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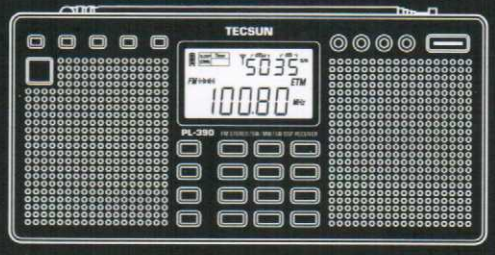
TECSUN

PL-390

FM stereo / SW / MW / LW DSP RECEIVER

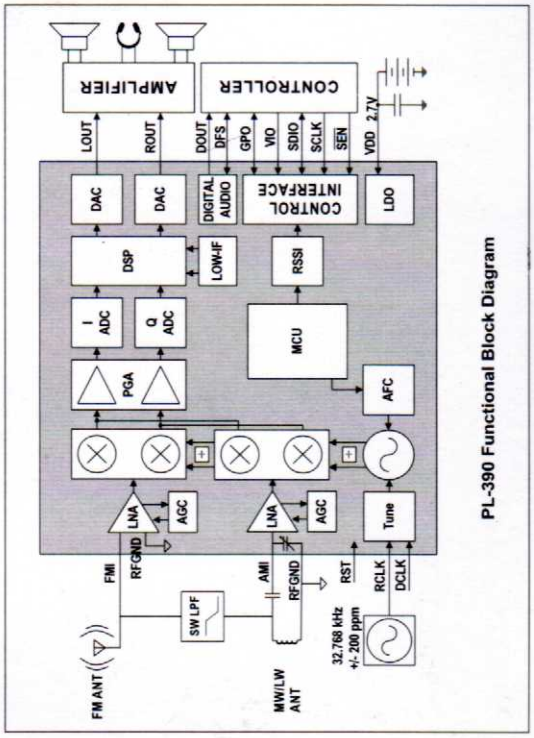
OPERATION MANUAL



TECSUN ELECTRONIC IND. LTD.

PL-390 Functional Block Diagram

PL-390 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-390 Functional Block Diagram

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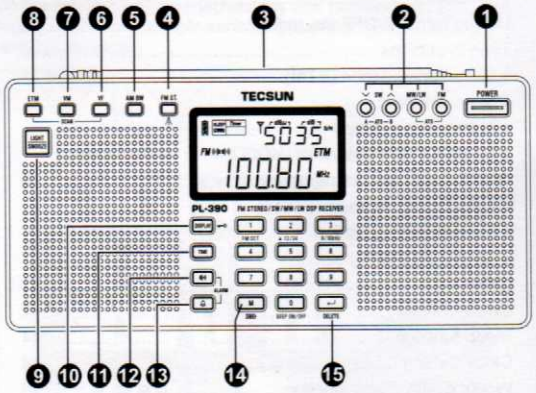
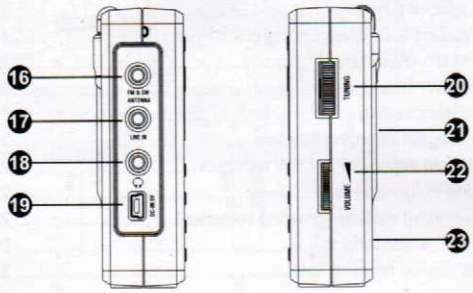
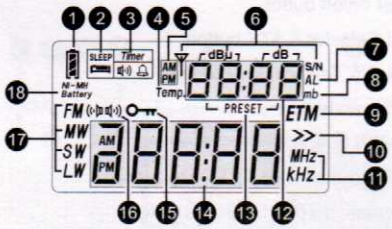
CONTROL LOCATIONS





1. Power on/off button
2. Band Selector & ATS button
3. FM & SW Telescopic Antenna
4. FM Stereo button
5. AM / BW button
6. View frequency (VF) & SCAN button
7. View memory (VM) & SCAN button
8. Easy Tuning Mode
9. Light / Snooze button
10. Display mode / key lock button
11. Time Set
12. Alarm by Radio
13. Alarm by Buzzer
14. Memory button
15. Delete / Confirm [↵] button
16. FM & SW External Antenna Jack
17. Line in Jack
18. Earphone Jack
19. USB 5V DC-Jack
20. Multifunctional Tuning Knob
21. Back Stand
22. Volume Knob
23. Battery Compartment

