

Operation Instructions

Thank you for purchasing the Internet Radio.

For Radios V3- Use the On/Off switch located on the left side for turning on/off the radio.

For Radios V4- Use the push button in the right to turn on/off the radio. Short press to turn on/off. In case of hangup long press of 10 seconds will reset and restart the radio.

The radio is controlled using the touch screen. Following are the touch screen various functions:

Touch Screen Functions



1. Battery Level Indicator
2. Station number and name
3. Assigned IP address
4. Wi-Fi Signal strength indicator
5. Timer – shutdown remaining time
6. Scroll right
7. Set sleep timer – press for 2 seconds to start and keep pressing for changing timer time
8. Volume slider
9. Toggle between slow and fast station scrolling
10. Scrolling singer and song information (if supplied by the radio station)
11. Scroll left

The radio is operated by one cell of 18650 3.7V Lithium- Ion rechargeable battery. For charging the battery you can use a standard phone type USB2.0 (USB A-USB C) 5V charging cable & charger.

When a charger is connected a red LED on the left side of the radio (close to the USB-C connector) will shine brightly. When the RED led turns off it means that the battery is fully charged.

Required for Radio V3 and below – Not required for Radio's V4 and above:

- ✓ While charging the battery the On/Off switch should be in the **On** position.
- ✓ While charging you can choose between two modes.
 - Listening to the radio while charging the battery.
 - Charging the radio silently.

You can choose the desired mode using the station manager webpage (see instruction below).

Connecting your Radio To the Internet

Unlike a regular radios, the Internet Radio needs to be connected to the internet in order for it to play radio station streams.

When turning the internet radio for the first time you will need to go through the following short one time process, in order to connect it to your local wi-fi.

1. Turn on the radio,
2. Open the Wi-Fi settings in your phone or computer browser and search for My_Radio network and connect to that wifi network.
3. Once connected, open your computer/phone browser and type the following address **192.168.4.1.**
4. You should get the following screen:

My_Radio

AsyncWiFiManager

Configure WiFi



Configure WiFi (No Scan)

Info

Reset

5. Press "Configure Wi-Fi", Find your network SSID name and connect to it using your internet password. Then press the "Save" button. This will connect the radio permanently to your home network. You have two minutes to connect the radio to the internet before the radio continue the boot process without connecting (it helps in situations where the radio hangs up).
5. Once completed restart the radio by turning it off and on again.
 - a. While booting, look at the RADIO LCD, you should see the IP address that was assigned to your radio by your home router. Remember that number. This will be the internet address of your radio station manager webpage.
 - b. Open your computer web browser and type that IP address.
 - c. You should get to a webpage named Radio Station Manager

Radio Station Manager

Here is how the radio station manager looks like and its various functions:

Radio Station Manager

Installed Firmware Version: V87

Battery Level: 80% (4.03V)

Station Control

Station Number: 4

Station Name: Otto Classical

Enter Station #

Previous

Play

Next

Mute

Volume Control

Volume: 0

☒ Volume Boost

Audio Equalizer

Bass: 0

Mid: 0

Treble: 0

Apply

Show the firmware station number and battery level and voltage

Shows the playing station number and name

Enter station number to play and press enter or play to switch to that station

Scroll back or forward and press play to play the desired station. You can also mute the radio

Controlling the radio Volume from the webpage

Sound equalizer for adjusting the sound. You should press apply after each change in order for the change to be registered

Audio Mode

☒ Mono
☐ Stereo

Apply

Switching between stereo and mono mode (in case you connect additional speaker to the amplifier of the radio)

Silent Charging Mode

☐ Enable Silent Charging

Save

Toggle between silent charging to listening while charging the (see explanation below)radio.
Not required for Radio versions 4

Scrolling Text

☒ Enable Scrolling Song Information

Save

Enabling/disabling scrolling song information info on the display while streaming

Screen Saver

☐ Enable Power Saving Mode

Save

Enabling/disabling screen saver.
Enabling power saving will dramatically increase the battery working time

Silent Charging Mode (not required for radio V4) - The radio automatically detects when a USB-C cable is connected. In radio V4 it is being done automatically. Leave this option unchecked

- Unchecked Mode - you can listen to the radio while charging.
- Checked Mode - once you connect the USB-C cable the radio will go to sleep mode while keep charging. When you take out the USB cable the radio will wake up (requires a onetime radio restart (turning off and on again) after the first time checking this checkbox).

