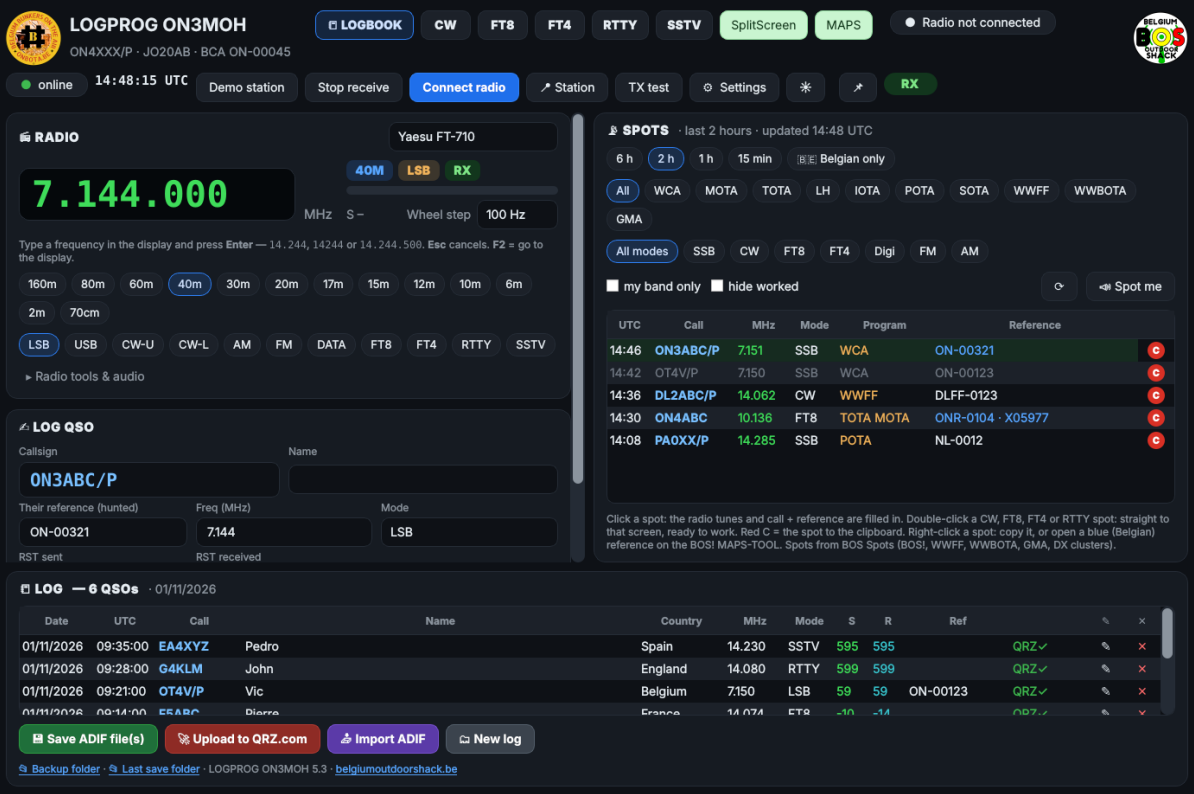
LOGPROG ON3MOH

Manual — installation and use

BOS! Logbook with CW, FT8 and FT4 in one program

for Linux (64-bit PC)

Version 5.3 — November 2026



Contents

1. What is LOGPROG ON3MOH? 3

2. Installation 4

3. First-time setup 5

4. The main screen 8

5. The logbook 10

6. The BOS! MAPS-TOOL 14

7. CW 15

8. FT8 and FT4 16

9. WSJT-X or JTDX from outside 17

10. Practising without a radio 18

11. Where is my data? 19

12. Troubleshooting 19

1. What is LOGPROG ON3MOH?

LOGPROG ON3MOH brings the **BOS! Logbook** and a complete **digital station** together in one program. You log, hunt spots and make your ADIF files for the Belgian programs, and in the same window you work CW, FT8 and FT4. Every QSO goes into your log automatically, together with your activation.

- **Logbook**: control the radio, log QSOs with dupe check, names from your log or QRZ.com, spots from BOS Spots, ADIF files for BCA, TOTA, BLHA, BELMOTA, ONBOTA, ONFF, POTA and GMA, upload to QRZ.com.
- **CW**: automatic decoding (like CwGet, with "Go to max") and sending by simply typing.
- **FT8 and FT4**: decode and transmit, also fully automatic: call CQ stations, complete the QSO and log it, with filters (e.g. only POTA/SOTA or /P) and up to 4 stations at once.
- **MAPS**: the BOS! MAPS-TOOL in its own window; "Activate … in the logbook" puts the reference straight into your activation.

Supported radios

Brand	Models
Yaesu	FT-710, FTX-1, FTDX10, FT-991A, FT-891, FT-817 / FT-818
Icom	IC-7300, IC-7610, IC-705
Kenwood / Elecraft / QRP Labs	TS-480, KX3, KX2, QMX
Xiegu	X6100
Without a radio connection	"No CAT (manual)": you enter frequency and mode yourself

Linux on a 64-bit PC (x86_64): Ubuntu, Linux Mint, Debian, Fedora, openSUSE … from about 2014 onwards. Nothing needs to be installed: Python, Qt and all libraries are included. Not for Raspberry Pi / ARM.

> **Tip** — This is the English version for Linux. The BOS! MAPS-TOOL website itself is in Dutch.

2. Installation

1. Download **LOGPROG_ON3MOH_Linux.tar.gz** from **on3moh.be**.
2. Unpack it, for example in your home folder: right-click › *Extract here* in the file manager, or in a terminal `tar xzf LOGPROG_ON3MOH_Linux.tar.gz`. You get the folder `LOGPROG ON3MOH`.
3. Start the program: double-click **logprog-on3moh** in that folder (choose *Run*), or in a terminal `"LOGPROG ON3MOH/logprog-on3moh"`.
4. Handy, once: run **install-menu-entry.sh**. LOGPROG ON3MOH then appears in your application menu (category Ham Radio) and on the desktop.

Once: access to the serial port

To control the radio (CAT) and to key CW via DTR/RTS your user account must be in the group **dialout**. Open a terminal and type:

```
sudo usermod -aG dialout $USER
```

Then log out and back in (or restart). The radio's ports are called `/dev/ttyUSB0`, `/dev/ttyUSB1` or `/dev/ttyACM0`. No driver is needed: Linux knows the USB chips of Yaesu, Icom, Kenwood, Elecraft, QRP Labs and Xiegu.