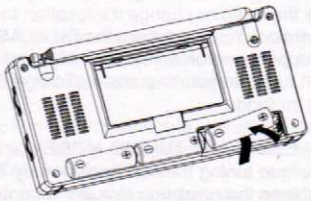
LCD DISPLAY



1. Battery consumption indicator / Charging indicator
2. Sleep timer indicator
3. Alarm on/off indicator
   " " alarm on by radio
   " " alarm on by buzzer
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

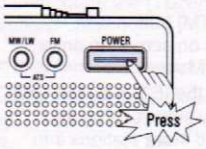
HOW TO TURN ON/OFF THE RADIO

1. Open the battery compartment located on the back of the unit, install 3 x AA alkaline batteries observing the battery polarity diagram on the back of the radio. Close the battery door.



Installing batteries

2. Press the [POWER] button to turn on/off the radio.



Note:
If the radio is unable to be turned on. Please check if the batteries were installed correctly, battery capacity is sufficient or the lock function had been applied with " " displays on screen (press & hold the [ ] button to unlock.)

TUNE IN STATIONS

Press the [POWER] button to turn on your radio, then select your desired band by pressing the [FM], [MW/LW], SW[∨] or [∧] button. In case of receiving FM/ SW broadcasting, fully extend the telescopic antenna for a better reception. When receiving MW and LW broadcasting, please rotate the radio or change it's location to achieve optimum reception. You can rotate the [VOLUME] knob to adjust to appropriate volume from 0 to 30 levels.
Now, you can turn into your favorite stations with any of the below tuning methods:

METHOD 1: ETM (EASY TUNING MODE)
ETM is the unique tuning method designed by Tecsun. It skillfully combines the reception circuitry & control procedure to pre-select the suspected radio station and temporarily auto store them into the ETM memory (not the regular 550 memories). This highly enhances the efficiency when tuning into radio stations. Employing ETM to tune preferred frequencies. you can easily tune into your desired stations from those preferred frequencies.

1. Press the [ETM] button with [ETM] shows on screen to enter Easy Tuning Mode.
2. Press & hold the [ETM] button until the frequency start running to auto scan and store stations into ETM memory, within the present band.
3. When the frequency stop running, turn around the [TUNING] knob to select those stored stations.

Notes: While operating ETM to search for stations, a few stations might be missed if there is interference in the surrounding. In this case, you can simply key-in the frequency, then press the [ETM] button to manually store it into ETM memory.

Tips:
FM station: When you are in a different city or country, you should perform the ETM function again in stead of using ATS function, because this will not delete any of the stations already stored within the memory.

MW station: It is recommendable to perform the ETM function during night time, because there are usually many stations starting 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 usually there are more stations that start broadcasting in the late afternoon.

METHOD 2: MANUAL TUNING
Frequency searching: Press the [VF] button to switch into frequency mode, and then rotate the [TUNING] knob to select your desired station.

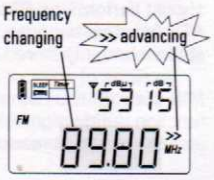
FAST/SLOW tuning is shown in the chart below for each band.

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

Memory searching: Press the [VM] button to switch into memory mode, and then rotate the [TUNING] knob to select those stored stations.

METHOD 3: AUTO BROWSE STATION

1. Turn on the radio and press the [VF] button to switch into frequency mode.
2. Press & hold the [VF] button with [>>] advancing to scan from one station to another, staying on each station for about 5 seconds.
3. To stop the auto browse function, simply press the [VF] button



Auto browse station

Note: While operating the "Auto Browse Station" function, you can press the [M] button anytime to store the station into memory, and the radio will keep on auto browsing the next available station.