Total Stations Stored: 400

Enter New Station Name:

Enter New Station Address (URL):

Enter the URL of that radio station

Save

When you press the Save button that radio station will be added to the list below (you can add up to 400 stations)

Enter Station Number to Erase:

To erase a station just write the station number and press the erase button

Erase

Erase All Stations

To erase all the stored stations press Erase All Stations and they will all be permanently erased

Total Stations Stored: 111

Enter New Station Name:

For registering a new web station enter the station name as you want it to show on the radio display.

Enter New Station Address (URL):

Enter the URL of that radio station

Save

When you press the Save button that radio station will be added to the list below (you can add up to 400 stations)

Enter Station Number to Erase:

To erase a station just write the station number and press the erase button

Erase

Erase All Stations

To erase all the stored stations press Erase All Stations and they will all be permanently erased

Browse... No file selected.

Upload Station List

To upload your station list press Browse, located your *.txt file and press Upload Station List

Download Station List

Press Download Station List in order to save your station list in *.txt format in your computer

It is advise to manage your station list using a text file format backed up in your computer.

The format used should be: **Station name, Station URL** (a comma should separate between the station name and the URL). Keep the station name short so it will fit the display limited space

Here is an example list:

Radio Ibiza, <http://ibiza-smooth-jazz.vip-radios.fm:8033/stream-128kmp3-ibizaSmooth>

Radio Paradise1, <http://stream.radioparadise.com/aac-128>

Otto Classical, <http://www.1.fm/tunestream/classical/listen.pls>

Include this last row, End of File

Download Station List

Stored Stations:

Station 1: Radio Ibiza

Station 2: Nostalgia Italia

Station 3: Radio Italy

Station 4: Otto Classical

Station 5: Radio NRW

Station 6: Bayern 1

Station 7: Radio Paradise1

Stored station list. Hover above the station you want to listen to. The background color will change to blue. Pressing that station number/name will make the radio switch to that station.

Your Internet Radio ID:

127779234522952

Your unique radio id required for license key generation and identification

Your License Key:

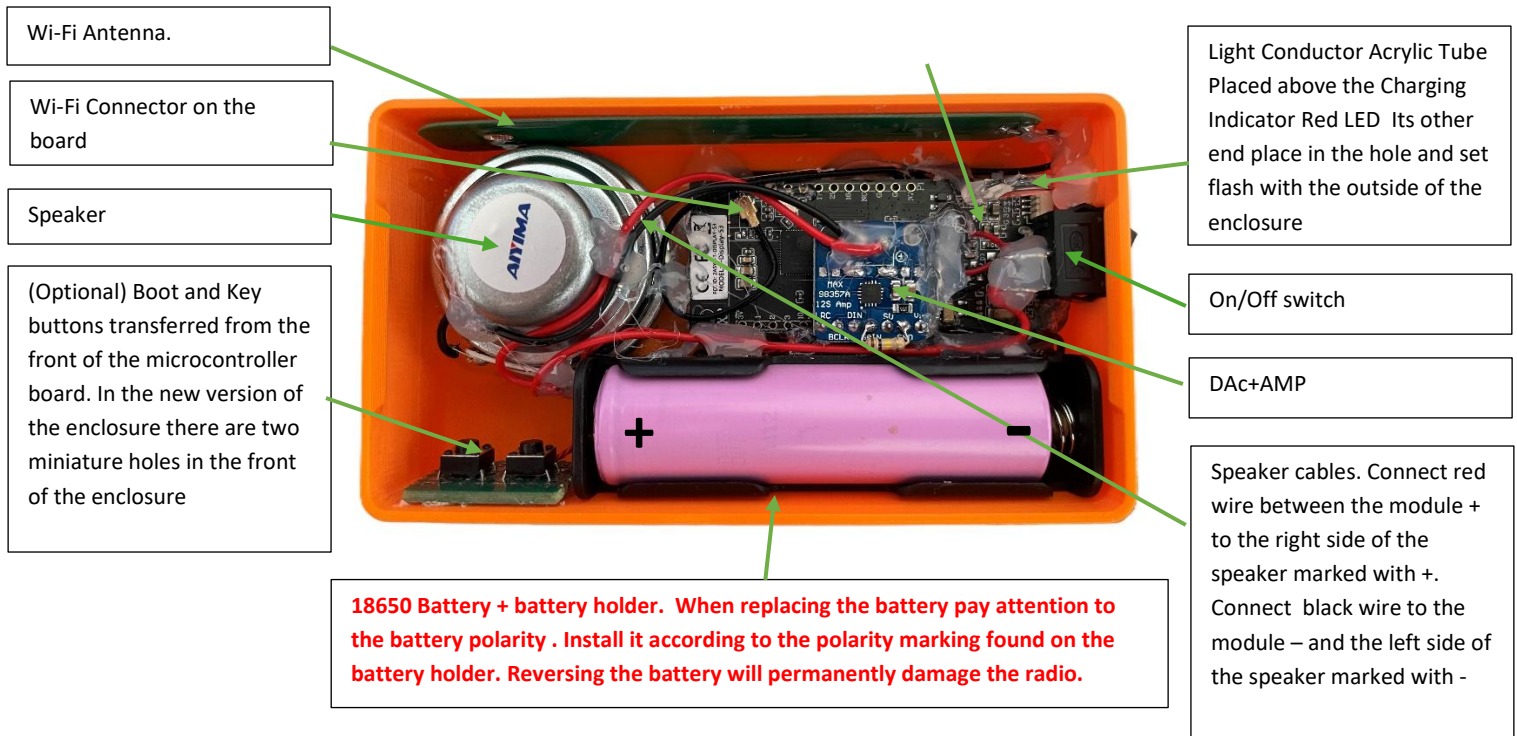
49cda47e278f5f0

Your unique license key, shows only after a successful registration.

Inside The Radio - Replacing The Battery

The back lid is held in place by two grooves on the left and right sides of the enclosure. To open the enclosure, simply pull up the back lid from the middle and pry it until the lid comes off. To close the enclosure, insert one side first and then push in the second side.

Radio V3



Radio V4 and Up



Enclosure Hidden Buttons

Two miniature holes in the front of the enclosure **Key** and **Boot** buttons.



In case the currently configured Wi-Fi network is not found, the radio will automatically search for a new network. Open your computer or phone's Wi-Fi settings and connect to the desired network as described at the beginning of this document. You have 90 seconds to connect before the radio starts without a network connection. To re-enter this mode, simply restart the radio.

If the radio loses its network connection, it will turn off after 10 seconds. To restore connectivity, turn it back on closer to the Wi-Fi router.

If the radio attempts to connect to an invalid or non-operational station URL, it will retry for 3 seconds before allowing you to switch/select a different station.

The following two processes will rarely be required, please don't use them unless there is no other solution. It is better to ask for support before proceeding. Please email themicromaker@outlook.com for consultation.

To perform this operation you will need a thin phone Sim card extractor or a thin needle.

In case you still want to erase Wi-Fi settings manually: Turn off the radio, using the sim card extractor press the Key button while keep pressing that button turn on the radio. You should get a message on the LCD that Wi-Fi setting has been erased. Now, open your computer/phone

Wi-Fi setting and connect to the desired new network the same way it was described at the beginning of this document.