Sound

LOGPROG ON3MOH uses ALSA, which also works on desktops with PulseAudio or PipeWire. Choose the radio's sound card (*USB Audio CODEC …*) directly, or choose *pulse*, *pipewire* or *default* and then select the radio's sound card in the sound settings of your desktop (or with *pavucontrol*).

> **Note** — Does the program not start, with a message that X11 libraries are missing? Install them once:
> `sudo apt install libxcb-xinerama0 libxcb-icccm4 libxcb-image0 libxcb-keysyms1 libxcb-render-util0 libxcb-xkb1 libxkbcommon-x11-0 libxcb-shape0` (Debian, Ubuntu, Mint)
> `sudo dnf install xcb-util-wm xcb-util-image xcb-util-keysyms xcb-util-renderutil libxkbcommon-x11` (Fedora)

Coming from Windows?

Copy *logbook-data.json* and *settings.json* from `%APPDATA%\LOGPROG ON3MOH` on the Windows PC to `~/.local/share/LOGPROG ON3MOH` (with LOGPROG ON3MOH closed). Your log, station and settings come along; enter the QRZ password and API keys once more in Settings › Logbook, and choose the serial port and sound cards again.

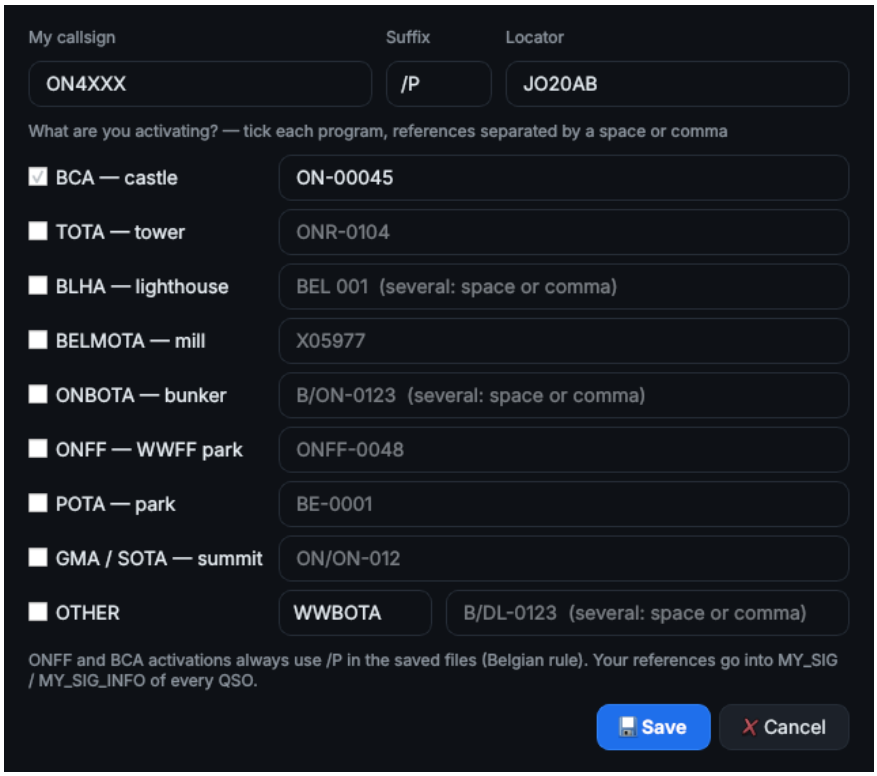
Updating to a new version

Unpack the new version **over** the old folder (replace the files). Your log and settings are kept: they are not in the program folder (see chapter 13).

3. First-time setup

Step 1 — Your station (button "Station")

Enter your callsign, choose the suffix (none, /P or /M) and your locator (e.g. JO20AB). Tick what you activate and enter the reference(s). Your callsign and locator are also used in CW, FT8 and FT4.

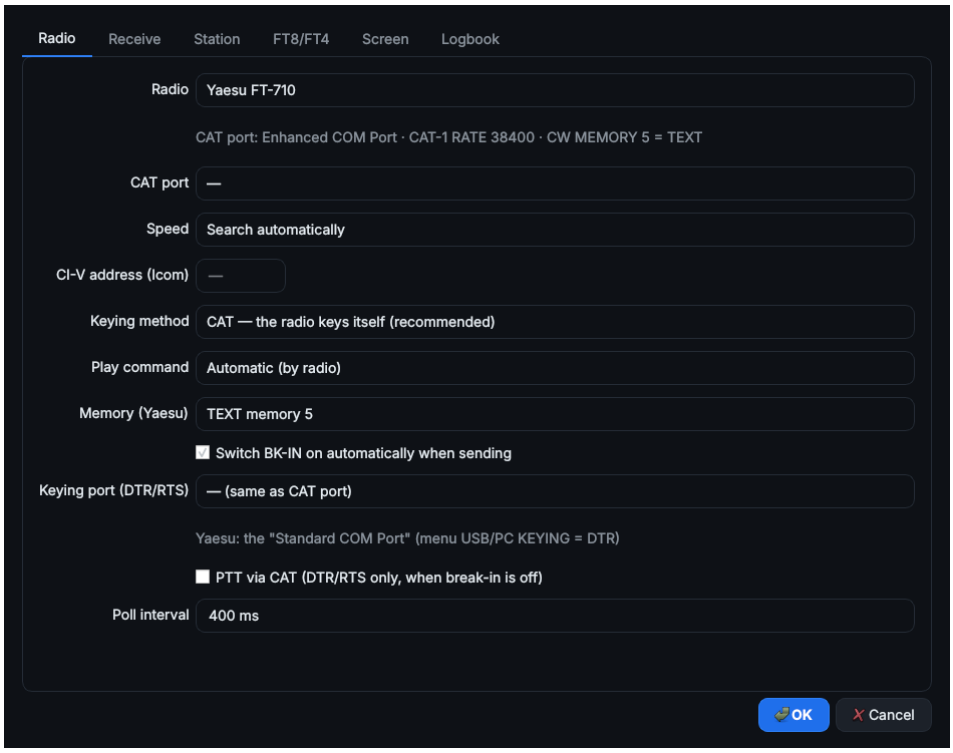


The Station & activation window

ONFF and BCA activations always get /P in the files (Belgian rule). Under **OTHER** you choose a program for activations abroad: WWBOTA, WWFF, POTA, SOTA, IOTA or WCA.

Step 2 — Your radio (⚙ Settings › Radio)

On Linux the ports of the radio are called `/dev/ttyUSB0`, `/dev/ttyUSB1` or `/dev/ttyACM0` instead of COM3, COM4 … Choose your radio and the CAT port. Leave "Speed" on *Search automatically*. Then click **Connect radio** at the top. If you have not chosen a CAT port yet, you get a list of the ports; the last one used is at the top.



