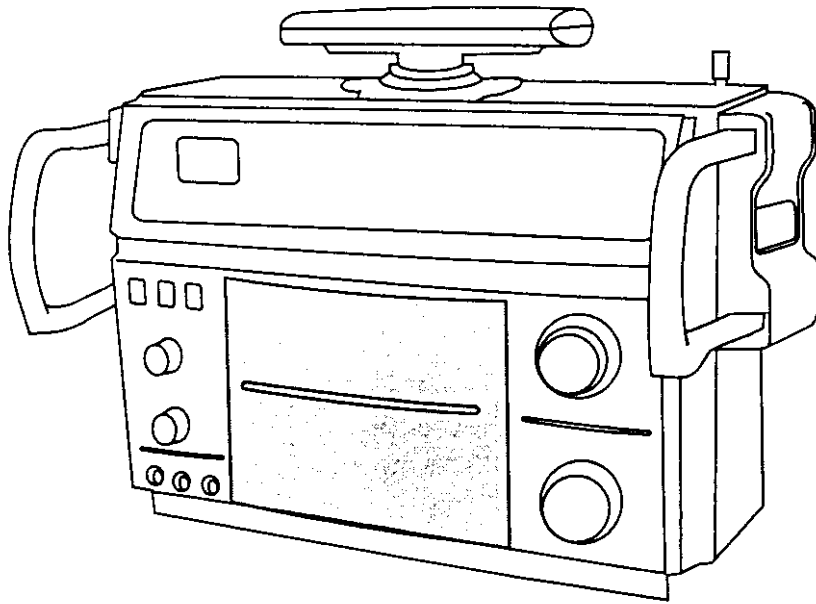


MULTIBAND RADIO RECEIVER





OPERATION INSTRUCTIONS



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



WARNING

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		
	The lightning flash with an arrowhead symbol, within the equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute an electric shock to persons.	
	The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.	

CAUTIONS

TEMPERATURE

Keep your radio away from areas of excessive heat such as radiators, cooking appliances, windows or trunks of cars parked in bright sunlight for long periods.

BATTERIES

When the radio will not be used for a substantial length of time, remove the batteries to avoid damage that can result from corrosion of the cells.

ANTENNA

Be careful not to bend the antenna until its length is fully extended so that the swivel joint is visible. After the antenna is fully extended it can then be rotated 360° to give the clearest sound.

DIRECTION FINDER

The direction finder rotates up to 210° only. DO NOT force rotation beyond this angle. DO NOT carry the unit by this direction finder.

INTERFERENCE

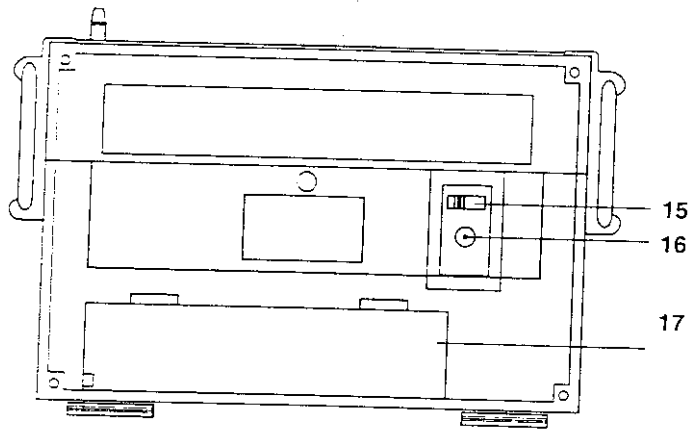
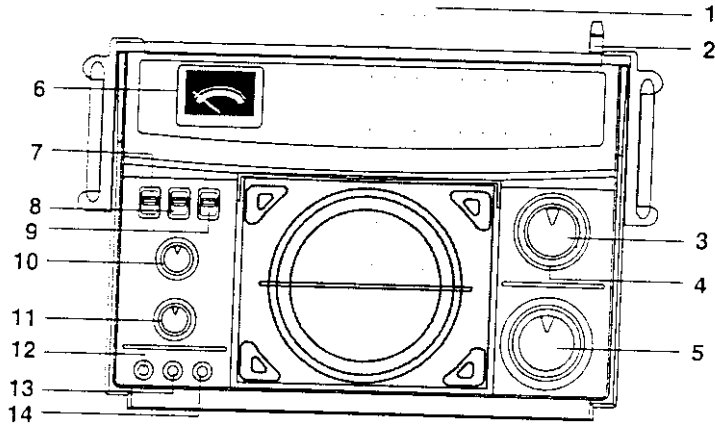
Shortwave reception are sensitive to interference from atmospheric conditions and certain solar phenomena called "sun spots". Fluorescent lighting fixtures and television sets may also affect reception. It is suggested that these latter sources of interference either be turned off when using these bands or that the radio be at least 12 to 25 feet away from them. In metal frame or reinforced concrete buildings, the radio should be placed near a window or used with an external antenna.

