User manual Vers. 4.15 Air for receiver SI4735/32 _ ESP32_2.8/2.4/3.2 inch Display

Page 1

BFO usage indicator. On when a BFO value is set

Indicator of use for AGC and for ATT. Is turned on when in use

Bandwidth indicator in use BANDW

Modulation mode indicator in use MODE

Indicator of the band in use BAND - HAM

Tuning pitch indicator STEP

Audio silencer button MUTE

Indicator STEREO - MONO for FM stazions
Press to turn the stereo on/off

Time and date display area; when Wi-Fi is on, data will be received from the network, when it is turned off by RDS FM stations

Frequency unit indicator MHz/kHz

Display digits frequency in reception

Button to activate Volume and Squelch adjustment via encoder (pag.3)

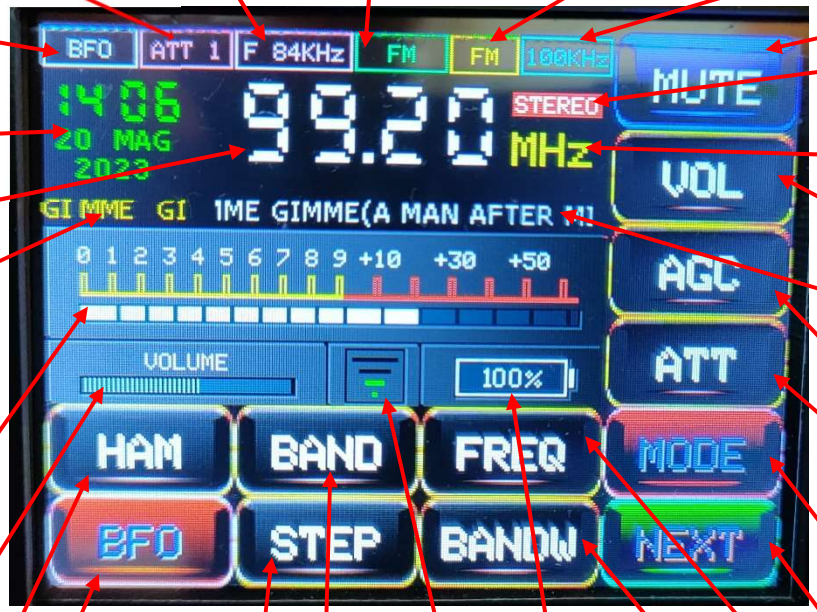
Write Area FM Station Name in RDS

Writing area services News in RDS for FM stations and indication of transmission type

S-meter, radio signal strength, has two types of S-meter, one is digital and the other is analog, and also has a Spectrum line and a Waterfall audio. Click to cycle between the four display options (page 13)

Activator button AGC

Button to activate the ATT attenuator adjustable by encoder



Volume level display area, adjustable via encoder. Press to mute (page 3)

Key to access the selection page for the STEP tuning step (Pag. 6)

WI-FI status display area, press to activate ON or to disable Off

Button to access the Broadcasting Bands selection page BAND

(Pag...4)

Charge/percentage/voltage battery level indicator, click on it to change the display

Key to access the page of choice of the Amateur Bands HAM (Pag...4)

Key to access the BFO adjustment page (Pag... 14)

Button to access the mode type selection page / Modulation MODE (Pag. 5)

NEXT button to go to the second page of function buttons....(pag. 2)

Button to access the manual frequency entry page FREQ (Pag...8)

Key to access the page of choosing the bandwidth in Khz BANDW (Pag..7)

