



# ***FAMPARC Online Shack PRIMER***

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## 1. REQUIREMENTS

The FAMPARC Online Shack is using a Flex 6400 radio connected to the club Ultrabeam antenna and also the fan dipole. The Ultrabeam can also be rotated remotely. The Online Shack is available whenever the club shack is not in use. In order to use the Online Shack, you will need:

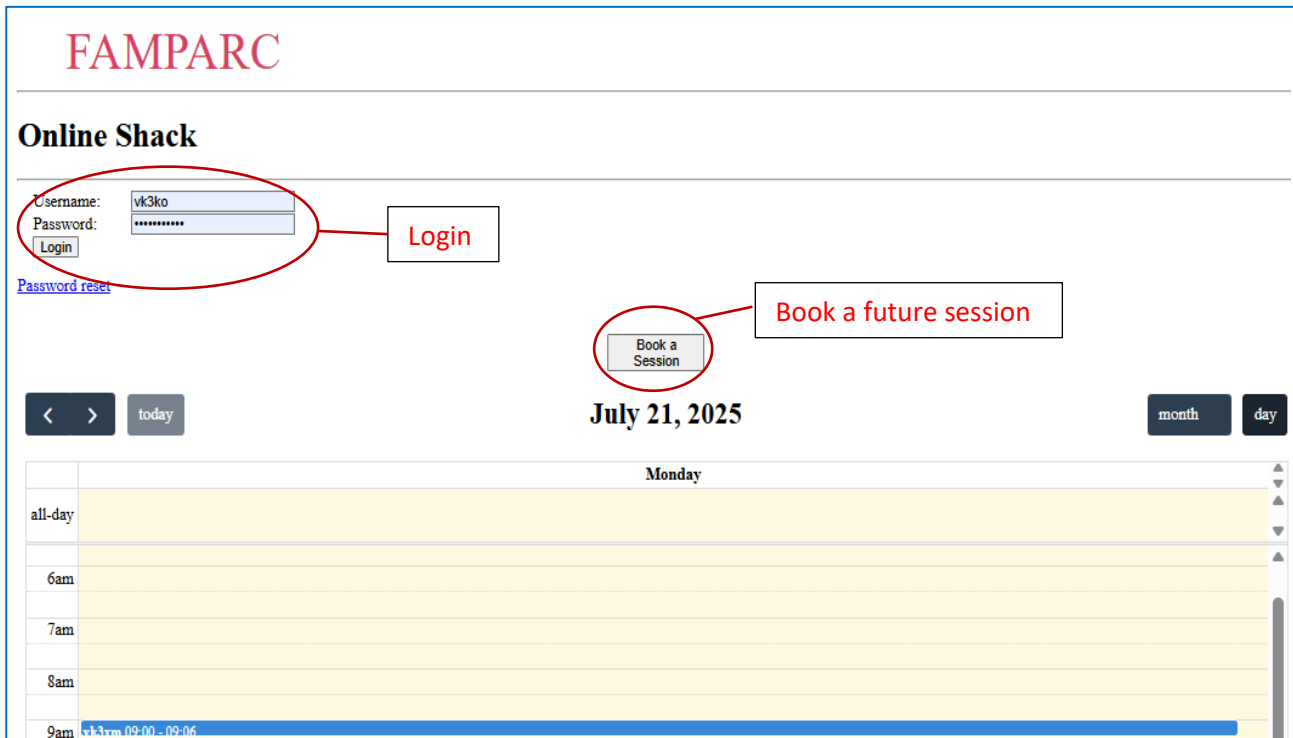
- The Flex SmartSDR software installed on either a Microsoft Windows device or an Apple device. You can download the windows software from <https://www.flexradio.com/category/software/installers/> or the Apple software from the AppStore. Make sure you download the current version installed on the FAMPARC Online Shack. The windows version is free to download, but the Apple version costs around \$150.
- A FAMPARC Online Shack account and password.

## 2. OPERATING THE ONLINE SHACK

### 2.1 LOG INTO THE ONLINE SHACK

The Online Shack login page can be found here:

- <http://remote.vk3frc.org.au>
- Or you can follow the link from the FAMPARC web site.