NOTE

Air transmission is not continuous broadcasts like AM and FM. Nothing will be heard until the sender transmits.



FUNCTIONS & CONTROL



- | | |
|------------------------------|---------------------------------|
| 1. Direction Finder | 10. Volume Control |
| 2. Telescopic Antenna | 11. Squelch Control |
| 3. Tuning Control | 12. Microphone Input Jack |
| 4. Fine-tuning Control | 13. LINE IN Jack |
| 5. Rotary Band Selector | 14. Earphone Jack |
| 6. Tuning/Battery Indicator | 15. AC/DC Switch |
| 7. AFC On/Off Switch | 16. DC 12V Jack |
| 8. Radio/P.A./LINE IN Switch | 17. Battery/AC Cord Compartment |
| 9. Power On/Off Switch | |

DESCRIPTION OF CONTROLS

- 1. Direction Finder**
Rotate this finder to improve AM reception.
- 2. Telescopic Antenna**
Extend this antenna for better reception.
- 3. Tuning Control**
Turn this control to select the desired station or frequency using the dial markings as a reference.
- 4. Fine-tuning Control**
Turn the Fine-Tune control to improve reception on Shortwave 1 (SW1) and Shortwave 2 (SW 2) and to obtain a more accurate frequency.
The fine tuning feature of this radio applies only to the SW bands.
- 5. Rotary Band Selector**
The function of the rotary band selector is as follows:
AM: Standard AM broadcast band; used to receive AM stations.
SW1: Shortwave band 1 - 4.0 to 6.0 MHz.
SW2: Shortwave band 2 - 7.0 to 12.0 MHz.
TV1: Audio portion of television broadcasts, channels 2 through 6.
TV2: Audio portion of television broadcasts, channels 7 through 13.
FM: FM broadcast band; used to receiver FM stations.
Aircraft: Aircraft band used to listen to airport control towers and nearby airplanes.
PB: Public Service band, used to listen to Police, Fire, Civil Defence, Rail road, Taxis, Highway Trucks, Private Mobile Telephone, etc.
CB: Fill 40 Channel citizens band reception.
WB: Continuous 24-HR reception of U.S. Weather Bureau broadcasts.
- 6. Tuning/Battery Indicator**
The needle will move from right to left as signal strength increases. The extreme left needle position indicates the best possible signal reception in all bands. Battery condition is read when the radio is not receiving a signal. Extreme right indicates strong batteries. Extreme left reading indicates batteries are weak.
- 7. AFC Switch**
Set this switch to "ON" to enjoy drift-free FM listening.
- 8. Radio/P.A./LINE IN Switch**
Use this switch to choose between Radio and Public address/Line In system or other auxiliary audio equipment.
- 9. Power On/Off Switch**
Turn Power On or Off with this switch.
- 10. Volume Control**
Volume is controlled by rotating this control from the extreme left position to the extreme right position. Make your volume adjustments slowly and gradually.



11. Squelch Control

Bass sounds - minimum setting ; treble sounds - maximum setting.

12. Microphone Jack

Insert a microphone (not included) for Public Address System.

13. Line In Jack

Connect this jack to the Line Out Jack of any audio equipment. This unit then becomes a mono amplifier.

14. Earphone Jack

When the earphone is inserted into the earphone jack, the speaker will be automatically cut off.

15. AC/DC Switch

Switch between AC and DC to match the power supply used.

