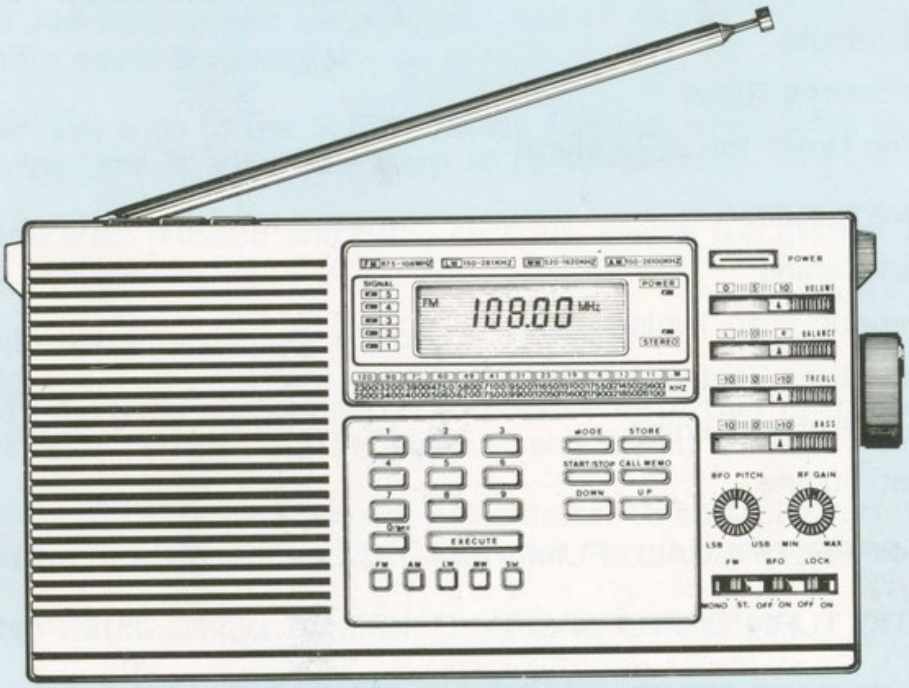
INTERSOUND

WE-12 WERELDONTVANGER

Operating Instructions
Gebruiksaanwijzing
Bedienungsanleitung
Mode 'Demploi



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FEATURES

1. Full **AM** frequency range 150KHz-29999KHz (or 150KHz-26100KHz on model for certain areas), enabling you to listen to **AM** radio programs wherever you may be in the world.

2. Five tuning functions: Direct Frequency Key-In, Auto Scanning, Manual Scanning, Preset Recall and Manual Rotary Tuning.

3. Radio, clock and alarm turn on automatically. Radio plays preset station at preset time.

4. Capability to preset nine stations of your choice for instant recall.

5. FM-stereo listening through the headphone (optional).

6. Twelve bands are available on Shortwave.

7. Two power sources - Batteries and AC adaptor for DC input.

8. Full **AM** band covers LW,MW,SW. And of course, the FM band brings in quality sound broadcasts.

9. When you wish to use SLEEP lullaby function when going to bed, radio playing time is adjustable from 10 to 90 minutes.

10. Separated TREBLE and BASS controls, enable the listener to adjust to his preference.

11. External antenna jack for better reception.

12. Adjustable RF GAIN control to prevent distortion when operating radio set near a station putting out a strong signal, or when interference occurs.

13. BFO control (Beat Frequency Oscillator) to control interference on SSB (Single Side Band) and CW(Continuous Wave) transmissions.

14. Illuminated display for ease in night time operation.

15. Designed for both portable and desk-top use.

16. Five-dot LED signal strength indicators.

PRECAUTIONS

1. For AC adaptor operation, BE SURE the polarity on plug is center negative ⊖ and supplies 9V DC.

2. When the set is not be used for a long period of time, remove the batteries to avoid damage from battery leakage.

3. When the set is to be operated extensively on power sources other than batteries, remove the radio batteries. Do not remove small UM-3 (AA size) penlight batteries used for memory and clock back-up.

4. Use the set within a temperature range of 0°C to 40°C (32°F to 104°F). If operated in environments where temperatures exceed the recommended temperature range, irregularities may result which disappear when temperatures return to normal.

5. Do not leave the set near heat sources, such as radiators and stoves and avoid direct sunlight, excessive dust, moist places.

