**Ocean Digital**

# Internet Radio

## WR-880N

User Manual
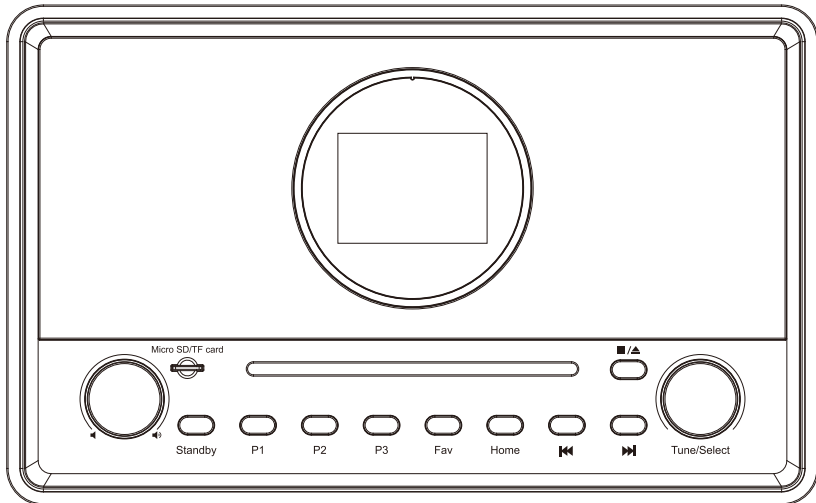
Micro SD/TF card

■/⏏

Standby   P1   P2   P3   Fav   Home   ⏮   ⏭   Tune/Select

Please read this user manual carefully before using the receiver

# Contents

# 1 Introduction to the WR-880N Internet Radio

The WR-880N Internet Radio is an audio component for integration into your home HiFi System as an added source of audio entertainment.

The radio has eleven different operating modes providing a comprehensive set of enhancements to audio entertainment and a gateway into the world of digital audio.

1) My Favorite (No Wi-Fi or Internet)
   • List of previously Preset favorite listening choices

2) Wireless Wi-Fi (Internet connected)
   • Internet Radio with more than 30 thousand radio stations world wide
   • Local Radio streamed over the Internet for high quality

3) Media Center (Wi-Fi - no Internet)
   • Play music streamed over the Wi-Fi network by a UPnP server e.g. smart phone, laptop

4) Wireless (Bluetooth – no Internet)
   • Play audio transmitted from a Bluetooth source e.g. smart phone, Laptop

5) Aux-in (no Internet)
   • Play pre-amplifier level audio source

6) CD player (no Wi-Fi and Internet)
   • Play favorite CDs with integrated high quality player

7) USB Driver (no Wi-Fi and Internet)
   • Play favorite music files with integrated high quality player

8) Micro SD/TF card (no Wi-Fi and Internet)
   • Play favorite music files with integrated high quality player

9) Sleep Timer (no Wi-Fi and Internet)
   • Adjustable timer to delay putting the Radio into Standby mode

10) Alarm (Wi-Fi and Internet)
   • Wake up alarm Clock with option to automatically set the Time of
     Day to Internet time standard

