playing the game, if the wire loop and the thread wire is touches, causing TR4 to operate. At this time, astable multivibrator circuit is generate the frequency. Astable multivibrator circuit consist TR2, TR3, C1, C2, and R2 to R5. This frequency is fed to the base of TR1 through the emitter of TR2. Transistor TR1 is amplifies the frequency and supply into the buzzer with have the beep tone continue. If push "RESET" switch, the beep tone is stop.

PCB assembly:

Shown in Figture 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully bent to fit the position on the PCB and then soldered into place. Make sure that the electrolytic capacitors are inserted the correct way around. The LED has a flat spot on the body which lines up with the line on the overlay. Now check that you really did mount them all the right way round!

Testing:

Now check that you really did mount then all the right way round! After separate between the wire loop and the thread wire. Connect the power supply 3VDC to the circuit at "+3V" point and "G" point. At this time, the circuit is not hear the beep tone. To touches between the wire loop and the thread wire. You hear the beeptone from the circuit. If push "push" switch, the circuit is stop the beep tone.

## Figure 1. Installing the componants

RESISTOR

$R \ldots \Omega$

ELECTROLYTIC CAPACITOR

$C \ldots \mu F$

Watch the polarity!

TRANSISTOR

NPN   PNP

CERAMIC CAPACITOR

$C \ldots \mu F$

DIODE   1N4148

TACTILE SWITCH

DYNAMIC BUZZER   PZ

Troubleshooting:

The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted in the wrong places. Make sure that all the polarised components have been soldered the right way round.
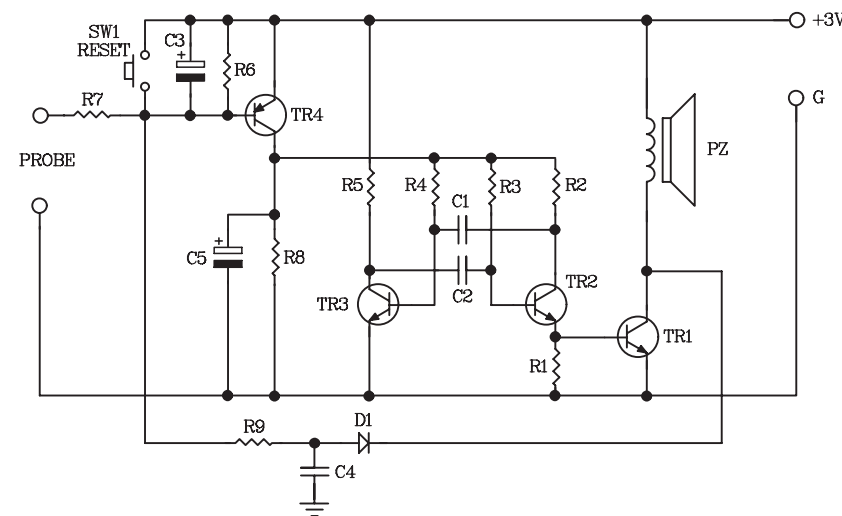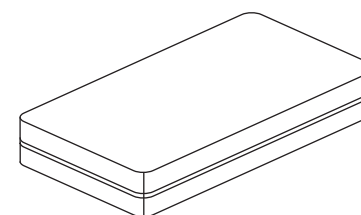

Figture 2. The deftness game circuit

Figture 3. Connections

FK145-1

red +

black -
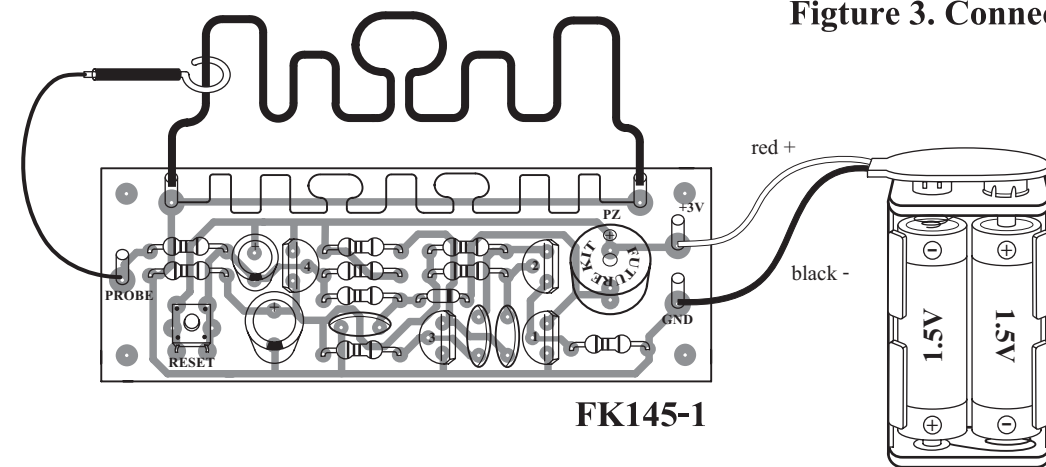
BATTERY 1.5V x 2 SIZE AA

NOTE:

FUTURE BOX FB17 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
271	LIGHT ACTIVATE ALARM (COCK VOICE) WITH SPEAKER	3VDC
272	SPACE GUN 3 TONE WITH SPEAKER	9VDC