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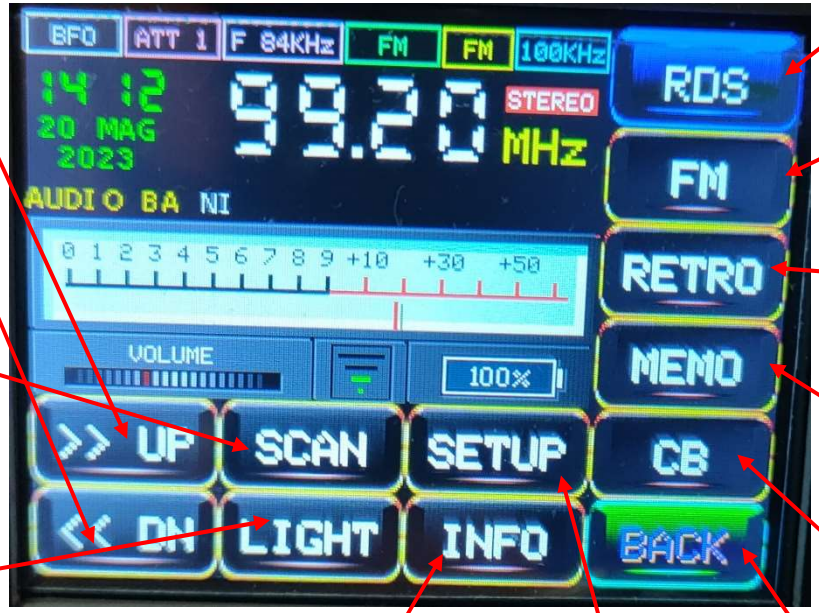
>>UP button to activate the automatic scanning of the frequency in use in increasing direction (the scan stops at any signal of good intensity)

>>DN key to activate the automatic scanning of the frequency in use in descending direction (the scan stops at any signal of good intensity)

SCAN button to open the frequency scan page for the current band (pag. 10)

LIGHT button to activate the adjustable screen brightness function by means of the encoder (Pag..13)



INFO button to access the pages that show the status of the different settings of the system and with the addition of a utility about the propagation status of radio waves in HF in real time (data obtained from the internet if the wi-fi is on) (Pag… 21)

SETUP button to access the setting page of the various system features

(Pag.. 19)

Button to activate / deactivate the reception of RDS services transmitted by stations in FM

FM button to display the stations in Fm stored in the preset file.csv and in the Memory Bank (pag.. 12 - 13)

Button to activate the "retro scale" display mode of tube radios (pag. 17)

Button to select the record page of the memory bank of the received stations (Pag. 12)

Button to enter CB channel reception mode (from channel –A [23.815 Mhz] to channel +D [29.995 Mhz]) (Pag… 9)

BACK button to return to the first page of function buttons (Pag… 1)

Squelch indication bar, adjustable by encoder.

Press to activate.

It works only for FM and AM

Digital/analog graphic indication of the volume level (press to turn on/off the sound)

Volume active button. You can also change the volume by pressing the encoder

Volume level indication area (0 to 63) adjustable with encoder

Encoder adjustable signal attenuation indication area. He is active in FM and AM.

Display of the audio spectrum with vertical bar graphics.

The audio bandwidth of the Spectrum varies depending on the bandwidth used.

ATT button active.

You can change the attenuation value by rotating the encoder-

Screen of choosing the broadcasting band to use , with an indication at the top of the frequency in current use.

Press the button to use the band indicated on it.

Screen of choosing the amateur band HAM to use, with indication at the top of the frequency in current use.

Press the button to use the band indicated on it.

Screen for selecting the modes/types of modulation used for the HAM ranges only (amateur ranges) and the SW range, and with the frequency used at the top

Press the button to use the mode indicated on it.

Screen for selecting modulation modes/types used for BAND/HF/MW/LW ranges, except FM, SW and HAM bands, and with the frequency used at the top

Press the button to use the mode indicated on it.

Screen obtained after pressing the DIGI button for selecting digital signal decoding modes

Press the button to use the mode indicated on it.

(Note:- FT8 button is currently disabled for future implementation)

Screens for choosing the STEP tuning pitch to be used for the FM - AM - SSB bands, with indication at the top of the current frequency.

Click the button to use the tuning step indicated on it.

Bandwidth selection screens to use, for FM / AM / SSB, with indication at the top of the frequency and mode in current use.

Press the button to use the filter indicated on it.

Screen accessed with the FREQ button for direct manual input of a frequency .