11) Configuration (no Wi-Fi and Internet)
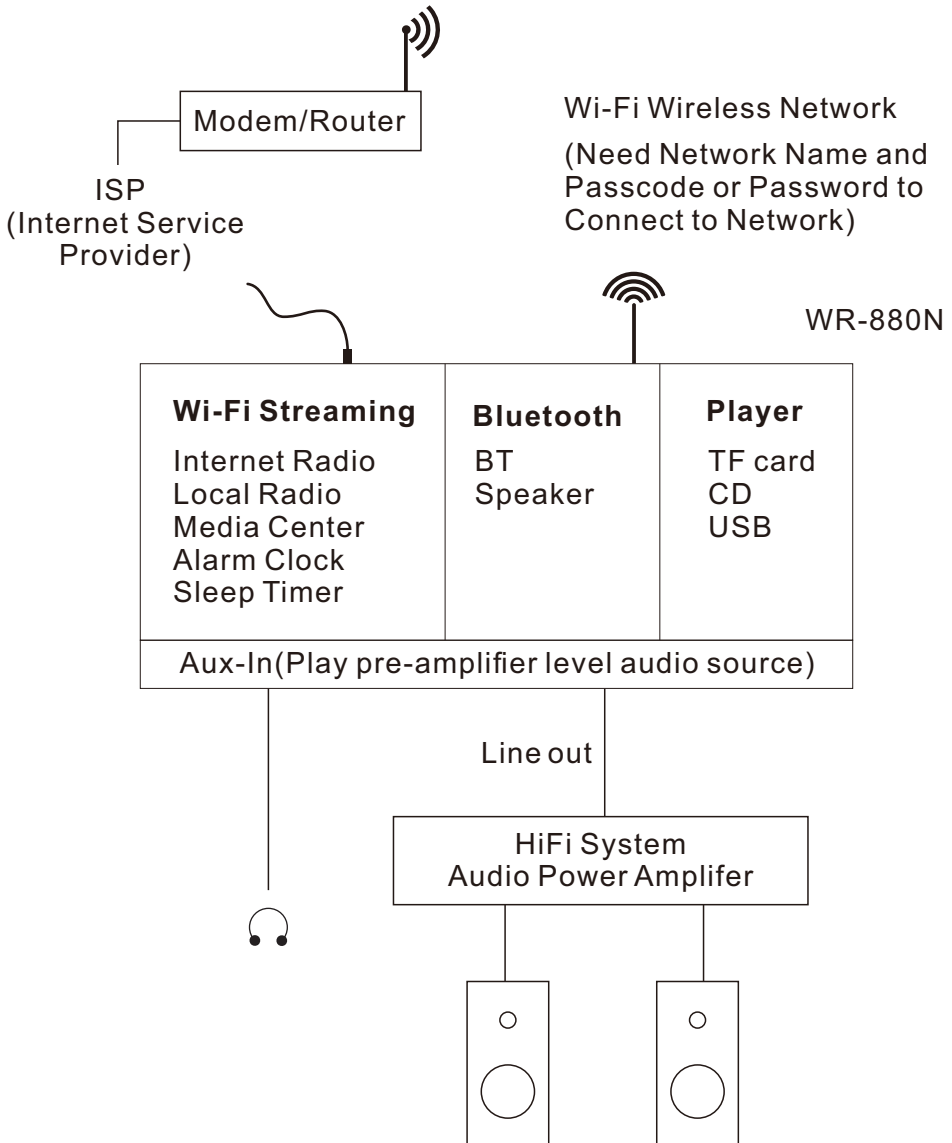   • Set up, options and information center

**Precautions**
Use only the A/C Power Adaptor supplied with the Radio or permanent
damage to the radio will occur and may be hazardous.

To clean use only a damp cloth and dry with a clean towel - keep away
from all liquids.

To avoid loss of warranty do not attempt to repair or remove the cover
for any reason.

Modem/Router

ISP
(Internet Service
Provider)

Wi-Fi Wireless Network

(Need Network Name and
Passcode or Password to
Connect to Network)

WR-880N

| **Wi-Fi Streaming** | **Bluetooth** | **Player** |
|---|---|---|
| Internet Radio<br>Local Radio<br>Media Center<br>Alarm Clock<br>Sleep Timer | BT<br>Speaker | TF card<br>CD<br>USB |

Aux-In(Play pre-amplifier level audio source)

Line out

HiFi System
Audio Power Amplifer
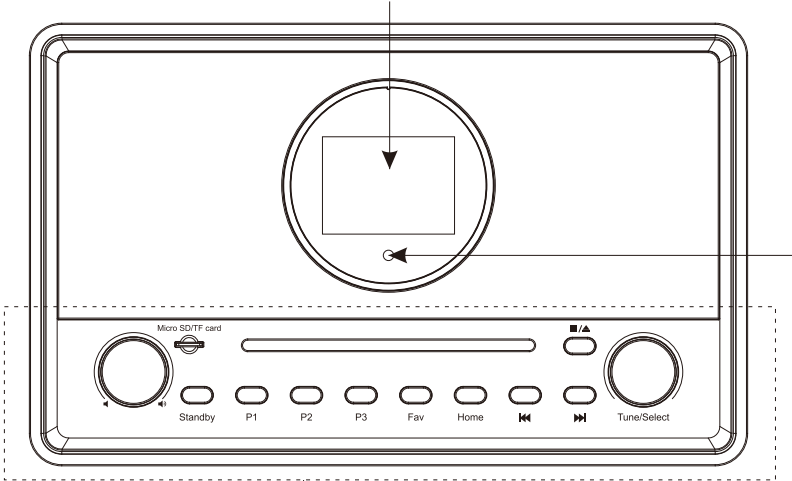
Color Display
2.4" TFT LCD
Brightness controlled
by Tune/Select knob
in Standby