**Figure 1 – Online Shack Login Page**

Your Online Shack credentials will be provided during an induction brief. To use the Online Shack, enter your login and password. Once you are logged in you can start the SmartSDR software.

- **MAKE SURE** you leave the browser window open (in the background) while using the SmartSDR software. If you close the browser, your Online Shack session will time out and the SmartSDR software will be unable to connect to the radio.
- A default 20 min booking will appear on the calendar under your username. This is for convenience only: your session is **not** limited to 20 mins. You can extend the session by pressing *Extend Current Session* button.

- When you logout, the session duration will adjust to the full session period.

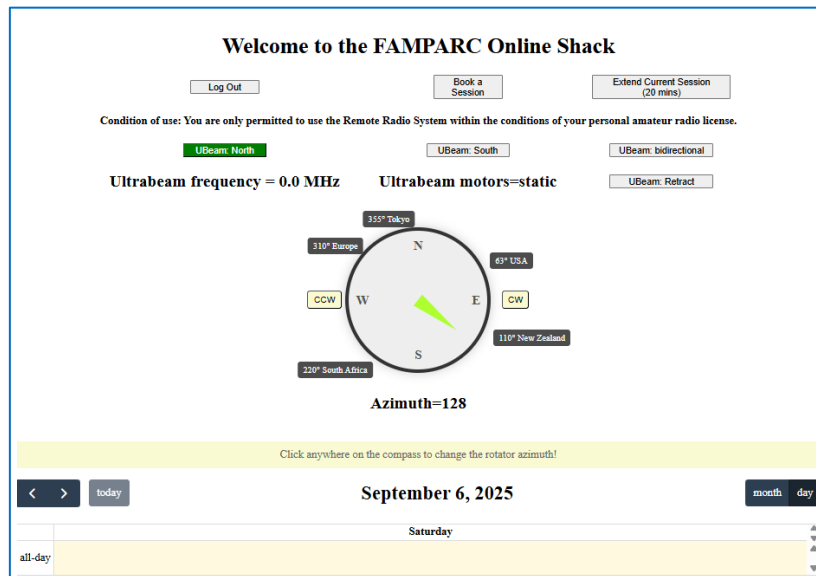


Figure 2 - User logged in – leave the browser open

## 2.2 LOGOUT OF THE ONLINE SHACK

When your session is finished:

- Close the SmartSDR software
- **Logout** of the Online Shack web page

There is currently no session time limit, so **if you do not logout, you will prevent anyone else from logging in.**

## 2.3 BOOK A FUTURE SESSION

If you just want to reserve a future slot, then press the “Book a Session” button.

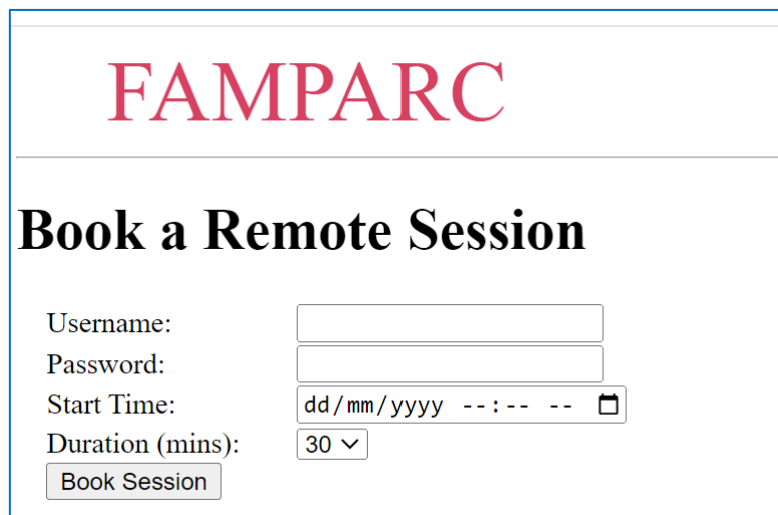


Figure 3 - Book a future session

- Enter your username and password
- Select a start date and time

- Select a duration

Once you book the session it will appear on the calendar.