Indication of current frequency

Indication of the frequency entered; (use the dot to separate MHz for the FM band)

Numeric keyboard for typing frequency

CANCEL button to not select the frequency entered, remaining on the current one

Key for total cancellation of the typed frequency CLEAR

Key ←| to clear the last digit you typed

OK button to enter the frequency typed to VFO

Megahertz separator point button in the FM band

Screen accessed by pressing the CB key.

Reception of the ranges of the Cityzen Band

Indication of the modulation used. Press to switch from AM to USB or LSB, and then long press to enable BFO mode.

Indication of the frequency of the tuned CB channel. Press to change the last digit of the frequency to 10 or 5 kHz

Displays the S-meter in digital/anaogic mode and Watewrfall/Spectrum.

Click to change appearance

Displays the BFO function when enabled. The value selected with the encoder can be displayed in the small yellow box at the top left

Digital indication of the tuned CB channel (from channel 1 to channel

Indication of the channel range (bass – treble) from the –A range to the +D range according to the ITU. Press on it to switch between available ranges

CB button activated

Displaying the Volume indicator in digital mode

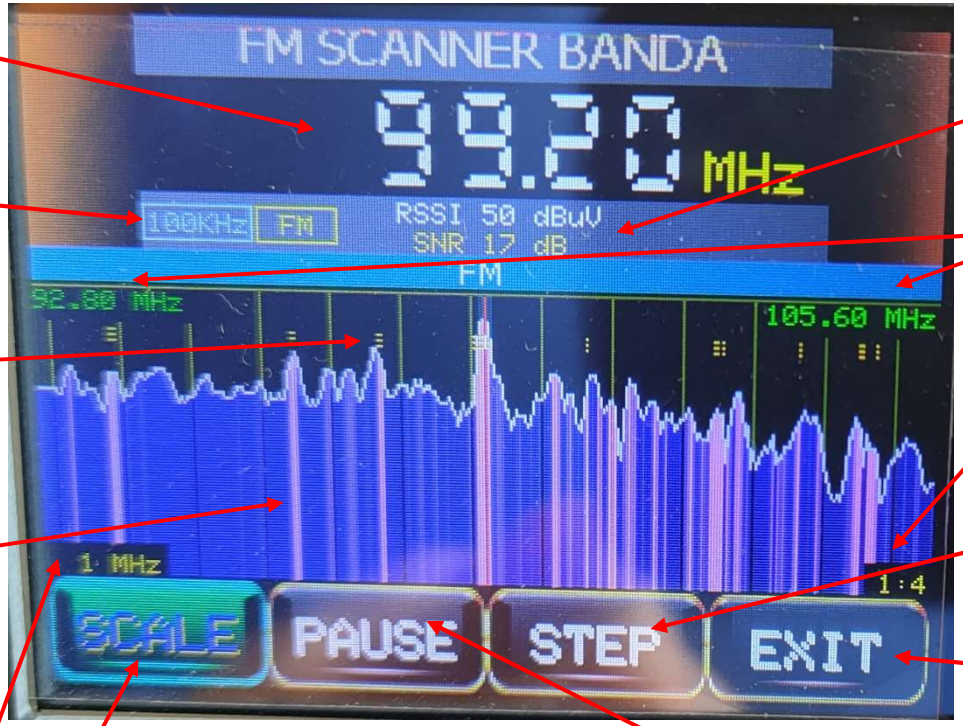
Indication of the current frequency at the cursor position

Indication of current reception parameters

Indications on workstations found

Displays the area of the graph based on the frequency (x-axis) and strength of the received signal (y-axis). The scale is adjusted in frequency / RSSI / signal strength , with the use of underlying keys and the encoder.

