

# TONER UNIT TU-8

# KENWOOD

KENWOOD CORPORATION

## INSTRUCTION MANUAL

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Thank you for purchasing a KENWOOD product. The TU-8 is a tone unit designed for the TS-440S FM operation.

### ■ SPECIFICATIONS

Tone frequencies: 67.0 to 250.3 Hz (38 steps),  
1750 Hz, 1800 Hz.

### ■ ACCESSORY

Instruction manual (B50-8091-10) .....1 copy

### ■ INSTALLATION

**Note:** Before installation, be sure to disconnect power cable.

1. Remove lower case with nine screws.
2. Connect securely the 3-pin plug from RF unit to the tone unit.
3. Remove seals of cushions.
4. Set the tone unit on the RF unit making the cushions cover two IC's of the RF unit.

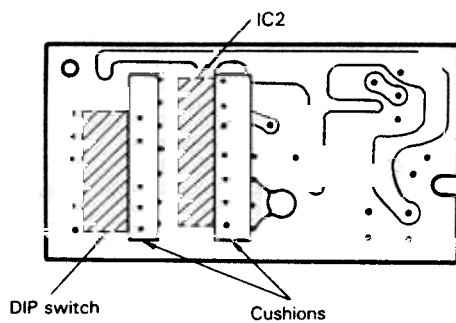


Fig.1 Foil side view

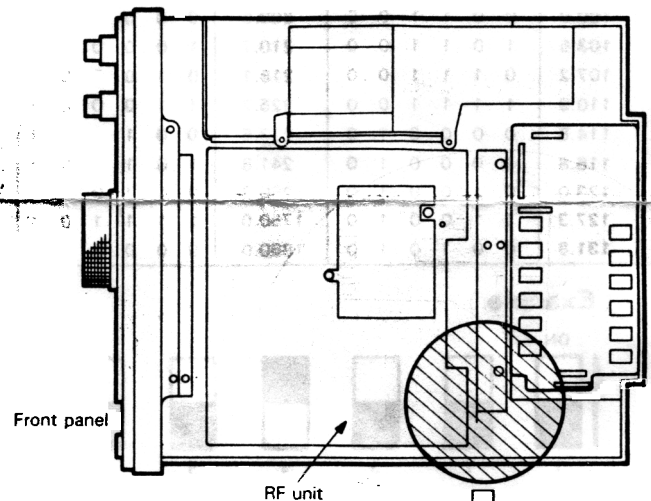


Fig.2 View when lower case is opened.

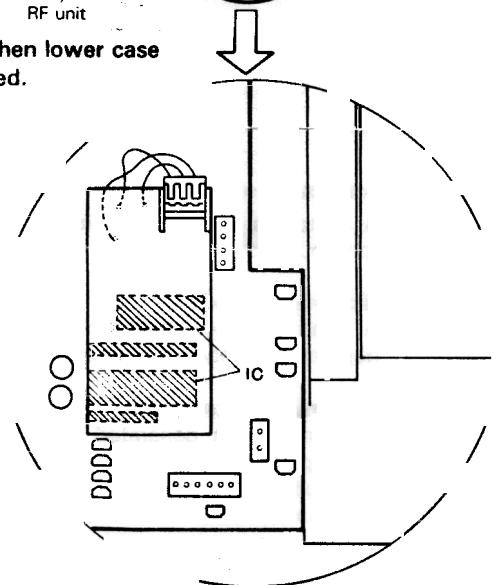


Fig.3 Enlarged view

## ■ OPERATION

### 1. Frequency selection.

A six position DIP switch (Fig. 4) has been provided to allow selection of the desired tone frequency. 38 different frequencies are available (See Table 1).

The TU-8 has been preset at factory for 600 Hz deviation.

Use the DIP switch and Table 1 to select the desired tone frequency.