Remote control
Infrared sensor
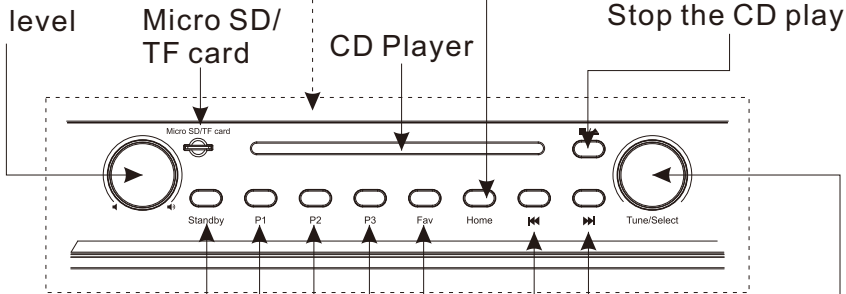
Micro SD/TF card

Standby    P1    P2    P3    Fav    Home    ◄◄    ►►|    Tune/Select

rotate clockwise
or counter-clockwise
to control the
volume level

Go back to
main menu

Press to remove CD;
Stop the CD player

Micro SD/
TF card

CD Player

Micro SD/TF card

Standby    P1    P2    P3    Fav    Home    ◄◄    ►►|    Tune/Select

Toggle between
ON and Standby

Press and hold to store
favorite stations;
press to recall stored station

Play Next
CD track

Play Last
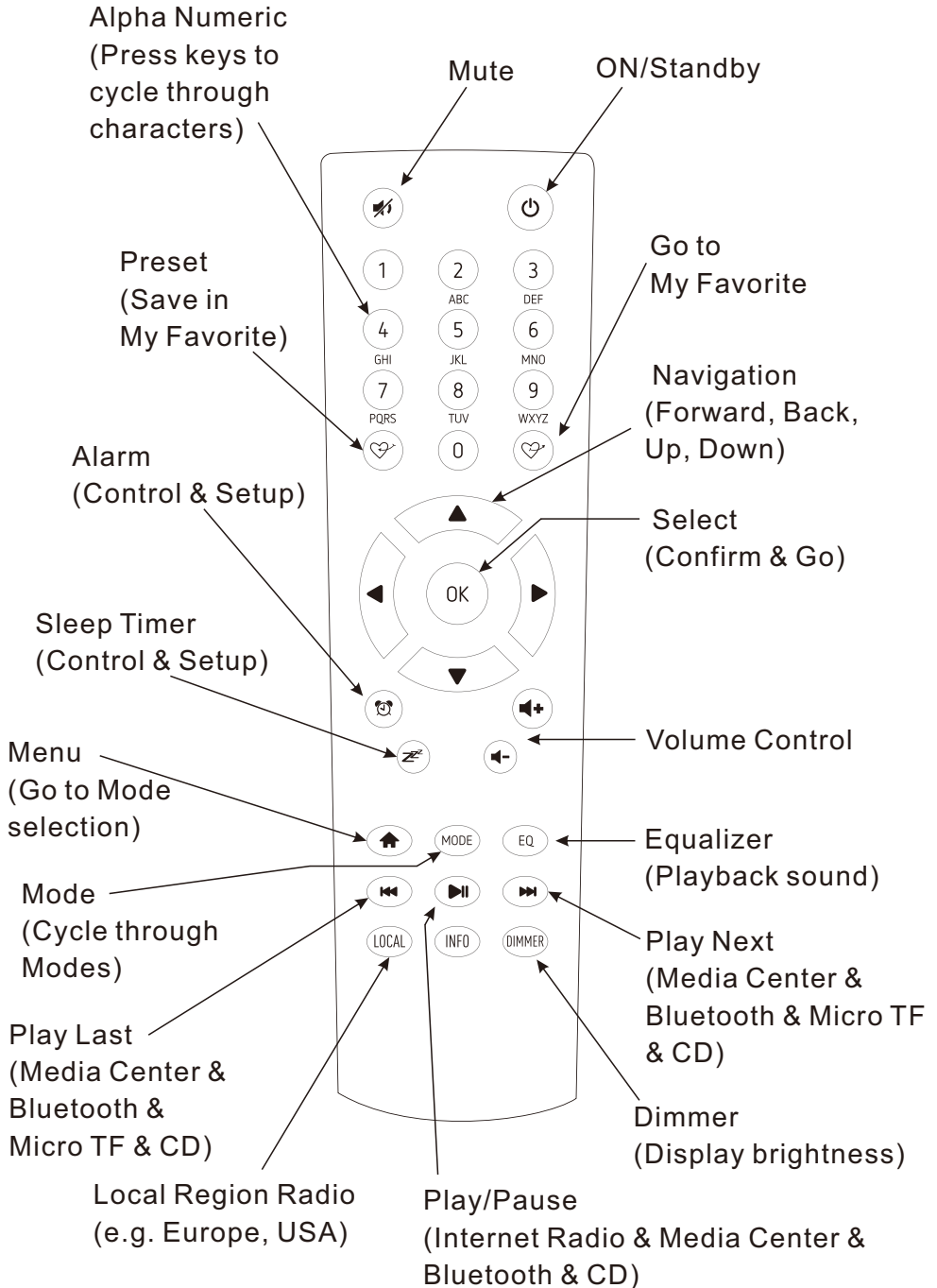CD track

Tune/Select control
A) Rotate clockwise or
counter-clockwise to
navigate Displays and Lists
B) Press to Select highlighted
or displayed option