6. To clean the case, use a dry, soft cloth dampened with a mild detergent solution. Never use chemical solutions.

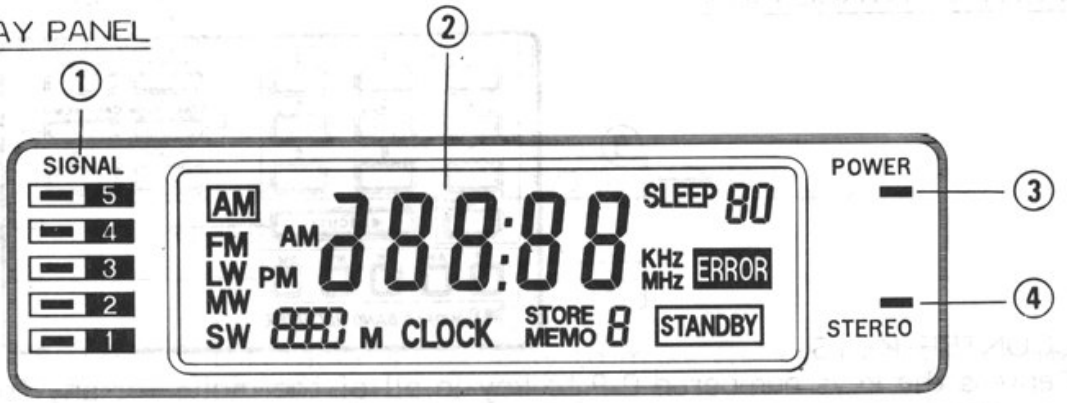
7. When the set is supported by the stand on the rear panel, never put heavy pressure on the set which may break it.

