TECSUN

PL-380

FM stereo / SW / MW / LW DSP RECEIVER

OPERATION MANUAL
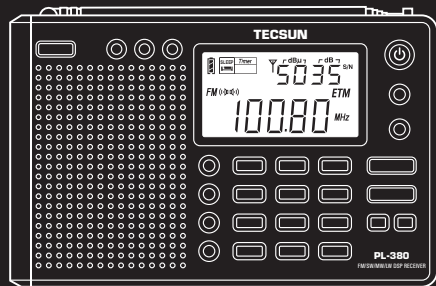
PL-380 Functional Block Diagram

PL-380 is using DSP si4734 Microchips (from Silicon Labs in USA) to digitalize the analog AM/FM broadcasting signal base on the modern software technology and radio principles. It can highly improve on radio's sensitivity, selectivity, S/N ratio and anti-interference.
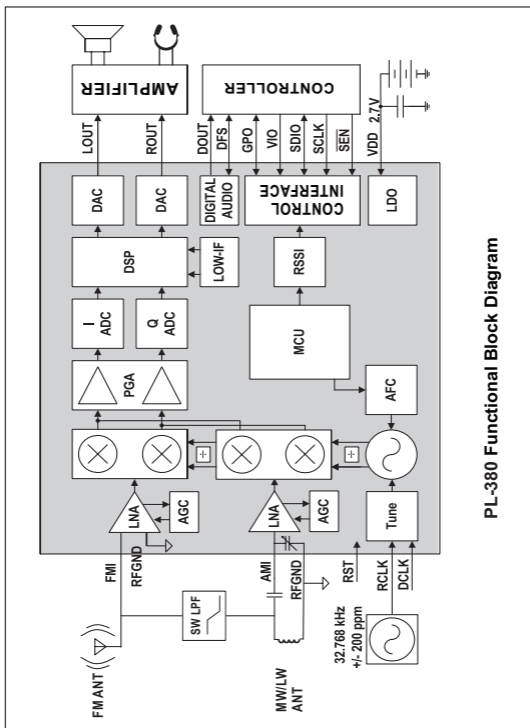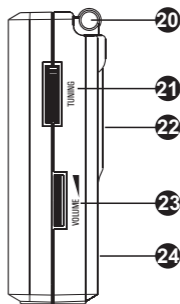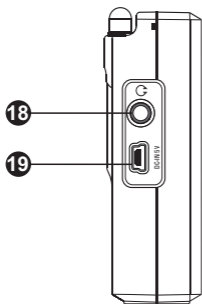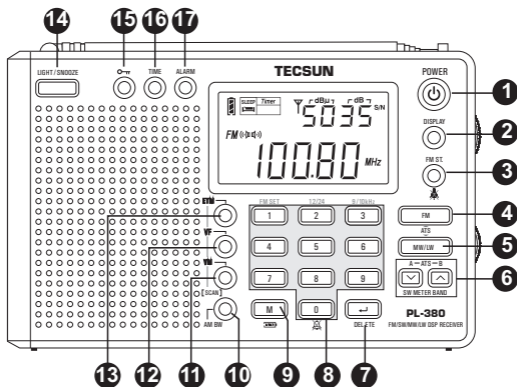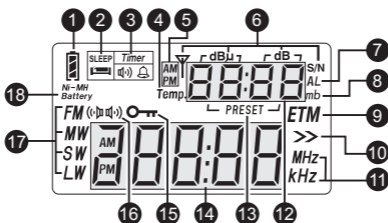