Settings › Radio

Radio	Setting in the radio	Port
Yaesu FT-710 / FTX-1 / FTDX10	CAT-1 RATE 38400 · CW MEMORY 5 = TEXT (for CW)	Enhanced port (usually /dev/ttyUSB0)
Yaesu FT-991A / FT-891	CAT RATE (factory 4800) · CW MEMORY 5 = TEXT	Enhanced port (usually /dev/ttyUSB0)
Yaesu FT-817 / FT-818	Menu 14 CAT RATE 4800 · menu 13 = CAT. CW keying via a DTR/RTS keying cable	Port of the CAT cable
Icom IC-7300 / IC-7610	CI-V USB Port = Unlink from [REMOTE] · CI-V address 94h / 98h	IC-7610: the first of the two
Icom IC-705	CI-V address A4h · CI-V USB Echo Back OFF (Bluetooth via rfcomm works too)	USB or Bluetooth port
Xiegu X6100	CI-V address 70h · 19200 baud	USB-C port
Kenwood TS-480	Menu 56 baud rate (9600) · break-in on for CW	Port of the cable
Elecraft KX3 / KX2 · QMX	Menu RS232 (baud rate) · QMX: virtual serial port (/dev/ttyACM0)	Port of the cable

Icom and Xiegu: the program finds speed and CI-V address by itself. If you changed the CI-V address in the radio, enter it under *CI-V address* (hex, e.g. 7A).

Step 3 — Sound card (for CW decoder, FT8, FT4)

- **Settings › Receive**: the radio's sound card (*USB Audio CODEC …*), or *pulse* / *pipewire* / *default* and then the radio's sound card as input in your desktop's sound settings.
- **Settings › FT8/FT4**: TX sound card, the same way (the radio's *USB Audio CODEC* as output).
- In the radio: data input via USB. Yaesu: DATA MOD SOURCE = USB / REAR. Icom: SET › Connectors › DATA MOD = USB.

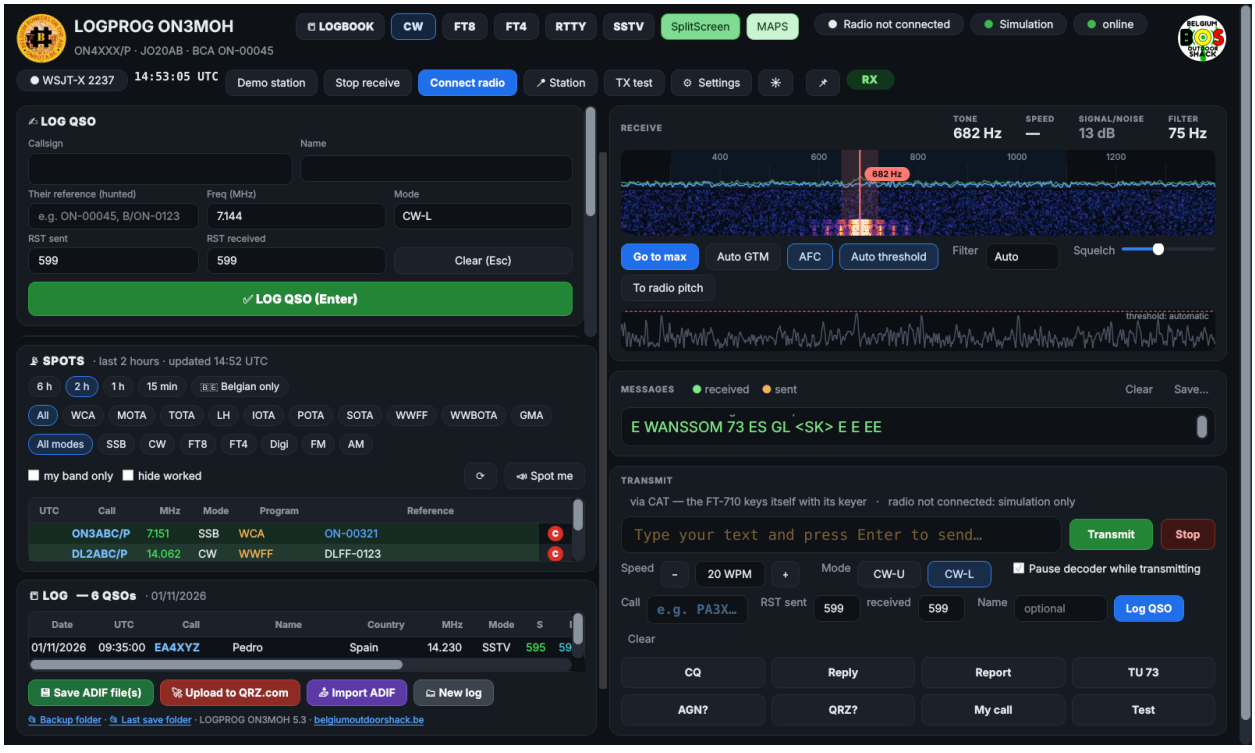
Step 4 — QRZ.com (Settings › Logbook, optional)

Username and password for looking up names (requires a QRZ XML subscription), and your Logbook API key(s) for uploading (qrz.com › My Logbook › Settings). You can give a separate key for /P or /M. Tick *Upload every QSO automatically* if you want that. On Linux password and keys are stored in *secrets.json*, readable only by your own user account.

4. The main screen

At the top you see the BOS logo, your station with your activation, and the tabs:

Button	What it does
LOGBOOK	Radio, log a QSO, spots and your log. You can always go here: CW, FT8 etc. just keep working.
CW · FT8 · FT4	Chooses the mode. The radio is set to the right mode (CW, DATA-U, DATA-L) right away.
SplitScreen	Logbook on the left and the mode (CW, FT8, FT4) on the right in the same screen. You can drag the border between them. Click again = mode only; LOGBOOK = logbook only. Handy on a big screen.
MAPS	Opens the BOS! MAPS-TOOL in its own window.
Connect radio	Makes the CAT connection (one connection for everything). Click again = disconnect.
Station	Your callsign, locator and activation.
TX test	Checks step by step whether the radio can send CW (with a "Listening test" that does not transmit).
Settings	Radio, sound cards, station, FT8/FT4, logbook (QRZ, WSJT-X, map), screen.
☀ / ☾	Light or dark colours (light is easier to read outdoors in the sun).
Pin	Window always on top.
RX / TX	Shows whether the radio is transmitting.



SplitScreen: the logbook on the left, the mode (here CW) on the right — you can drag the border between them

Dots show the status: radio connected, sound card, internet (online/offline) and the WSJT-X link. You may make the window bigger and smaller; in a narrow window some buttons move under ☰.

