

# Belcom<sup>®</sup>

## MODEL AMR-217B VHF FM Scanning Monitor



### OWNER'S GUIDE

## FEATURES

- This is a scanning receiver of high performance utilizing crystal and ceramic filters.
- A scanning circuit utilizing digital logic IC's has been adopted.
- Stable reception is assured due to adoption of the memory circuit.
- This unit can be operated on either of automobile battery (12V) or commercial AC power source (220V) at home.
- Crystals can be exchanged easily.

## RATINGS OF MODEL AMR-217B

(The circuitry and rating are subject to change without notice because of our incessant technical development.)

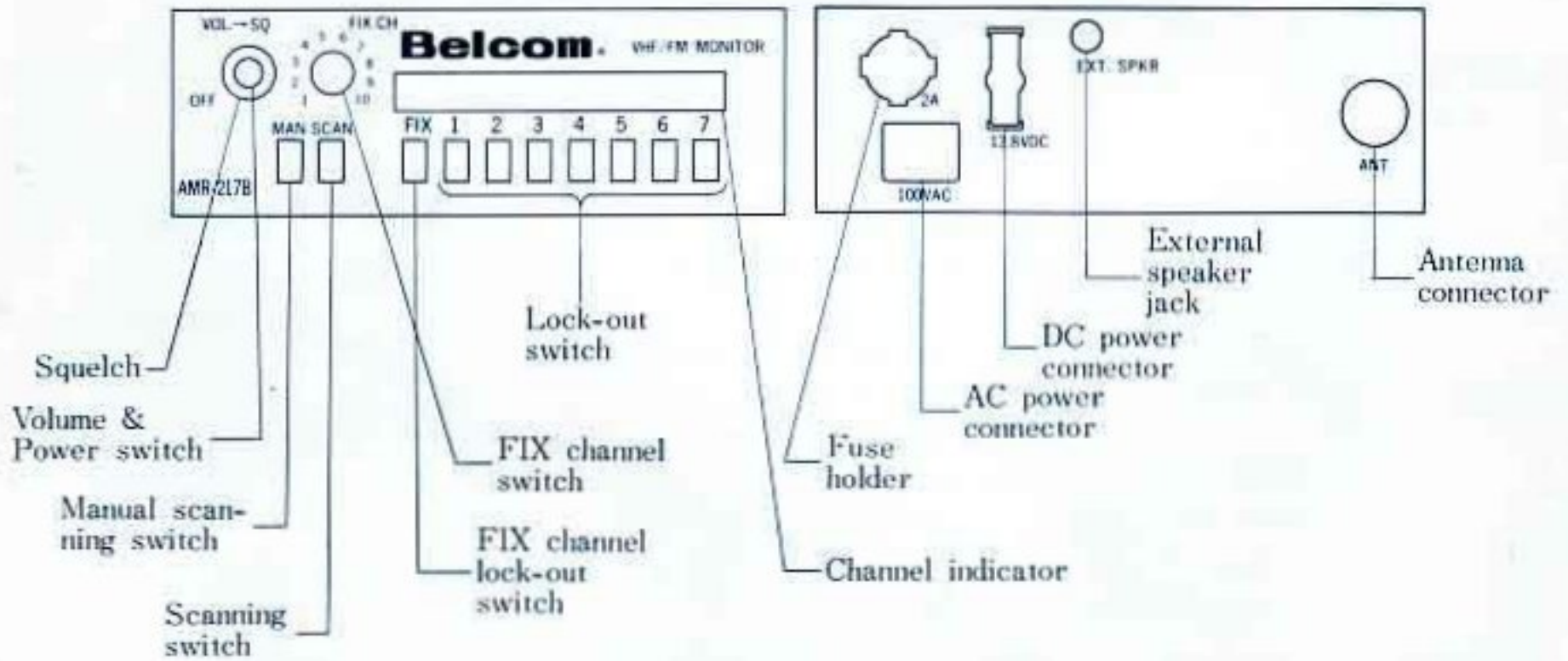
- Receiving frequency ..... 17 waves in 140MHz band (only one channel 144.48MHz installed actually)
- Type of radio wave ..... FM (F<sub>3</sub>, 15KHz deviation)
- Reception system ..... Double superheterodyne system  
(NO.1 IF10.7MHz, NO.2 IF455KHz)
- Receiving sensitivity ..... 1  $\mu$ V
- Multiplications of No.1 local oscillator ..... 9 multiplications

