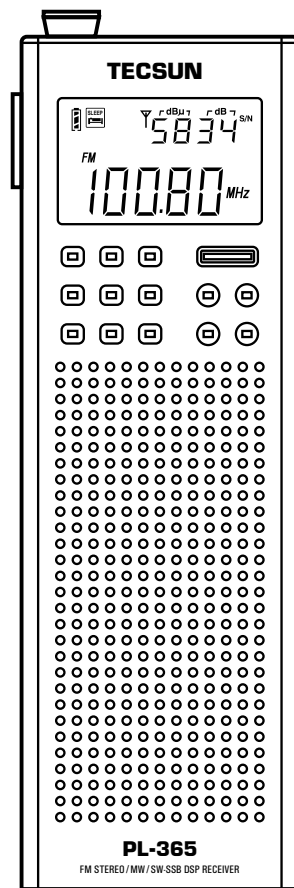


# PL-365

FM stereo / MW / SW-SSB DSP RECEIVER

## OPERATION MANUAL



**TECSUN RADIOS AUSTRALIA**

24/9 Powells Road, Brookvale, NSW 2100 Australia

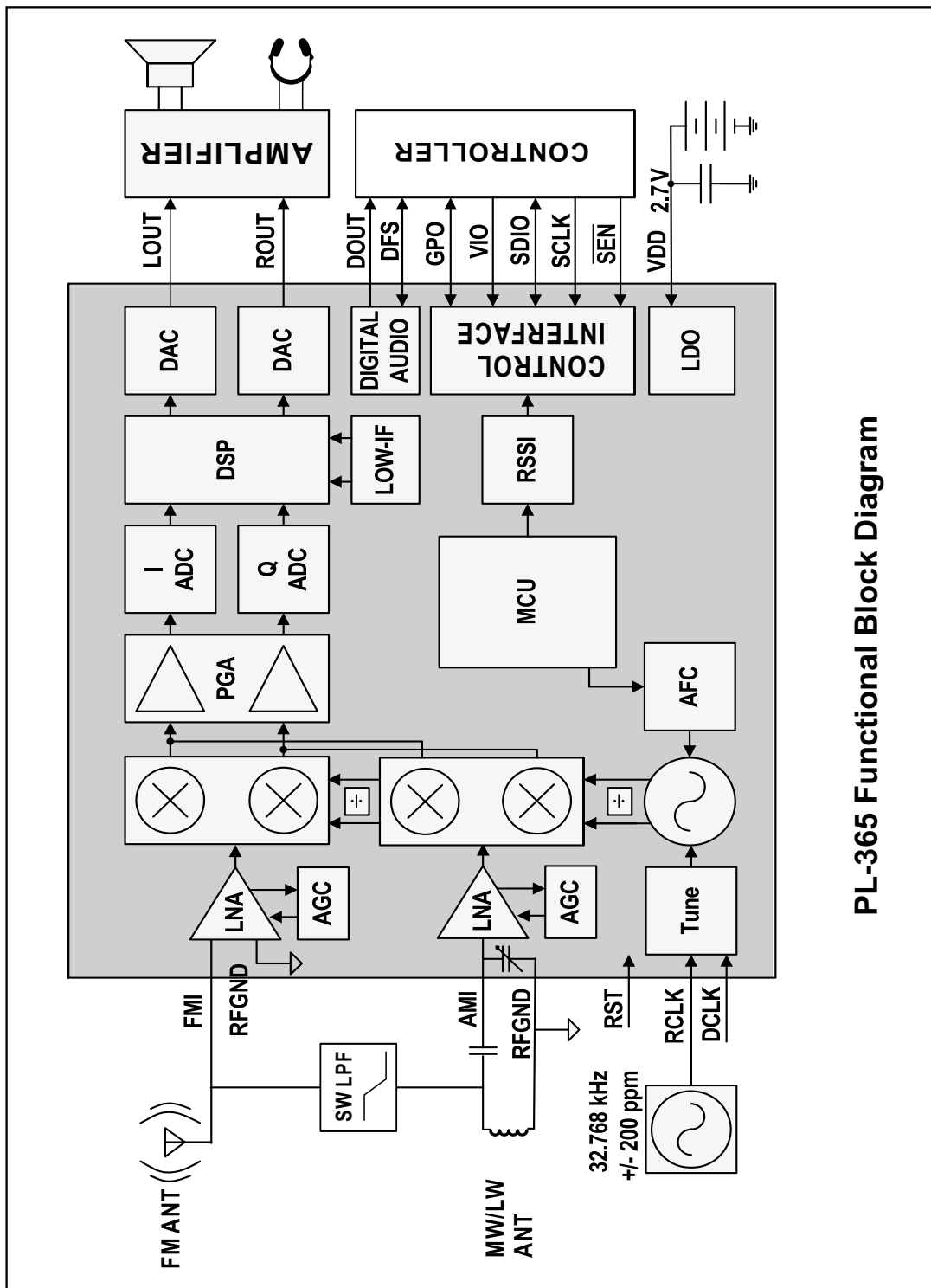
Email: [info@tecsunradios.com.au](mailto:info@tecsunradios.com.au)