Small screen or laptop (⚙ Settings › Screen)

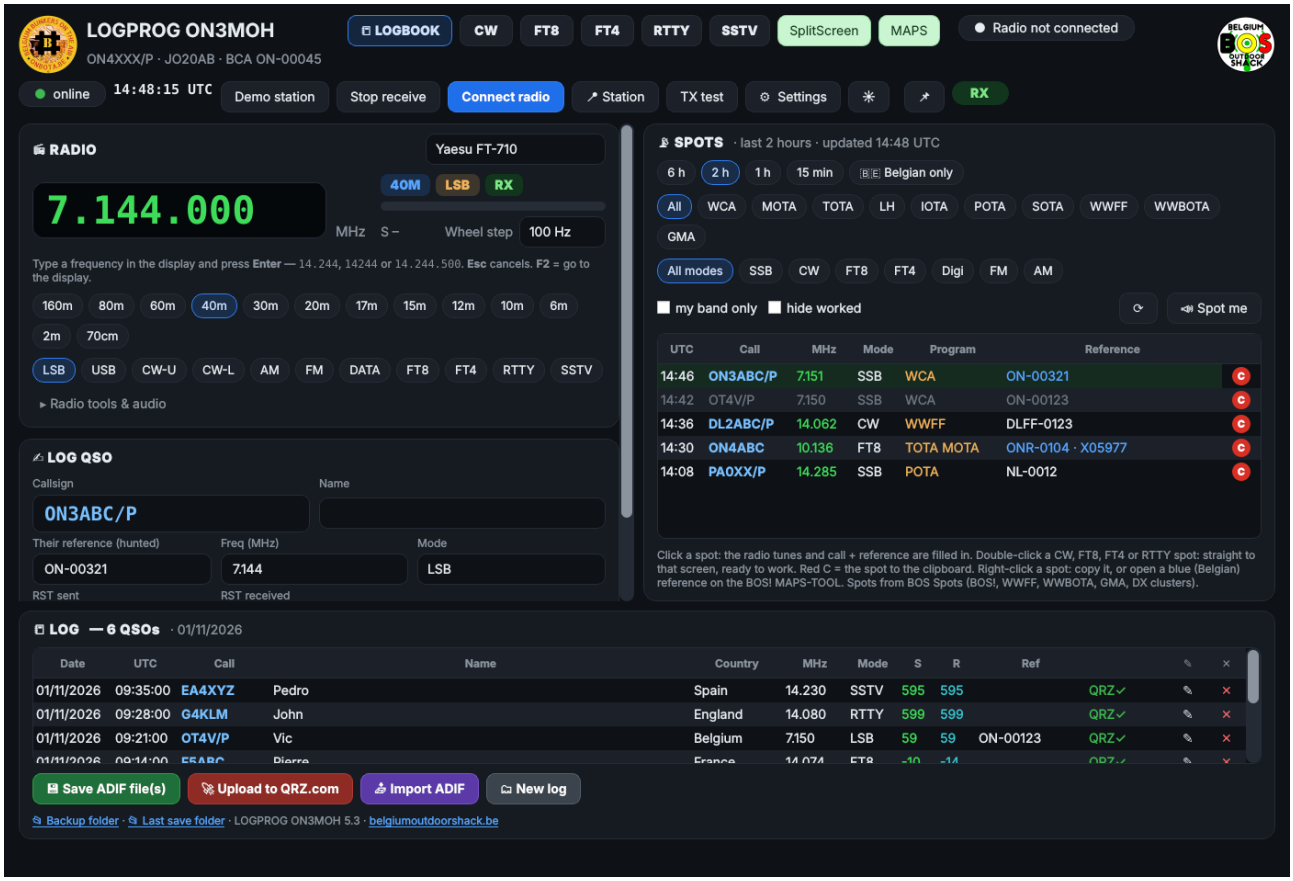
On a small screen LOGPROG ON3MOH switches to a **compact view** by itself: smaller margins and buttons, and in the logbook the *LOG QSO* form moves to the top. Under **Settings › Screen** you choose yourself:

Setting	Choice
Compact	Automatic (recommended) · always compact · never compact
Size	80 % to 150 %: everything smaller or bigger, text too

> **Tip** — Restart LOGPROG ON3MOH after changing this. If everything is still too big on your laptop, set the Size to 90 % or 80 %.

The newest QSO is always at the top of the log. FT8/FT4 always shows the latest lines; if you scroll up yourself to read something back, it stays put for 20 seconds and then jumps back to the latest line.

5. The logbook



The logbook: radio, log a QSO, spots and the log

Radio

- Type a frequency in the green display and press **Enter**: `14.244`, 14244 or `14.244.500`. **Esc** cancels, **F2** jumps to the display.
- With the **mouse wheel** on the display you tune in steps of the chosen *wheel step* (10 Hz to 5 kHz).
- Band buttons go to the last frequency used on that band (in FT8/FT4: the FT8/FT4 frequency). Mode buttons switch the radio.
- You see band, mode, RX/TX and the S-meter. Under *Radio tools & audio*: VFO A/B, NR, NB, IPO, TUNE … and volume and RF gain.
- You can also choose the radio model at the top right of the radio panel.

Logging a QSO

1. Type the callsign. The name comes from your log or from QRZ.com; you also see right away whether it is a **dupe**.
2. Enter their reference if you work an activator (e.g. ON-00045, B/ON-0123).
3. Check the RST and press **Enter** or click **LOG QSO**. **Esc** clears the fields.

Dupe means: same call, same band **and** the same references. If an activator moves to another reference, or you start a new activation, it is a new QSO and not a dupe.

QSOs from CW, FT8 and FT4 are added here automatically. The call they are working appears in the Callsign field right away, so the name is already looked up.

Spots

The spots from BOS Spots (BOS!, WWFF, WWBOTA, GMA and DX clusters) are refreshed every 30 seconds. Filters: time (6 h, 2 h, 1 h, 15 min), Belgian only, per program, per mode, my band only, hide worked.

With the buttons **BOS Spots** and **DX Summit** at the top you switch the source. With **DX Summit** you see everything spotted on www.dxsummit.fi (refreshed every minute), with the country and the comment. The mode is taken from the comment or the band plan. Clicking, double-clicking, the watch list and the filters work the same way.

Globe

At the top is **GLOBE** (on a narrow screen only the globe button): a turning earth with the spots as coloured dots per band, with an arc from your own QTH (your locator, otherwise your call) and day and night according to the sun. On the right the number of spots and countries, the band activity of the last half hour and the list with the distance in km. Drag = rotate, mouse wheel = zoom, click a spot = tune, double-click = to CW/FT8/FT4. Source and filters are set under SPOTS in the logbook (at most the 50 newest spots on the globe). The position comes from DX Summit or from the prefix (cty.dat by AD1C). With **My log** you see your latest 200 QSOs instead of the spots (position from the locator of the QSO, otherwise from the prefix); click = QSO details, double-click = edit the QSO. **Spots** = back.