PL-380 Functional Block Diagram

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2. Display button
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4. FM / ATS button (FM band selector and Auto Tuning Storage)
5. MW / LW button (MW / LW band selector & Auto Tuning Storage)
6. SW/ ATS button (SW meter band selector & Auto Tuning Storage)
7. ENTER / DEL ETE button
8. 0-9 Numeric keys
9. Memory button (Storing radio stations) / Batteries type selector
10. AM / BW button (AM IF bandwidth selector)
11. VM (View Memory) & Scan button (Memory)
12. VF (View Frequency) & SCAN button (Frequency)
13. ETM (Easy Tuning Mode) button
14. LIGHT / SNOOZE
15. LOCK button
16. TIME Setting
17. ALARM On/Off & Setting
18. Earphone jack
19. USB 5V DC-IN jack
20. FM & SW telescopic antenna
21. Multifunctional tuning knob
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1. Battery consumption indicator / Charging indicator
2. Sleep timer indicator
3. Alarm on/off indicator
   " ⏚)) " alarm on by radio
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4. Temperature (Temp.)
5. AM, PM indicator for 12-hour format clock
6. Signal indicators
   dBu: signal strength unit
   dB : Signal to Noise Ratio (S/N) unit
7. Alarm time indicator
8. SW meter band indicator
9. ETM indicator
10. Tuning speed:
    " > " Slow Tuning
    " >> " Fast Tuning
11. kHz: frequency unit for MW, LW & SW
    MHz: frequency unit for FM
12. Digital number display (4 Digits)
    With radio off: world time, alarm time, temperature
    With radio on: word time, signal strength / SNR, alarm time, temperature, local time, memory address, meter band.
13. Preset memory address
14. Digital number display
    With radio off: local time
    With radio on: frequency display, band display
15. Key-lock indicator
16. FM stereo status indicator
17. Band indicator
18. Rechargeable batteries indicator

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QUICK START GUIDE

TIME SETTING
1. Long press [TIME] button until "hour" is flashing in the display. Rotate the [TUNING] knob to adjust the correct "hour".
2. Short press [TIME] button again, rotate the [TUNING] knob to adjust "minute".
3. Press the [TIME] button again to confirm your time setting.

ALARM SETTING
1. Long press [ALARM] button. Rotate the [TUNING] knob when "hour" is flashing in the display.
2. Short press [ALARM] button again. When the "minute" is flashing. Rotate the [TUNING] knob to adjust the "minute".
3. Short press [ALARM] button again, rotate the [TUNING] knob to select 1 ~ 90 minutes of the Alarm's duration.
4. Finally, short press [ALARM] button again to confirm.

Note:
In ALARM section, [📢] means ALARM is set to radio-on; [⏰] means ALARM is set to buzzer, or if the display corner remains blank, which means the alarm is off.

LISTEN TO THE RADIO
1. Short press [POWER] button to turn on your radio.
2. Select FM by pressing the [FM] button, MW and LW by pressing the [MW/LW] button, SW by pressing the [∨] or [∧] button sequentially until you have selected the desired meter band (meter band number flashes in the upper right corner of the display).
3. Turn the TUNING knob to your desired radio station.
4. You can also direct key-in the frequency numbers by pressing the numeric keys.
5. Adjust the volume level by rotating the VOLUME knob.

Note:
Be sure to fully extend the telescopic antenna when listening to SW and FM.

ETM(Easy Tuning Mode) on FM, MW, LW, SW band

1. Turn on the radio and select your desired band by pressing either the FM, MW/LW or SW [∨] or [∧] button.
2. Short press the [ETM] button with [ETM] shows on the display to enter Easy Tuning Mode.
3. Long press the [ETM] button until the frequency running to auto scan the stations within present band.
4. When the frequency stop running, turn around the [TUNING] knob for those scanned stations.
5. Short press either the [VF] & [VM] button with frequency flashing and the disappearance of ETM on the display to exist ETM mode.
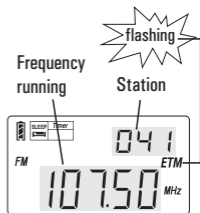
STORING FREQUENCIES INTO MEMORY

1. Turn on your radio, and tune into your favorite station.
2. Short press [M] button, with the memory address is flashing in the display, press [M] button again to confirm.

LISTEN TO STATIONS IN THE MEMORY

1. Turn on the radio, press and release the [VM] button with notice that the PRESET show in the display's upper right corner.
2. Turn the [TUNING] knob to select stored stations.

DELETE MEMORY

1. Turn on the radio and press the [VM] button, causing PRESET to appear in the display's upper right corner.
2. Use the [TUNING] knob to select the memory that you want to delete.
3. Long press [DELETE] button. " dEL " is flashing in the display, press [DELETE] button again to confirm it.

