



# FIVE AND NINE PLUS

THE OFFICIAL NEWSLETTER  
OF THE  
APPLEDORE AND DISTRICT  
AMATEUR RADIO CLUB

Club Callsigns: G2FKO and GX2FKO  
Web Site : [www.adarc.co.uk](http://www.adarc.co.uk)

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February 2024

### EDITORIAL

This month's meeting on **February 19<sup>th</sup>** is the second part of **Phil's (G6DLJ) excellent talk on Yaesu's digital Fusion system**. The Meeting format is flexible so if you have any C4FM/DMR problems - **bring your rig to the meeting**. There will also be an opportunity for Q&A on all matters relating to digital use in the South West.



**Next month is our AGM** and a chance to vote for your Committee to steer the Club through the next Club year. Next month's 5&9 will indicate which present Committee members are willing to stand for re election and of course, please let any Committee member know if you also would like to stand.

During January, there have been considerable developments on the digital mode front as summarised in the Local Repeaters/Gateways section of this Newsletter. Digital is a bit like Marmite but I have to say that providing the signal is strong enough, the quality is unbelievable. Of course the downside is that if isn't then you will hear nothing!

Our **April Meeting** has been penciled in as the annual Open Meeting when family and friends are invited and the meeting topic is non-radio based. Attendance by family and friends in previous years has been sparse and hence it would be interesting to know whether members feel if there is still a need for such a Meeting.

Finally the Newsletter ends with information kindly provided by Rob (G0HFN) which includes advice on how to change digital rooms eg within GB3DN and an update on GB3DN.

So that's it for this month

Terry (G4CHD)

### CLUB MEETINGS

Meetings are held at the **Appledore Football Social Club** starting at 7.30pm for 8.00pm. Visitors always welcome.

For further information, please contact the Secretary John (G3JKL) - see panel above for contact details.

Date	Topic
February 19 <sup>th</sup>	'Fusion - Part 2' by Phil (G6DLJ)
March 19 <sup>th</sup>	AGM
April 15 <sup>th</sup>	Open Meeting - possibly via TEAMS TBC

### REPORT ON OUR JANUARY MEETING

#### Bring & Buy

There was a very good attendance which shows how popular Bring & Buy meetings are. We all need to either declutter or change rigs etc and such meetings help us to do this. It's also a wonderful opportunity to have a good old natter and catch up with all the news or even get that problem that's been worrying you solved.



## LOCAL REPEATERS/GATEWAYS

### **GB3DN VHF Fusion & FM Repeater - Stibb Cross**

Tone 77Hz (for analogue FM)  
Repeater TX 145.6375 RX 145.0375  
Keeper Tony G1BHM  
<http://www.g0rql.co.uk/gb3dn.htm>

### **GB3ND UHF DMR Repeater - Holsworthy**

TX 439.7375 RX 430.7375 colour code 1  
Slot 1 local RF Slot 2 SW Cluster  
Keeper Tony G1BHM

### **GB7FB UHF DMR Repeater - Bideford**

TX 439.475 RX 430.475 Colour code 5  
Slot 1 local RF Slot 2 SW Cluster  
Keeper Drew M0MFS

### **GB7LZ UHF DMR Repeater - Winkleigh**

TX 430.9125 RX 438.5125 Colour code 1  
Slot 1 local RF Slot 2 SW Cluster

### **GB3LZ VHF Fusion & FM Repeater - Winkleigh**

Tone 77Hz (for analogue FM)  
Repeater TX 145.6625 RX 145.0625  
Keeper Simon G4MQQ

### **MB6DT VHF Fusion Gateway**

Frequency 144.8125 MHz.  
Gateway Keeper Darren (2E0LVC)

## LOCAL NETS

Weekday Zepp FM Net: Mon/Tues/Thurs/Fri :  
145.450MHz - 4pm - 5pm  
Wed via GB3DN - 4pm - 5pm  
Net Control : Len (M0SXY)

2m Elevenses FM Net: Mon/Wed/Fri :  
11 - 12.00 noon via GB3DN  
Net Control ; Mike (G3PGA)