METHOD 4: DIRECT KEYPAD ENTRY

To search for frequency, turn on the radio and press the [VF] button to switch into frequency mode, press the numeric keys [0] - [9] to enter the station frequency directly.

To search for memory, press the [VM] button to switch into memory mode, then press the numeric keys [0] - [9] to enter the preset memory number directly.

Notes:

1. Ignore the decimal point for FM band when inputting the frequency numbers.
   For example, FM 89.3 MHz, just enter 8 9 3.
2. If the entered frequency rate is not within the covering area, the display would display "Err" (error) symbol.

WORKING WITH STATION MEMORIES

There are total 550 preset memories within the unit. 100 preset memories for each FM, MW, and LW band, and 250 for SW.

FM ATS:

1. Fully extend the telescopic antenna and press the [FM] button to select FM band.
2. Press & hold the [FM] button with "*PRESET*" flashing and the frequency start running, then you can scan and store your desired stations within the present band. When the frequency stop running, it means the ATS operation has been completed; then rotate the [TUNING] knob for those scanned and stored stations.

Auto Tuning storage (ATS) status

MW/LW ATS:

Press the [MW/LW] button to select MW/LW band, then follow step 2 of FM ATS.

SW ATS:

Fully extend the telescopic antenna and press the SW[∨] or [∧] button to select SW band. There are two modes for SW ATS tuning:

Mode A: Press & hold the [∨] button to ATS the stations within all meter bands

Mode B: Press & hold the [∧] button to ATS the stations within present meter band only.rotate the radio for better location (MW & LW).

Notes:

1. During ATS process in FM, MW / LW or SW (mode A), pre-stored radio stations will be replaced automatically by the new searched stations.
2. 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.
3. If there is too many interference in you surrounding or many mirror/blank station being stored during ATS, you should contract the telescopic antenna (FM & SW) or rotate the radio for better location (MW & LW).

METHOD 2: MANUAL STORING STATON

1. Select band and tune to your desired station.
2. Press the [M] button with "preset" flashing
3. Press the [M] button again to store the station into memory.
   You can also wait for 3 seconds to auto store the station into memory.

METHOD 3: SEMI-AUTO STORING STATION

While operating the "Auto Browse Station" function, you can simply press on the [M] button to store the station into memory to avoid storing unwanted stations and interfering signals.

1. Press the [VF] button to switch into frequency mode.
2. Press & hold the [VF] button with " >> " advancing to auto browse from one station to another.
3. While tuning to your favor station, press the [M] button with "*PRESET*" flashing to direct store the station into the next available memory. The unit will keep on browsing until you deactivate it by pressing on the [VF] button again.

LISTENING TO STORED STATIONS

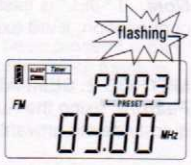
METHOD 1: MANUAL MEMORY TUNING

Press the press [VM] button to enter the frequency mode, then rotate the [TUNING] knob to tune into the stored station one by one.

address state

METHOD 2: AUTO BROWSE MEMORY

1. Press the [VM] button with memory page shows in the upper right corner to enter the frequency mode.
2. Press & hold the [VM] button until "*PRESET*" flashing to auto scan from one memory to another, staying on each station for about 5 seconds.



Auto browse preset station

To stop auto search memory, simply press the [VM] button.

METHOD 3: DIRECT KEY IN MEMORY ADDRESS

1. Press the [VM] button to enter the memory mode.
2. Press the numeric keys [0] - [9] to enter the memory address directly, and then press the [↵] button to confirm.

Note: If the display shows " - - - - "symbol after entering the number, it means the entered memory address does not exist.

DELETE MEMORY

METHOD 1: MANUAL DELETE SINGLE MEMORY

1. Press the [VM] button to enter the memory mode.
2. Rotate the [TUNING] knob to select the memory that you want to delete.
3. Press & hold the [DELETE] button with " dEL " flashing; then press the [DELETE] button to remove the unwanted memory address.

Delete a single station

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

METHOD 2: SEMI-AUTO DELETE MEMORY

Feature: using the Auto-Browse function of memory to quickly delete unwanted station.