AUTO BROWSE STATION
1. Turn on the radio and short press the [VF] button with the frequency flashing.
2. Long press the [VF] button with [>>] moving to scan from one station to another, staying on each stations for about 5 seconds.
3. To stop auto browse function, simply press the [VF] button.

Frequency running >> moving
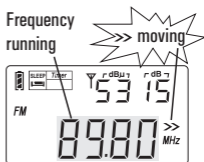
Auto-scan with pre-listening

AUTO BROWSE MEMORY
1. Turn on the radio, short press the [VM] button with memory page shows in the upper right corner and disappears in 5 seconds.
2. Long press [VM] button with " PRESET " flashing to scan from one memory to another, staying on each station memory for about 5 seconds.
3. To stop auto search memory, simply press the [VM] button.

flashing
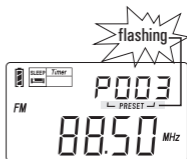
Auto-scan memory with pre-listening

TURN ON / OFF THE RADIO

1. Installing batteries

The battery compartment is located on the back of the
PL-380. To remove the battery compartment cover, apply
thumb pressure and slide it towards the bottom of the
radio. Install 3 AA alkaline batteries into the battery
compartment, observing the battery polarity diagram on
the back of the radio. Display screen would show battery
capacity, time, etc.
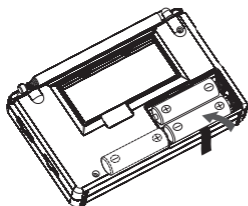
2. Short press on [POWER] button to turn the radio on or off.
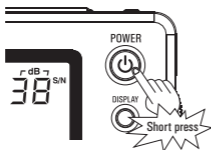
Note:
If the radio is not able to be turned on. Please check if the
batteries were installed correctly, battery capacity is
sufficient or the lock function had been applied with symbol
" 🔒 " displayed on screen.

TUNE INTO STATIONS

Short press [POWER] button to turn on your radio, then select your desired band by short pressing the [FM],[MW/LW], SW [∨] or [∧] button. In case of receiving FM/SW broadcasting, fully extend the telescopic antenna for a better reception.
Now, you can turn into your favorite station with any of the below tuning methods:

Method 1: ETM (Easy Tuning Mode)
The ETM function allows you to tune into stations easily and temporally store them into the ETM storage; 100 stations for FM/MW/LW & 250 stations for SW.

Note: Scanned stations will not be stored in the regular 550 memories, but will remain in the ETM temporary storage until next ETM scanning within each band.

HOW TO USE ETM
1. Turn on the radio and select your desired band by pressing either the FM, MW/LW or SW [∨] or [∧] button.
2. Short press the [ETM] button with [ETM] shows on the display to enter Easy Tuning Mode.
3. Long press the [ETM] button until the frequency running to auto scan the stations within present band.
4. When the frequency stop running, turn around the [TUNING] knob for those scanned stations.
5. Short press either the [VF] & [VM] button with frequency flashing and the disappearance of ETM on the display to exist ETM mode.
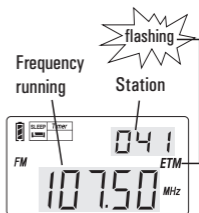
Notes:
FM station: When you are in a different city or country, you should perform the ETM function again, because this will not delete any of the stations already within the memory.

MW station: It is recommendable to perform the ETM function during day time as well as night time, because there usually are more stations that start broadcasting at night

SW station: It is recommendable to perform the ETM function in the morning, afternoon as well as night time, because the transmitting signal of SW is very unstable and there usually are more stations that start broadcasting in the late afternoon.

Method 2: MANUAL TUNING
Turn on the radio, short press the [VF] button to switch into frequency mode. Rotate the [TUNING] knob to select your station.

FAST/SLOW tuning is shown in the chart below for each band.

step band	> Slow tuning mode	>> Fast tuning mode
	turning step	turning step
FM	0.01 MHz	0.1 MHz
MW	1kHz	9 / 10kHz
LW	1 kHz	9 kHz
SW	1 kHz	5 kHz

Method 3: AUTO BROWSE STATION
1. Turn on the radio and short press the [VF] button with the frequency flashing.
2. Long press the [VF] button with [>>] moving to scan from one station to another, staying on each stations for about 5 seconds.
3. To stop auto browse function, simply press the [VF] button.