- Antenna input impedance ..... 50  $\Omega$  unbalance
- External speaker impedance ..... 8  $\Omega$
- Low frequency output ..... 1 W or more (8  $\Omega$  load 10% distortion)
- Power source ..... DC13.8V 0.4A AC 220V 10W
- Dimensions
  - Width ..... 15.5 cm
  - Length ..... 21 cm
  - Height ..... 5.6 cm
- Weight ..... Approx. 1.7 kg
- Accessories
  - Mounting bracket for mobile use ..... 1 pc.
  - Wing screw ..... 2 pcs.
  - M5  $\times$  15 screw ..... 2 sets each
  - Crown washer ..... 2 sets each
  - Nut ..... 2 sets each
  - DC power cord ..... 1 pc.
  - AC power cord ..... 1 pc.
  - Spare fuse 2A ..... 1 pc.
  - Spare lamp 16V40mA ..... 1 pc.

# FUNCTIONS AND NAMES OF PARTS

FRONT

BACK



- **VOLUME & POWER SWITCH**

This serves for a volume adjusting knob and an ON-OFF switch of power source.

- **SQUELTCH**

When turned clockwise, it will be turned on. If the SQUELTCH is not turned on, it will not scan automatically.

- **MANUAL SCAN SWITCH**

This switch is used when channels are changed manually. When pushed once, the channel is moved by one.

- **SCAN SWITCH**

When this button is pushed, it will start scanning. If there is any channel receiving a signal at this state, it will stop automatically and reception can be made.

- **FIX CHANNEL LOCK OUT SWITCH**

When this switch button is pushed, connection will be made with circuits of 10 waves of FIX CHANNEL. (When the button protrudes, it will be OFF.)

- **FIX CHANNEL SWITCH**

This is a switch for selection of crystals for extension of 10 waves.

## OPERATING METHOD

1. Insert the AC power cord or DC power cord in the plug socket.
2. Connect the antenna with ANT connector.
3. Push all lock out switches.
4. Turn fully the SQUELTCH knob counterclockwise and turn the volume knob clockwise, resulting in turning on power, giving a click. Volume is increased as it is turned.
5. When the manual scan switch is pushed, channels will be changed.
6. Pushing the SCAN SWITCH and turning the SQUELCH knob clockwise, when the SQUELTCH is turned on (giving no sound), channels will be changed automatically (AUTO-SCAN). A fixed length of time is required by memory circuit before scanning operation starts after turning on the SQUELTCH.
7. In the case of a channel which is hard to listen to because of radio interference or noise etc., when the lock out switch is pushed, it will jump over and scan.
8. **FIX CHANNCEL SWITCH**  
This is a switch for selection of crystals of 10 wave extension. As for scanning, the number of channels is 8 i.e. (1) — (7) channels with channel indicators plus one wave selected by this switch. As for the indicator of this channel, a lamp on FIX button is lighted.

## REPLACEMENT OF CRYSTALS

1. Pull out AC or DC power cord.
2. When 4 black buttons located on both sides of the case, the case holding plate will be removed.
3. When the case at speaker end is pulled open, the inside will appear.
4. The frequency is fixed from the following formula.

$$\text{CRYSTAL OSCILLATING FREQUENCY (MHz)} = \frac{\text{Receiving frequency (MHz)} - 10.7}{9}$$

5. As for adjustment on frequency, turn the trimmer for adjustment on each crystal frequency to such a position with an adjusting driver where the quality of sound is good.