8. In vehicles or in buildings, radio reception may be difficult or noisy. Try listening near a window.

9. Normally, keep the RF GAIN control at its full clockwise position for better reception.

10. Set the BFO switch in the OFF position unless SSB/CW reception is required.

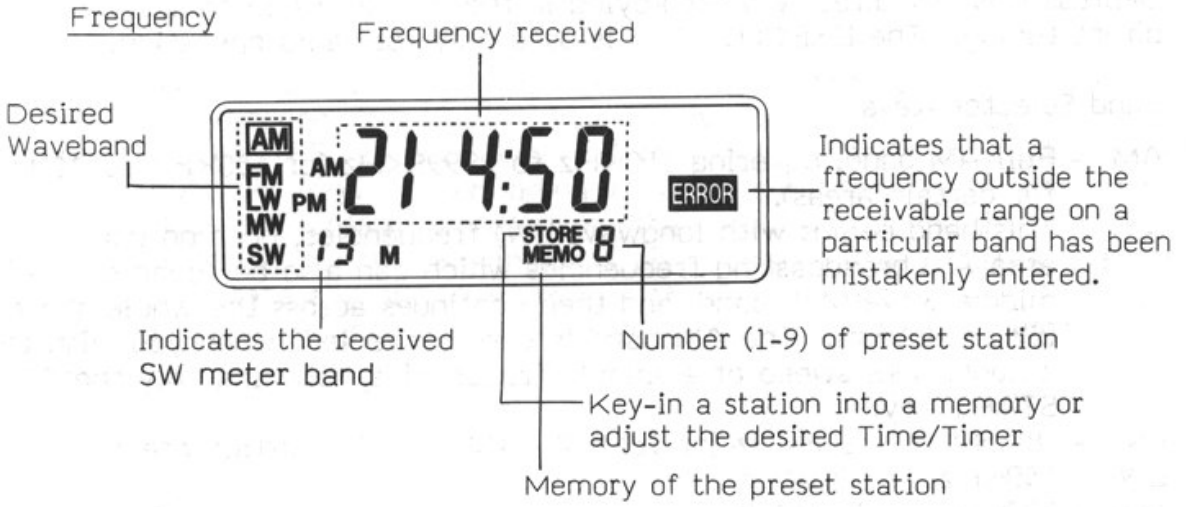
DISPLAY PANEL



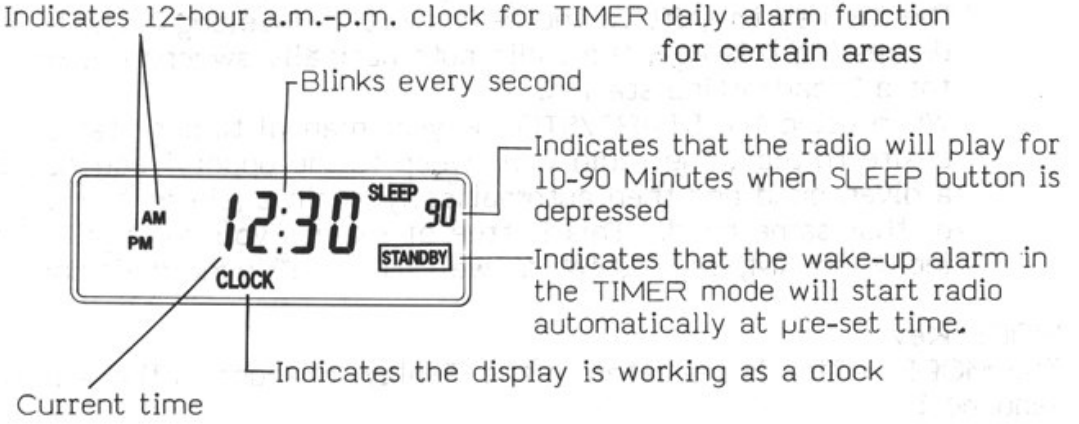
1. Signal strength indicator
   The stronger the signal received, the greater the number of LED indicators that are illuminated.

2. LCD Display

Frequency



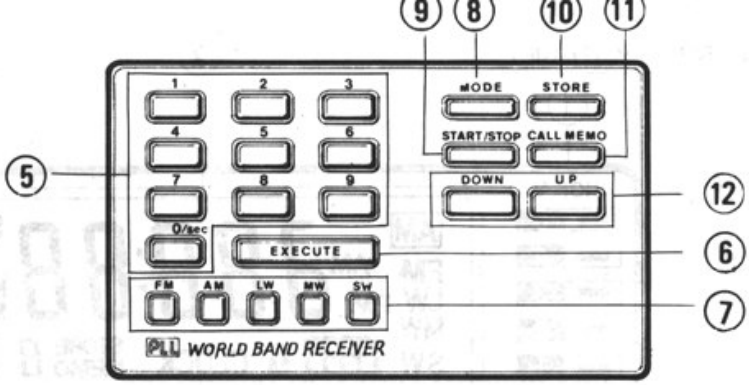
Clock/Timer



3. POWER Indicator
   The indicator lights up when the radio is on.

4. Stereo Indicator
   The indicator lights up when the received FM station is broadcasting in stereo. Insert the headphone plug into the jack (on left side panel) for stereo listening.

DISPLAY CONTROL PANEL



5. COUNTER KEYS
Depress the keys numbered 0-9 to key-in all of the digits for any frequency you wish to program into the radio, and the display will show the same. Depress 0/SEC to give minutes and seconds while display is in the CLOCK mode. The counter keys are not used in the CLOCK mode of either the TIMER or SLEEP functions.

6. EXECUTE
Depress this key directly after keying in the desired radio frequency for direct tuning. The EXECUTE key is used only for radio operation.

7. Band Selector Keys

AM - Full AM band, covering 150KHz to 29999KHz (or 150KHz to 26100KHz for certain areas).
This band begins with longwave(LW) frequencies, goes on common local area AM broadcasting frequencies which can also be found on the middle wave(MW) band, and then continues across the whole shortwave (SW) spectrum. The AM band is very convenient when you wish to do a continuous sweep of available frequencies, touching only the STOP/START key.

FM - 87.5MHz - 108MHz (or 76MHZ - 108MHz for certain areas)

LW - 150KHz - 281KHz

MW - 520KHz - 1620KHz

SW - Shortwave Band Spread tuning system over all 12 SW bands. Depress the SW key to shift to the next shorter wavelength band. Upon depressing this key, the radio automatically sweeps the new band for a broadcasting station.
When using the START/STOP key or manual tuning stations you desire to play, the radio will sweep to the upper frequency limit of a given band and then automatically begin again at the lower limit of that same band. This is true of sweeps you do on all of the bands, including AM,FM,LW,MW, as well as the 12 band divisions of SW.

8. MODE Key
The MODE, which is indicated in the display, changes in the following sequence:

Power ON :
-- TIMER key on:
Frequency → CLOCK → TIMER
-- TIMER key off:
Frequency → CLOCK

Power OFF:

-- TIMER key on:

CLOCK → TIMER

-- TIMER key off:

CLOCK

The MODE key on this radio is used only to make the Hour-Minute, Zero Second reset, and TIMER setting adjustments. It is not used to shift between automatic scanning and manual scanning modes on the radio.