Ph: +61 2 9939 4377

[www.tecsunradios.com.au](http://www.tecsunradios.com.au)

PL-365 Functional Block Diagram

PL-365 is equipped with DSP si4735 microchips (from Silicon Labs in the USA) for digital demodulation of analog AM/FM broadcasting signals, which greatly enhances the radio's sensitivity, selectivity, S/N ratio and anti-interference.

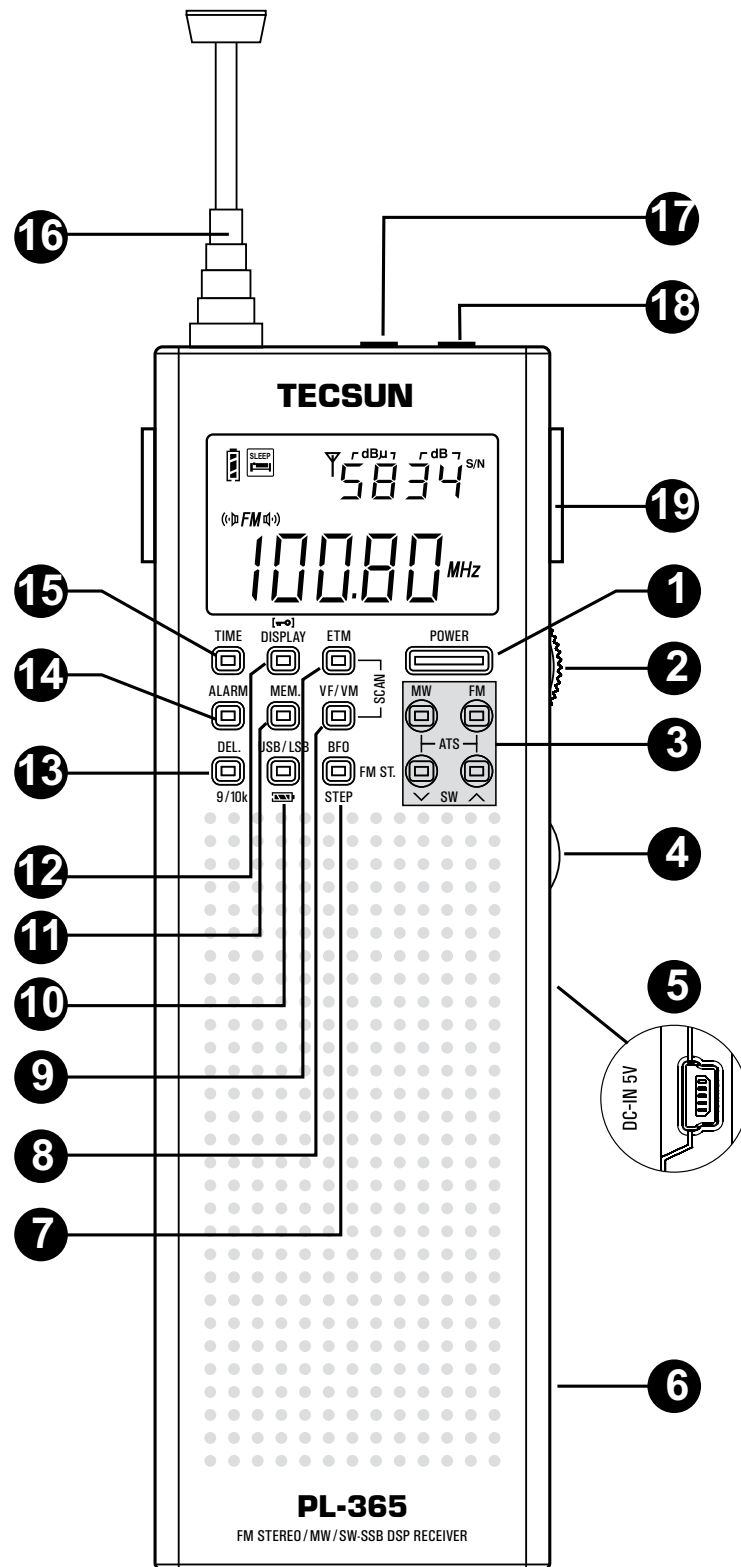


PL-365 Functional Block Diagram

## **TABLE OF CONTENTS**

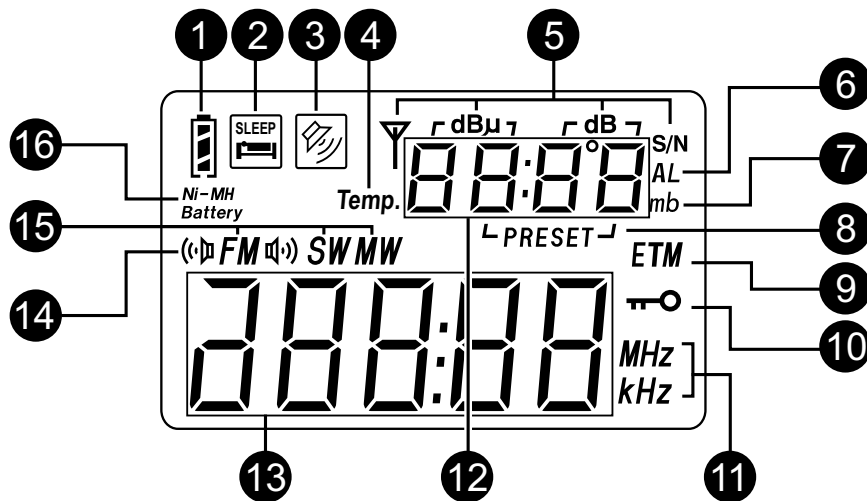
<b>CONTROL LOCATIONS</b> .....	2
<b>LCD DISPLAY</b> .....	4
<b>TURN ON / OFF THE RADIO</b> .....	5
<b>TUNE INTO STATIONS</b> ... ..	6
● ETM (Easy Tuning Mode)	
● Manual tuning	
● Auto scan stations	
<b>SINGLE SIDE BAND (SSB)</b> .....	8
<b>WORKING WITH MEMORIES</b> .....	9
● ATS - Auto Tuning Storage	
● Storing stations manually	
● Semi-Auto station storage	
<b>DELETE MEMORY</b> .....	10
● Delete Single Memory Manually	
● Semi auto-delete memory	
● Delete all memory	
<b>SLEEP FUNCTION</b> .....	11
<b>CLOCK SETTING</b> .....	12