Table 1. Programs (1: ON, 0: OFF)

Frequency (Hz)	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	P <sub>5</sub>	P <sub>6</sub>	Frequency (Hz)	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	P <sub>5</sub>	P <sub>6</sub>
67.0	1	0	0	0	0	0	136.5	1	0	1	0	1	0
71.9	0	1	0	0	0	0	141.3	0	1	1	0	1	0
74.4	1	1	0	0	0	0	146.2	1	1	1	0	1	0
77.0	0	0	1	0	0	0	151.4	0	0	0	1	1	0
79.7	1	0	1	0	0	0	156.7	1	0	0	1	1	0
82.5	0	1	1	0	0	0	162.2	0	1	0	1	1	0
85.4	1	1	1	0	0	0	167.9	1	1	0	1	1	0
88.5	0	0	0	1	0	0	173.8	0	0	1	1	1	0
91.5	1	0	0	1	0	0	179.9	1	0	1	1	1	0
94.8	0	1	0	1	0	0	186.2	0	1	1	1	1	0
97.4	1	1	0	1	0	0	192.8	1	1	1	1	1	0
100.0	0	0	1	1	0	0	203.5	0	0	0	0	0	1
103.5	1	0	1	1	0	0	210.7	1	0	0	0	0	1
107.2	0	1	1	1	0	0	218.1	0	1	0	0	0	1
110.9	1	1	1	1	0	0	225.7	1	1	0	0	0	1
114.8	0	0	0	0	1	0	233.6	0	0	1	0	0	1
118.8	1	0	0	0	1	0	241.8	1	0	1	0	0	1
123.0	0	1	0	0	1	0	250.3	0	1	1	0	0	1
127.3	1	1	0	0	1	0	1750.0	1	1	1	1	0	1
131.8	0	0	1	0	1	0	1800.0	0	0	0	0	1	1

( Example )

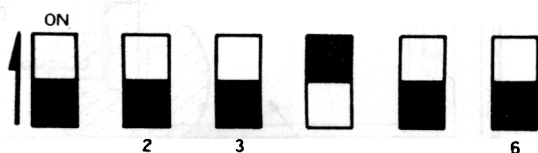


Fig.4 Set to the DIP switch (Setting for 88.5 Hz)

### 2. Tone-burst or continuous-tone selection.

A switch is provided to allow selection of either the tone-burst or continuous tone modes.

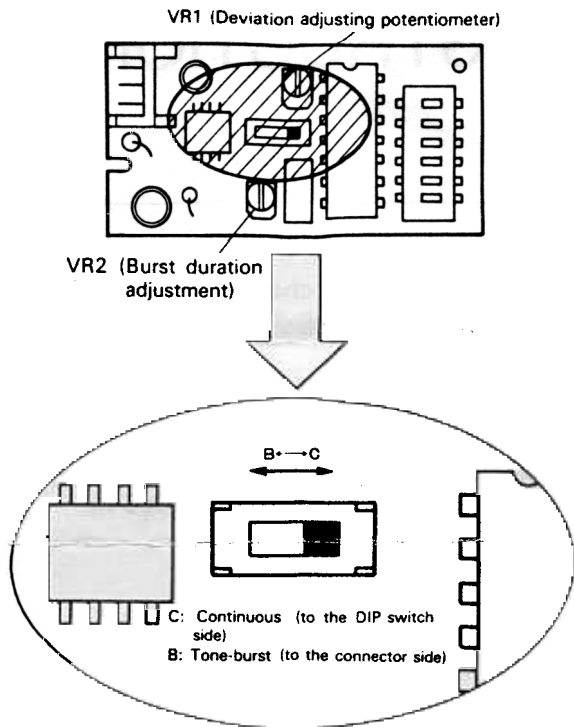
#### [Tone-burst mode]

A tone will be generated for a brief period at the beginning of each transmission.

#### [Continuous-tone mode]

A tone will be generated as long as the PTT switch is depressed. Since the tone is adjusted for a sub-audible level, this should not interfere with normal communications.

This unit has been preset to the Continuous-tone mode.