The globe with the spots

Meter

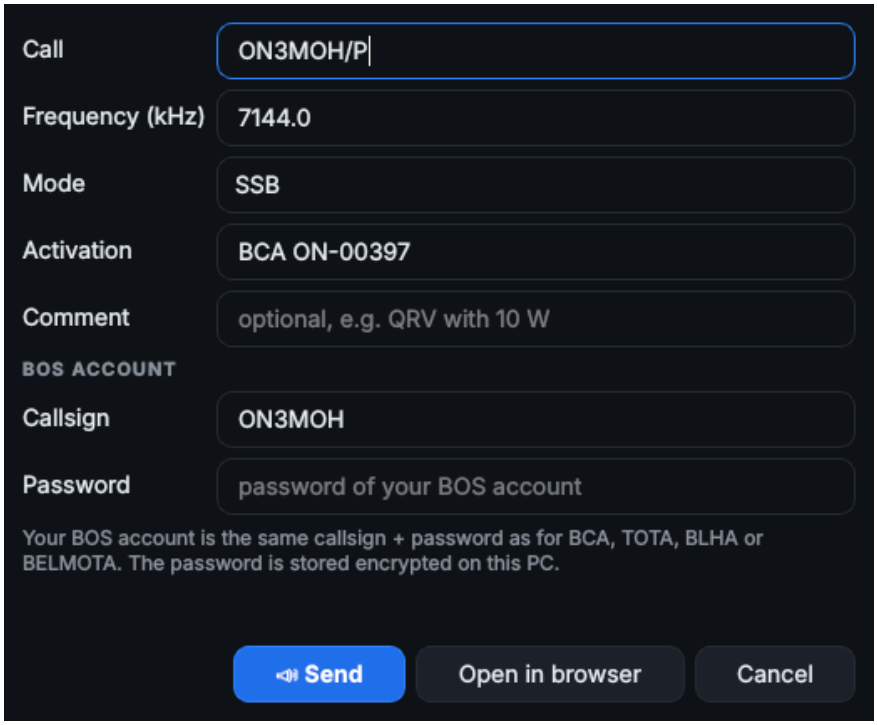
The radio box has an analogue meter. Click **S**, **PO** or **SWR**: received signal, transmit power (in % of the maximum of the radio) or standing wave ratio. PO and SWR come from the radio and only move while transmitting (Yaesu, Icom; Kenwood PO only; FT-817 PO only and an SWR warning). The red mark is the peak.

Action	Result
Single click	The radio tunes and call + reference go into the logbook.

Action	Result
Double-click a CW spot	To the CW screen with the call filled in and the radio on that frequency; the decoder looks for the signal.
Double-click an FT8/FT4 spot	To FT8/FT4 on that band. As soon as the station is decoded, the program calls it by itself (max. 15 min, Stop TX stops the search).
Red button C	The spot to the clipboard, e.g. *ON5SE 7.034 MHz CW POTA BE-0414 (13:42 UTC)*, to paste into a chat or mail.
Right-click a spot	Copy it, or open a blue (Belgian) reference on the BOS! MAPS-TOOL.
★ Watch list	Calls, references or programmes you want an alert for (see below).
Spot me	Spot yourself on BOS Spots, straight from the program (see below).

Spotting yourself (Spot me)

Frequency, mode and your activation (programme + references from Station) are already filled in. Check them, add a comment if you like and click **Send**: the spot is on BOS Spots right away (and from there also goes to WWFF, WWBOTA and GMA). You log in with your **BOS account**: the same callsign and password as for BCA, TOTA, BLHA or BELMOTA. The password is stored on your computer in a file only you can read; you only enter it once. **Open in browser** opens BOS Spots with everything filled in.