Frequency running >> moving
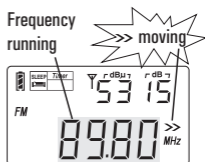
Auto-scan with pre-listening

Note: When the radio search & stop to a station, just press [M] button once to store it.

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Method 4: AUTO BROWSE MEMORY
1. Turn on the radio, short press the [VM] button with memory page shows in the upper right corner and disappears in 5 seconds.
2. Long press [VM] button with " PRESET " flashing to scan from one memory to another, staying on each station memory for about 5 seconds.
3. To stop auto search memory, simply press the [VM] button.

flashing
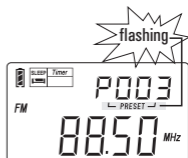
Auto-scan memory with pre-listening

Note: Please first read [Working with Memory] in next page before using this function.

Method 5: DIRECT KEY-IN FREQUENCY
Short press the [VF] button to enter the frequency mode, press the numeric keys [0] - [9] to enter the station frequency directly.
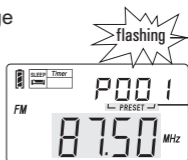
Note:
1. Ignore the decimal point for FM band when input the frequency numbers.
   For example, FM 89.0 MHz, Just ENTER 8 9 0 .
2. If the entered frequency rate is not within the covering area, the display would display " Err " error symbol.

WORKING WITH MEMORIES

There are total 550 preset memories within PL-380. For FM, MW, and LW, each band has 100 preset memories; and 250 preset memories for SW.

Method 1: ATS - Auto Tuning Storage
Turn on the radio and select the band that you want to ATS to take place in, either FM or MW/LW. Long press the [FM] or [MW/LW] button and notice that the " PRESET " number (P001) appears in the display's upper right corner with the presets to the right increasing as the band is scanned and frequencies are stored into memory.

Auto Tuning Storage

There are two modes for SW ATS function:

Mode A: In SW band, long press the [A / ∨] button to ATS the stations within all meter bands.

Mode B: In SW band, long press the [B / ∧] button to ATS the stations within present meter band only.

Note:
During ATS process in FM, MW / LW or SW (mode A), pre-stored radio stations will be replaced automatically by the new searched stations.
With ATS in SW (mode B), those existing memories will not be replaced; all the newly found radio stations would be stored in the blank memories addresses.

Method 2: MANUALLY STORING STATION
1. Tune to your desired station, press the [M] button once and notice the PRESET number flashing in the upper right corner of the display.
2. While it flashing, press the [M] button to store it into the memory or wait for 3 seconds to store it automatically. If you want to store it into another PRESET memory, just rotate the tuning knob of your choice, and press the [M] button to confirm.

Method 3: SEMI-AUTO STORING STATION
1. Short press the [VF] button to enter frequency status.
2. Long press [VF] button with [>>] moving to activate the Auto-browse function.
3. While tuning to your favor station, you can direct store it into the next available memory by pressing on the [M] button with PRESET flashing. The Auto frequency browsing keeps on going unless you short press the [VF] button again.

DELETE MEMORY

Method 1: MANUAL DELETE MEMORY
1. Turn on the radio and press the [VM] button causing PRESET stations appears in the display's upper right corner.
2. Rotate the [TUNING] knob to select the memory that you want to delete.
3. Long press [DELETE] button with "DEL" flashing in the display, press the [DELETE] button again to confirm.

Note: If " dEL " is flashing more than 3 seconds without confirmation, it will exit the delete function automatically.

Method 2: SEMI AUTO-DELETE MEMORY
In VM mode, long press the [VM] button to activate the Auto-Browse function of memory. Once previewing your unwanted station, simply press the [DELETE] button with " dEL" shows for 2 seconds and then keep on browsing other stations. To stop the browsing function, short press the [VM] button to exist.