1. Press the [VM] button to enter the memory mode.
2. Press & hold the [VM] button with [PRESET] flashing to auto scan from one memory to another, staying on each station memory for about 5 seconds.
3. Once previewing your unwanted station, simply press the [DELETE] button with " dEL " shows on display to delete the station, then keep on browsing other stations.

Delete memory

METHOD 3: MANUAL DELETE ALL MEMORY WITHIN THE BAND

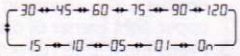
1. Press the [VM] button to enter the memory mode.
2. Press & hold the [DELETE] button for 3 seconds and notices " ALL " flashing in the upper right corner of display.
3. Press the [DELETE] button again to delete all memory within the selected band.

Delete all memories

Note: If the [DELETE] button has not been pressed within 3 seconds to confirm, it will exit the delete function automatically.

SLEEP FUNCTION

1. Press & hold the [POWER] button with " SLEEP " and "30" symbols show on the display.
2. Rotate the [TUNING] knob immediately to select sleep timer from 1 ~ 120 minutes or select permanently " On ", then wait till the radio auto turn on to confirm the setting.



Sleep time range

Note:
The default setting of the auto-turn off time is 30 minutes.

CLOCK SETTING

1. Press & hold the [TIME] button with hour flashing, then rotate the [TUNING] knob to adjust the hour.
2. Then press the [TIME] button with minutes flashing, and then rotate the [TUNING] knob to adjust the minute.
3. Press again the [TIME] button to confirm the setting.

※ If the [TIME] button has not been pressed again within 3 seconds, the unit will automatically confirm the setting.

Note: You can also direct key-in the number to set the clock after pressing & holding the [TIME] button.
Example: To set the clock to 6:35, press the numeric key to enter [0] [6] [3] [5] ; then you will hear a prolonged "B -" sound suggesting that the time has been set up.

WORKING WITH ALARM

It is recommended to set the alarm by buzzer if you are not familiar with the local radio frequency and air time.

SETTING THE ALARM (BY BUZZER)

1. Press & hold the [🔔] button with hour flashing in the upper right corner, then rotate the [TUNING] knob to adjust the hour.
2. Press the [🔔] button with minutes flashing, then rotate the [TUNING] knob to adjust the minute.
3. Press the [🔔] button with "🔔 " shows on display to confirm the setting.

Setting the alarm by buzzer

※ If the [🔔] button has not been pressed again within 3 seconds, the unit will automatically confirm the alarm setting.

SETTING THE ALARM (BY RADIO)

First preset the alarm station:

1. Turn on the radio, then tune into your favorite station for alarm by radio and adjust your desired alarm volume level.
2. Press the [M] button with " *PRESET* " flashing,
3. Press the [🔊] button immediately and notice " 🔊 " shows on the display to confirm the preset alarm station.

Then set the alarm time:

1. Press & hold the [🔊] button with hour flashing in the upper right corner, then rotate the [TUNING] knob to adjust the hour.
2. Press the [🔊] button with minutes flashing, then rotate the [TUNING] knob to adjust the minute.

3. Press the [🔊] button again with [30] shows on display, then rotate the [TUNING] knob to select 1 ~ 90 minutes to set the Auto Alarm Off Timer.
4. Press the [🔊] button again to confirm.

Auto sleep timer

※ If the [🔊] button has not been pressed again within 3 seconds; the unit will automatically confirm the setting.

The unit will turn on automatically with the preset station when it reaches the alarm time. It will auto turn off as well when it reaches the preset alarm off timer.

HOW TO ACTIVATE / DEACTIVATE THE ALARM

You can press the [🔔] or [🔊] button repeatedly to activate/deactivate the alarm by buzzer / radio respectively.
- If " 🔔 " shows on the display, it means the alarm by buzzer is turned on.
- If " 🔊 " shows on the display, it means the alarm by radio is turned on.
- If " 🔔 " / " 🔊 " does not show on the display, it means the alarm by buzzer / radio is turned off.