Chart scale step indicator



Indication of the quality of the received signal at the cursor position

Indication of the start and end frequency of the band scan

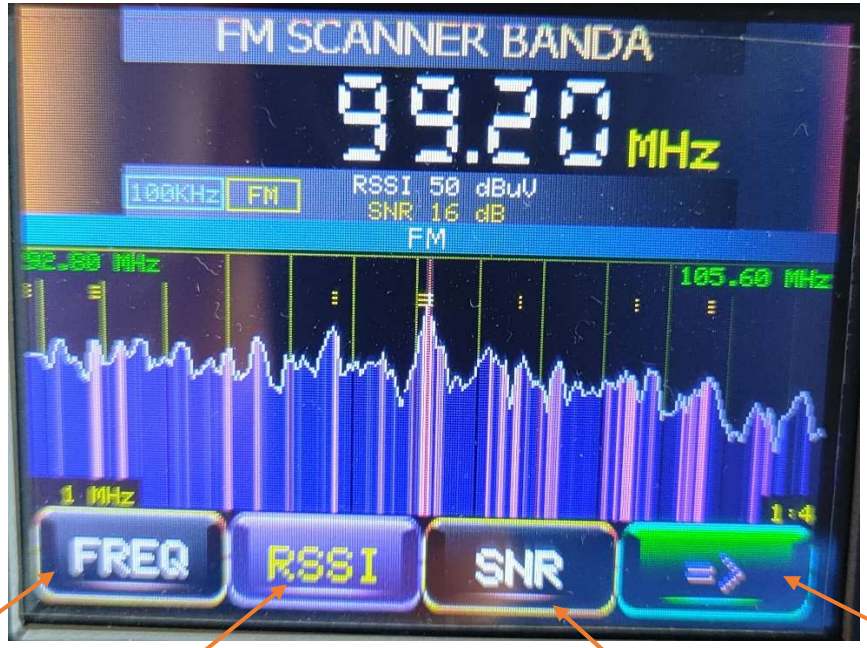
Indicating the chart display scale

STEP button for frequency tuning pitch change

EXIT button to exit Scanner mode.

SCALE button. pressing switch to the set of buttons for adjustment scales FREQ – RSSI- SNR - =>

PAUSE button to temporarily stop scanning; Click to resume scanning. The scan is also suspended after the encoder is rotated. In pause mode, you can move the cursor by tapping the screen



FREQ button to vary the amplitude of the graph in the frequency domain (X axis). Adjust with encoder

RSSI button to vary the amplitude of the graph in the signal domain (Y axis). Adjust with encoder

SNR button to better mark the intensity of the signals received. Adjust with encoder

Key => Press to return to previous page

Indication of the frequency in use to be stored

The display area of the name that we have given to the memory cell;

To insert a new one, after pressing the ADD button, a black bar will appear in this area, where you can change the name of the station via the encoder and confirm each character entered by pressing the encoder or screen. If you made a typo, press DEL, the character will be deleted. To clear all text, press and hold the encoder or screen until the text is erased

Specifies the city for which the current station will be stored. Click to select and edit the list of cities

Display of the memory location with various parameters and a name to be assigned to the memory using the EDIT button

CITY button to view memories for the chosen city

EXIT button to exit the memory bank

CHANGE button to change the name of the station and link to the city

Button SET

Screen appearance with FM button enabled. You can switch the encoder to the FM stations of the band stored in the memory bank for the current city.

The on-screen encoder is activated by pressing and dragging from bottom to top at the bottom of the screen. To close the on-screen encoder, swipe down from the center of the screen. The screen encoder is available in all modes.

The appearance of the screen with the LIGHT button activated and the display brightness indication adjusted by the encoder.

Also in this picture there is the S-Meter in digital display mode

Layout screen of receiving an amateur HAM band

BFO frequency setting screen via encoder

LABEL indication of CW-DIGI-SSB-DX modes in the sectors of the band in use

Tuning step indication slider in SSB mode,

pressing on the digits 1Khz , 100 Hz , 10 Hz the cursor moves below the digit selected for fine tuning

BFO button enabled.

BFO frequency indication

STEP button changes BFO tuning pitch (1Hz, 10Hz, 25Hz)

Tuning step indication BFO

Reception in the HF bands with color indication of the conditions of propagation of radio waves in the range used:

color green - gamma with open propagation;

yellow color - gamma with medium open propagation;

Red color - gamma with closed propagation.

HF propagation data is obtained directly from the Internet, so it is displayed when the Wi-Fi connection is active.

Digital signal decoding

Decoding screen of the FELDHELL digital mode (also called "Minifax"). To center the writing long press on the display receiving messages, the writing will change to yellow, then use the encoder to adjust; press again to return.