Method 3: DELETE ALL MEMORY
Short press the [VM] button to enter VM / Memory mode, long press the [DELETE] button for 3 seconds with " dEL" shows on the upper right corner of the display, press again the [DELETE] button to remove all memory.

flashing

ALL
dEL

Delete all memories

Note: If " dEL " is flashing more than 3 seconds without confirmation, it will exit the delete function automatically.

SLEEP FUNCTION

With sleep function, you can adjust the length of time for the radio to turn off automatically.
The default setting for the auto-turn off time is 30 minutes if the radio being turned on by short pressing the [POWER] button.
To change the sleep timer, long press the [POWER] button with [ON / 01~120] & [SLEEP] appear on the display, rotate the [TUNING] knob to select sleep timer from 1 ~ 120 minutes or permanently " On " Wait for 3 seconds until " ⏲ " symbol stops flashing to confirm.

Note: Short press the [POWER] button to directly turn on the radio with previous preset sleep timer; long press it to change the timer.

SETTING THE CLOCK

1. Long press the [TIME] button until you see the hour flashing. Rotate the [TUNING] knob to set the correct hour, then short press the [TIME] button and notice the minutes are flashing.
2. While it's flashing turn the [TUNING] knob to set the correct minutes, then press [TIME].

Note: You can also directly key-in the numeric key instead of rotating the [TUNING] knob to set the correct clock.

SETTING THE ALARM TIME

1. Long press the [ALARM] button until both the HOUR & AL flashing, rotate the [TUNING] knob to adjust the hour, then short press [ALARM] with the minutes flashing.
2. Rotate the [TUNING] knob to adjust the minutes and short press the [ALARM] button with the " SLEEP " symbol flashing.
3. Rotate the [TUNING] knob to select 1 ~ 90 minutes to set the Auto Alarm Off Timer.
4. Short press the [ALARM] button to confirm and notice " ♧ " shows on display to activate the alarm by buzzer (BB sound). Short press twice with " ◁» " appears to set the alarm by radio.
5. To turn off the alarm function, repeat short pressing the [ALARM] button and notice both " ♧ " & " ◁» " disappear.

PRESET ALARM STATION
1. Turn on the radio, then tune into your favorite alarm radio station and adjust your desired alarm volume level.
2. Short press the [M] button to store the alarm station into memory.
3. Repeat short pressing the [ALARM] button and notice " ◁» " shows on the display to confirm the preset alarm station.

SNOOZE / LIGHT FUNCTION

After alarm was activated with buzzer or radio broadcasting, press & release [LIGHT / SNOOZE] with a "B" sound. Then the radio would be turned off temporary, it will start to alarm again 5 minutes later.

For the LCD backlight function, short press the [LIGHT] button to illuminates the LCD for 3 seconds. Long press it for permanently illumination. Press again the [LIGHT/ SNOOZE] button to turn off the light.

TURN OFF THE ALARM

When the unit is alarmed by radio, press the [POWER] button twice to turn off the alarm.

When the unit is alarmed by buzzer (BB sound), simply press the [POWER] button once to turn off the alarm.

DISPLAY MODE

With radio OFF: Short press the [DISPLAY] button to view on Temperature, Alarm time.

With radio ON: Short press the [DISPLAY] button to view on Alarm time, Temperature, Local time, signal strength/ SNR.

KEY LOCK FUNCTION

Long press the [⊶] button with " ⊶ " symbol appears in the display to lock up all keys / buttons. Long press it again with the symbol disappears to unlock the keys/buttons.

FM ST. (FM STEREO) BUTTON

While listening to FM station via stereo earphones, short
press the [FM.ST] button with " (⫾ ⫾) " appears over the left
side of the frequency in the display to activate the STEREO
mode once it receives the FM stereo station.

AM BW (BANDWIDTH) BUTTON

Short press the [AM BW] button to choose 6, 4, 3, 2, 1 kHz
AM IF bandwidth. This may help to reduce interference on
some frequencies. Using WIDE usually results in better
audio fidelity, while using narrow limits the audio fidelity is
somewhat dull in sound. You can use it in MW, LW and SW
band.