AC - House current

DC - Batteries, 12-volt car adaptor

16. DC 12V Jack

Attach this to a car cigar lighter with a car adaptor when necessary. CAR ADAPTOR : Use only 12-Volt, 1 Amp DC supply, negative ground, model no.:DC-912.

17. Battery/AC Cord Compartment

Put batteries for DC operation and storage of the AC cord.

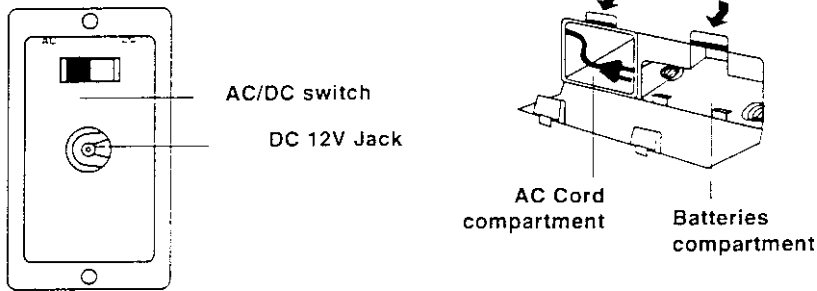


POWER SUPPLY

1. AC Operation

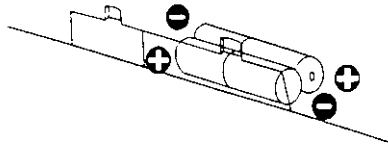
Before use, check that the rated voltage of the unit matches the local voltage.

The AC/DC switch (at the back of the unit) controls the power supply. Be sure AC/DC switch is in the proper position : **AC** for household current; **DC** for battery and 12-Volt adaptor current.



2. Battery Installation

Insert four D size batteries in the battery compartment. Be sure that the batteries are inserted correctly to avoid damage to the unit. Always remove them when the unit will not be used for a long period of time, as this will cause leakage and subsequent damage to your set. The Tuning:Battery indicator will show the battery strength when the unit is turned on so batteries can be replaced if necessary.

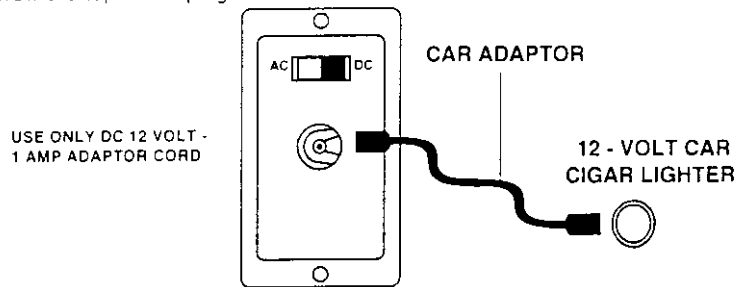


3. 12-Volt Car Adaptor Operation:

Connect the adaptor properly to a working 12-Volt cigar lighter receptacle and firmly insert the adaptor cord plug to the DC 12V Jack located on the back of the radio cabinet. Be sure AC/DC switch is in at DC position.

CAR ADAPTOR (Optional accessory): Use only 12-Volt, 1 Amp DC supply, negative ground.

The cigarette lighter plug is equipped with a fuse to protect the radio. To replace this fuse unscrew the top of the plug.





BASIC RADIO OPERATIONS

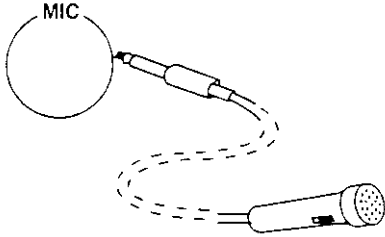
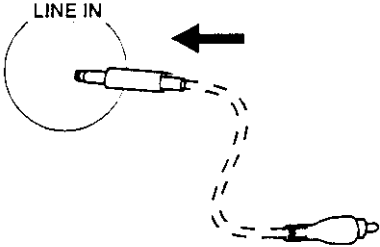
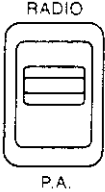
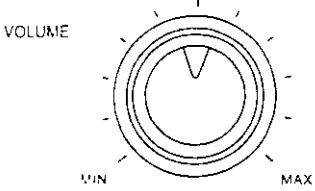

