

## G3WSC Hotspot — How to Access

DASHBOARD: <http://pi-star.local>

The Hotspot enables a suitably programmed UHF radio to access the various digital networks online. At present DMR, D-Star and system Fusion are programmed on the Hotspot.

RF access frequency 438.8 MHz transmit and receive (i.e. simplex). Colour code (CC) 1, and Time Slot (TS) 2.

Program your radio talk groups (TG) as per regular repeaters.

For **Brandmeister** TGs simply use the advertised TG number, for example 9990 for the Parrot. See <https://brandmeister.network/?page=talkgroups> for details.

For **Phoenix** TGs prefix the TG number with 20xxxxx to make up seven digits. For example, to go out on TG9990 (Parrot audio test TG), program TG2009990 in your radio's code plug. The Hotspot knows that TGs prefixed with '20' and made up to seven digits with leading '0's will be directed to the Phoenix network. See <http://www.dmr-uk.net/index.php/layout/> for details.

For **FreeDMR** TGs prefix the TG number with 30xxxxx to make up seven digits. For example, to go out on TG235, program TG3000235 in your radio's CPS. The Hotspot knows that TGs prefixed with '30xxxxx' and made up to seven digits with leading '0's will be directed to the FreeDMR network. See <https://www.freedmr.uk/index.php/united-kingdom-talk-groups/> for details.

To program your rig do the following:

In the CONTACTS list add the following TGs (if not already there).

For BM add the TGs you want from this list: <http://www.dmr-uk.net/index.php/layout/> something like:

Contact name	Call Type	Talk Group (TG)
1 WW	GROUP	1
2 Euro	GROUP	2
3 USA	GROUP	3
etc		
etc		
9990 Echo	PRIVATE	9990

The name is unimportant, but the call type and TG must be correct. Your code plug may have a different layout but should have the similar column headings.

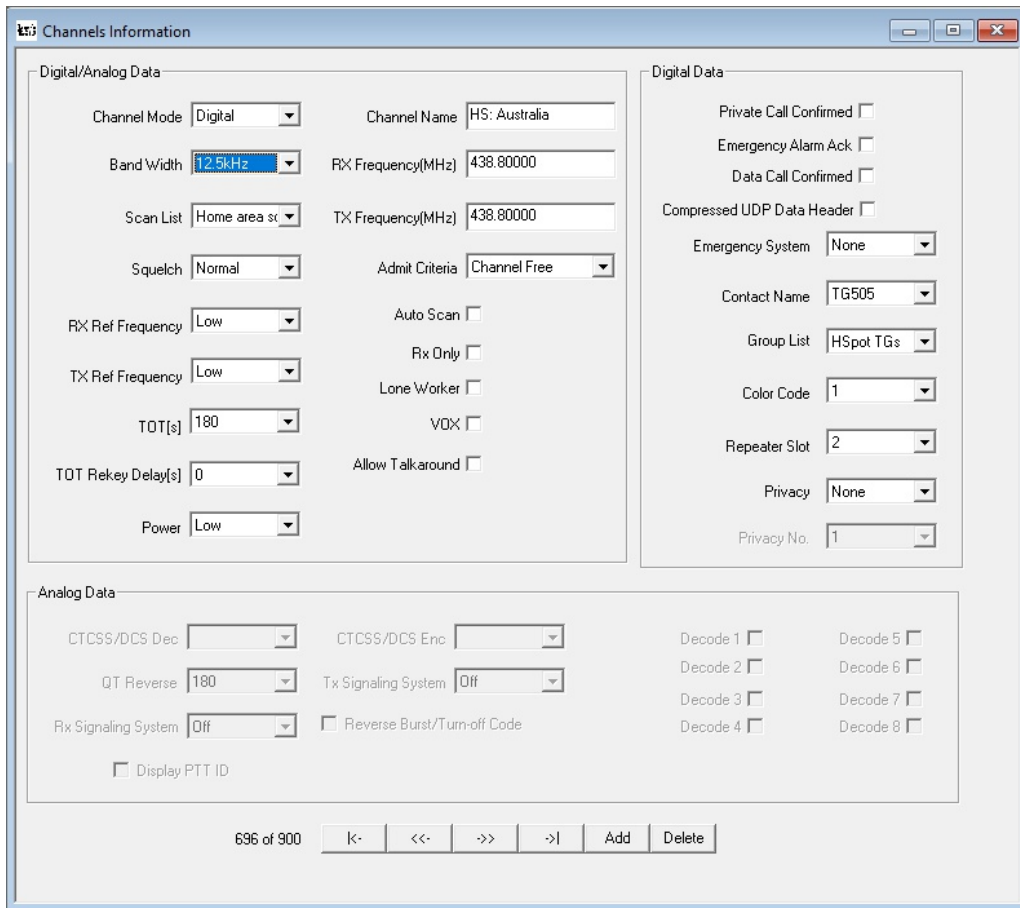
For Phoenix add those you wish from these if necessary from <http://www.dmr-uk.net/index.php/layout/>