SYSTEM SETTING

Frequency range setting for FM
Turn off the radio, long press [FM SET] button, until 87.5-108MHz, 64-108MHz, 76-108MHz, or 87-108MHz appears in the display. Quickly keep pressing on the [FM SET] button to select suitable frequency range for your local FM.

Changing the clock format
Turn off the radio, long press [12/24] button, until " *I2H* "or " *24H* " appears in the display. If " *I2H* " appears in the display, which means the clock system will be in the 12 hour format.

MW(AM) step setting
Turn off the radio, long press [9/10kHz] button until "9kHz" or "10kHz" appears in the display. By long pressing again, the alternative band step would be shown. The temperature is also shown on screen at the same time.
In general practice, the frequency step of 10kHz is to be used for broadcasting MW(AM) as well as the temperature in the degree of Fahrenheit (*℉*) to be used in the North America.
In order to provide convenience to the end users, the "10kHz" of frequency step is default to be displayed with temperature in the degree of Fahrenheit (*℉*) together as well as "9kHz" to be displayed with temperature in the degree of Centigrade (*℃*) together.
If the display shows "10kHz" with degree of Fahrenheit (*℉*), which means this radio is set to 10 kHz step for MW(AM) with temperature in Fahrenheit (*℉*) which is for the North America region.

LW on/off setting
Turn off the radio. Press and hold the [MW/LW] button until "LW ON" or "LW OFF" appears in the display to turn ON or OFF the LW respectively.

Turn off the "Bi" sound
Turn off the radio, press and hold the [🔔/ 0] button until
" OFF " or " On " appears in the display; If " OFF " appears
in the display, which means "Bi" sound is turned off.

Turn on / off intelligent lighting function
This radio bears the intelligent lighting function which the
backlight would be on for 3 seconds when tuning or
pressing any key.
With radio off, press & hold the [🔔] key with the " OFF "
shows in the display to deactivate the lighting function; long
press again with " On " shows up to activate it.

Note: After shutting off the intelligent lighting function, the
[LIGHT/SNOOZE] key is still workable for turning on or off
the backlight.

**Turn ON/OFF charging function & exchange battery
consumption display**
Press & hold the [▭] key with " $\mathit{CHR\ On}$ " & " $\mathit{Ni\text{-}MH\ Battery}$ "
shows up to activate the consumption display of
rechargeable batteries and the built-in charging system.
Press & hold the [▭] key with " $\mathit{CHR\ OFF}$ " shows up &
" $\mathit{Ni\text{-}MH\ Battery}$ " disappear to activate the consumption display of
alkaline batteries and turn off the built-in charging function.

Note: This radio is default to use alkaline batteries for
power supply. In case of using rechargeable batteries, you
should switch the radio in rechargeable batteries mode in
order to show the correct power capacity.

USING THE EXTERNAL ANTENNA

The external antenna, which was come with is radio, is used to improve shortwave or FM performance. Clipping one end of the external antenna on the extendable antenna of this radio, then clipping another end of external antenna at the window. This could improve the receiving effect of FM/SW.

EXTERNAL FM/SW ANTENNA

WINDOW   WALL
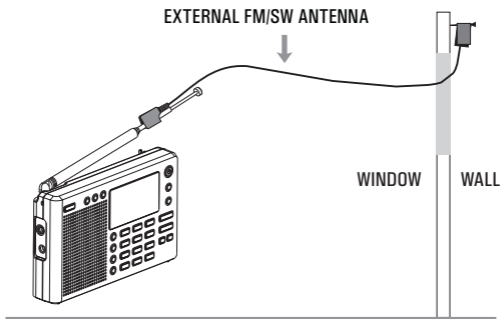
⚠ Caution: Don't install external FM/SW antenna in the frequent thunder area.

Notice: Do not install any external antenna at the area with thunder & lightening.

USING THE INTELLIGENT CHARGING FUNCTION

With radio off, install 3 x UM3 (AA) rechargeable batteries
and then press & hold the [🔋] key with " ⌐HR On " &
" Ni-MH Battery " displays to activate the built in charging function.