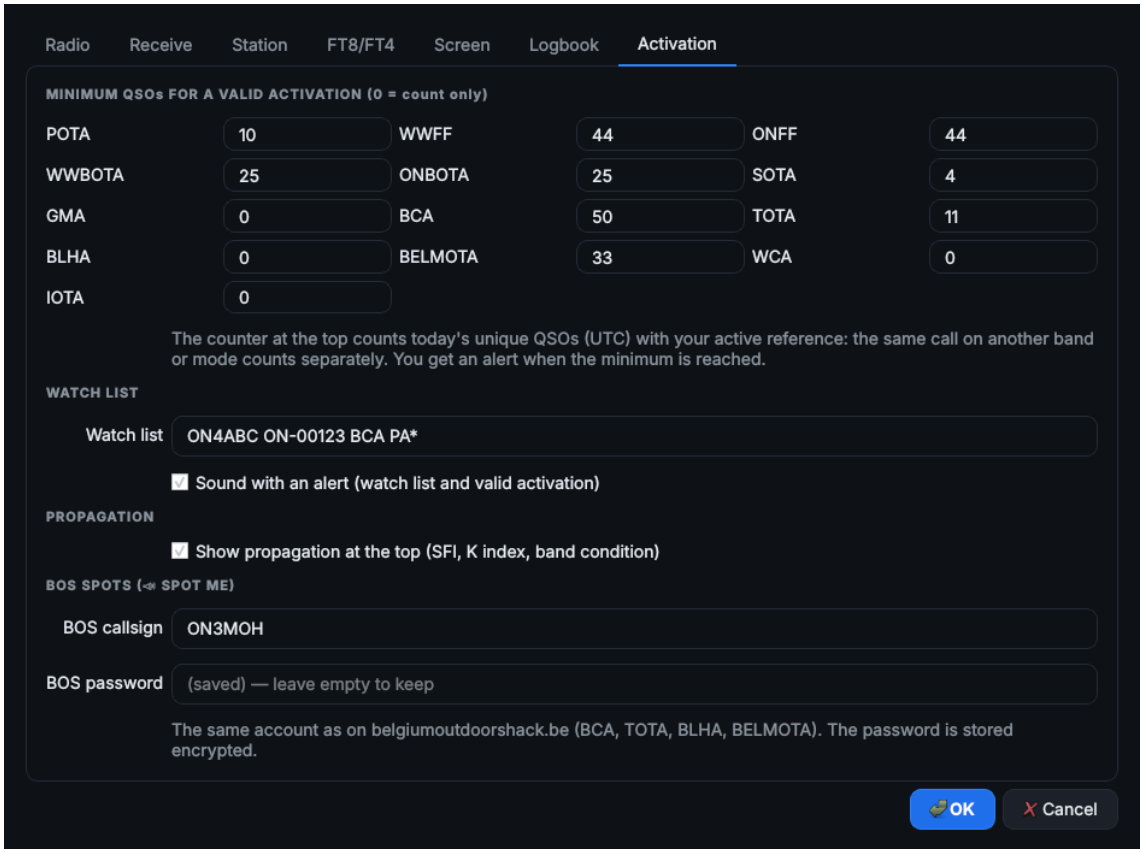


Spot me: everything filled in, one click on Send

Activation counter, watch list and propagation

- **Counter** — at the top you see e.g. **QSO BCA 37/50**: today's unique QSOs (UTC) with your active reference. The same call on another band or mode counts separately. Orange = not enough yet, green with ✓ = valid activation; at that moment you get an alert with sound. Default minimum: BCA 50, BELMOTA 33, TOTA 11, ONFF/WWFF 44, ONBOTA/WWBOTA 25, POTA 10, SOTA 4. Change it in ⚙ Settings › Activation (0 = count only).
- **★ Watch list** — type calls, references or programmes, e.g. *ON4ABC ON-00123 BCA PA** (* = anything). When a matching spot comes in, its row gets a ★ and an orange background and you hear an alert. In FT8/FT4 you also get an alert as soon as such a station calls CQ or is active.

- **Propagation** — at the top: ☀ **SFI 142 · K 2 · 40m good**: solar flux, K index and the condition of the band your radio is on (day or night), from N0NBH (hamqsl.com), updated every hour. Hover = all bands. Switch it off in ⚙ Settings › Activation.

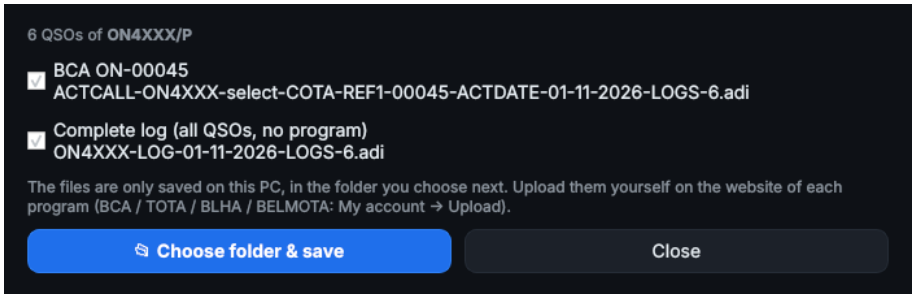


⚙ Settings › Activation: minimum per programme, watch list, propagation and your BOS account

The log

- ✎ = edit, ✕ = delete; double-click a row = edit.
- **[D]** = dupe. **QRZ✓** = uploaded, **QRZ…** = being uploaded in the background (you can just keep logging), **QRZ✗** = failed (it is retried later).

Saving ADIF files



Save ADIF file(s)

For each activation you get the right file with the right name (the same names as the ADIF Converter on the website), plus the complete log. You choose the folder yourself; it is remembered. Then upload the files yourself on the website of each program (BCA / TOTA / BLHA / BELMOTA: My account › Upload; ONFF: Activator Log Upload ONFF with your location photo; ONBOTA: onbota.be; POTA: pota.app; GMA: cqgma.org).

> **Tip** — One file = one activation. Start a **New log** for every new activation; the old log is saved as a backup first.

Other buttons

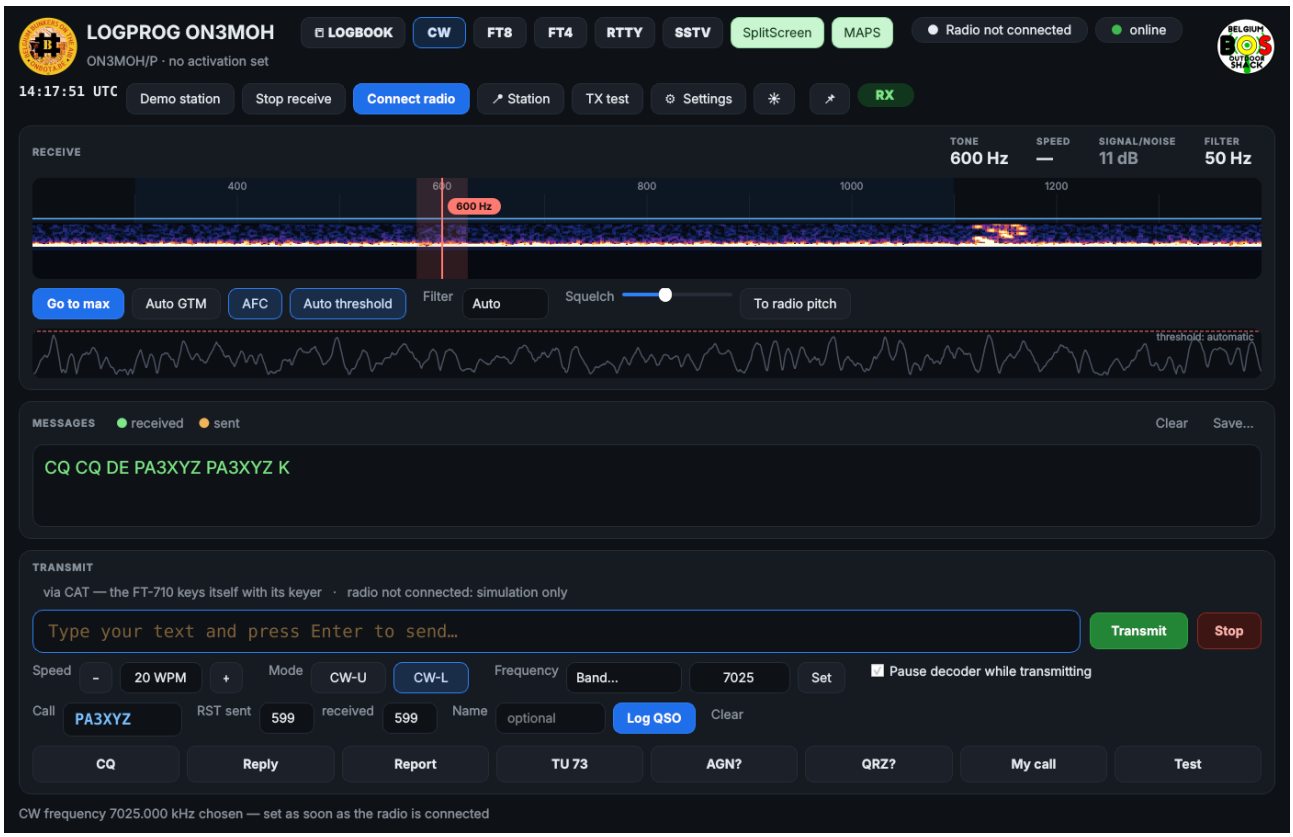
- **Upload to QRZ.com**: only the QSOs that are not there yet.
- **Import ADIF**: read an ADIF file (QSOs that are already in the log are skipped).
- **New log**: first makes a backup in *Documents\BOS Logbook\backups* and then starts an empty log.