HOW TO TURN OFF WHEN ALARMING

Buzzer alarm: Press the [POWER] button to turn off the alarm.

Radio alarm: Press once the [POWER] button to continuously listening to the radio, press twice to turn off the station alarm.

Note: If the preset alarm is activated when you are listening to the radio, it will auto switch to the preset radio station.

SNOOZE FUNCTION

When the preset alarm is activated, you can press the [LIGHT / SNOOZE] to temporarily turn off the alarm, the unit will start alarming again 5 minutes later.

HOW TO CHANGE THE DISPLAY MODE

With radio OFF: Repeat pressing the [DISPLAY] button to view Temperature or Alarm time display.

With radio ON: Press the [DISPLAY] button to view Local time, Alarm time, Temperature or Signal strength/ SNR showing on the upper right corner of the display.

KEY-LOCK FUNCTION

Press & hold the [🔒] button with " 🔒 " symbol appears on the display to activate the key lock function.
Press & hold it again with the " 🔒 " symbol disappears to deactivate the locking function.

WORKING WITH INTELLIGENT LIGHT

This radio has an intelligent lighting function with which the backlight would be on for 3 seconds when operating any keys or knobs.

You can use the following methods to turn on / off the backlight:

TEMPORARY ILLUMINATION:
Press the [LIGHT/SNOOZE] button with a "B" sound to illuminates the LCD for 3 seconds.

PERMANENT ILLUMINATION:
Press & hold the [LIGHT/SNOOZE] button with a prolonged "BB" sound heard for permanently illumination. Press it again with a BB sound to turn off the backlight.

Notes:
1. When the unit is powered by the battery, please try to avoid setting the backlight to permanent illumination so as to reduce power consumption.
2. When the unit is turned off, the permanent illumination function will be turned off automatically as well.

HOW TO TURN ON/OFF THE INTELLIGENT LIGHTING

Press & hold the [🔔] key with the "OFF" shows in the display to deactivate the lighting function;
press & hold the [🔔] key 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.

FM ST. (FM STEREO)

While listening to FM stereo stations, press the [FM ST.] button with " 🔊 " appears in the display to activate the " *STEREO* " listening. If the received FM broadcast signal is too weak, it is recommendable to turn off the stereo function by pressing the [FM ST.] button again with " 🔊 " disappears.

Note: The stereo function will not be activated if the FM station is not stereo broadcasting.

AM BW (BANDWIDTH)

Repeat pressing the [AM BW] button to select your desired 6, 4, 3, 2, 1 kHz bandwidth.

Wide band: It has better audio fidelity when receiving strong signals or local stations.

Narrow band: It is suitable to receive weak & long distant station as narrow band is able to limit the interference from adjacent strong signal and reduce the background noise.

SYSTEM SETTING

SETTING FM FREQUENCY RANGE: In radio off mode, press & hold the [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.

SETTING 12/24 CLOCK FORMAT: In radio off mode, press & hold [12/24] button with "12H/24H " shows on display to select your desired clock format.

SETTING MW(AM) TUNING STEP: With radio off, press & hold [9/10kHz] button until "9kHz" or "10kHz" appear in the display to select your desired AM tuning step

TEMPERATUE: When the AM tuning step is 10 kHz, the temperature displays will auto switch to Fahrenheit (℉). When the AM tuning step is 9 kHz, the temperature displays will auto switch to Centigrade (℃).

TURN ON/OFF THE LW: With radio off, press & hold the [MW/LW] button until "LW ON" or "LW OFF" appears in the display to turn ON or OFF the LW respectively.

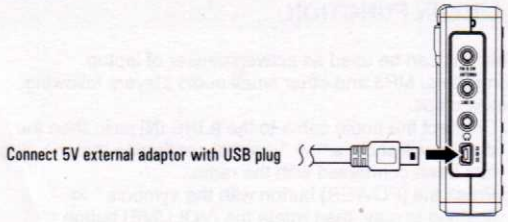
TURN ON/OFF THE CHARGING FUNCTION & EXCHANGE THE BATTERY CONSUMPTION DISPLAY: With radio off, press & hold the [ ] key with " CHR On " & " Ni-MH Battery " show up to activate the consumption display of rechargeable batteries and the built-in charging system. Press & hold the [ ] key with " CHR OFF " shows up and " Ni-MH Battery " disappears to activate the consumption display of regular batteries and turn off the built-in charging function.