<b>Name</b>	<b>Call Type</b>	<b>TG ID</b>
WORLD WIDE (CALLING)	GROUP	2000001
EUROPE (CALLING)	GROUP	2000002
WORLD WIDE ENGLISH (CALLING)	GROUP	2000013
UK WIDE - USER ACTIVATED 1	GROUP	2000080
UK WIDE - USER ACTIVATED 2	GROUP	2000081
UK WIDE - USER ACTIVATED 3	GROUP	2000082
UK WIDE - USER ACTIVATED 4	GROUP	2000083
UK WIDE - USER ACTIVATED 5	GROUP	2000084
WORLD WIDE ENGLISH - USER ACTIVATED 1	GROUP	2000113
WORLD WIDE - USER ACTIVATED 1	GROUP	2000119
WORLD WIDE ENGLISH - USER ACTIVATED 2	GROUP	2000123
WORLD WIDE - USER ACTIVATED 2	GROUP	2000129
FREESTAR NETWORK (USER ACTIVATED)	GROUP	2023426
UK WIDE (CALLING)	GROUP	2000235
UK WIDE (CALLING / USER ACTIVATED)	GROUP	2002350
YSF CQ-UK WIRES-X (USER ACTIVATED)	GROUP	2002351
HUBNET UK (USER ACTIVATED)	GROUP	2023526
RAYNET UK (USER ACTIVATED)	GROUP	2023531
SCOTLAND CHAT (USER ACTIVATED)	GROUP	2023550
REGIONAL : SOUTH EAST ENGLAND	GROUP	2000801
REGIONAL : SOUTH WEST ENGLAND	GROUP	2000810
REGIONAL : NORTH WEST ENGLAND	GROUP	2000820
REGIONAL : MIDLANDS	GROUP	2000830
REGIONAL : EAST OF ENGLAND	GROUP	2000840
ECHO SERVER	PRIVATE	2009990