6. The BOS! MAPS-TOOL

Click **MAPS** at the top. The map opens in its own window that you can put next to the logbook. In the info panel of a reference, **"Activate … in the logbook"** puts that reference straight into your activation (Station). On Linux "My location" uses your locator; you can also right-click the map where you are.

> **Tip** — If the map window does not work on your PC, the map opens in your normal browser by itself. You can also choose this yourself: Settings › Logbook › "Open the map in my normal browser". "Activate in the logbook" only works in the map window.

7. CW



The CW screen: spectrum and waterfall, received text, sending and macro buttons

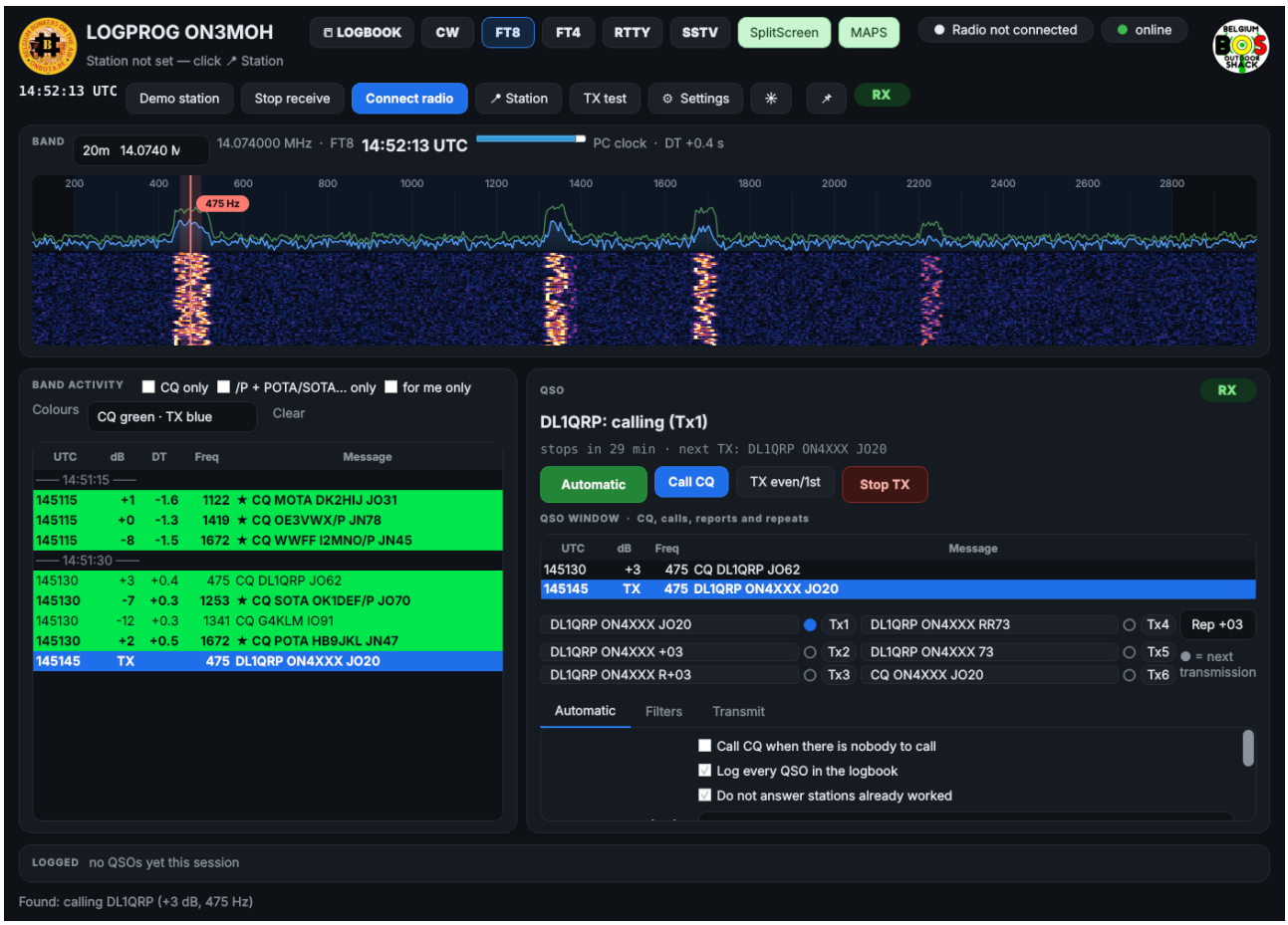
Receiving

- Click a signal in the **spectrum/waterfall** to tune to it (mouse wheel = ±5 Hz). At the top you see the tone, the speed (WPM), signal/noise and the filter width.
- **Go to max** jumps to the strongest signal. **Auto GTM** does that by itself after a pause, **AFC** follows a drifting signal and **Auto threshold** sets the threshold itself (otherwise: drag in the oscillogram).
- **Filter**: Auto or 25–250 Hz. **Squelch**: higher = fewer junk characters from noise, lower = weaker signals. **To radio pitch** puts the decoder on the CW pitch of your radio.
- Received text is green, what you send yourself is orange. **Double-click a call** to fill it in as Call. **Clear** / **Save…** for the text.

Transmitting

- Type your text and press **Enter** (or **Transmit**); **Stop** or **Esc** aborts. At the top you see how keying is done (via CAT with the keyer of the radio, or via a serial port).
- **Speed** in WPM with − and +. **Mode**: **CW-U** or **CW-L**; below 10 MHz the program chooses CW-L by itself, above it CW-U.
- **Frequency**: pick the CW part of a band under *Band…*, or type a frequency yourself (e.g. 7025, 14032.5 or 14.0325) and press Enter or **Set**. The radio goes there and the sideband follows.
- **Macro buttons** (CQ, Reply, Report, TU 73, AGN?, QRZ?, My call, Test): click = send, right-click = edit. In the text you may use {MYCALL}, {MYNAME}, {MYQTH}, {CALL}, {RST} and {WPM}.
- Fill in **Call**, **RST** and optionally **Name** and click **Log QSO** (or Enter in one of those boxes): the QSO goes into the logbook with mode CW and the time in UTC.