1. Use any 5V external adaptor with USB plug to
   connect this radio, the symbol " 🔋 " will advance from
   the bottom to top during power charging. It stops when
   batteries are fully charged.
2. You can also use any USB cable to connect the radio
   with your PC for charging.

Connect USB 5V to external
power sources
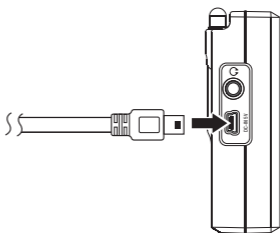
Notes for charging power:
1. Insisting to use up all power of rechargeable batteries
   before charging again, this could extend the life time of
   battery and keeping them in good conditions.
2. 3 pcs of batteries to be used as a group and don't
   separate them to other usage. Also don't mix to use
   batteries with different power capacity.

Caution: Don't charge on any non-rechargeable batteries in
the radio, this will cause a hazard or damage to your radio.

IMPORTANT MATTERS FOR USING BATTERIES

1. If no battery has been installed inside for long time, clock of radio would stop to work. However, pre-stored frequencies are still kept. Clock would work again after new batteries being re-installed inside.
2. When the battery power is low, the " ▯ " symbol in the display will flash to alert you for changing new batteries. Besides it will turns off automatically when the power is gone.
3. Mix using the used & new batteries would cause damage of radio and also display the capacity of power incorrectly.
4. In case of radio not to be used for a long period, draw out the batteries for preventing liquid leakage and damaging the parts of radio.

TROUBLE SHOOTING

QUESTIONS	ANSWERS	SOLUTIONS
Can not turn on the radio.	-No power with the batteries. -Didn't install the batteries properly. -Power button is locked.	-Replace the new batteries. -According to "+" or "-" sign to install the batteries again. -Press [⊶] button to unlocked.
Radio goes off when you are listening.	-No power with the batteries. -Sleep timer is activated.	-Replace the batteries. -Turn on the radio again.
Can not store some stations using ATS Some station store with noise using ATS.	-Frequency of stations are too weak. -There are interference near by your area.	-Search the station manually. - Low down the antenna or move to other location and try again.
Only limited FM stations can be received in Japan.	-FM frequency is 76~90MHz for Japan.	-Turn the radio off and long press on the [FM SET] button, short press [FM SET] button again to select 76~108MHz.
Received very poor AM in USA.	-USA is using 10kHz step for AM.	-Turn off the radio press the [9/10kHz] button to select 10kHz.

QUESTIONS	ANSWERS	SOLUTIONS
When the alarm activated (alarm by radio), there is only noise with the broadcast.	-Did not set the proper radio station for the alarm. -Or there are no broadcasting at that radio station. -Or you are in another city where does not have a radio station for your preset frequency.	-Preset your alarm station properly (see the above setting). -Make sure it has radio broadcast in your location. -Or set the alarm by buzzer.
radio malfunction.	This may caused by interference, and the computer microchip not function properly.	Remove the battery, then you can reload. If it is still not able to work, please contact your nearest dealer for customer service.

"Bi" SOUND VIA FUNCTIONS

Function	Button	Status	Sound	Display
Radio on or off	POWER	Radio on	B	
		Radio permanently	B-- (long)	" On " display
		Radio off	BB	" OFF " display
Adjust auto-off time	POWER & TUNING KNOB	Rotate at 30, 60, 90, 120 mins.	B	Display the time for auto-off
		Radio permanently	BB	" On " display
FM STEREO	FM ST.	STEREO	B	" (◖▯ ◖▯) " display
		MONO.	BB	" (◖▯ ◖▯) " disappear
FM	FM	FM	B	" FM " in the display
MW (AM) or LW	MW/LW	MW	B	" MW " in the display
		LW	B-- (long)	" LW " in the display
SW BAND METER BAND	⌄ or ⌃	SW	B	" SW " & SW frequency
		METER BAND	B	Meter band on the right corner
ATS (Auto Tuning Storage)	FM MW/LW SW (⌄ or ⌃)	ATS on	B	Freq. & memory address are running
		ATS off	B-- (long)	Display 01 memory address and Frequency
ETM	ETM	ETM On	B	" ETM " in the display
Frequency Scanning	VF	Frequency mode	B	Radio freq. numbers flashing.
Memory Scanning	VM	Memory mode	BB	Memory address on the top right corner
Auto browsing (Scanning)	VF	Frequency mode	B	Radio freq. running
	VM	Memory mode	B	Memory address running
AM band width		1kHz, 2kHz, 3kHz, 4kHz, 6kHz	B	Display equivalent band width
Store memory	MEMORY	On	B	Memory address flashing on the top right corner
		Confirmed / Auto confirm	B-- (long)	Stopped
Delete memory	DEL ETE	Delete single memory	B	Memory address and " dEL " are flashing
		Delete all memory	BB	" ALL " & " dEL " are flashing
		Confirmed	B-- (long)	Back to Freq. display