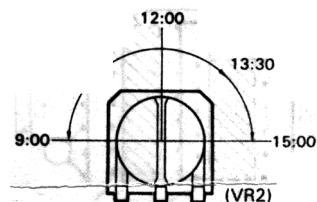


When the TU-8 is installed in the TS-440S, the maximum frequency deviation will be approximately 2 kHz with the deviation potentiometer full clockwise.

### 3. Adjustment of burst duration.

The burst duration can be adjusted by with VR2

Position 9:00	Approx. 0.5 sec.
Position 12:00	Approx. 2 sec.
Position 13:30	Approx. 3.5 sec.
Position 15:00	Continuous



### 4. Transmission

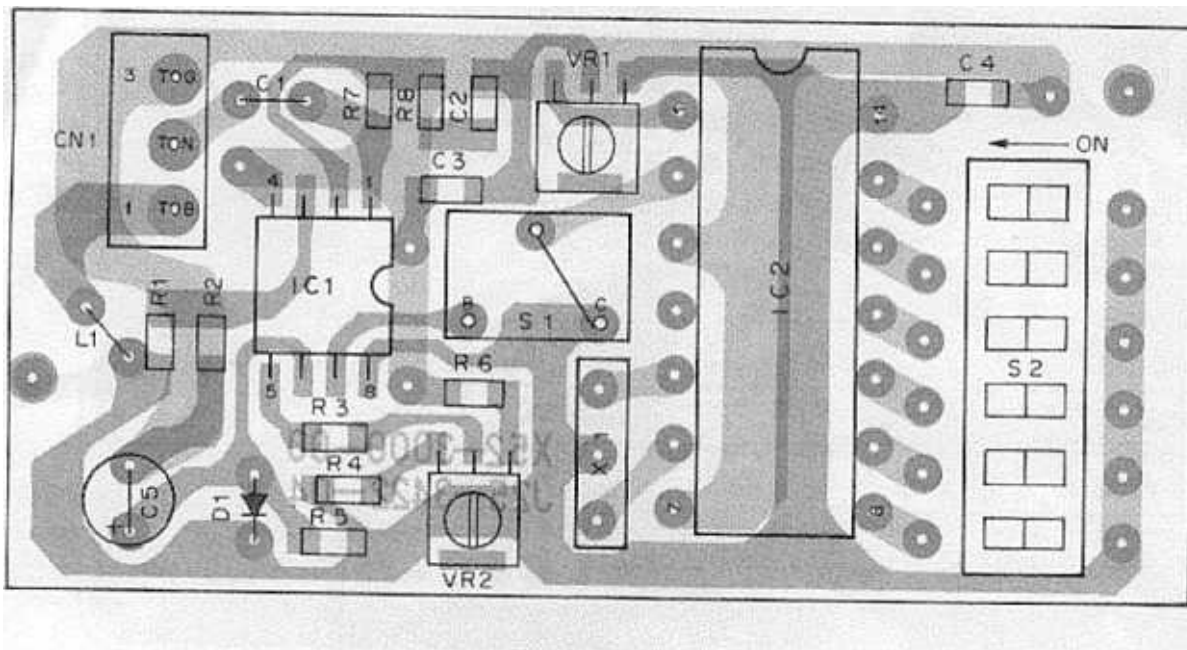
When the FM mode has been stored in memory channels CH 90 to 99 (Split memory channels), a tone will be generated automatically on transmit.

For memory storage details, please consult the TS-440S instruction manual.

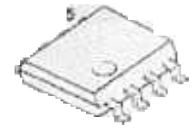
# TU-8 (TONE UNIT)

## TU-8 PC BOARD VIEW

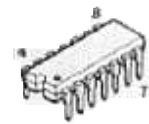
### TONE UNIT (X52-3000-00) Component side view



NJM3404AM



S7116A



## TU-8 SCHEMATIC DIAGRAM

### TONE UNIT (X52-3000-00)