Press to recall Favorite list;
Long press to add a playing
station to favorite list

## Location of Controls



DC IN

USB playback  Aux In  Line Out  ⌂

ON
OFF

DC 12V Input
from A/C Adaptor

On/Off
Switch

To connect
the USB-disc

Headphone 3.5 MM
(Volume adjusted
by Tune/Select)

3.5mm line out socket

3.5mm Aux in socket

Alpha Numeric
(Press keys to
cycle through
characters)

Mute

ON/Standby

Preset
(Save in
My Favorite)

Go to
My Favorite

Navigation
(Forward, Back,
Up, Down)

Alarm
(Control & Setup)

Select
(Confirm & Go)

Sleep Timer
(Control & Setup)

Menu
(Go to Mode
selection)

Volume Control

Mode
(Cycle through
Modes)

Equalizer
(Playback sound)

Play Next
(Media Center &
Bluetooth & Micro TF
& CD)

Play Last
(Media Center &
Bluetooth &
Micro TF & CD)

Dimmer
(Display brightness)

Local Region Radio
(e.g. Europe, USA)

Play/Pause
(Internet Radio & Media Center &
Bluetooth & CD)

# 5 Choosing options and functions

All user input is information that the Radio uses to provide the desired audio entertainment with select (enter) a confirmation and go command.

The **Tune/Select** control knob is used for navigating LCD displays and lists by rotating clockwise (CW) or counter clockwise (CCW) to change or highlight information displayed on the LCD screen and confirms a selection when it is pressed and released.

The ⏮ button can be used to go back to the previous menu or display and to play the previous track when in playing mode.

Throughout this manual "Select" will mean navigating through display screens or option lists to display or highlight desired selection and confirming it by pressing and releasing the **Tune/Select** knob.

The remote controller can also be used to control the Radio with the center navigation buttons ( ◄ ▼ ► ▲ ) and OK button to confirm selections.

Many other controls are available on the remote controller with discrete buttons for many functions e.g. volume up or down.

# 6   Network Setup

The Internet Radio must have a high bandwidth internet connection and a wireless (Wi-Fi) home network connected to it to be fully functional.

Plug the A/C Power adaptor into a wall socket and the back of the Radio.

Turn On the rear panel On/Off switch - the display will show a list of available languages. Highlight and Select a language.

## Network Setup

The first time the Radio is turned on after leaving the factory a Configure Network wizard is automatically started:

1) Highlight and Select Yes to connect to the Wi-Fi network

2) The display will change and display a list of options – Select Add/Remove AP

3) The display will change and display a list of options – Select Add AP (Scan)

4) The display will show a list of available networks – Select your network

5) The display will ask for your passphrase – this is often called passcode or password

- highlight the first digit by using the **Tune/Select** knob on the front of the radio, or the ▲▼ buttons on the remote controller.

Note: If an error is made correct it by using the move back button ◄◄ on the front of the radio or ◄ on the remote controller.

- Select by pressing and releasing the Tune/Select knob

- highlight the next digit

- Select by pressing and releasing the Tune/Select knob

- Repeat until the last digit has been Selected

- Confirm by pressing and holding the Tune/Select knob until the display changes.

6) If the connection is successful "Association Complete" will be displayed briefly.

To repeat the above procedure, or if the Configure Network wizard does not automatically start, the network can be connected by using the Configuration mode.

1) Press the **Home** button to go to My Favorite mode.

2) Using the **Tune/Select** knob navigate to and select configuration

3) Select Network

There are three different options to connect to the network from the Configuration mode:

1) Repeat steps 2) through 5) above.

2) Select Add AP (WPS button) – Press WPS button on your router within 2 minutes to complete the connection.

3) Select Add AP (Smart Config) – Download APP ESPTouch  (it configures ESP32 devices such as the WR-880N) and install on a smart phone, tablet or other device that can use APPs. Start the APP to complete the connection. During the setup, please tap "Multicast" in the menu.