9. START/STOP key

- Depress this key and the radio begins searching for a station. When a station is received or this key is depressed again, scanning will stop automatically.

10. STORE Key

A. The radio station to which you are currently listening may be stored in memory by depressing STORE key firstly, then following by depressing one of COUNTER keys number 1-9 to store the frequency into one of the COUNTER key. When doing this, be sure the single number you select does not already represent another station that you desire to keep in this memory space. Keying-in a new station into a certain memory space will erase any previous memory there.

B. Use the STORE key also in adjusting clock and timer. For details, turn to CLOCK ADJUSTMENT on p. 12.

C. When the display is in minute-SECOND mode, depress this key to reset the second time to 00.

11. CALL/MEMO Key

Play any station you have stored in memory by first depressing this key and then depressing the single counter key from 1 to 9 that represents the station you want to play.

12. UP/DOWN Keys

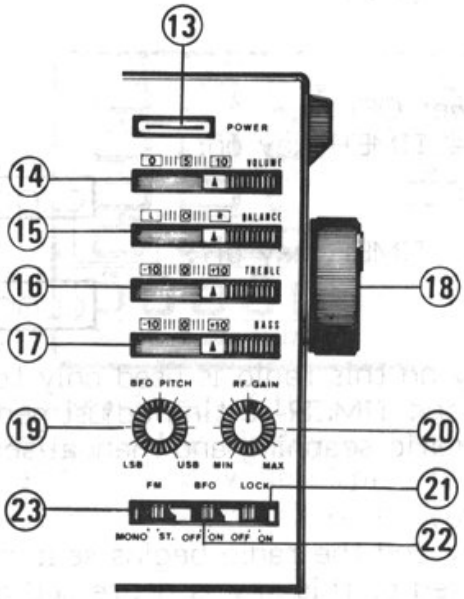
a. Radio Frequency

The radio frequency moves up or down the dial in signal steps each time the key is depressed until you stop at a station you want to hear. Faster speed can be attained when the key is depressed for more than 1/2 second.

b. Clock/Timer

The minutes digit is increased/decreased in 1-minute steps. Faster 10-minute steps can be obtained when the key is depressed for over 1/2 second.

FUNCTION CONTROLS



13. POWER Switch
    Depress the key to turn the radio on or off.

14. VOLUME Control
    Adjust the radio volume to your listening pleasure.

15. BALANCE Control
    Adjust the volume on L/R channel while listening to stereo broadcasting over headphones.

16. TREBLE Control
    Allows more of the higher audible frequencies to pass through the system when control is moved toward the right.

17. BASS Control
    Allows more sounds in the lower audible-frequency range to pass through the system when the control is moved toward the right.

18. MANUAL ROTARY TUNING KNOB
    Radio frequency, CLOCK and TIMER can be tuned and adjusted by this control. When the control is turned rapidly, the tuning and adjustment change at a much much greater speed, radio frequency changing in 100KHz steps and the clock/timer changing in 10 minute steps.

19. BFO PITCH Control
    Adjust this control for better reception of SSB(Single Side Band) and CW(Continuous Wave).

20. RF GAIN Control
    Set this control to MAX position during normal conditions. If the sound is distorted due to strong signals or if interference occurs, rotate it to get the best possible reception.

21. LOCK Switch
    Lock the activity of all the functional keys on the control panel to prevent accidental changing of modes or shifting to new radio stations.

22. BFO ON/OFF Switch
For SSB/CW reception, set the switch to ON position.

23. MONO-STEREO Switch
This switch gives you the option of listening to stereo stations by wearing headphones, or saving battery power by switching to MONO.

24. LIGHT button
Depress this button to illuminate the display for night time listening.

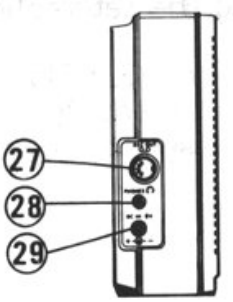
25. TIMER button
Depress this button to enable the auto timer alarm to turn the radio on at the same pre-set time everyday. The STANDBY sign will appear on the display when this is done. The radio will turn on automatically at the pre-set time and to the station you select. When the button is depressed again, the STANDBY sign will disappear and auto timer alarm will not turn the radio on at pre-set time.