### 3. OPERATING THE SMARTSDR FLEX SOFTWARE

The SmartSDR software is a modern interface with a rich set of features. It supports remote operation of the Flex using voice modes, CW and digital modes. In this primer we will cover the basic features needed to get on the air in voice and CW modes. If you want to explore the full suite of features, there are links to the manual and some helpful YouTube videos below.

#### 3.1 USEFUL LINKS

Description	Link
Flex User Manual V 3.1.7 2019	<a href="https://edge.flexradio.com/www/uploads/20200818185014/FLEX-6400M-and-FLEX-6600M-User-Guide-v3.x.pdf">https://edge.flexradio.com/www/uploads/20200818185014/FLEX-6400M-and-FLEX-6600M-User-Guide-v3.x.pdf</a>
SmartSDR Software User Guide	<a href="https://edge.flexradio.com/www/uploads/20200818184951/SmartSDR-Software-User-Guide.pdf">https://edge.flexradio.com/www/uploads/20200818184951/SmartSDR-Software-User-Guide.pdf</a>
SmartSDR for iOS User Guide	<a href="https://documents.roskosch.de/smartsdr-ios/">https://documents.roskosch.de/smartsdr-ios/</a>
FT8/WSJTX Guide	<a href="https://edge.flexradio.com/www/uploads/20200818185007/1544460953wpdm_WSJT-x-FT8-how-to.pdf">https://edge.flexradio.com/www/uploads/20200818185007/1544460953wpdm_WSJT-x-FT8-how-to.pdf</a>
Setting transmit profiles	<a href="https://www.youtube.com/watch?v=3s7UbKiqxAA">https://www.youtube.com/watch?v=3s7UbKiqxAA</a>
Setting a microphone profile	<a href="https://www.youtube.com/watch?v=GdFeTzPo14w">https://www.youtube.com/watch?v=GdFeTzPo14w</a>
CAT and DAX in detail	<a href="https://www.youtube.com/watch?v=RXeMMayB3-o">https://www.youtube.com/watch?v=RXeMMayB3-o</a>

#### 3.2 STARTING THE SOFTWARE

Flex remote operation is coordinated through the Flex SmartLink system. The first time you start the SmartSDR software you will be prompted to enter a SmartLink login and password. The Flex is allocated to the following SmartLink account:

- Login: Advised during induction brief
- Password – Advised during induction brief

Subsequent sessions will start with the window shown in

Figure 4. Click **“Connect”** to start the session.

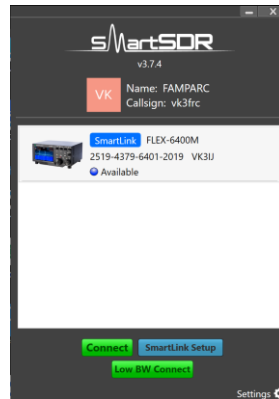


Figure 4 - SmartSDR startup window

### 3.3 TURN OFF CAT AND DAX

By default, when you start SmartSDR the software also starts the CAT and DAX support programs. Unless you are using digital modes, you probably don't need either CAT or DAX running. You can stop them from starting by default by deselecting them in the *Settings* menu.

If you do want to try digital modes, then you will need the DAX program. The DAX software lets you route the audio to other applications on your computer, such as digital mode decoding software. For more information, see the useful links section of this primer.

### 3.4 SELECT PROFILES

Different users will change various settings on the Flex and when you login you will see the settings however the previous member left them. If you would prefer to always start from the same basic settings and views, the first thing to do is select the **FAMPARC Default profiles**.

The Flex has three profile domains:

- Global Profile: to set the band, frequency, and pan-adaptor display
- Transmit Profile: to set the transmit power and tuning power
- Microphone Profile: to set the equaliser settings and source settings for the input microphone.

We have created a FAMPARC Default Profile for each of these domains. The FAMPARC default settings assume you just want to get on the air from a PC or laptop.