<b>SETTING THE ALARM TIME</b> .....	12
<b>TURN OFF THE ALARM</b> .....	13
<b>DISPLAY MODE</b> .....	13
<b>KEY LOCK FUNCTION</b> .....	13
<b>FM ST. (FM STEREO) BUTTON</b> .....	13
<b>SYSTEM SETTING</b> .....	14
<b>USING THE EXTERNAL ANTENNA</b> .....	16
<b>USING THE INTELLIGENT CHARGING FUNCTION</b> .....	17
<b>IMPORTANT MATTERS FOR USING BATTERIES</b> .....	18
<b>TROUBLE SHOOTING</b> .....	19
<b>SPECIFICATIONS</b> .....	21

# CONTROL LOCATIONS



- ① Power on/off
- ② Multifunctional tuning knob
- ③ Band selector and Auto Tuning Storage
- ④ Volume knob
- ⑤ USB 5V DC-IN jack
- ⑥ Battery compartment
- ⑦ BFO / Fine tuning step set / FM ST. button
- ⑧ VF/VM (View Frequency/View Memory) & Scan button (Memory)
- ⑨ ETM (Easy Tuning Mode) button
- ⑩ USB / LSB button
- ⑪ Memory button (Storing radio stations) / Batteries type selector
- ⑫ Lock / Display button
- ⑬ DEL ETE & 9/10kHz MW step set button
- ⑭ ALARM On/Off & Setting
- ⑮ TIME Setting
- ⑯ FM & SW telescopic antenna
- ⑰ MW Antenna Jack
- ⑱ Earphone jack
- ⑲ Removable Belt Clip