Friday Night 2m Net: Friday : 145.450 FM, 8 - 9pm

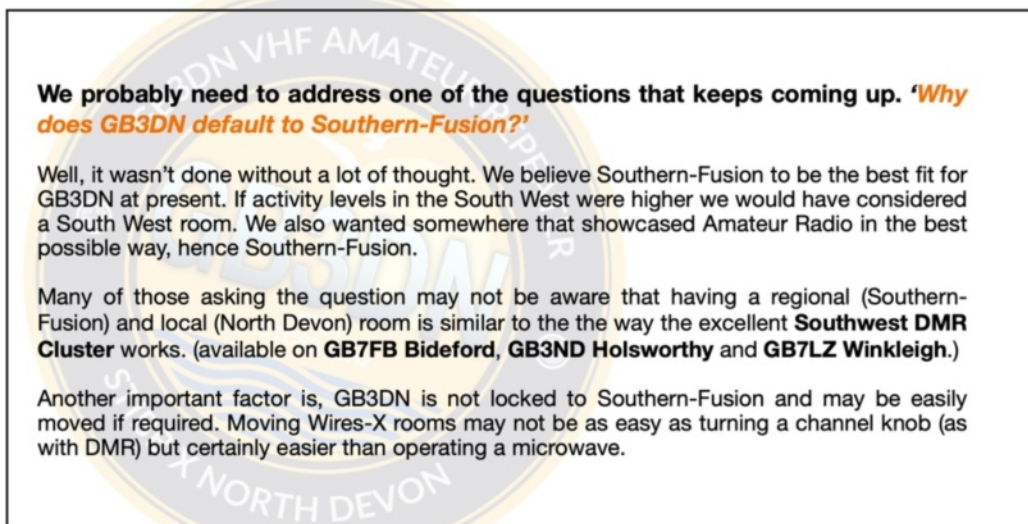
Sunday Top Band Net: Sunday 1.860 MHz  
9.30 - 10.15am  
(LSB - 32W pep max)

2m SSB Nets: Wed: 8 - 9pm 144.260MHz  
USB SSB (Vertical polarised)  
Sun: approx 10.30am (follows  
Top Band Net) 144.260MHz  
USB SSB (Vertical polarised)

Sunday FM Net: Sunday: 11 to noon via GB3DN  
Net Control : Chris (G0FJY)

**Note :-** FM Nets which use GB3DN as shown above  
will continue despite the recent changes.  
GB3DN is disconnected from the Southern  
Fusion Room just before the listed start and  
end of each FM Net.

**Rob (G0HFN)** has kindly sent me the following which explains how much thought went into deciding which Room GB3DN defaults to and an update on GB3DN :-



**We probably need to address one of the questions that keeps coming up. 'Why does GB3DN default to Southern-Fusion?'**

Well, it wasn't done without a lot of thought. We believe Southern-Fusion to be the best fit for GB3DN at present. If activity levels in the South West were higher we would have considered a South West room. We also wanted somewhere that showcased Amateur Radio in the best possible way, hence Southern-Fusion.

Many of those asking the question may not be aware that having a regional (Southern-Fusion) and local (North Devon) room is similar to the the way the excellent **Southwest DMR Cluster** works. (available on **GB7FB Bideford**, **GB3ND Holsworthy** and **GB7LZ Winkleigh**.)

Another important factor is, GB3DN is not locked to Southern-Fusion and may be easily moved if required. Moving Wires-X rooms may not be as easy as turning a channel knob (as with DMR) but certainly easier than operating a microwave.

	LOCAL	REGIONAL
<b>GB3DN</b> Stibb Cross	North Devon	Southern-Fusion
<b>GB3ND</b> Holsworthy DMR <small>GB7FB GB7LZ</small>	TG9 Local	TG950 South West Cluster



## SIMPLE STEP BY STEP GUIDE FOR MOVING

# GB3DN

FOR THE PURPOSES OF LOCAL DIGITAL QSO'S



## Changing rooms on GB3DN for local digital QSO's/local nets

It has been suggested that a local digital option on GB3DN similar to that of GB3ND's DMR Slot 1 would be useful. This would give local digital coverage within DN's RF footprint without tying up the default room, currently Southern-Fusion. One way to do this would be to connect the repeater to its own room. (North-Devon) It is easy to do. Here is a hint sheet based on the popular FTM-400. Current radios including the FT500 are similar. However, owners of earlier equipment should consult the 'model specific' Wires-X manual on Yaesu's website.



1. Make sure radio is tuned to GB3DN and in digital mode.

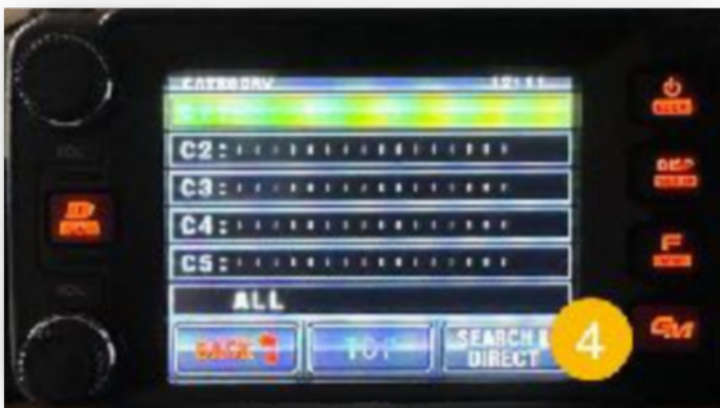
2. Press hold and release DX button



Radio connects to GB3DN

note: This screen shows GB3DN is connected to Southern Fusion.