8. FT8 and FT4



FT8: band, waterfall, band activity (left) and the QSO window (right)

Choose a band at the top. The radio goes to the FT8/FT4 frequency in DATA-U (Icom: USB-D) by itself; PTT goes via CAT. The clock is set via the internet (NTP); the DT of the stations should be close to 0.0 s.

Band activity and QSO window

- Green = CQ (★ = POTA/SOTA/BOTA/TOTA/MOTA … or /P), dull green = already worked, red = for you, blue = your transmission. Choose other colours under *Colours*.
- **Double-click** a message = call that station. Your TX frequency jumps to that of the station. Clicked a little late (up to about 2 s into your period, FT4 1 s)? It still transmits in the same period, as WSJT-X does.
- The QSO window only shows your running QSOs: CQ, calls, reports, repeats, RR73 and 73. **Double-click** a received (red) line = answer that station again, e.g. RR73 once more if he did not hear you. A logged QSO is not logged again.
- You can drag the border between the QSO window and the tabs below it (Automatic, Filters, Transmit), and the border below the band window: that makes the spectrum and waterfall bigger or smaller.
- With ⧉ **Separate window** (top right of the tabs) you open Automatic, Filters and Transmit in their own large window: handy to change something without scrolling. Closing the window or **Put back** returns them to their place.
- Next to the clock you choose the waterfall **colours** (Classic as in WSJT-X, Blue/white, Purple/orange, Green, Fire, Grey) and set **Contrast** and **Brightness**. While transmitting the waterfall pauses, so the radio switching over does not leave white lines.

Tx1 to Tx6 (as in WSJT-X)

Below the QSO window are the six messages of the running QSO. The blue dot ● shows which message is being sent now (or next); so you see at a glance how far the QSO has got.

> **Tip — Calling a call yourself** (as in WSJT-X): type the call in **DX Call** (locator optional) and click **Gen msgs** or press Enter: Tx1 to Tx5 are filled in, nothing is sent yet. Then click **Tx1**. Or click **Call** straight away. If the station was decoded in the last few minutes, you transmit in the right period with the right report; otherwise in the period of "TX even/1st".

Button	Message	Example
Tx1	Call with locator	DL1QRP ON4XXX JO20
Tx2	Report	DL1QRP ON4XXX +03
Tx3	R + report	DL1QRP ON4XXX R+03
Tx4	RR73	DL1QRP ON4XXX RR73
Tx5	73	DL1QRP ON4XXX 73
Tx6	CQ	CQ ON4XXX JO20

- Click a **Tx button** = send that message next, for example your report once more or RR73 straight away. Tx6 starts calling CQ.
- **Rep** is the report you send. It is filled in automatically with the signal of the other station; you can change it.
- Without a running QSO the panel shows *DXCALL* as an example; only Tx6 (CQ) works then.

Buttons

Button	What it does
Automatic	Calls CQ stations passing your filters by itself, completes the QSO and logs it.
Call CQ	Call CQ; whoever answers is worked automatically (up to 4 stations at once, tab Automatic).
TX even/1st	On = transmit at :00/:30 (FT8), off = :15/:45.
Stop TX	Stop transmitting immediately (Automatic goes off too).

Filters (tab Filters)

- Only CQ from: POTA, SOTA, BOTA, TOTA, MOTA, WWFF, GMA, WCA, IOTA (nothing ticked = all CQs).
- /P: does not matter · only stations with /P · program CQ or /P.
- Only new stations, skip directed CQ, minimum signal strength and prefix.
- **Exclude**: calls that are never called or answered. Use * as wildcard, several in a row: `PA*  PD*  0N4ABC` = all PA and PD calls and ON4ABC (also with /P or a prefix).

> **Note — Stop automatically after …** (tab Automatic) is a safety stop: if you do nothing in the program for that long, it stops transmitting. Automatic operation must be supervised by the operator.

The decoder is ft8_lib: FT8 down to about −19 dB, FT4 down to about −14 dB (a little less sensitive than WSJT-X).

9. WSJT-X or JTDX from outside

Still using WSJT-X, JTDX or MSHV? There, under File › Settings › Reporting, set the UDP Server to 127.0.0.1, port 2237, and tick "Accept UDP requests". What you log there ends up in the log here.

At the top you then see "WSJT-X linked". JTAlert or GridTracker too? Use the multicast address 224.0.0.1 in WSJT-X and in Settings › Logbook.

10. Practising without a radio

Under Settings › Receive choose the sound card **Simulation (no radio)**. Click **Demo station**: in CW a station calls. In FT8/FT4 you get a simulated band with stations calling CQ that really answer. So you can safely try everything out.

11. Where is my data?

What	Where
Log, station, settings	~/.local/share/LOGPROG ON3MOH (hidden folder: Ctrl+H shows it in the file manager)
Backups (New log)	~/Documents/BOS Logbook/backups
ADIF files	The folder you choose under "Save ADIF file(s)"
Error messages	~/.local/share/LOGPROG ON3MOH/fout.log and start.log

The program folder itself contains no personal data. So you can safely replace it with a new version.

12. Troubleshooting

Problem	Solution
The program does not start	Missing X11 libraries: install them (chapter 2). Look in start.log and fout.log.
"No access to /dev/ttyUSB0"	Add yourself to the group dialout (chapter 2), then log out and back in.
Icons shown as empty boxes	Install an emoji font, e.g. *sudo apt install fonts-noto-color-emoji*.
"No answer from the radio"	Right radio and serial port? Yaesu: the Enhanced port. Close other programs using the port (old BOS! Logbook, WSJT-X, flrig). Icom: CI-V USB Port = Unlink from [REMOTE]. IC-7610: try the other port.
CW is not transmitted	Use TX test. BK-IN on, Yaesu CW MEMORY 5 = TEXT, radio in CW.
FT8: no decodes	Right sound card (and input level in the desktop's sound settings)? Signals visible in the waterfall? DT far from 0: internet needed for the clock (NTP).
FT8: radio does not transmit	Check the TX sound card and the DATA MOD setting of the radio; raise the TX level to just below ALC.
No spots / QRZ	Internet connection? The top shows "online" or "offline". Logging just continues offline.
QRZ: no names	Settings › Logbook: username and password (XML subscription needed).
Map does not open in the window	Then it opens in your browser; see chapter 6.
Screen too small, everything too big	Settings › Screen: Compact on and Size at 90 % or 80 %, then restart.

73 and have fun with LOGPROG ON3MOH!

ON3MOH — on3moh.be — belgiumoutdoorshack.be

FT8/FT4 decoder: ft8_lib, © 2018 Karlis Goba YL3JG, MIT licence.