RTTY digital mode decoding screen. You can have the three decoding speeds 45.45 / 50 / 75 baud by clicking on the speed indication at the top (the tuning must be made on the first note by switching between Rtty-L and Rtty-U)

CW mode decoding screen. The decoding speed of CW signals is automatic. (it is useful to know that the intensity of the audio volume influences the correct decoding, so adjust in relation to the goodness of the signal)

Both on the Waterfall and on the Spectrum, a red vertical line is indicated indicating the audio frequency of 800Hz, note that it is decoded by the decoder inside the receiver; this line, adequately adjusting the frequency with minimum step, must match the track on the Waterfall of the received signal, a signal for CW and FeldHell transmissions, two signals for RTTY transmissions.

A long press on the scale switches the modulation from AM to SSB and vice versa (the function is not active in FM), in SSB a short press switches to fine tuning in SSB. This changes the color of the scale. A short press on the encoder button activates the volume control, a long press switches from AM to SSB and vice versa. Turn the encoder to move along the scale.

For HAM bands the modulation in SSB is automatic.

Receiver screen in "retro" style.

Volume button. Press to change the volume. Or press the retro volume indicator to mute the sound

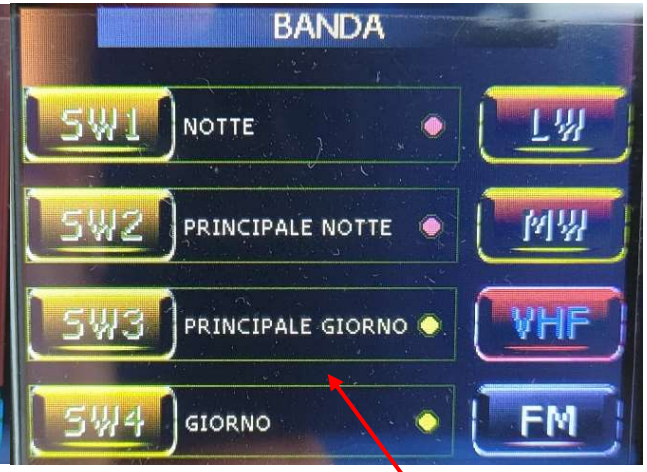
Scroll the scale from left to right or vice versa to activate scrolling to the next stored station

Button to exit mode RETRO

Pressing the SET button takes you to the next buttons CITY | STEP | BFO |->

Button => to return to the previous screen

BFO button, active for HAM bands, adjust with the encoder the necessary value



SCAN button for scanning and storing FM stations in the selected city

EXIT button to exit CITY mode

ADD button to add a city to the list

Button => to exit the list of cities and return to the previous page

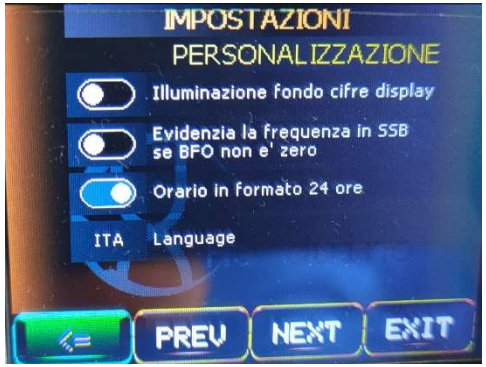
Band selection page displayed in RETRO mode, with buttons for retro bands and color indication of wave propagation conditions in relation to real-time conditions with data obtained via WiFi

FM button to display the list of FM stations in the current city

EDIT button to edit city names and adjust the time zone of your area. To adjust UTC time in an already stored city, rename the city and then adjust the time

DEL button to delete a selected city from the list

Click to select a city on the screen. Or scroll through the list with the encoder and the CHANGE button go to the next screen to EDIT -ADD-DEL



Configuration screens accessible via the button.

SETUP

In these pages you set multiple parameters chosen by the user in relation to their needs.