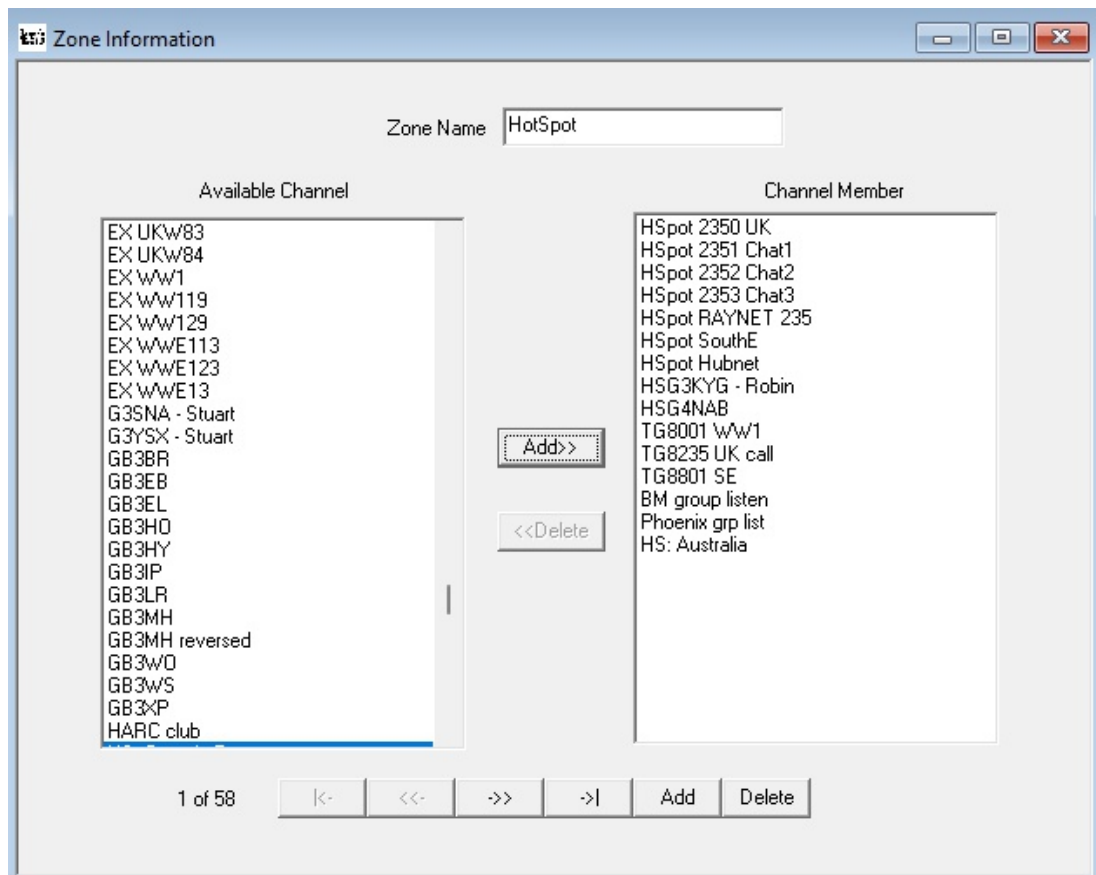
For FreeDMR network TGs add some of these from <https://www.freedmr.uk/index.php/united-kingdom-talk-groups/>

<b>Name</b>	<b>Call type</b>	<b>TG ID</b>
UK Central	Group	3002350
Chat 1	Group	3002351
Chat 2	Group	3002352
Chat 3	Group	3002353
Chat 4	Group	3002354
Chat 5	Group	3002355
Chat 6	Group	3002356
Isle of Man	Group	3002357
London	Group	3002358
Kernow & Jersey	Group	3002359
South West	Group	3023500
South East	Group	3023510
North West	Group	3023520
Yorkshire	Group	3023530
Ireland	Group	3023540
Scotland Chat	Group	3023550
Scotland Alba Allstar Multi	Group	3023551
Scotland East	Group	3023557
Scotland H & I	Group	3023558
Scotland West	Group	3023559
North East	Group	3023560
Wales	Group	3023570
West Midlands	Group	3023580
East Midlands	Group	3023590
OZ-DMR Chat	Group	3023595
East Anglia	Group	3023490
Echo/Parrot	Private	3009990

Then create a **CHANNEL** with each TG from each network that you wish to have on your rig. Channel name is your choice. Make it something that means something to you. For example **ECHO 3009990** for the echo/parrot server. You will probably only want a few of the above from each network. Your choice. There are many more



