


SOUTHPORT & DISTRICT AMATEUR RADIO CLUB



Using the  
**GB30A**  
repeater for  
**Internet Linking**

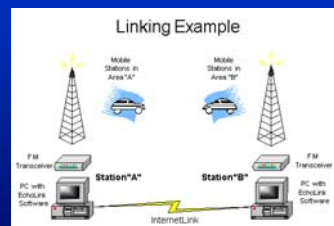
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**What is an Internet linked repeater?**

Linking Example



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**Why use GB30A?**

- Extends range of handheld and mobile Tx/Rx
- Allows low power VHF Tx/Rx to work stations abroad
- Great when solar cycle at minimum
- High quality audio easier to understand

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**What you will need**

- Tx/Rx with CTCSS encode
- Tx/Rx with narrow deviation
  - 2.5KHz on transmit
  - 12.5KHz on receive
- Microphone with numeric keypad
- Be in range of the repeater
- A list of IRLP nodes

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**Frequencies**

- The repeater runs on standard 2m repeater offset frequencies
  - **Output frequency:** It transmits (you listen) on 145.6125MHz
  - **Input frequency:** It listens (you transmit) on 145.0125MHz

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**Access Method**

- Most repeaters need some form of tone to 'open' them
  - 1750Hz tone burst
  - Sub-audible CTCSS tone
- GB30A is accessed using an 'encoded' CTCSS tone of 82.5Hz
- Your transceiver manual will tell you how to set this into your radio

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## Bear in mind...

- GB3OA has a 5 minute time-out – no warning
- GB3OA can be used for IRLP or EchoLink – different commands
- GB3OA's node number is 5302 on both systems

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## Bear in mind...

- If using a Tx/Rx with wide deviation
  - Back off from the microphone
  - Avoids interference
- GB3OA's footprint is deliberately small
  - Southport
  - Some of West Lancashire
  - Bits of Liverpool and Bootle

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## The Golden Rule!

- Listen...
- Listen...
- Then listen some more
- Internet linking has significant delays as paths are established between nodes

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## Using the repeater

- To have a local contact...
  - Listen
  - Anyone using the repeater?
  - Push PTT and call CQ
  - Listen, repeater may timeout
  - Anyone using the repeater?
  - Push PTT and call CQ
  - Enjoy the contact

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## Using the repeater

- Using IRLP (1)...
  - Listen
  - Anyone using the repeater?
  - Push PTT and wait for 2 seconds
  - Announce callsign
  - Key in required node number (#206003)
  - Release PTT
  - Wait 15 seconds

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## Using the repeater

- Using IRLP (2)...
  - Call CQ
  - Anyone come back?
  - Yes, enjoy the contact
  - No, call CQ again
  - Key 73 to disconnect from node

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## Using the repeater

- Using Echolink...
  - As for IRLP
  - Put a '#' in front of Echolink node numbers

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## Over to you

- Have a play with our Tx/Rx
- Bring in your own Tx/Rx and manuals to get CTCSS set up
- Go home and play
- Let us know your best contacts

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## Links

- [Echolink nodes](#)
- [IRLP nodes](#)
- [SADARC web-site](#)
- [GB30A repeater](#)

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