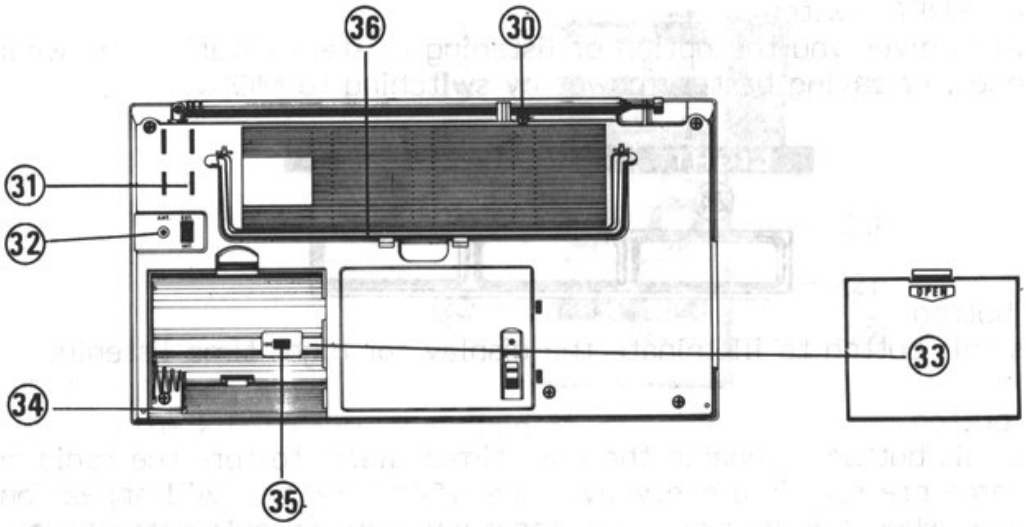
26. SLEEP button
When the radio is turned off, depress this button to turn it on for a short, pre-set lullaby period while you go to sleep. After the desired pre-set listening period, the radio will turn off automatically.
The length of the SLEEP lullaby period, adjustable downward in 10-minute steps from a maximum off 90 minutes, will appear on the display. The period is adjustable downward by depressing this button repeatedly.

27. Recording Output Socket
For recording radio programs with a cassette tape recorder.

28. Headphone Jack
For private listening with a stereo headphone (32 ohm). When the headphone jack is plugged in, the built-in speaker is disconnected automatically.

29. DC IN 9V (external power input) Jack for operation on external DC power source.





30. Telescopic Antenna
For FM and AM reception

31. ANT. Switch
Normally set this switch on INT position. Change to EXT while using an external antenna system.

32. EXT. ANT. Jack
For the connector leading to an optional external antenna wire.

33. Radio battery lid

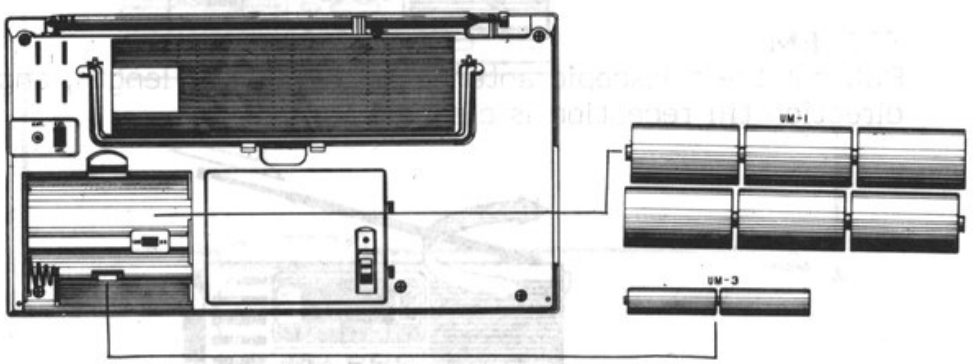
34. Battery compartment for memory back up

35. 9KHz/10KHz selector
Set this selector according to the MW frequency allocation system of your country.