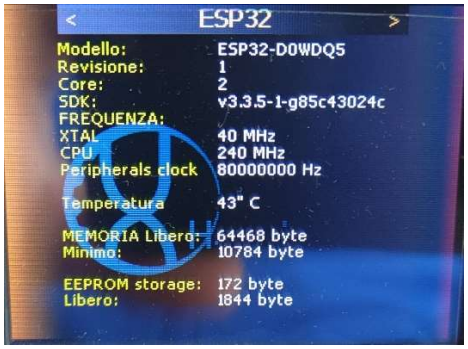
Select, deselect or change the selection of the respective element by clicking on it or on the marker to the left of the description.

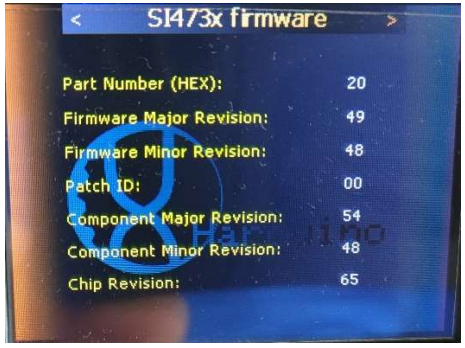
If your receiver is not working properly, you can reset the settings via the appropriate item in the list, or by pressing the encoder button while turning on the receiver. If the parameters have been changed, when you press the EXIT button the system will ask you to confirm the saving of the new settings

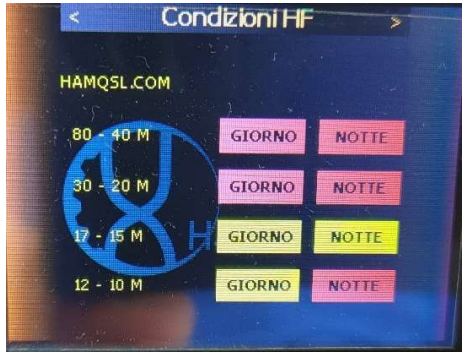
With Wireless on on, select a Wifi AP and enter a password if you've never used it before. The current connection is displayed in yellow, saved in blue. Scan the list of networks again using the SCAN button. Scroll through the list with the encoder or with the PREV and NEXT buttons

INFO button information screens.

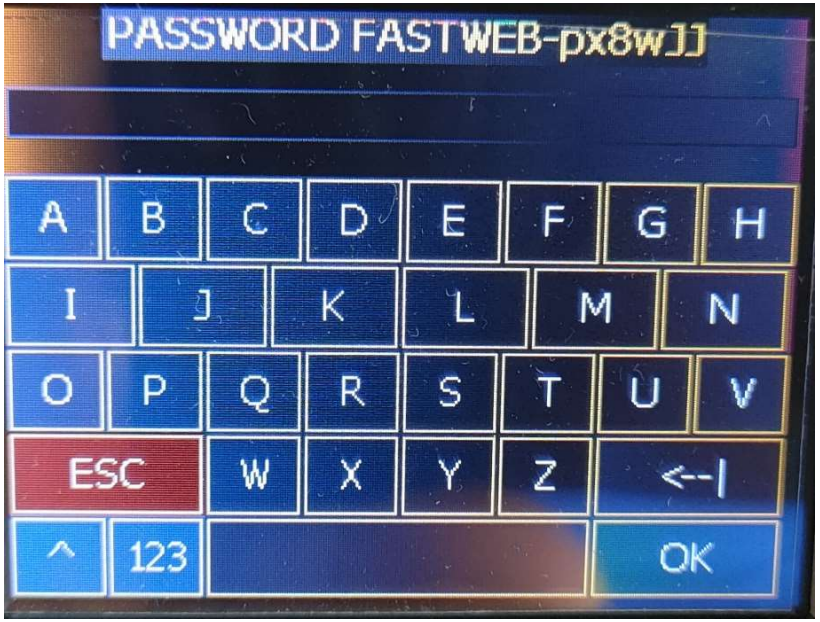
It shows the parameters used by the receiver, firmware information, Si473x chip, HF band propagation conditions (extrapolated in real time via WiFi) and developers