## LCD DISPLAY

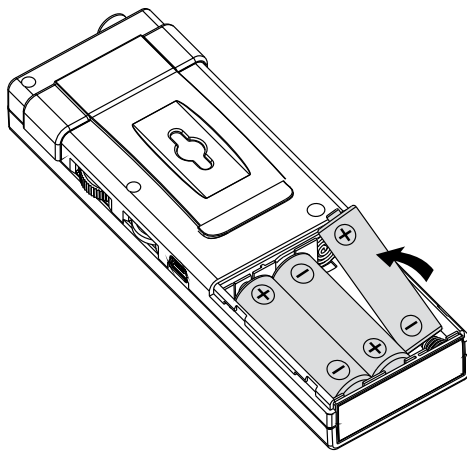


- |   |  |
|---|--|
| <p><b>1</b> Battery consumption indicator / Charging indicator</p> <p><b>2</b> Sleep timer indicator</p> <p><b>3</b> Alarm on/off indicator</p> <p><b>4</b> Temperature (Temp.)</p> <p><b>5</b> Signal indicators<br/>dBu: signal strength unit<br/>dB : Signal to Noise Ratio (S/N) unit</p> <p><b>6</b> Alarm time indicator</p> <p><b>7</b> SW meter band indicator</p> <p><b>8</b> Preset memory address</p> <p><b>9</b> ETM indicator</p> <p><b>10</b> Key-lock indicator</p> <p><b>11</b> kHz: frequency unit for MW&amp; SW<br/>MHz: frequency unit for FM</p> | <p><b>12</b> Digital number display (4 Digits)<br/>With radio off: local time, alarm time, temperature<br/>With radio on: local time, signal strength / SNR, alarm time, temperature, memory address, meter band, SSB fine tuning frequency.</p> <p><b>13</b> Digital number display<br/>With radio off: local time<br/>With radio on: frequency display, band display</p> <p><b>14</b> FM stereo status indicator</p> <p><b>15</b> Band indicator</p> <p><b>16</b> Rechargeable batteries indicator</p> |
|---|--|

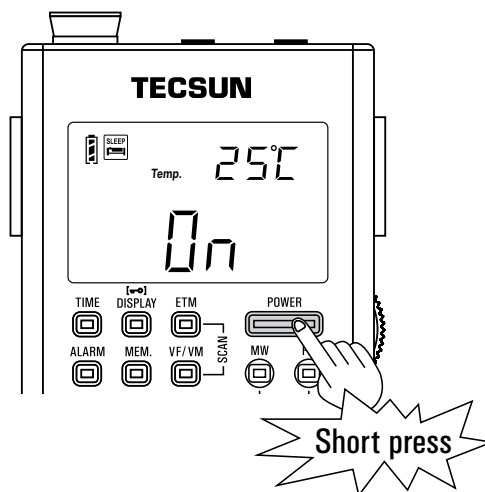
## TURN ON / OFF THE RADIO

### 1. Installing batteries

The battery compartment is located on the back of the PL-365. To remove the battery compartment cover, apply thumb pressure and slide it towards the bottom of the radio. Install 3 AA size 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], SW [∨] or [∧] button. In case of receiving FM/SW broadcasting, fully extend the telescopic antenna for a better reception.

Now, you can tune into your favorite station with any of the below tuning methods:

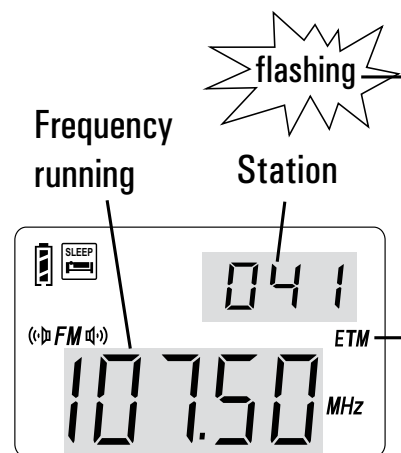
### Method 1: ETM (Easy Tuning Mode)

The ETM function allows you to tune into stations easily and temporarily store them into the ETM storage; 100 stations for FM/MW & 250 stations for SW.

**Note:** Scanned stations will not be stored in the regular 450 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 or SW [∨] or [∧] button.
2. Short press the [ETM] button to enter Easy Tuning Mode.
3. Long press the [ETM] button to automatically scan all available stations within the selected band.
4. When the scanning procedure is completed, turn the [TUNING] knob to browse through the found stations.
5. Short press the [VF/VM] button to exit the 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 recommended 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 recommended 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

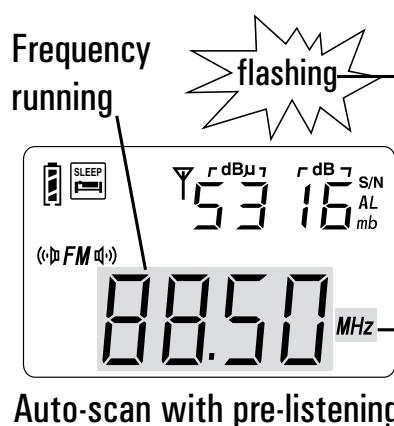
Turn on the radio, short press the [VF/VM] button to switch into frequency mode. Rotate the [TUNING] knob to select your station.