36. Stand
For the convenience of letting the set recline at an angle with the display facing upward.

POWER SUPPLY

BATTERY INSTALLMENT



1. BATTERY POWER

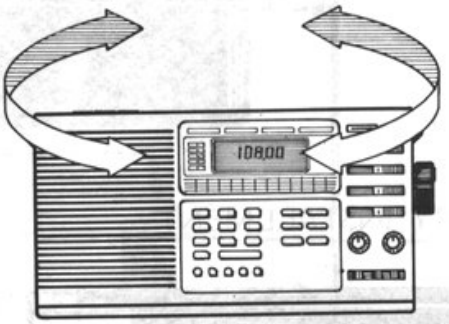
   a. Two UM-3(AA size) batteries provide uninterrupted independent back up power for clock, display and SLEEP, TIMER and radio memories. These batteries normally can be lasted about one year.
   SPECIAL NOTE: After the replacement of two UM-3 batteries, if the display appears irregular signal and the set doesn't work properly, please remove the new batteries and wait about two minutes then insert again.

   b. Six UM-1(D size) batteries supply power to play the radio when you wish to carry it or move it around from place to place as a portable. BE SURE these batteries are placed into the radio in the direction of polarity shown on the identification label.

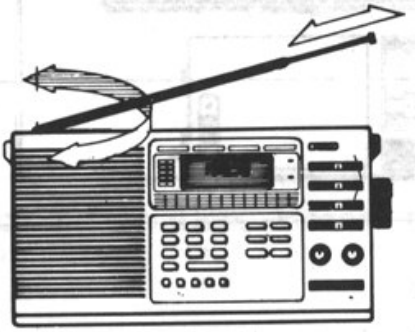
2. AC ADAPTOR rectifier (optional) for those who require the power transformer to be outside of the set. The adaptor should be DC 9V, 400mA, center negative on the jack, plug.

ADJUSTING ANTENNA SYSTEM FOR OPTIMUM RECEPTION

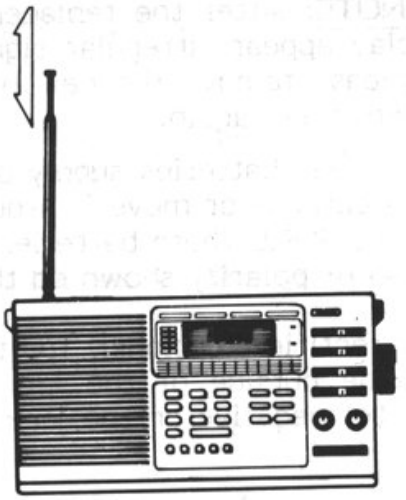
FOR **MW/LW** (Frequency range between 150KHZ - 1620KHz)
Rotate the direction of the set horizontally till the best reception is obtained.



FOR **FM**
Pull out the telescopic antenna and adjust its length, angle and direction till reception is clear.

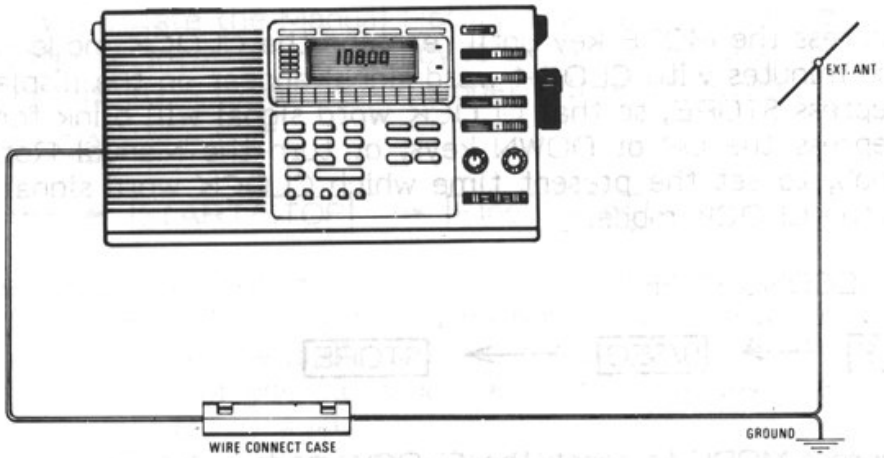


FOR **AM (SW** section)
(Frequency range between 1621KHz - 29999KHz/26100KHz)
Pull out the telescopic antenna vertically to its full length.



EXTERNAL ANTENNA CONNECTION

If reception is unsatisfactory with the telescopic antenna or the built-in ferrite bar antenna, better performance can be achieved by setting up an external antenna system. Remember to set the antenna select switch to EXT position.