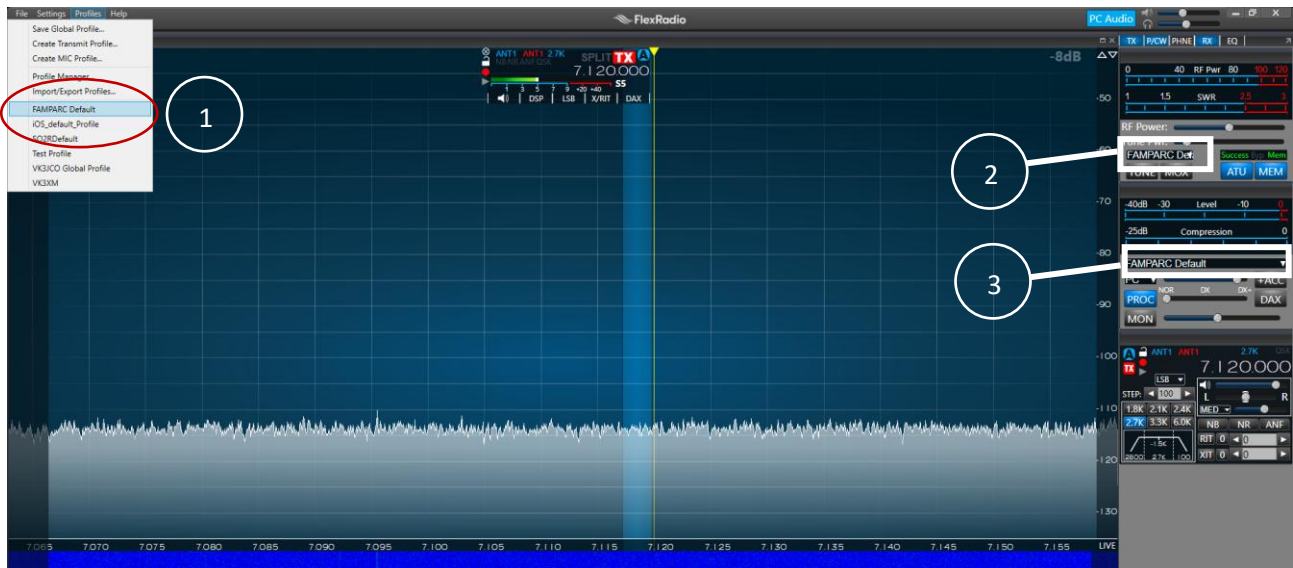


Figure 5 - Selecting profiles

1	<b>Set the Global Profile:</b> From the Profiles menu, select <i>FAMPARC Default</i> .
2	<b>Set the Power Profile:</b> From the power drop-down, select <i>FAMPARC Default</i> .
3	<b>Set the Microphone Profile:</b> From the microphone drop-down, select <i>FAMPARC Default</i> . Make sure the microphone type is <i>PC</i> .

### 3.5 SMARTSDR MAIN SCREEN

These are the controls for basic operations.