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

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

## Method 3: AUTO-SCAN STATIONS

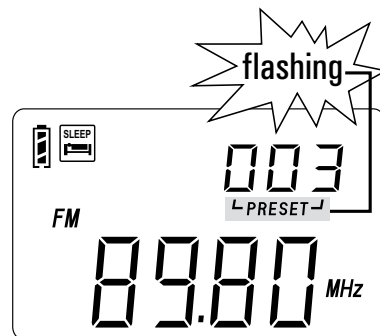
1. Turn on the radio and short press the [VF/VM] button with the frequency flashing.
2. Long press the [VF/VM] button to scan from one station to another, staying on each stations for about 5 seconds.
3. To stop auto browse function, simply press the [VF/VM] button.



**Note:** While pre-listening a station, press the [MEM.] button to store it.

## Method 4: AUTO BROWSE MEMORY

1. Turn on the radio to enter memory mode. Short press the [VF/VM] button until the memory position flashes in the upper right corner and disappears after 3 seconds.
2. Long press the [VF/VM] button until "Preset" flashes. The memory is now being browsed, staying on each stored station for about 3 seconds.
3. To stop browsing, press the [VF/VM] button.



Auto-scan memory with pre-listening

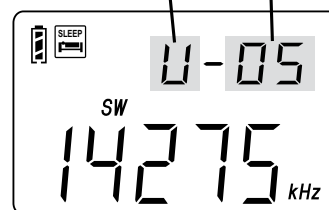
**Note:** Please read the "Working with Memories" section before using this function.

## SINGLE SIDE BAND (SSB)

1. In any mode, press the [USB/LSB] button to select SSB reception; press again to select USB/LSB.
2. Turn the [TUNING] knob to search stored SSB stations.
3. Press the [BFO] button, when "U" / "L" flashes on the display, turn the [TUNING] knob to adjust the reception.

SSB fine tuning frequency

- "U" is for USB.
- "L" is for LSB.



When it is off, press and hold the [BFO] button to set the fine tuning step. (P.15)

**Exit SSB:** Press and hold the [USB/LSB] button to exit.

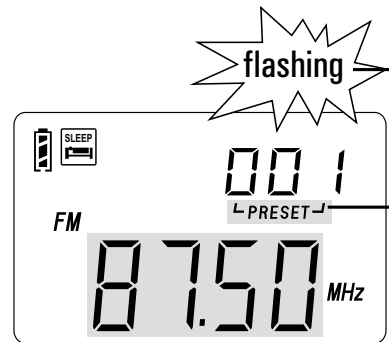
## WORKING WITH MEMORIES

The PL-365 has 550 station memories: FM (100), MW (100), SSB (100) and SW (250).

### Method 1: ATS - Auto Tuning Storage

To automatically store all available stations, first select the frequency band in which to perform ATS.

Then press & hold the band button (e.g. [FM] or [MW]); "PRESET" will flash in the top right corner of the display while the frequency starts running. The frequency stops running once the ATS operation has completed. Rotate the [TUNING] knob to browse all stored stations.



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:

When performing ATS in FM, MW or SW (mode A), all previously stored stations will be replaced.

When performing ATS in SW (mode B), previously stored stations are not replaced; newly found stations are stored in blank SW memory positions.

## **Method 2: MANUALLY STORING STATION**

1. Tune to your desired station, press the [MEM.] button once and notice the PRESET number flashing in the upper right corner of the display.
2. The station is automatically stored after 3 seconds; press the [MEM.] button to confirm immediately. If you prefer to store the station at a different memory position, rotate the [TUNING] knob to the position of your choice and press the [MEM.] button to confirm.

## **Method 3: SEMI-AUTO STATION STORAGE**

1. Short press the [VF/VM] button to enter frequency mode.
2. Long press [VF/VM] button to activate the Auto-browse function.
3. During the browsing process, press the [MEM.] button to store stations into the next available memory position. The browsing process continues until you press the [VF/VM] again.

## **DELETE MEMORY**

### **Method 1: DELETE SINGLE MEMORY MANUALLY**

1. Turn the radio on and press the [VF/VM] button until "Preset" and the memory position appears in the upper right corner of the display.
2. Rotate the [TUNING] knob to select the stored station you wish to delete.
3. Press & hold the [DEL.] button until "dEL" flashes on the display, press again to confirm.

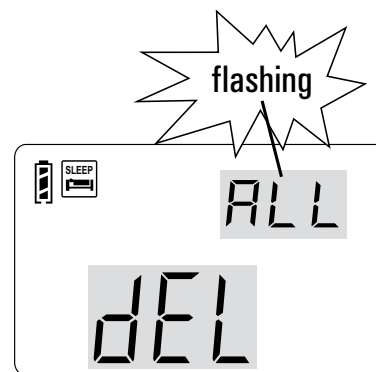
**Note:** If "dEL" is flashing more than 3 seconds without confirmation, it will exit the delete function automatically.