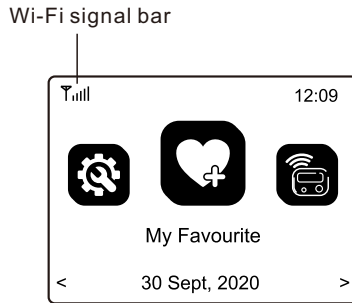Connection status is displayed in the top left hand corner of the LCD with the Wi-Fi symbol and signal strength bars ( ▼ⁱₗₗₗₗ ).

For best Wi-Fi performance, limit "drop outs" (interruptions) the Wi-Fi Channels must be set according to the location of the Radio e.g. China, USA, Europe. The factory default is China.

To set the correct location, select Configuration, Network, Wi-Fi Channels and select the correct option.

To Select any mode use the **Home** button on the front panel or the ( 🏠 ) on remote controller to display the My Favorite screen:

Wi-Fi signal bar

```
┌─────────────────────────────┐
│ ▼ⅧⅡ              12:09      │
│                             │
│   ⚙️      ❤️➕      📻        │
│                             │
│         My Favourite        │
│ <      30 Sept, 2020      > │
└─────────────────────────────┘
```

Navigate through the modes to find and Select any of these functions:

1) My Favorite — A maximum of 99 previously saved (Preset) favorite listening sources are listed for Selection.

2) Internet Radio — Select online radio station from the thousands available on Skytune or by using the History list of previously selected radio stations or use search to find a preferred radio station.

3) Media Center — Browse and Select music streaming on your home Wi-Fi network by any UPnP compatible server e.g. Smart phone, Tablet, PC, Laptop.

4) Bluetooth — When "Paired" (connected) to another Bluetooth device use the Radio as a connection to your Hi-Fi system. Maximum range of the Bluetooth wireless signal is 10 meters (32 feet) but may be reduced by the presence of walls or other obstructions.

5) Aux-in — Connect any pre-amplifier level audio source for high quality playback.

6) CD player — Play music from CD inserted into the player

7) USB — Play music files stored on a USB disc

8) Micro SD — Play music files stored on a Micro SD/TF card

9) Alarm — two separate alarm clocks with the time of day automatically synchronized to the internet time standard.

10) Sleep Timer — Select a time delay before the Radio goes to Standby mode while playing your selected audio entertainment source.

11) Configuration — This mode lists all available options and settings to personalize your Radio.

# 8 My Favorite

This mode displays a list of up to a maximum of 99 audio sources that have been Preset (stored) using the Preset button on the remote controller ( ⌲ ) while an audio source is playing.

Press and hold button until the Preset symbol ( ⤓ ) is displayed in the top left corner of the LCD.

After the first 99 presets the next Preset will be stored in the first location, the next in the second location; continuing to overwrite each list location until it loops back to the first location again.

To Edit the list highlight a list item then press the Move Forward button ( ▶▶ ) on the front of the radio or ▶ on the remote controller to move to the Edit list function where the item can be moved Up, Down or Deleted from the list.
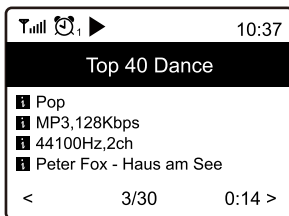
# 9 Internet Radio

Select Internet Radio mode using the **Home** button or **Mode** button on the front panel or the remote controller and navigate the extensive list of worldwide radio stations using these options:

1) Skytune – Select a radio station using the structured lists that aid and reduce the task of finding the right station.

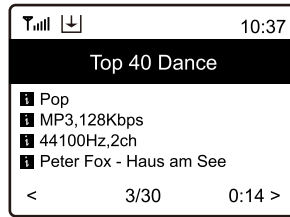   Select Local Radio to listen to a radio station in the region set up in the Configuration mode.

2) Use Search instead of browsing the extensive radio station list by using numbers or letters in the desired station name, creating a shorter list of stations the more characters used in the search.

3) The History option will show a list of the radios stations recently selected. Every station selected is added to the list automatically until a maximum of 99 is reached when the next station selected will replace the first station in the list.