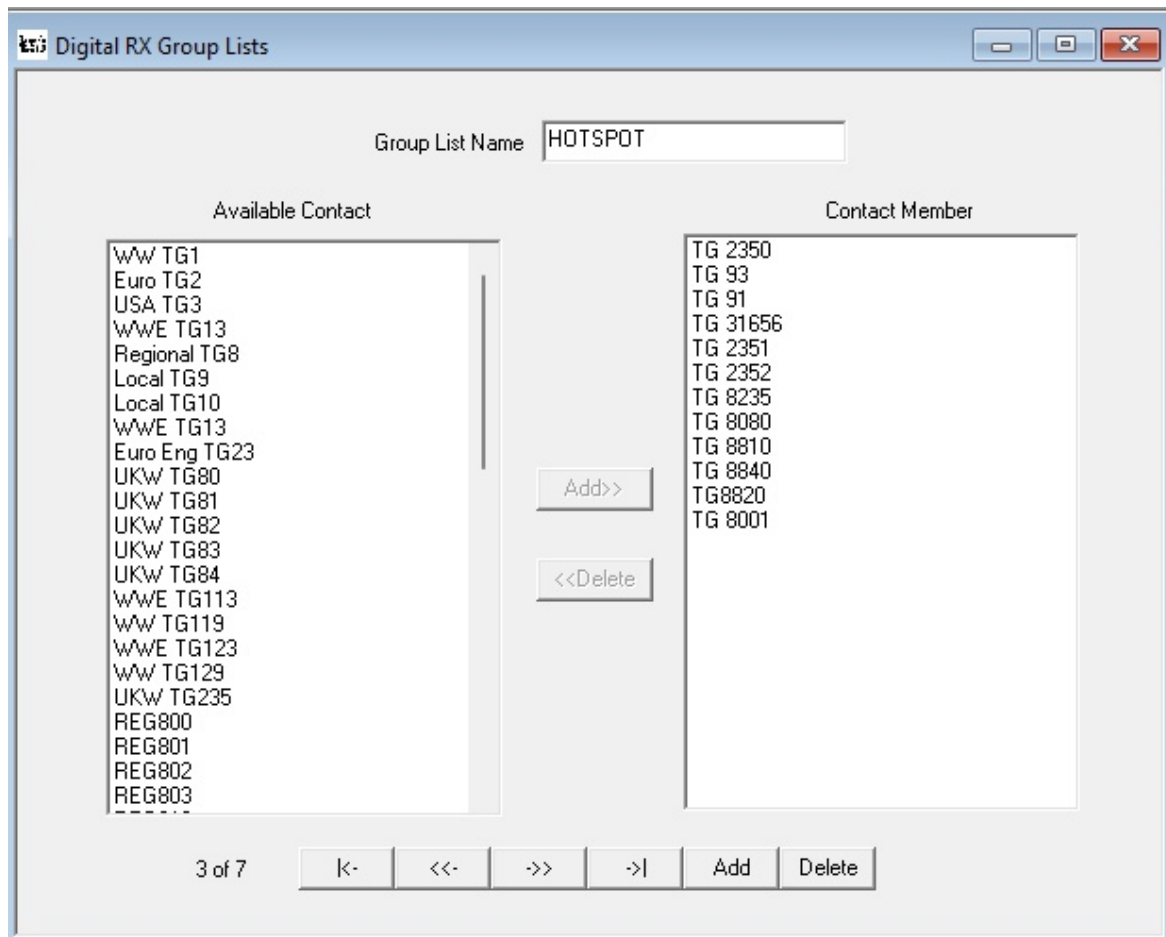
TGs all around the world if you have the patience to key them all into individual channels... Below is an example of one I created on my handheld Retevis RT3 for calling up Australia via my personal Hotspot.



Next create a **ZONE**, called, for example, **Hotspot**, and add the channels you have created into it. Save the codeplug and write it to your rig.

**You're done: many happy hours of working the world!**

### *Addendum*



In addition to the above suggested code plug programming, it is worth creating a group list (perhaps called "Hotspot", as shown above) and adding a number of talk groups to it, then include it in the individual channel setups. This is effectively equivalent to scanning in the FM radio, except that the group list TGs are simultaneously monitored, and as soon as one of the TGs becomes active your radio will come alive. If you want to talk to the station heard, as soon as he stops transmitting (and within three seconds or so) you press your transmit button back to him and your radio (most radios) will set itself on that TG as if you had set it manually. You can then complete the QSO in the normal manner.

Additionally, if you include TG9 in the group list, you will hear periodic beacon transmissions and occasionally other service messages from the three networks enabled on the G3WSC hotspot.

