InteractiveToy Concepts (HK) Ltd

Address: 7/F, Eu Yan Sang Tower
11-5 Chatham Road South
TST, Kowloon, Hong Kong
Email: virginia@interactivetoy.com.hk
TEL : (852) 23 688 166
Fax (852) 23 688 155

Circuit Description

**IN TRANSMIT MODE.

WHEN THE CONTROL KNOB IS PRESSED, A CW SIGNAL IS TRANSMITTED.
THE CRYSTAL CONTROLLED OSCILLATOR Q1 OUTPUT IS COUPLED THROUGH
C7 TO THE BASE OF Q2,FROM Q2 THE SIGNAL IS FED THROUGH T-1。
THE LOW PASS FILTER MADE UP OF C12 & T-1 & C1 L-1 WHICH ARE CONNECTED TO
THE ANTENN。
THE 'MODULATION IS PROVIDED BY U-1 .WHEN SWITCH IS PUSHED,
THE MODULATION SIGNAL WILL BE SENT TO THE BASE OF Q1 THAT
WILL MODULATE THE RF WAVE DIRECTLY,Switch stay 45 Seconds U1
Automatic OFF ,A RESET SWITCH S1 IS PROVIDED TOO.
ENERGRY IS SUPPLIED BY 6F22=9 VDC ALKALINE BATTERY.

** TYPICAL OPERATION

TYPICAL OPERATION WOULD INVOLVE THE USER TURNING ON THE UNIT TO THE TOY GAME.
WHEN TURNED ON, THE UNIT COMES UP ON THE DEFAULT CHANNEL AND TRANSMITS A
CONTINUOUSLY STEAM DATA. THE USER CAN NOT, AT WILL, CHANGE TO ANY OTHER OF THE
PREDEFINED CHANNEL.

** CONFIGURATION

THE TRANSMITTED RF CIRCUITRY CONSISTS OF A CRYSTAL CONTROLLED OSCILLATOR,
FOLLOWED BY ONE POWER AMPLIFIER, & FINALLY, AN ANTENNA. THE MAIN CHARACTERISTICS
OF THIS CONFIGURATION ARE SHOWN BELOW :-

** FREQUENCY RANGES **27.145MHZ**

OCCUPIED BANDWIDTH (3DB)	**+/-2KHZ**	MAX
FREQUENCY STABILITY	**+/- 20 PPM**	MAX
MODULATION METHOD	**A M**	100% .
OUTPUT POWER	**80DBUV / M**	MAX

** REFERENCE OSCILLATOR

A 27.145MHZ CRYSTAL OSCILLATOR IS USED TO GENERATE THE REFERENCE FREQUENCY
IT HAS A STABILITY OF + / - 20 PPM.

** AMPLIFIER

THE OSCILLATOR IS FOLLOWED BY ONE AMPLIFIER. THIS ACTS MORE AS BUFFER FOR THE
OSCILLATOR THAN AS GAIN STAGE. AND ADD VERY LITTLE POWER TO THE SIGNAL.
THE FINAL OUTPUT IS 80D BUV PER METER MAX

** ANTENNA

THE SYSTEM ANTENNA IS A ANTENNA ROD LINKED TO PCB .
ANTENNA CAN BE TURNED OUT OR IN PENDING USER'S WISH.

** MICROCONTROLLER

* THE TX SYSTEM IS CONTROLLED BY A SMALL MICROCONTROLLER
RUNNING WITH A 128KHZ +/- 20% OSCILLATOR