When playing Internet stations information about the station and what is playing will be displayed on the color LCD screen with more information being available by using the Forward ( ► ) button on remote control or press and hold the ▶▶ on the front of the radio.

| ▼ⅠⅠ ⏰₁ ▶       10:37 | ▼ⅠⅠ ⏰₁ ▶       10:37 | ▼ⅠⅠ ⏰₁ ▶       10:38 |
|---|---|---|
| Top 40 Dance | Top 40 Dance | Top 40 Dance |
| ℹ Pop<br>ℹ MP3,128Kbps<br>ℹ 44100Hz,2ch<br>ℹ Peter Fox - Haus am See | 10:37 | *TOP40 Dance* |
| <      3/30      0:14 > | <      2 May,2018 Wed      > | <                      > |

Radio Stations can be added to the My Favorite list at anytime a station is playing using the Preset ( ✑ ) button on the remote controller. When a Preset is added the icon ( ⊻ ) is displayed as shown below.

```
┌─────────────────────────────────────┐
│ T.ull  [↓]               10:37       │
│ ─────────────────────────────────── │
│ ███████████ Top 40 Dance ██████████ │
│ ─────────────────────────────────── │
│ ▪ Pop                                │
│ ▪ MP3,128Kbps                        │
│ ▪ 44100Hz,2ch                        │
│ ▪ Peter Fox - Haus am See            │
│ ─────────────────────────────────── │
│ <          3/30         0:14 >       │
└─────────────────────────────────────┘
```

A maximum of 99 Presets can be put in the list before the next Preset will overwrite the first entry.

Use list Edit options to move an entry Down, Up or Delete by highlighting the station to edit and pressing the Forward button ( ► ) on remote controller or press and hold the ►►I on the front of the radio.

# 10 Media Center

The Radio supports the industry standard Universal Plug and Play (UPnP) standards.

The Radio can browse and play music files stored on a UPnP server provided the server has been setup to allow sharing of files on the network.

Playback has several modes selected in **Configuration** under **Playback Setup; Repeat All, Repeat One, Shuffle** and **Normal** playback.

**Select** the **Media Center** to display list of options;

1) UPnP – A scan is made to find UPnP devices that are streaming on the Wi-Fi network (this can take a few seconds) and when complete options are listed to select music or playlists files. If no UPnP servers are found "Empty List" is displayed.

2) My Playlist – Your own play list may be created by playing selected music and while it is playing pressing and holding the FAV button or the ♡ on remote control until the preset symbol ( ↓ ) is displayed.

3) Clear My Playlist – Select to delete all music files from My Playlist.

# 11 Micro SD

The radio can playback audio files on Micro SD/TF cards if they are stored in MP3 format.

To start playing music files insert the Micro SD/TF card into the card reader slot and the radio will start to play the first track automatically.

Press ▶▶| to go to the next track, or press |◀◀ to go back to the previous track - the track will start playing automatically.

Playback will start by playing the selected track with the next track to be played selected automatically according to the playback option setting under Playback Setup in Configuration mode i.e. repeat all, repeat one, shuffle or normal.

Presets cannot be used with the Micro SD/TF card playback feature.

# 12 Bluetooth Speaker

After selecting Bluetooth the display will display the Radio Bluetooth identifier code and connection status. If it is not connected "pairing" must take place with the audio source Bluetooth device.

When the Radio identification code appears in the list of local Bluetooth devices, on the Bluetooth source device, pair the two devices so that they can recognize each other and will automatically connect whenever the Radio is in range and in Bluetooth mode.

Once pairing is complete the audio file being transmitted by the Bluetooth device will be received by the Radio and played the same as any other audio source.

# 13 CD player

Select CD Player mode (press Home button and navigate to CD mode) and insert a CD into the CD player slot.

The radio will automatically start playing the first track on the CD with the next track to be played selected automatically according to the playback option selected In Configuration mode under Playback Setup i.e. repeat all, repeat one, shuffle or normal.

To change tracks when a track is playing press the Previous ( ⏮ ) or Next ( ⏭ ) button on the front of the radio or on the remote controller.

To stop playing the CD press Stop button (front of radio) or Eject the CD from the player.

To pause playing the CD press Play/Pause button – to restart playing press Play/Pause button again.

To replay a CD already in the player press Stop and Play/Pause buttons – after a short delay the first track will start playing Presets cannot be used in the CD player mode.

# 14 USB

The radio can playback audio files on a USB-disc if they are stored in MP3 format.

To start playing music files insert the USB-disc player cable into the USB connector and the first music files will start playing automatically with its number  displayed.

To change to a different track rotate the Tune/Select knob or press the Previous ( ◄◄ ) or Next ( ►► ) button to start playing the previous or next track automatically.

Playback will start with the first music file (song)  with the next track to be played selected automatically according to the playback option setting under Playback Setup in Configuration mode i.e. repeat all, repeat one, shuffle or normal.

Presets cannot be used with the USB-disc playback feature.

# 15 Alarm & Snooze

There are two separate wake up alarms that can be set up independently to start at a given time, with selectable sounds, at adjustable volume and with repeat options, on their own or at the same time e.g. set Alarm 1 for normal wake time and Alarm 2 to wake in case of falling asleep again .