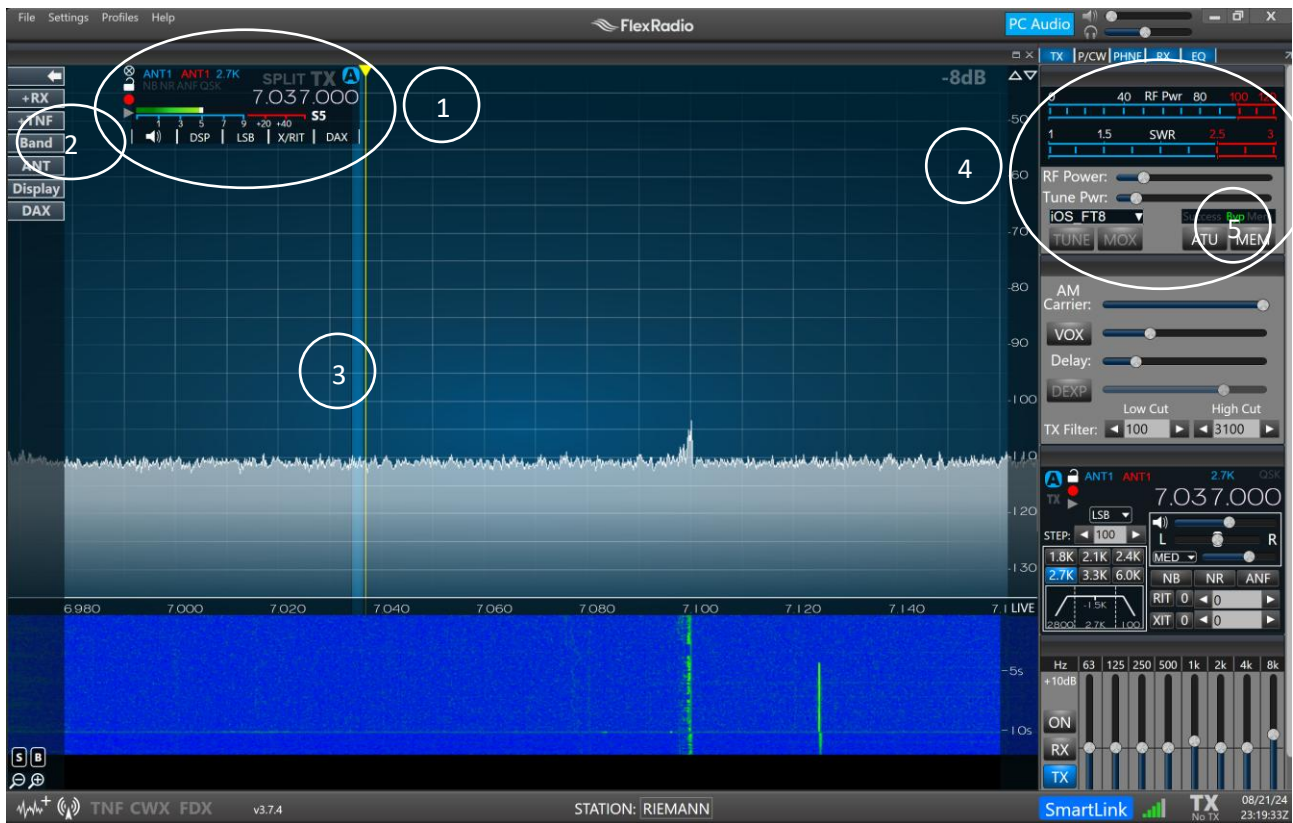


Figure 6 - SmartSDR main screen

<p>1</p>	<p><b>Change Frequency:</b> Click on the numbers and enter the digits you need. Alternately, see #3 below.</p> <p><b>Change Mode:</b> Click on “LSB” to open a mode selector. Select the mode you need.</p>
<p>2</p>	<p><b>Change Band:</b> Click on “Band” to open a band selector. Select the band you need.</p>
<p>3</p>	<p><b>Change Frequency:</b> Drag the marker to your desired frequency. For fine tune adjustments, hover your mouse over the marker and use the mouse wheel.</p> <p><b>Change Bandwidth:</b> Drag the marker width to increase or decrease the bandwidth</p>
<p>4</p>	<p><b>SWR:</b> Observe the SWR on the digital meter.</p> <p><b>Change Power:</b> Drag the “RF Power” slider to set the power level. Maximum power is 100 Watts.</p>
<p>5</p>	<p><b>ATU:</b> It is necessary to re-tune the ATU after changing frequency.</p> <p>If you switch the <b>MEM</b> button on then the radio will remember the ATU settings when you return to that frequency later.</p>



### 3.6 TRANSMITTING VOICE

To transmit voice, you can use the laptop built-in microphone, or you can use a USB headset microphone. There are a couple of settings to check in order to make the audio work properly.