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

TURN ON/OFF THE "Bi" SOUND: With radio off, press & hold the [BEEP ON/OFF] button until "ON" or "OFF" appears in the display to activate or deactivate the "Bi" sound respectively.

INTELLIGENT CHARGING FUNCTION

With radio off, install 3 x UM3 (AA) rechargeable batteries & then press & hold the [ ] key with " CHR On " and " Ni-MH Battery " display to activate the built-in charging function. Use 5V external adaptor with USB plug to connect with the radio. The symbol " " will advance from the bottom to top during power charging. It stops when batteries are fully charged.

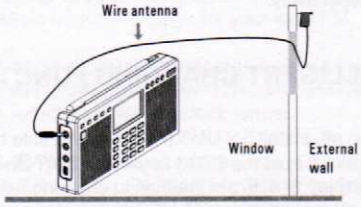


Notes:

1. Insist to use up all power of rechargeable batteries before charging again. This could extend the life time of battery and keep them in good conditions.
2. 3 pcs of batteries to be used as a group and don't separate them for other usage and mix to use batteries with different power capacity.
3. Don't charge on any non-rechargeable batteries in the radio, this will cause a hazard or damage to your radio.

HOW TO IMPROVE FM / SW RECEPTION

Plug in the external wire antenna to the [FM & SW] antenna jack of this radio, and then hang its end outside the window for better reception of FM and SW.

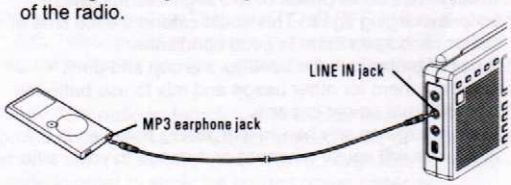


Caution: Do not install any external antenna at the area with thunder & lighting!

LINE-IN FUNCTION

This unit can be used as active speaker of laptop computers, MP3 and other small audio players following below steps:

1. Connect the audio cable to the [LINE IN] jack; then the display will show a " >> " symbol confirming that the plug has been connected with the radio.
2. Press the [POWER] button with the symbols " >> " flashing to play; then rotate the [VOLUME] button to adjust the volume.
3. Press again the [POWER] button to turn off the speaker of the 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 the [⊶o] 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 press & hold the [FM SET] button, 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.
No sound while connecting with external MP3.	Have not pressed the [POWER] button.	Press the [POWER] button until the " >> " flashing on the display to play
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 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	BB	" 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	BB	Radio freq. numbers flashing.
Memory Scanning	VM	Memory mode	B	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		Lock	B-- (long)	" " display
		Unlock	B	" " 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		Hour setting	B	"hour" flashing
		Minute setting	BB	"minute" flashing
		Adjust the length of alarm	BB	1 ~ 90 minutes display, " " and " " 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 "°C" 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

Function	Button	Status	Sound	Display
"Bi" sound on/off	BEEP 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	Off	BB	"LW OFF" display
		On	B	"LW On" 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 (±150kHz)
MW	>60 dB (BW=3kHz, ±9kHz)
LW	>60 dB (BW=3kHz, ±9kHz)
SW	>60 dB (BW=3kHz, ±5kHz)
4. FM Stereo crosstalk	Less than 35 dB
5. Memory	550
6. Output (Distortion 10%)	180 mW X 2
7. Power	UM3 or AA X 3
	USB 5V DC
8. Speaker (2 speakers)	Φ 57mm, 250mW/8 Ohm
9. Earphone Jack	Φ 3.5mm, 8~32 Ohm, Stereo type
10. Dimensions Approx.	186(W) X 89(H) X 29(D) mm
11. Weight	315g (Batteries not included)