In case the Radio got stacked during firmware upgrade (very rear):

Going into boot mode – Turn off the radio. Press the boot button while turning on the radio.

The radio is now in boot mode. You can now try to upgrade the firmware again.

Finding New Stations URL's

You can find and copy station URL's using the following web sites:

- <https://streamurl.link/>
- <https://fmstream.org/> (search for the desired station, click on it to start playing and copy the link from the player located at the bottom of the page)
- <https://www.radio-browser.info/>

Alternatively, you can search YouTube for instruction videos on how to get live radio streaming URLs using your webpage editing tools.

For some stations that don't play or don't play well, and their URL starts with <https://> try replacing the URL to <http://> and check if it is working.

Using your mobile phone

This internet radio is designed to be fully controlled from your mobile phone.

Just connect to the same Wi-Fi network, open a browser, and enter the radio's IP address.

For quick access, you can even add it to your home screen — it will look and work just like a regular app.

Using the web browser

Use the radio IP address (can be found on the right top corner of the radio display) in your web browser address bar

Creating a dedicated icon on your phone screen

iPhone users:

1. Open Safari on your iPhone.
2. Go to your ESP32's URL, e.g., <http://192.168.1.x>
3. Tap the Share button → then Add to Home Screen.
4. It creates an app-like icon on your home screen that opens fullscreen like a real app.
- 5.

Android users:

1. Open Chrome on your Android phone.
2. Navigate to your ESP32's IP address, e.g., <http://192.168.1.x>.
3. Tap the three-dot menu (⋮) in the top-right corner.
4. Select “Add to Home screen” (you might see “Install app” or “Add shortcut” instead).
5. Edit the name if you wish, then tap Add.
6. Confirm again by tapping Add to home screen (or dragging the icon manually, depending on Android version).
7. You’ll now see an app-like icon on your home screen. Tapping it opens the page in fullscreen (PWA-style) without the address bar.

Upgrading the firmware:

You can download new firmware versions, once available, from here:

<https://1drv.ms/f/c/38ba1975d40552d7/EtdSBdR1GboggDh6AAAAAABXGewSTWX4JG938piuGl--g?e=21bV7o>

Important: Before erasing your current firmware save your license key number as it shows in the bottom of the station manager web page. You will need to enter that number in order to reactivate your radio after the new firmware has been uploaded.

To upload the firmware please follow these steps:

1. Download the Espressif Flash Tool or alternatively use the online tool <https://espressif.github.io/esptool-js/>
2. Choose Chip Type: ESP32-S3, WorkMode Develop and LoadMode USB