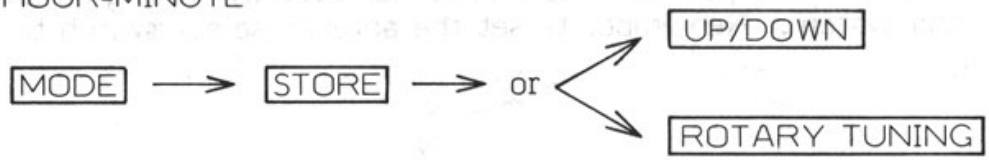
Notes :

1. Setting up the external antenna system requires some technical knowhow, so you may wish to seek the services of someone with experience or professional skills.

2. Disconnect radio from external antenna system when not in use, and do not touch the external antenna wire during lightening storms, or when the weather appears to be developing toward possible lightening storm activity.

CLOCK ADJUSTMENT

1. HOUR-MINUTE



a. Depress the MODE key until reaching the CLOCK mode where hours and minutes with CLOCK word signal appear on the display.
b. Depress STORE, so that CLOCK word signal will blink for 5 seconds.
c. Depress the UP or DOWN keys, or turn the Manual Rotary Tuning Knob, to set the present time which CLOCK word signal is blinking in the CLOCK mode.

2. ZERO SECOND RESET

a. Depress MODE to reach the CLOCK mode.
b. Depress 0/SEC, so that minutes and seconds appear on the display.
c. Depress STORE, the display will revert to appear hours and minutes, but simultaneously the second function starts operating from "0". (Please note that there is no signal indicating the operation of seconds unless depress 0/SEC again.)

3. SETTING TIMER FOR DAILY ALARM

a. Depress the TIMER key until reaching the TIMER mode where hours and minutes with STANDBY word signal appear on the display for 5 seconds.
b. Within 5 seconds, by additionally depressing the STORE key, making the STANDBY sign on the display blink for 5 seconds, you enable the TIMER daily alarm to be adjusted to a new settting.
c. Depress UP or DOWN, or turn the Manual Rotaray Tuning Knob, to set the desired time when the TIMER daily alarm will activate, turning on the radio automatically to wake you up.

An explanation of all above is given on p.4 and 5 function keys mentioned.

TUNING METHODS

1. DIRECT TUNING

a. Select the desired waveband.
b. Enter the frequency of the station you desire by keying-in the numbers on the counter keys.
c. Depress EXECUTE to tune in the station.
d. If the received signal is not clear enough, briefly depress the UP/DOWN keys, or slowly rotate the Manual Rotary Tuning Knob, as the fine tuning.
e. If an improper or incorrect frequency is executed, an ERROR sign will blink on the display 5 times and no signal will be received.

2. AUTOMATIC SCAN TUNING

a. Select the desired waveband.
b. Depress the START/STOP key to search for available stations. The scanning will stop automatically when a station with sufficient signal strength is received, or you can stop the scanning at anytime by pressing the START/STOP key again.
c. Automatic scanning may also stop when strong noise or interference is received.
d. Fine Tuning - Same method as 1.-d.

3. MANUAL SCAN TUNING

a. Select the desired waveband.
b. Depress the UP or DOWN keys to search for stations in steps. The speed of the search becomes faster as the keys remain depressed.

4. MANUAL ROTARY TUNING KNOB

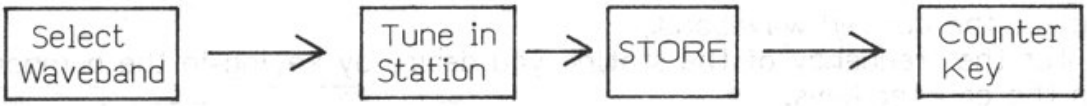
a. Select the desired waveband.
b. Turn the Manual Rotary Tuning Knob to select a station. Rapid rotation shifts frequency changes from ones digits to hundreds digits. This method is the fastest possible method of doing a continuous sweep across the whole frequency range of any waveband. Of course, the fastest way to attain any particular frequency on a given waveband is by means of DIRECT TUNING which is discussed above.

5. PRESET TUNING

If your required station is already preset in the memories, recall the station by depressing CALL MEMO and then following by depressing the single number 1 to 9 that represents the station you have previously stored in memory.