<p>1. Switch the POWER to "ON". Note: Select the correct type of voltage (AC/DC) first.</p> <div style="text-align: center;"> </div>	<p>2. Switch to RADIO.</p> <div style="text-align: center;"> </div>
<p>3. Select a BAND.</p> <div style="text-align: center;"> </div>	<p>4. Tune to the desired station.</p> <div style="text-align: center;"> </div> <p>Note: For Shortwave band, if the reception is not clear enough or the desired stations cannot be obtained, adjust the FINE TUNE button.</p>
<p>5. Adjust the Volume and Tone.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>VOLUME</p> </div> <div style="text-align: center;"> <p>TONE</p> </div> </div>	

NOTE:

1. When FM reception is weak, set the AFC switch to "ON" to obtain a clearer sound.
2. For AM reception, the telescopic antenna may not be essential. However, the direction finder can be rotate to improve reception when necessary.
3. Be sure to fully extend the telescopic antenna and rotate to a direction that gives the clearest sound. When receiving strong or nearby stations it may be desirable to shorten the antenna to prevent distorted sound.

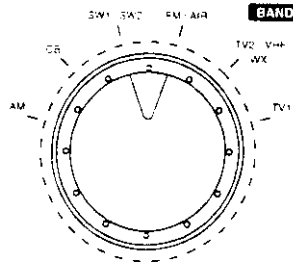


MIC, LINE IN AND EAR FUNCTIONS

<p>MICROPHONES (not included) This radio can also be used as a Public Address System:</p> <p>1. Simply insert the microphone into the Microphone Input jack on the front.</p> 	<p>LINE IN Function This unit can be used as a mono amplifier.</p> <p>1. Connect any audio equipment to the LINE IN jack.</p> 
<p>2. Select the P.A. LINE IN function. NOTE: Power switch must be at "ON" position.</p> <div style="text-align: right;">  </div>	
<p>3. Adjust the volume to a desired level.</p> <div style="text-align: right;">  </div>	
<p>FOR PRIVATE LISTENING</p>  <p>1. Insert an earphone plug into the EAR jack. 2. All sound will be diverted via the earphone and the speaker will turn off automatically. 3. Adjust the volume by using the volume control.</p> <p>CAUTION: When using earphone with the volume on high may damage your ears!</p>	

ROTARY BAND SELECTOR

To play the radio on a particular band rotate the selector knob which is located on the front of the case to one of the six positions.



1. AM and FM Listening

When playing the radio on the AM band, it is not necessary to raise the TELESCOPIC ANTENNA since there is a built-in antenna for reception. However, radios are sensitive to direction, therefore reception may be improved by rotating the direction finder to different positions. For FM listening, it may be necessary to raise the TELESCOPIC ANTENNA for maximum performance. Be sure that the radio is tuned precisely to the FM station desired, otherwise, a howling or hissing noise may distort the sound. Put the AFC switch to "ON" position to enjoy drift-free FM listening. Unsatisfactory reception, even with the antenna raised, may mean that the batteries should be replaced.

2. Air Band [AIR]

The Aircraft band permits the conversations between air planes and control towers in the nearby area to be heard. Again, the TELESCOPIC ANTENNA should be fully extended, and tuning should be done very slowly and carefully to pick up these signals. Since aircraft transmissions are not continuous, there will be times when no signal is received on a given frequency.

3. Shortwave Bands [SW1, SW2]

To operate the radio on Shortwave (SW1 and SW2) bands, extends and rotates the TELESCOPIC ANTENNA, and tuning should be done very slowly and carefully to pick up these signals. When tuning to various frequencies, remember that very small movement of the Tuning Control result in a relatively large frequency change. Move the control slowly and cautiously to pick up all signals within the range of your radio.

The best time for listening to shortwave broadcasts is during the evening and night-time hours. Foreign stations generally schedule their transmissions in this period. Broadcasts from Australia and the South Pacific are often best in the early morning hours.

The quality of shortwave reception will vary according to the season of the year, prevailing weather conditions, changes in the atmosphere, and the frequency to which you are listening. Fall and winter are generally the best seasons for shortwave reception, especially for European and Far East stations, while Australian and South Pacific stations are strongest in the spring. In any case, interference and intrusive noise are to be expected with any shortwave reception. The radio is equipped with a tone control to help eliminate these intrusive noises.