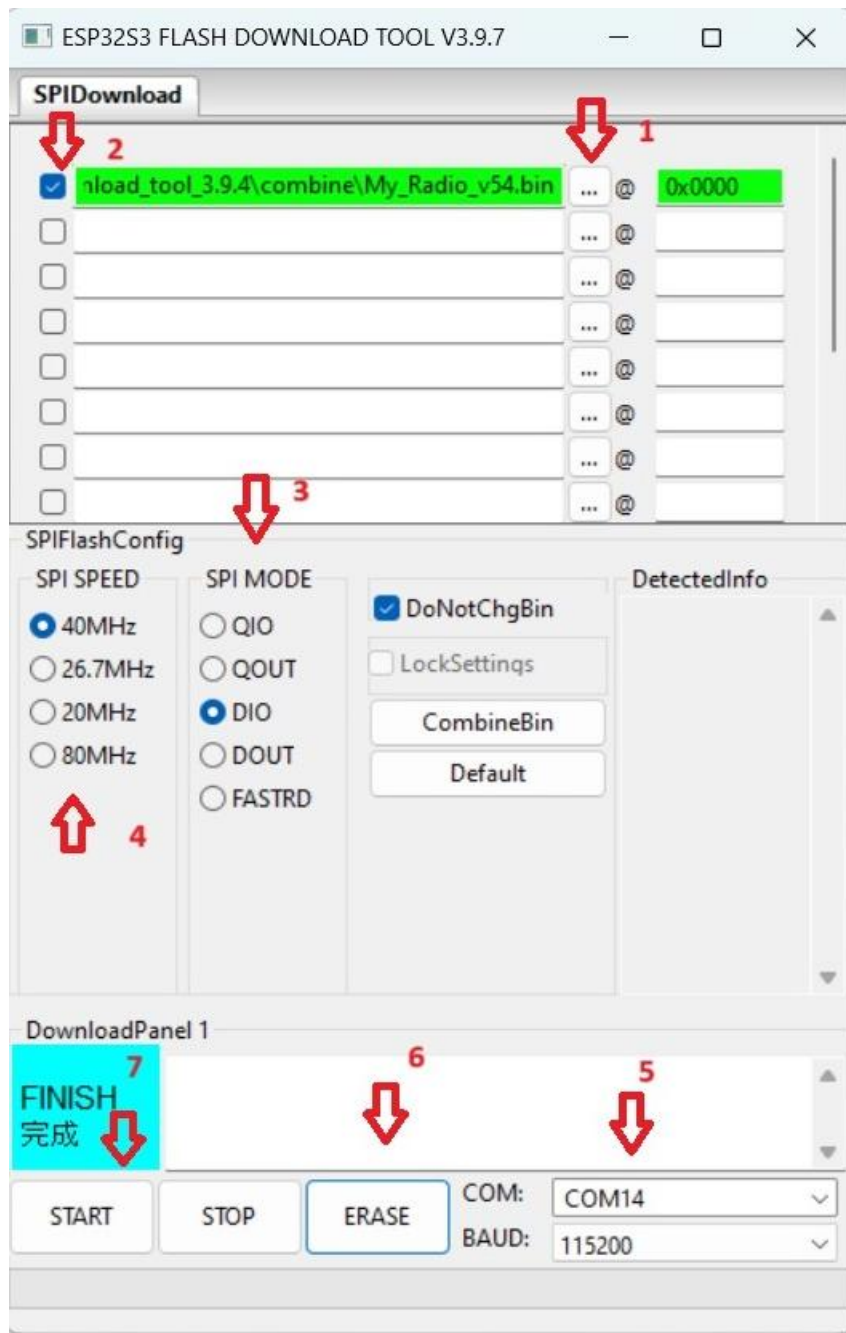
3. Press the tree dots to select the files as follows:

My_Radio.bin 0x0000

Make sure that the lines are marked green. If not green use the check mark on the left side.

Here is a screenshot of the flash tool:

Make sure to select your designated com port (located at the right bottom side)

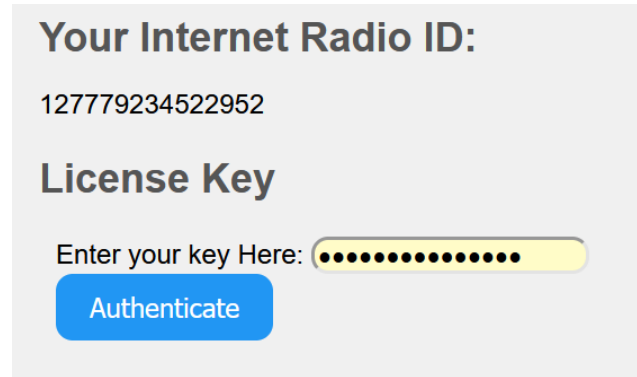


It is recommended to press firstly the Erase button for cleaning the memory.

After the memory has been erased , use the Start button in order to upload the new firmware.

After the new firmware has been uploaded - Restart the radio and open the web page. At the bottom left corner of the page, you will see the following.

Enter the license key you save before erasing the previous firmware.



Your Internet Radio ID:

127779234522952

License Key

Enter your key Here:

Authenticate

The Station management system was tested and debugged only with Google chrome browser.

If you have any questions please send contact me via email themicromaker@outlook.com