3. Press the down arrow shown centre screen.



4. Press Search and Direct button

Hint Sheet

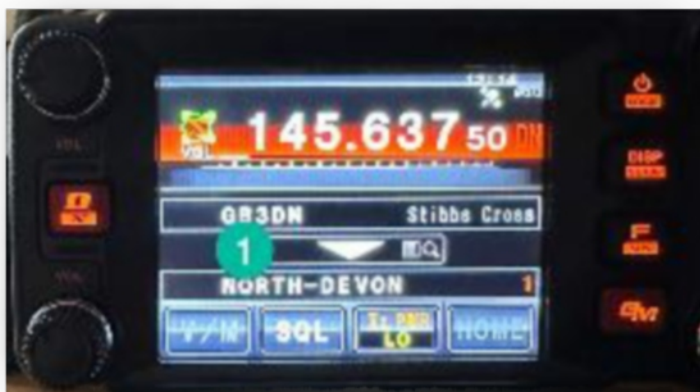


5. Type North-Devon in text box (North-Devon is GB3DN's own room.)

6. Press enter



7. After a few seconds North-Devon room will be shown on screen (shown). Tap to connect to the room.



You are now disconnected from Southern Fusion and connected to North-Devon, GB3DN's own room.

QSO's are now limited to GB3DN's RF footprint and anyone connected to GB3DN's room (unlikely)



When you have finished your local digital QSO please return GB3DN to Southern Fusion. Just follow the guide again substituting Southern-Fusion for North-Devon.

**note:** You can add rooms to memory by clicking the ADD button when the screen shown left is displayed during the connect

## FTM500D

The FTM500D works in a similar manner but in addition uses the function knob to navigate and the sub dial knob to save rooms to memory.

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## FT5D

The FT5D is broadly similar to the FTM400.

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## Other radios

991A, FT70, FTM-100: Download the model specific Wires-X manual.

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## What if?

Please remember, if you find you are unable move the repeater back onto Southern Fusion no-one is going to die or get upset with you. It's a hobby.

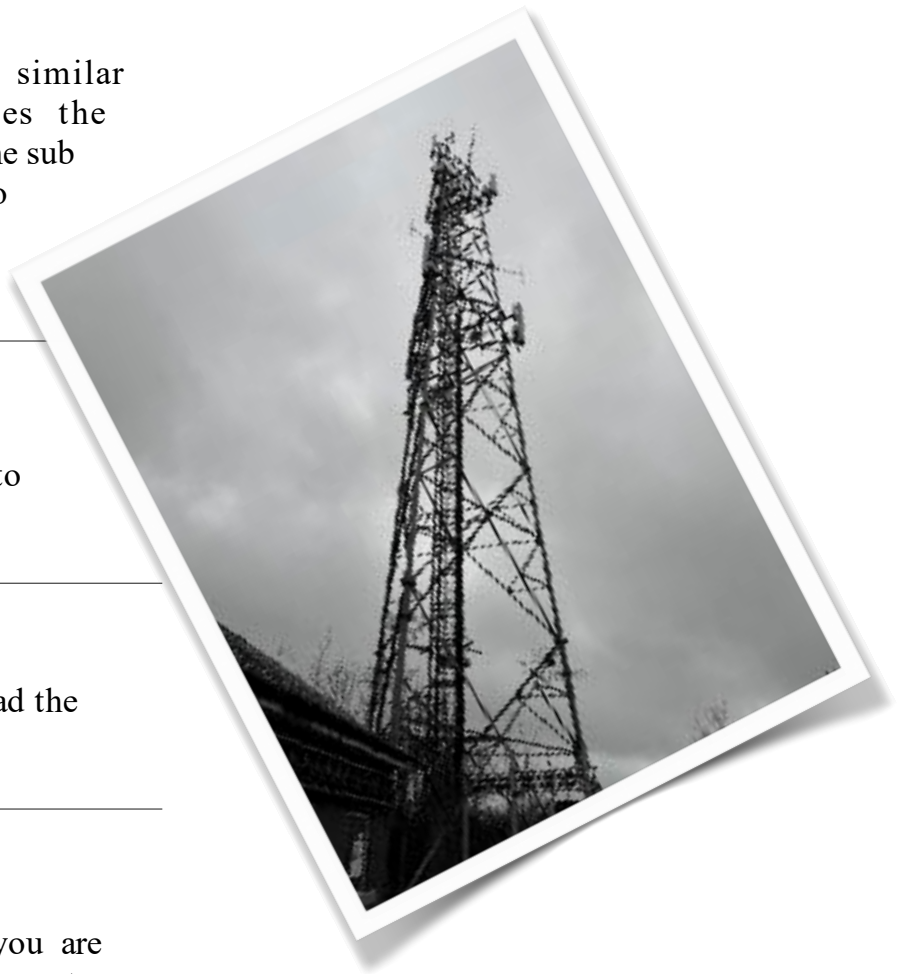
The repeater is clever enough to find its way back unaided after 30mins.