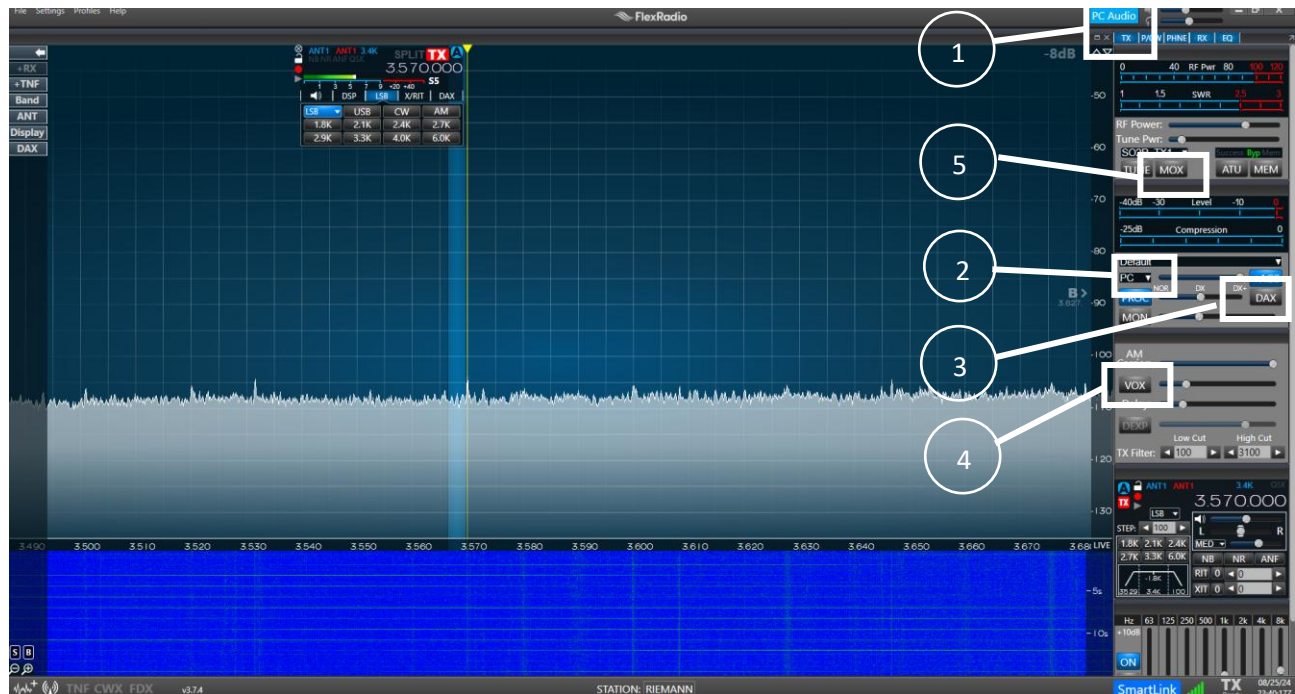


Figure 7 – Setting up audio

1	<b>Receive Audio:</b> Click the “PC Audio” button to route the audio through your PC speakers. “On” is when the button is blue. If you do not switch this on, your audio will be coming through the 6400M speakers in the club shack!
2	<b>Mic Profile:</b> Select the “PC” profile from the drop-down. This will use your computer microphone input, which is usually either the built-in microphone or a USB microphone. (Note: do not choose “MIC”. It tells the Flex to use the MIC port on the rear of the radio in the shack)
3	<b>Turn DAX off:</b> ie, Not Blue! (If DAX is on, then the PC microphone is disabled. You have to set up all of the audio routing using the DAX application)
4	<b>VOX (Optional):</b> If this button is on (blue) then you will transmit when you talk – normal VOX function, but typically not desirable so leave it off.
5	<b>MOX:</b> This is the standard <b>PTT button</b> . Press MOX on and speak into your PC microphone, then press MOX off when you are finished.



## 3.7 OPERATING WITH CW

### 3.7.1 LISTENING TO CW

To listen to CW, just:

- Select the CW mode
- Tune to the frequency

### 3.7.2 SENDING CW

The Flex supports text-to-Morse transmitting only. You cannot hand-send morse remotely using the Flex.

To send a Morse code message:

- Click the **CWX** button ((1) in bottom-left corner of screen) to open the CW Transmit window.
- Type the message in the CW send window and click “Send”.
- Alternate: Switch on the “**Live**” button and the Morse is sent out as soon as you press each letter.