## D-Star

**Programming a D-STAR** (Digital Smart Technologies for Amateur Radio) radio involves several steps to set up frequencies, repeaters, and other parameters. Here's a general guide on how to program a D-STAR radio:

**Obtain Radio Programming Software:** First, you'll need the programming software for your specific D-STAR radio model. This software is typically provided by the manufacturer and can usually be downloaded from their website.

**Install Software and Connect Radio:** Install the programming software on your computer and connect your D-STAR radio to your computer using the appropriate cable (usually provided with the radio).

**Download Repeater Lists (Optional):** If you want to access repeaters, you might want to download a repeater list for your area. These lists are often available online from amateur radio websites or organizations.

**Configure Radio Settings:** Open the programming software and configure the basic settings of your radio, such as your call sign, frequency ranges, power levels, and other preferences.

**Enter Repeater Information (if using repeaters):** If you plan to use repeaters, enter the frequencies, offsets, and other relevant information for the repeaters you want to access. This information can typically be found in repeater directories or online databases.

**Set Up D-STAR Settings:** Configure the D-STAR settings on your radio, including your D-STAR registration (if required), your desired reflector or gateway settings, and other digital-specific parameters.

**Save and Write Changes to Radio:** Once you have entered all the necessary information, save your programming file and write the changes to your radio. This process will vary depending on the programming software and radio model you are using, but there should be an option to upload your settings to the radio.

**Test Your Setup:** After programming your radio, it's a good idea to test it out to ensure that you can transmit and receive signals successfully. You can do this by trying to make contacts with other D-STAR users or by accessing local repeaters.

**Make Adjustments as Needed:** If you encounter any issues or if you want to make changes to your programming later on, you can always go back to the programming software, make adjustments, and write the changes to your radio again.

**Stay Updated:** Keep your programming software and radio firmware up to date to ensure compatibility with any changes or advancements in the D-STAR system.

Remember that specific instructions may vary depending on your radio model and the software you're using, so it's always a good idea to consult the user manual and any documentation provided by the manufacturer. Additionally, reaching out to local amateur radio clubs or online communities can be a great way to get assistance and tips from experienced operators.

## **System Fusion (YSF)**

Programming a System Fusion radio involves configuring various settings such as frequencies, repeaters, digital modes, and other parameters. Here's a general guide on how to program a System Fusion radio:

**Obtain Radio Programming Software:** First, you need the programming software for your specific System Fusion radio model. This software is usually provided by the manufacturer and can be downloaded from their website.

**Install Software and Connect Radio:** Install the programming software on your computer and connect your System Fusion radio to your computer using the appropriate cable (usually provided with the radio).

**Download Repeater Lists (Optional):** If you plan to use repeaters, you might want to download a repeater list for your area. These lists are often available online from amateur radio websites or organizations.

**Configure Radio Settings:** Open the programming software and configure the basic settings of your radio, such as your call sign, frequency ranges, power levels, and other preferences.

**Enter Repeater Information (if using repeaters):** If you intend to use repeaters, enter the frequencies, offsets, tones, and other relevant information for the repeaters you want to access. This information can typically be found in repeater directories or online databases.

**Set Up System Fusion Settings:** Configure the System Fusion settings on your radio, including the digital mode (DN, VW, FM), your desired repeater linking options (if applicable), and other digital-specific parameters.

**Save and Write Changes to Radio:** Once you have entered all the necessary information, save your programming file and write the changes to your radio. This process will vary depending on the programming software and radio model you are using, but there should be an option to upload your settings to the radio.

**Test Your Setup:** After programming your radio, test it out to ensure that you can transmit and receive signals successfully. You can do this by trying to make contacts with other System Fusion users or by accessing local repeaters.

**Make Adjustments as Needed:** If you encounter any issues or if you want to make changes to your programming later on, you can always go back to the programming software, make adjustments, and write the changes to your radio again.

**Stay Updated:** Keep your programming software and radio firmware up to date to ensure compatibility with any changes or advancements in the System Fusion system.

Remember to consult the user manual and any documentation provided by the manufacturer for specific instructions related to your radio model. Additionally, reaching out to local amateur radio clubs or online communities can be helpful for getting assistance and tips from experienced operators.

*Document v2.1*