## Method 2: SEMI AUTO-DELETE MEMORY

Press the [VF/VM] button to enter the memory mode, then press & hold the [VF/VM] button to activate the memory auto-browse function. During the browsing process unwanted stations can be deleted by pressing the [DEL.] button. Press the [VF/VM] button again to stop browsing.

## Method 3: DELETE ALL MEMORY


Press the [VF/VM] button to enter the memory mode, then press & hold the [DEL.] button until " ALL " appears on the display, press the [DEL.] button again to confirm.

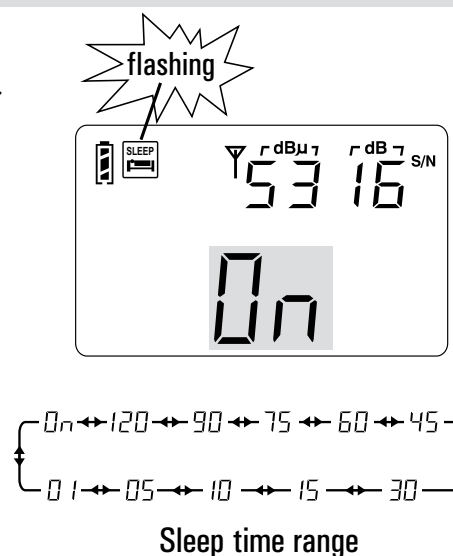


Delete all memories

**Note:** If the [DEL.] button is not pressed within 2 seconds to confirm, the delete function is automatically exited.

## SLEEP FUNCTION

1. In POWER OFF mode, press & hold the [POWER] button until the sleep timer symbol "  " flashes on the display.
2. Rotate the [TUNING] knob immediately to select a sleep timer from 1 - 120 minutes or select " 0n " for POWER ON mode (the radio will be turned on after 1 second).






Sleep time range

**Note:** The default setting of the sleep timer is " 0n ".


## 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].

## SETTING THE ALARM TIME

1. Press & hold the [ALARM] button until both "HOUR" and "AL" are flashing on the display; rotate the [TUNING] knob to adjust the hours, then press the [ALARM] button to adjust the minutes.
2. Rotate the [TUNING] knob to adjust the minutes and press the [ALARM] button; the "  " symbol flashes on the display.
3. Rotate the [TUNING] knob to select the time (1-90 minutes) after which the alarm should automatically turn off.
4. Press the [ALARM] button to confirm; the alarm symbol "  " appears on the display.
5. To turn off the alarm, press the [ALARM] button until the alarm symbol "  " disappears.

### Setting the alarm by radio

1. Turn on the radio and tune to your preferred radio station. Please set the volume to a suitable alarm level.
2. Short press [MEM.] button and notice the PRESET number flashing in the upper right corner of the display.
3. While flashing, press the [ALARM] button. The alarm symbol "  " briefly appears on the display. The alarm station is now set.

## TURN OFF THE ALARM

When the radio is turned on by the alarm function with radio, you can short press [POWER] button to continue listening radio afterwards.

Short press [POWER] again to turn off the radio.

## DISPLAY MODE

In radio off mode, short press the [DISPLAY] button to view the temperature or alarm time.

In radio on mode, short press the [DISPLAY] button to view the alarm time, temperature, local time, signal strength/SNR.

## KEY LOCK FUNCTION

To activate the key lock function, press & hold the [🔒] button; the " 🔒 " symbol appears on the display. Press & hold the [🔒] button again to unlock.

## FM ST. (FM STEREO) BUTTON

When listening to FM stations via earphones, press the [FM. ST] button; if the station is transmitted in stereo the " (◀▶) " symbol appears on the left side of the display.

## SYSTEM SETTING

### Frequency range setting for FM

Press & hold the [FM] button until 76-108MHz, 87-108MHz or 87.5-108MHz appears on the display. Press the [FM] button to select a suitable frequency range for FM.

### MW(AM) step setting

Turn off the radio, then long press the [9/10k] button until "9 kHz" or "10 kHz" is displayed.

The temperature unit display is associated with the MW tuning step. The temperature is shown in Celsius (C) when the MW tuning is in 9 kHz steps. Tuning steps of 10 kHz are associated with Fahrenheit (F).



### Turn On/Off LW

LW is only available in 9 kHz tuning steps. Therefore, before turning on LW, first assure the device is set to 9 kHz tuning steps.

Then, long press the [MW] button and "MW 150 - 1620" is displayed to confirm that LW has been turned on.