STATION PRESET/RECALL FUNCTION

STATION PRESET



1. Select the desired waveband.
2. Tune in the desired station by the above mentioned tuning methods.
3. Depress the STORE key, the sign on the display will blink for a period of 5 seconds.
4. While the STORE sign is still blinking, store the station by depressing any single counter key 1 to 9 representing an empty memory space.
5. If a new station is stored into the memory space already occupied by another station, the original station will be erased from memory automatically.

STATION RECALL

No matter which waveband you are currently listening to, you may recall a desired preset station simply by depressing CALL MEMO and the single digit number that represents the station stored in memory.

AUTOMATIC TURN ON FOR TIMER FUNCTION and AUTOMATIC TURN OFF FOR SLEEP FUNCTION

--- Automatic turn on is enabled when TIMER key for wake up alarm is depressed. The STANDBY sign will appear in the display and the set will turn on for 1 hour daily at the time you pre-set.

--- Automatic turn off is enabled when SLEEP key for lullaby listening is depressed. When the radio is off, depress SLEEP to get 90 minutes or less of radio listening. The SLEEP sign will show on the display. The period can be adjusted downward from 90 to 10 minutes by depressing the SLEEP key repeatedly. The radio will shut off automatically after the pre-set lullaby period has expired. This brief period of listening begins immediately after you depress SLEEP.

HOW TO OPERATE SSB/CW

The technology of SSB(Single Side Band) and CW(Continuous Wave) transmission, employing beat-frequency control, has been used by amateur "ham" radio operators for a long time. In the future, international shortwave bands will adopt this technology to control beat frequency interference, which occurs between stations on the very crowded SW bands.

For SSB/CW reception, three essential factors are required :

-- Broadcasting stations must transmit SSB or CW signals.
-- Receivers need excellent electronic stability.
-- A BFO(Beat Frequency Oscillator) circuit must be added.

Try to tune in amateur SSB/CW signals following these procedures.

1. Depress AM.
2. Turn RF GAIN fully clockwaise to MAX position.
3. Set the BFO switch to ON position.
4. Turn the BFO PITCH control to center position.
5. Tune accurately into a SSB/CW station by either direct key-in or Manual Rotary Tuning.
6. Vary the BFO PITCH to the correct position with respect to the SSB/CW signal until the distorted speech on SSB will become intelligible.
7. Improve the audibility of the SSB/CW signal by reducing the RF GAIN.

SPECIFICATIONS

Semi conductors : 1 pc. LSI
7 pcs. ICs
8 pcs. FETs
44 pcs. Transistors
59 pcs. Diodes
7 pcs. LEDs

Circut : FM - Superheterodyne
AM(LW,MW,SW) - Dual conversion superheterodyne

Frequency range :

FM : 87.5MHz - 108MHz
(or 76MHz - 108MHz on model for certain areas)
AM: 150KHz - 29999KHz
(or 150KHZ - 26100KHz on model for certain areas)
LW : 150KHz - 281KHz
MW: 520KHz - 1620KHz
SW : divided into 12 shortwave bands

120M	2300KHz	-	2500KHz
90M	3200KHz	-	3400KHz
75M	3900KHz	-	4000KHz
60M	4750KHz	-	5060KHz
49M	5800KHz	-	6200KHz
41M	7100KHz	-	7500KHz
31M	9500KHz	-	9900KHz
25M	11650KHZ	-	12050KHz
19M	15100KHz	-	15600KHz
16M	17550KHZ	-	17900KHz
13M	21450KHz	-	21850KHz
11M	25600KHz	-	26100KHz

Antennas : LW/MW - Built in ferrite bar antenna.
SW - Swivel telescopic antenna.
- External Antenna Terminal.
FM - Swivel telescopic antenna.
- External Antenna Terminal. (Not apply to W. Germany)

Output : 1200mW (10% THD)

Jacks : 1. DC jack for external power (9V)
2. Headphone Jack - 3.5ø for mini stereo headphone.
3. Recording output jack
Output level 1mV
Output impedance 1K ohm

Power sources :
1. For Power when not playing radio -
UM-3(AA size) penlight battery x 2pcs. for radio station memory/ clock back-up (3V).
2. For Power to play radio
a. UM-1 (D size) battery x 6pcs. (9V)
b. AC adaptor 9V/400mA center negative

Dimension : 29.2cm x 16.0cm x 6.0cm (11.5in. x 6.3in. x 2.36in.)

Weight : 1.7 kg. (3.75 lbs) without batteries.

Accessories : Shoulder strap

Above specifications subject to change without notice.