Function	Button	Status	Sound	Display
BACKLIGHT	SNOOZE/ LIGHT	Illuminate short time	BB	Backlight on for 3 seconds
		Illuminate permanently	B-- (long)	Backlight on
		Turn off	B	Backlight off
SNOOZE	SNOOZE/ LIGHT	Temporary off	B	" ◁» " or " ♫ " and the auto turn-on time are flashing
Lock	o⊸	Lock	B-- (long)	" o⊸ " display
		Unlock	B	" o⊸ " disappear
Time setting	TIME	Hour setting	B	"hour" flashing
		Minute setting	BB	"minute" flashing
		Confirm or Auto confirm	B-- (long)	Flashing stop
Auto radio on / off function	ALARM	Hour setting	B	"hour" flashing
		Minute setting	BB	"minute" flashing
		Adjust the length of alarm	BB	1 ~ 90 minutes display, " ◁» " or " ♫ " and " SLEEP " are flashing
		confirmed	B-- (long)	Display time
		Select alarm by radio	B	Display " ◁» "
		Select alarm by buzzer	BB	Display " ♫ "
		Select alarm off	B-- (long)	" ◁» " and " ♫ " disappear
In/out SW meter band	TUNING	Inside SW meter band	B	Meter band appear on the top right corner
		Out of SW meter band	B	Meter band disappear
FM freq. range	FM SET	Select FM freq.	B	87.5-108MHz,64-108MHz, 76-108MHz or 87-108MHz
12/24 format	12/24	Select 12 format	B	" 12H " in the display
		Select 24 format	BB	" 24H " in the display
MW(AM) STEP	9/10kHz	Select 9kHz step	B	"9kHz" and "℃" in the display
		Select 10kHz step	BB	"10kHz" and "°F" in the display
Charge on/off	▭	On	B	" CHR On " & " Ni-MH Battery " in display
		Off	BB	" CHR OFF " in display & " Ni-MH Battery " disappeared

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Function	Button	Status	Sound	Display
?Bi? sound on/off	🔔	On	B	" On " in the display
		Off	BB	" OFF " in the display
Intelligent lighting on/off	🐜	On	B	" On " in the display
		Off	BB	" OFF " in the display
LW on / off	MW/LW	On	B	" LW On " display
		Off	BB	" LW OFF " display

SPECIFICATIONS

1. Frequency range

FM	87~108 MHz
	Russia 64~108MHz
	Japan 76~108 MHz
	Eu, USA 87.5~108 MHz
MW	522~1620 (USA 520~1710) kHz
LW	153~513 kHz
SW	2300~21950 kHz

2. Sensitivity

F M (S/N=30dB)	Less than 3 μ V
MW (S/N=26dB)	Less than 1mV/m
LW (S/N=26dB)	Less than 10mV/m
SW (S/N=26dB)	Less than 20 μ V

3. Selectivity

F M	>60 dB
MW	>60 dB
LW	>60 dB
MW	>60 dB

4. FM Stereo crosstalk — Less than 35 dB

5. Memory — 550

6. Output — 350 mW

7. Power — UM3 or AA X 3
USB 5V DC

8. Speaker — Φ 50mm, 500mW/16 Ohm

9. Earphone Jack — Φ 3.5mm, 8~32 Ohm, Stereo type

10. Dimensions Approx. — 135(W) X 86(H) X 26(D) mm

11. Weight — 200g (Batteries not included)