4. Weather Band Operation

The ability to pull in clear signals will vary depending upon your location in relation to the broadcast location. These signals are somewhat like television signals, in that when you are 40-60 miles from the broadcast point your signal is lessened considerably (Especially if there are obstructions, like mountains, etc.)

5. Citizen Band

Your CB band will allow you to hear full 40-channel communications. The versatility of your new multi-band will give you full listening capabilities, including all the highway action. You can now be aware of traffic and road conditions, you can hear what the truckers say and how they say it, and you can plan your trips to avoid traffic tie-ups and make your long road trips more enjoyable. CB reception is on a limited range basis, and some conditions that may limit range of reception are as follows:

- a. Electrical interference. Power lines and some vehicle ignition system may cause temporary interference with reception.
- b. Obstructions. Natural terrain such as mountains, hills, trees, or tall buildings.
- c. Weather conditions. Humidity and extreme temperatures.
- d. Atmospheric conditions. Change may cause a broadcast to "skip".

CB transmissions are not continuous and there are times when there will be no signal on the CB frequencies. The telescopic antenna should be fully extended and rotated for best reception. When used inside a vehicle, the telescopic antenna should be exposed to the outside.

No FCC license is required to operate the CB band on your radio.

6. Public Service

Unlike AM and FM broadcasts, police transmission is not continuous, and there are times when there is no signal on a given frequency. These are functional broadcasts and are used only when necessary for the exchange of information. A certain amount of patience will pay off in much listening enjoyment. The Public Service band will enable you to hear conversations between squad cars and headquarters as well as fire fighting calls, taxi, truck and other private mobile transmission. The telescopic antenna should be fully extended, and tuning should be done very slowly and carefully to pick up all the signals above.

7. Television Channel Bands 2-13

TV1 & TV2 permit you to hear the audio portion of your favourite TV favourite TV news, daytime drama, talk of game shows, channels 2-13. Simply extend the telescopic antenna and dial the show you wish.

Both high-frequency police (HP) and shortwave reception are sensitive to interference from atmospheric conditions and certain solar phenomena called "sun sports". Fluorescent lighting fixtures and television sets may also affect reception. It is suggested that these latter sources of interference either be turned off when using these bands or that the radio be at least 12 to 25 feet away from them. In metal frame or reinforced concrete buildings, the radio should be placed near a window.

TROUBLE SHOOTER

If no signals can be received on the radio, check the unit by following the procedures described below.

I. If battery operated, check the following:

1. AC/DC switch set to "DC" position.
2. Batteries are correctly inserted, and fully charged.

II. If house current is being used, check the following:

1. AC/DC switch set to "AC" position.

III. If DC 12-Volt adaptor operated, check the following:

1. Cigar lighter adaptor cord is properly connected to a working 12-Volt receptacle and firmly inserted in the DC 12V Jack located on the back of the radio cabinet.
2. AC/DC switch set to "DC" position.

IV. If the procedure described above have been checked and are correct, check the following:

1. Power switch set to "ON" position.
2. Radio/P.A./LINE IN switch set to "Radio" position.
3. VOLUME set to an audible level.
4. SW & Air transmissions are not constant - set radio at desired band with volume control high and wait for transmissions.

V. If all the procedures have been checked and there is still no signal:

1. Send the unit to a qualified personnel for reparation.

TECHNICAL DATA

Frequency Range:	AM	535 - 1605 kHz	AM	310 μ V/m
	SW1 - SW2	3.9 - 12.5 MHz	SW1 - SW2	190 μ V/m
	FM-TV1	59 - 108 MHz	FM - TV1	11 μ V
	TV2	176 - 218 MHz	TV2	30 μ V
	AIR-PB-WB	108 - 175 MHz	AIR-PB-WB	30 μ V
	CB	26.94 - 27.46 MHz	CB	10 μ V

Mains Power Supply: 230V 50Hz

Battery Power Supply: 6V, 4x1.5V (HP2)

Power Output: 1W

Power Consumption: 5W

Dimensions: 369(w) x 273(h) x 132(d)mm

Weight: 2.6kg (without batteries)

811-296031-xxx