Select Alarm 1 or 2 and a setup wizard will start to guide selecting options:

The wake sounds selected can be a tone or other sources in the My Favorites list or radio stations list.

After selecting the final option or adjustment exit the set up wizard by using the ◄◄ button on the front of the radio or back button ( ◄ ) on the remote controller.

After setting up the Alarm check to confirm it is set by the presence of the alarm icon ( ⏰ ) at the top, left side of the display.

The Alarm will function while the radio is On or in Standby modes.

When the Alarm sounds, turn off the Alarm function by pressing the Power button or using remote controller to active Snooze by pressing the OK button.

When the snooze feature is activated the alarm is reset to sound again after 9 minutes when the Alarm function can be turned off by pressing the Power button or to Snooze again by pressing the Tune/Select knob.

# 16 Sleep Timer

Set a time delay before the Radio automatically goes to Standby mode allowing the listening of audio entertainment while falling asleep.

After selecting the sleep timer a list of delay times will be displayed – select the appropriate time and exit sleep timer setup by using the back button ( ◄◄ ) on the radio or ( ◄ ) on the remote controller.

Select Configuration for a list of adjustments and options to be displayed, navigate the list and select the desired function by rotating the **Tune/Select** knob or the up/down (▲/▼) button on the remote controller to go forwards or backwards in the decision tree and press **Tune/Select** or **OK** to make selections.

**Network**
    Wi-Fi Network
> ➢ Network Options – Select if the Radio should be permanently connected or to disconnect if the connection is not active for more than 30 seconds.

> ➢ Wi-Fi Channels – Select your location to minimize interruption (drop outs) of the information stream e.g. music.

> ➢ Wi-Fi Network
> • Add/Remove AP – Scan local area to find and list available Wi-Fi networks
> • AP:[ ] – If there is more than one router on the network select the one for the Radio to use.
> • Signal – Display Wi-Fi signal strength
> • IP [current setting] – Factory Reset default is Dynamic
> • DNS [current setting] - Factory Reset default is Dynamic

**Date & Time**
Set up and select options for time zone, clock and date formats, adjust for day light saving time, network time, NTP server address, and FM time.

**Language**
Select language

**Local Radio**
Option to automatically set local stations or set manually

**Playback Setup**
Options to repeat all, repeat one, shuffle or normal

**Resume play options**
Play when ready or do not start playing

**Power-on options**
Resume from last or go to Standby

**Dimmer**
Options to set LCD brightness levels in play and Standby – set Dim and Bright light levels independently from dark to full brightness

**EQ [current setting]**
Options for playback sound e.g. Flat, Rock, Classical

**Buffer Time [current setting]**
Select either a 2 or 5 second buffer (storage) of streaming information to be stored before restoring audio after short breaks in the Internet data stream.

**Information**
Network and System information

**Software Update**
Request an update to the system software. Do not turn off the radio until the update has completed. If an error occurs or radio becomes unresponsive use the power switch on the back of the radio to turn it off and back on again after a few seconds.
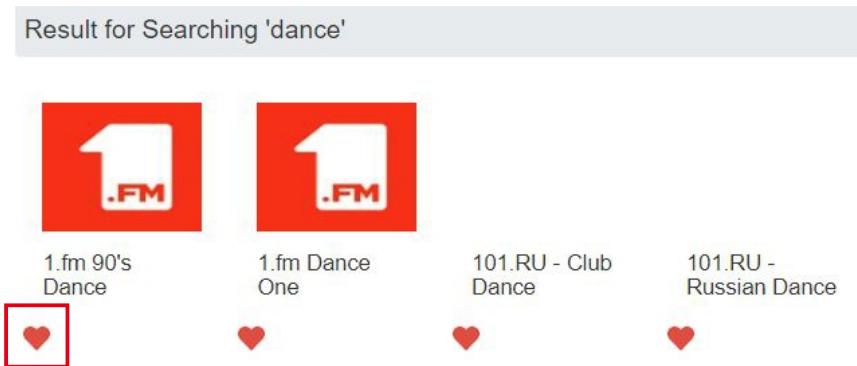
**Reset to default**
Reset all the Radio settings and options back to the exit factory condition

**Browse / Search**

On the opening page click Browse / Search at the lower right side of the page.
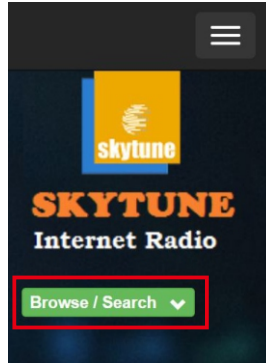


Enter the name of a Radio Station or Browse the structured list of stations available, select the one of interest and click on the heart symbol ( ♥ ) when the station logo is displayed.