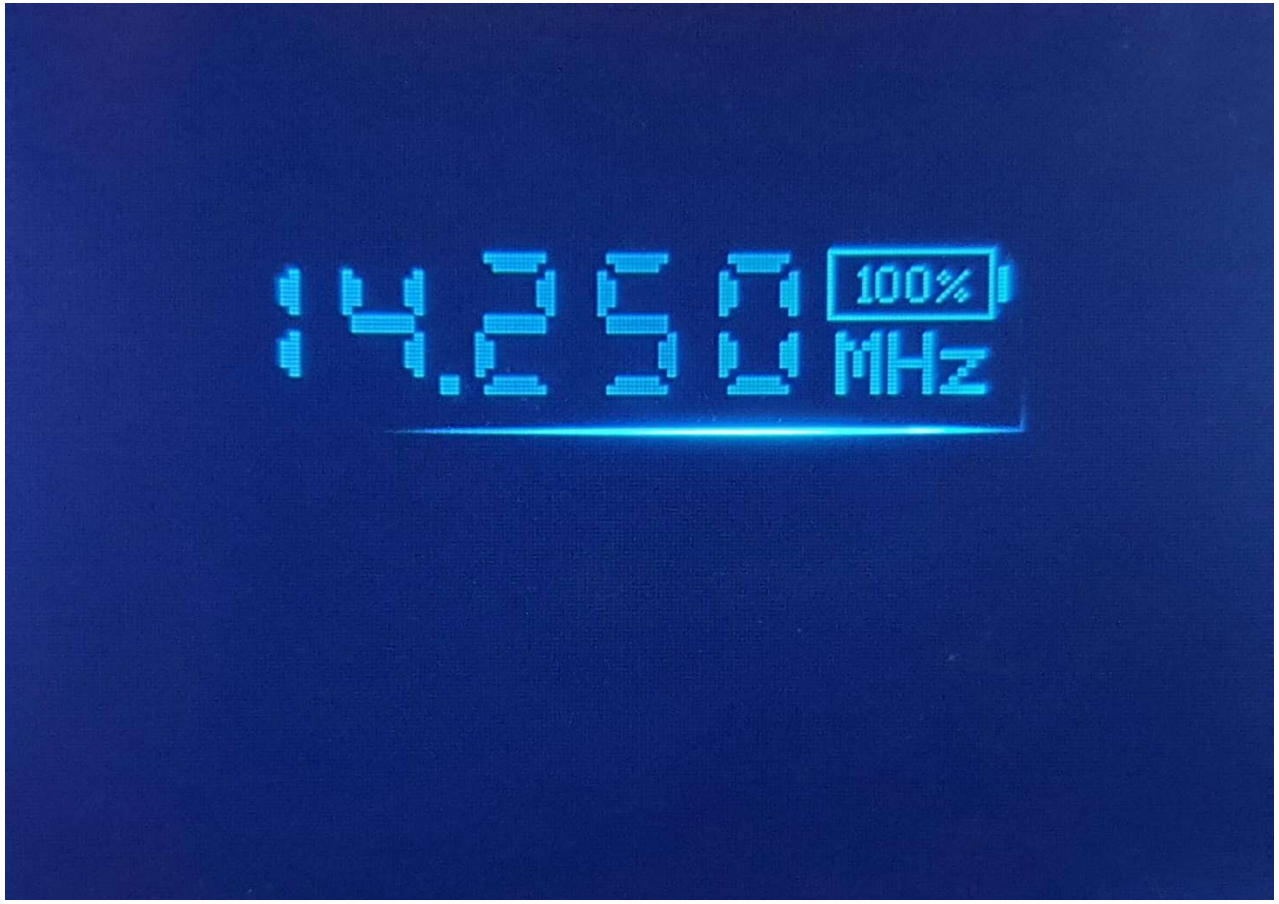
ON-SCREEN KEYBOARD



This on-screen keyboard appears when there is a need to enter characters and data within the receiver pages, WiFi AP passwords, firmware activation keys, memory name editing, stations, cities... and much more. The "^" and "123" buttons activate uppercase / lowercase / numeric / special characters.

OK per confermare ed ESC per uscire dalla keyboard.

SCREENSAVER (Time and adjustments from SETUP)



END

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
lf this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.