## Turn ON/OFF charging function & exchange battery consumption display

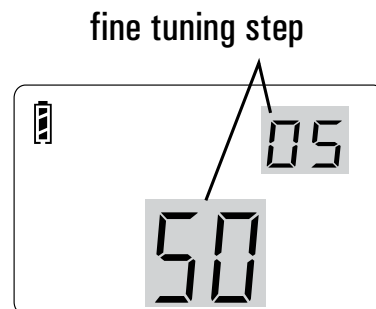
Press & hold the [  ] key with " *CHA ON* " & " *Ni-MH Battery* " shows up to activate the consumption display of rechargeable batteries and the built-in charging system. Press & hold the [  ] key with " *CHA OFF* " shows up & " *Ni-MH Battery* " disappear to activate the consumption display of alkaline 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.

## Set the fine tuning step

Turn off the radio, press and hold the [BFO] button to show the current fine tuning step, turn the [TUNING] knob to adjust.

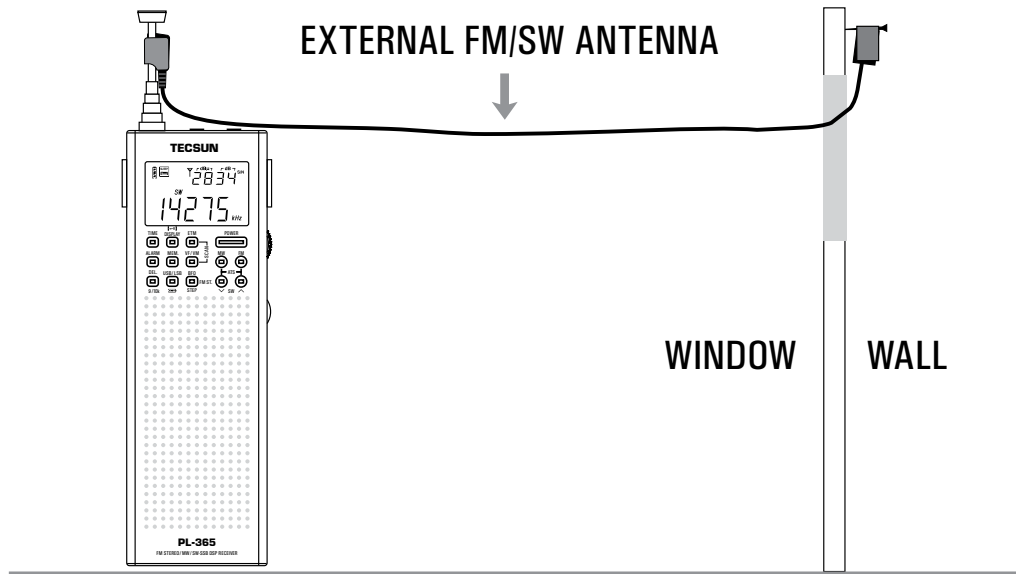
- " *50 05* " indicates that the fine tuning step of SSB is 50Hz.
- " *20 02* " indicates that the fine tuning step of SSB is 20Hz.
- " *10 01* " indicates that the fine tuning step of SSB is 10Hz.



## USING THE EXTERNAL ANTENNA

### Enhancing FM/SW reception

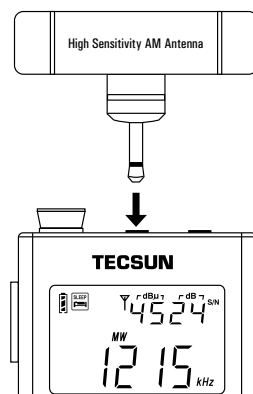
Use the external wire antenna to clip onto the telescopic antenna of the PL-365. Then position the opposite end outside the window for better FM and SW reception.




Do not place the external antenna outdoors during a thunderstorm!


### Enhancing AM/LW reception

Plug the AM/LW external antenna into the AM Antenna jack, then rotate the antenna for better AM/LW reception.

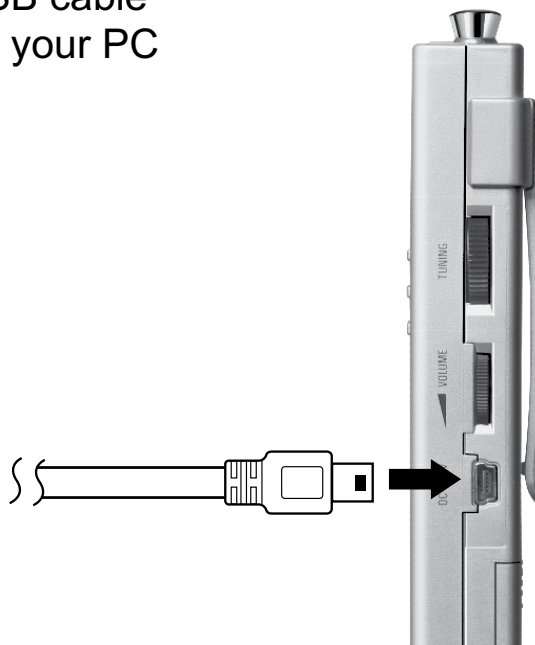


## USING THE INTELLIGENT CHARGING FUNCTION

In power off mode, install 3 x UM3 (AA size) rechargeable (Ni-MH) batteries. Press & hold the [  ] button until "CHARGE" and the "Ni-MH Battery" symbol appear on the display.