This is a basic hint sheet not a replacement for the manual that came with your radio.

Anything new like this may involve a bit of head scratching but Amateur Radio is about experimentation and self training.

If you get stuck, ask for help.

gb3nd@bosten.co.uk



Notes:

**Disconnect** from a room by pressing \* (star) on mic.

**Exit Wires-X** by press/hold and release DX button).

(Press/hold and release the DX button to check what room the repeater is in. Repeat to return to normal screen.)



## North Devon Repeater Group GB3DN update Jan 2024

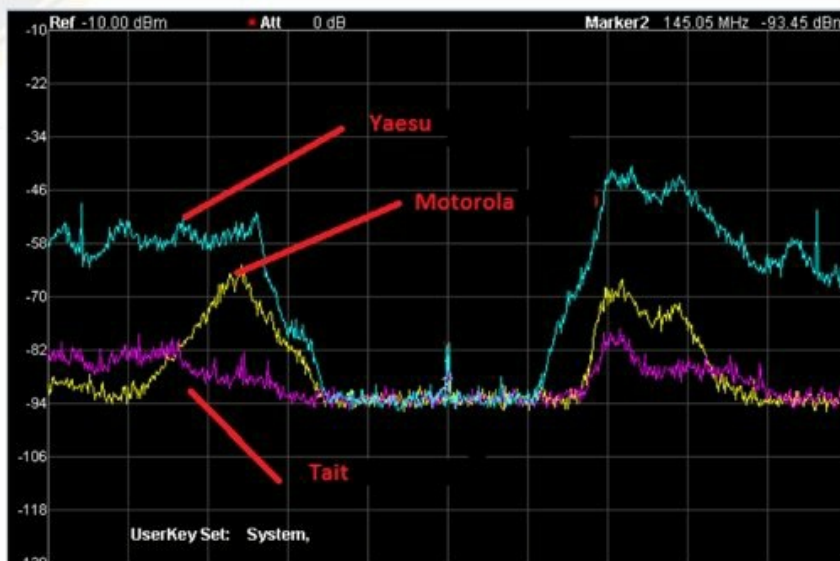
GB3DN has been in service for nearly 25 years so what better way to celebrate this than by fulfilling our aspiration to move it into the 21st century?

Around 2 years ago we bench tested a Yaesu C4FM repeater and it soon became apparent that transmitter phase noise was much higher than our existing professional TAIT FM repeater presenting challenges for the existing duplexer.

Cavity filters costing thousands of pounds would be required if we wished to maintain the repeaters on air performance.

On the secondhand market these cavities are very scarce and it has taken until now to resource a complete set at a reasonable price.

In addition, the repeater group did not feel an 'out of the box' digital solution would be appropriate for an established analogue repeater like GB3DN. There was an aspiration to enhance the FM user experience, not degrade it.



There are a number of regular nets that use the repeater so if changes and improvements were to be made, it was felt that, if possible, they should be done with minimal disruption. After all, if the primary aim was to increase use by adding a digital mode, losing current users would be counterproductive.

A new bespoke version of GB3DN went live on Sunday 14th January. It remains, as promised, a fully featured FM repeater but now includes a C4FM and Wires-X option. During this introductory phase the repeater will be running at half power. The intention is to increase it to full power later in the year.

Users with a preference for FM will be pleased to know GB3DN works pretty much as it did before. If you've not already done so, it is recommended you turn on tone squelch to mute digital noise. Please remember though, you will not hear digital QSO's so please check your radio's meter or activity light before pressing that PTT. Appledore or Holsworthy Amateur Radio clubs will be able to offer further advise.

We would like to thank YAESU UK and in particular Drew Brook MØMFS for their help.

Please note that GB3DN automatically switches off Wires-X linking during the following nets. Elevenses, Sunday and Holsworthy Club nets. Your net not listed? Let us know, email address below.

**North Devon Repeater Group**  
**Tony G1BHM Don GØRQL Rob GØHFN**  
**gb3dn@bosten.co.uk**