The Radio connection page will ask if the station is to be played or saved in your My Favorite list.

To make an Internet connection to the Radio it's IP address must be entered in the space provided – the Radio IP can be found at Configuration > Information > Network Information.

Once the IP address has been entered make selection to save or listen, click Send.

The Radio My Favorite page will be displayed with your list of Preset stations that can be edited using the tools provided on the web page.

**Request to add Radio Station**
If you know the name of a Radio Station but it is not in the list a request can be made to have it added.

On the opening page select the Suggest Station tab and fill in the application.

## Adding a Radio Station

To add a Radio Station its name and URL can be entered in the Add Channel section along with selecting the Country where it is located and Genre of audio entertainment it provides.



## Smart Phone, Tablet or Computer Control

With device connected to the same Wi-Fi network as the Radio use web browser to edit lists and add radio stations.

Enter the Radio IP address ( Configuration > Information > Network to find IP address) as web address and a window will open to edit lists e.g. add your favorite radio station URL if it is not in the list .

Note: Only audio stream URL from radio stations will function correctly i.e. web site, web player or any other types of URL are not compatible and will not function correctly.

# 19 Problems and Solutions

**Cannot connect to the Wi-Fi Network**
**a) Common Causes**
• Incorrect passphrase / passcode / password for the selected Network.

• Location of the Radio has a weak Wi-Fi signal – if possible check with another Wi-Fi connected device in the same location.

**b) Unusual Causes**
• Incorrect Network security encryption – Radio supports WEP, WPA and WPA 2

**Cannot play UPnP Files**
• There is no UPnP server.

• The UPnP server is not streaming files over the Wi-Fi Network.

• The server is not correctly configured to allow sharing of files over the network

**Internet Radio has interruptions (drop outs)**
• Wi-Fi Channel – incorrect region selected Configuration > Network > Wi-Fi Channels.

• Weak Wi-Fi signal – check the Wi-Fi symbol (top left hand side of LCD display) for a minimum of two "Bars" - add a Wi-Fi Extender to the Network if necessary.

• Radio Station has interrupted streaming – check by trying a stations in the Skytune> Globe Most Popular list.

• The Internet connection does not have sufficient bandwidth (capacity) to support all the devices connected to the Network when operating at the same time or is experiencing excessive error rates – have the Internet connection checked by the ISP (Internet Service Provider).

**Internet Radio cannot play some stations**
• The station may not be streaming – not all stations stream for 24 hours a day.

• There are too many users at this time – some stations have a limited number of users they can support at any given time.

• The station link is out of date – it is updated regularly but might take some time for the next update. Alternatively contact Ocean Digital support at www.oceandigitalshop.com

• The station link is no longer active – the station is no longer available.

**Radio plays but there is no sound or it has poor sound quality / is distorted**
• If they are available check the sound with headphones connected to the Radio – the **Tune/Select** knob controls the volume.

• Make sure that the Radio audio output is connected to the power amplifier and this connection is selected as the amplifier input / source e.g. if the CD connectors are used select CD.

• The Radio is connected to the "Phono" / Record Player input connector – this input cannot be used as it is a special input designed to work with record players.

# 20   Technical Specification

A/C Adaptor Power Input: 100 – 240 Volts 50/60 Hz 1.0 Amp.
DC Power Input: 12 Volts 2 Amp.
Remote Controller: 2 x AAA Battery (Not included)

Wi-Fi Wireless Network: IEEE 802.11b/g/n (5 GHz only version ac – not supported)
Frequency: 2.4 GHz
Security: WEP, WPA, WPA2

Bluetooth Version: V4.2 BR, EDR Compliant
Frequency: 2.4 GHz
Range: 32 Feet (10 meters) Line of sight
Transmit Power: 12 dBm Receive only (not for headphones)

Audio File Streaming Formats
UPnP: MP3, AAC, AAC+, FLAC

Micro SD/TF Card Formats
MP3

USB-disc Formats
MP3

CD Formats
CD, MP3

Audio Outputs: Headphone; Line out
Aux-In: 3.5mm socket for audio in
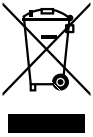
Dimension: 310 x 210 x 195 mm
Weight: 3.52 Kgs

*Remark: Specification may vary without notice*

## In the box

* Internet Radio
* Power adaptor
* Remote control (without batteries)
* User manual

## WEEE and Recycling

The European laws do not allow any more the disposal of old or defective electric or electronic devices with the household waste. Return your product to a municipal collection point for recycling to dispose of it. This system is financed by the industry and ensures environmentally responsible disposal and the recycling of valuable raw materials.

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