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:

Do not mix new and used batteries, or batteries of different charging capacity.

**Caution:** Do not attempt to charge non-rechargeable batteries, this will damage both the device and the batteries.

## IMPORTANT MATTERS FOR USING BATTERIES

1. When the device is not powered by batteries or the adaptor for a long time, the clock setting is lost, but the stored radio stations are saved.
2. When battery power is low, the "  " symbol starts flashing to alert you to charge the batteries or change to new ones. The device turns off automatically when all power is gone.
3. Do not mix new and used batteries, this may damage the radio and display an incorrect power capacity.
4. If not using the radio for an extended period of time, remove the batteries to prevent liquid leakage and damage to the device.

## TROUBLE SHOOTING

QUESTIONS	ANSWERS	SOLUTIONS
Cannot turn on the radio.	<ul style="list-style-type: none"> <li>-Batteries have no power.</li> <li>-Didn't install the batteries properly.</li> <li>-Key lock function is activated.</li> </ul>	<ul style="list-style-type: none"> <li>-Replace all batteries with new ones.</li> <li>-Take note of the correct polarity direction, then reinstall the batteries.</li> <li>-Press the [⏻] button to deactivate it.</li> </ul>
Radio turns off while listening.	<ul style="list-style-type: none"> <li>-Batteries have no power.</li> <li>-Sleep timer is activated.</li> </ul>	<ul style="list-style-type: none"> <li>-Replace or charge all batteries.</li> <li>-Turn on the radio again.</li> </ul>
During ATS, some stations cannot be stored. Some stored stations have noise.	<ul style="list-style-type: none"> <li>-Frequency of stations is too weak.</li> <li>-There is interference near by your area.</li> </ul>	<ul style="list-style-type: none"> <li>-Search the station manually.</li> <li>-Contract the antenna or move to other location and try again.</li> </ul>
Only few FM stations can be received.	<ul style="list-style-type: none"> <li>-FM frequency may have been set to 76 - 90MHz accidentally.</li> </ul>	<ul style="list-style-type: none"> <li>-Turn off the radio, press &amp; hold the [FM SET] button to select the accurate FM frequency range.</li> </ul>
Poor AM reception in USA.	<ul style="list-style-type: none"> <li>-USA uses 10kHz AM tuning steps, the device may still be set to 9kHz.</li> </ul>	<ul style="list-style-type: none"> <li>-Turn off the radio press the [9/10kHz] button to select accurate tuning step.</li> </ul>

QUESTIONS	ANSWERS	SOLUTIONS
<p>When the alarm (radio) goes off, there is only noise in the broadcasting.</p>	<p>-Did not set the proper radio station for the alarm.</p> <p>-Or there is no broadcasting at that frequency.</p>	<p>-Preset your alarm station properly (see the above setting).</p> <p>-Make sure it is possible to receive radio broadcastings at your location.</p> <p>-Or set the alarm by buzzer.</p>
<p>Radio malfunction.</p>	<p>There may be some form of interference, causing the microchip to not function properly.</p>	<p>Remove the batteries. Reinstall the batteries once the device's display has turned off completely. If it is still not able to work, please contact your nearest dealer for customer service.</p>

## SPECIFICATIONS

1. Frequency range
  - FM 87~108 MHz  
Japan 76~108 MHz  
EU, USA 87.5~108 MHz
  - MW 522~1620 (150~1620) kHz  
USA 520~1710 kHz
  - SW 1711~29999 kHz
2. Sensitivity
  - F M (S/N=30dB) Less than 3  $\mu$  V
  - MW (S/N=26dB) Less than 1mV/m
  - LW (S/N=26dB) Less than 10mV/m
  - SW (S/N=26dB) Less than 30  $\mu$  V
  - SSB (S/N=10dB) Less than 3  $\mu$  V
3. Selectivity
  - FM > 60 dB
  - MW > 60 dB
  - LW > 60 dB
  - SW > 60 dB
4. FM Stereo crosstalk Less than 25 dB
5. Memory 550
6. Output 350 mW
7. Power UM3 or AA X 3  
USB 5V DC
8. Speaker  $\Phi$ 40mm, 500mW/16 Ohm
9. Earphone Jack  $\Phi$ 3.5mm, 8~32 Ohm, Stereo type
10. Dimensions Approx. 53(W) X 159(H) X 26(D) mm
11. Weight 128g (Batteries not included)