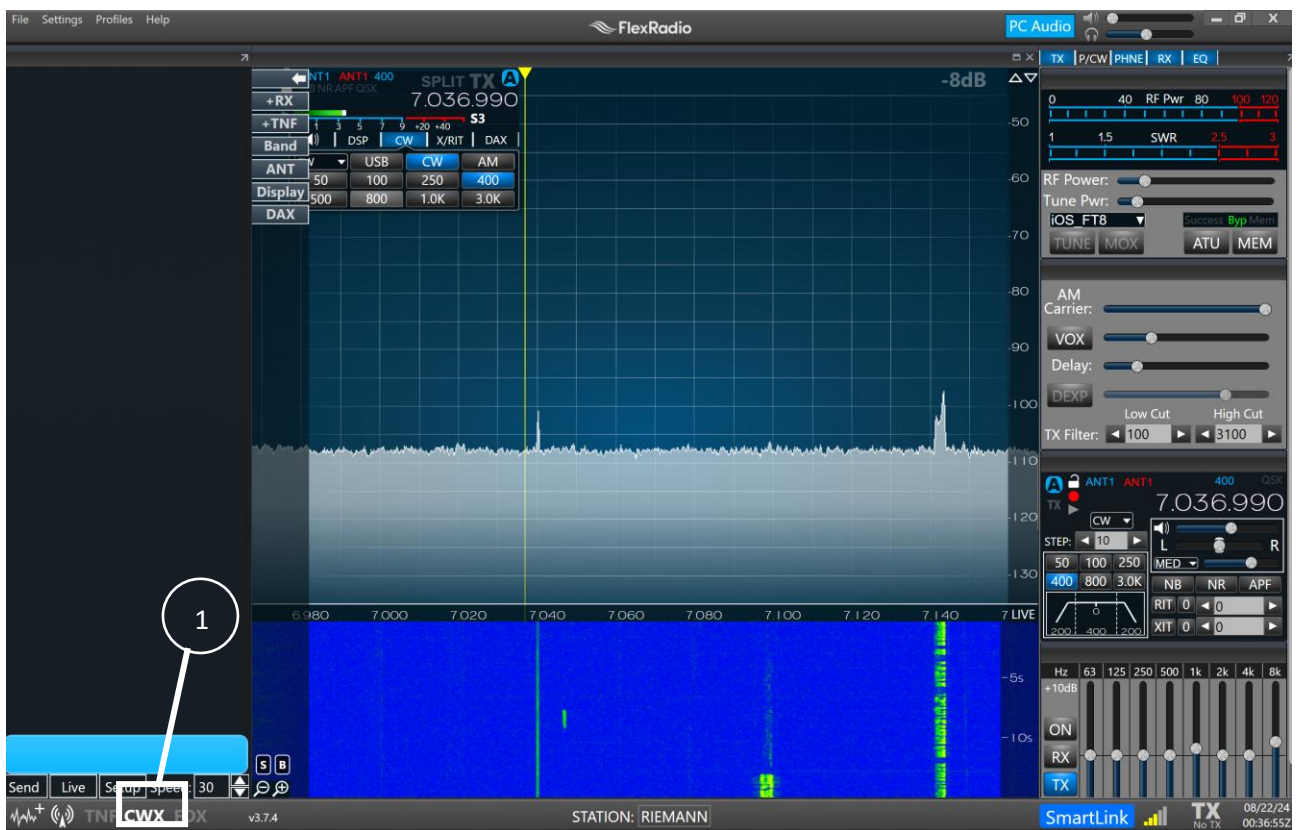


Figure 8 - SmartSDR with CWX window

## 3.8 ANTENNAS

### 3.8.1 'ANT 1' IS THE FAN DIPOLE

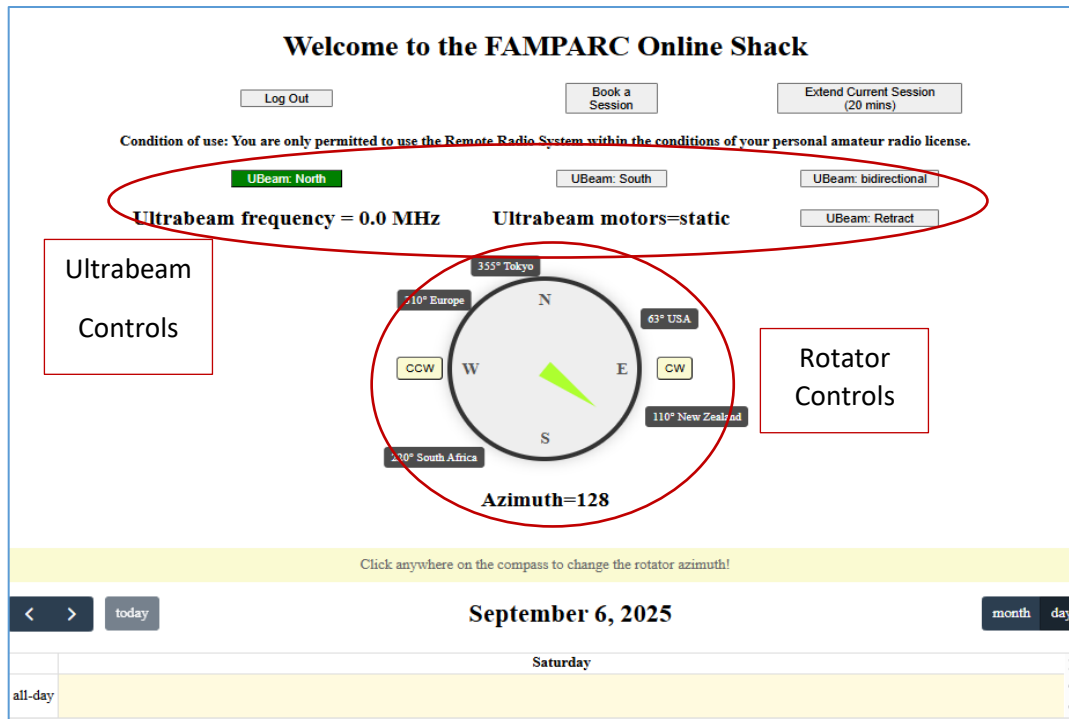
Antenna 1 of the Flex is connected to the club fan dipole. The fan dipole is resonant on 80/40/20/10 metres.

### 3.8.2 'ANT2' IS THE ULTRABEAM

Antenna 2 of the flex is the Ultrabeam.

## 3.9 ROTATOR

The Online Shack provides access to the features of the Ultrabeam and the Rotator.



### 3.9.1 ULTRABEAM

#### 3.9.1.1 General operation

By default, the Ultrabeam starts each session oriented to the north. You can flip the focus to the south by pressing the 'Ubeam: South' button or split the focus in both directions by pressing the 'Ubeam: Bidirectional' button.

- **Band changes:** Be aware that when you change band on the Ultrabeam, it will take some time for the beam tapes to adjust to their new resonant position. In the shack, you hear the 'click-click' sound to prompt you to wait before transmitting, but at home there is no audible prompt.
- **Wait for the Ultrabeam!** If you do a band change, please wait before transmitting. This gives the Ultrabeam time to extend or retract the tapes to the new band. On the web page, while the tapes are moving, you will see "**Ultrabeam motors=active**", which indicates that the tapes are not yet fully in place.
- **Interlock.** There is an interlock failsafe to stop transmission while the tapes are adjusting. However, we encourage patience as good practice in order to avoid unnecessary transmissions.

#### 3.9.1.2 Bands

The Ultrabeam covers 40 metres to 6 metres. **It does not cover 80 metres!**

To operate on 80 metres, please choose Antenna 1 in the Flex (the Fan Dipole) for both transmit and receive.

### 3.9.2 ROTATOR

Adjust the rotator by clicking in the compass in the desired direction. The red arrow indicates your desired direction and the green arrow shows the current azimuth of the rotator.

~END~