

Programming the BCR repeater for mixed mode Analog / Digital operation.

The BCR repeater can be used in analog mode along with your favorite digital modem. This application note describes how to program the BCR repeater so both modes can be used.

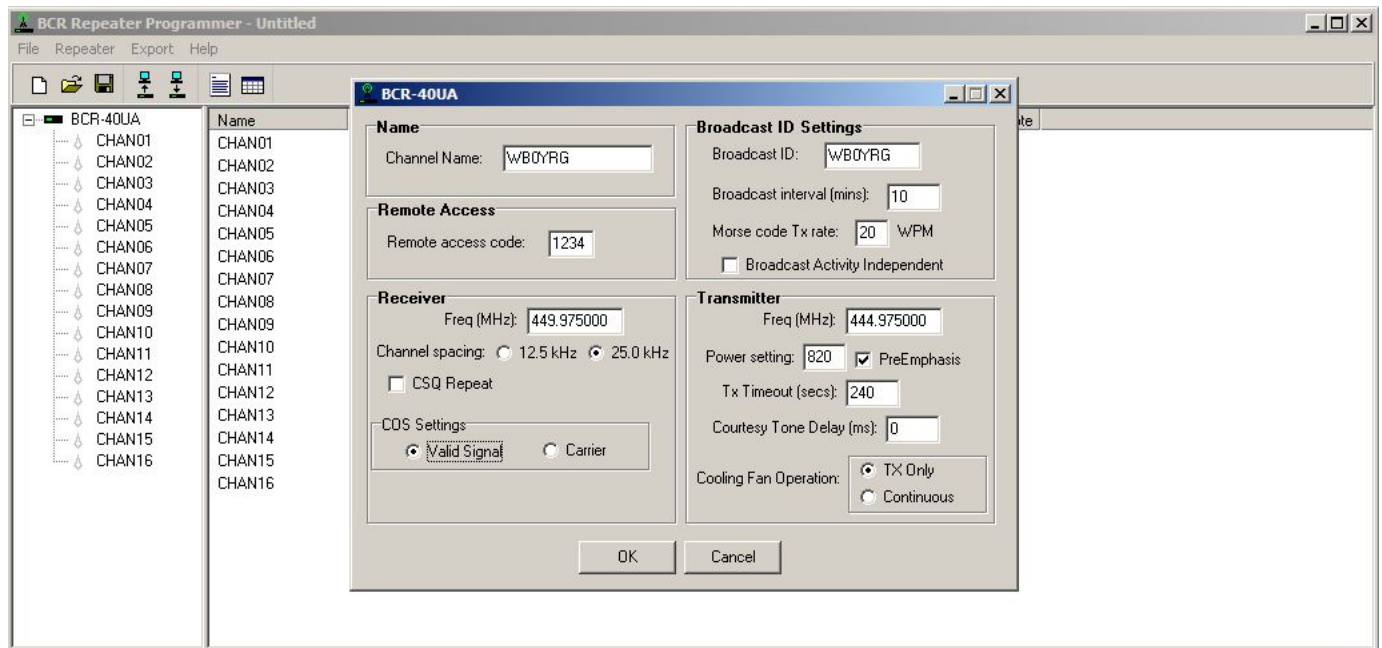
Oftentimes repeaters are set up to operate in only one mode: Analog or Digital. The BCR repeater can be programmed to support both modes allowing users of both mediums to work the repeater. Not at the same time, of course, but handle either analog calls or digital calls.

Set up your repeater channel for normal operation.

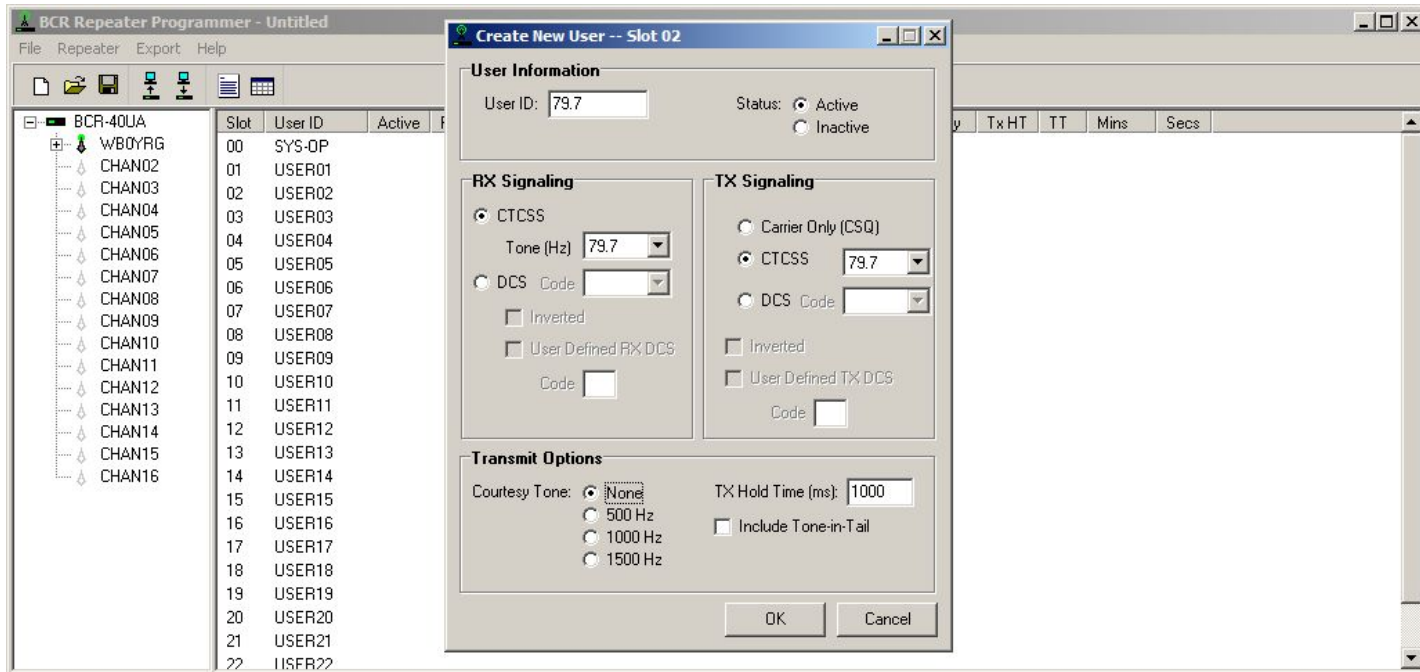
Pre-emphasis can be checked or unchecked.

If the external modem supports station ID, set the BROADCAST interval to 0 thus disabling the repeater controller's internal ID'er, otherwise, set it to something other than 0 for the internal controller to handle Station ID.

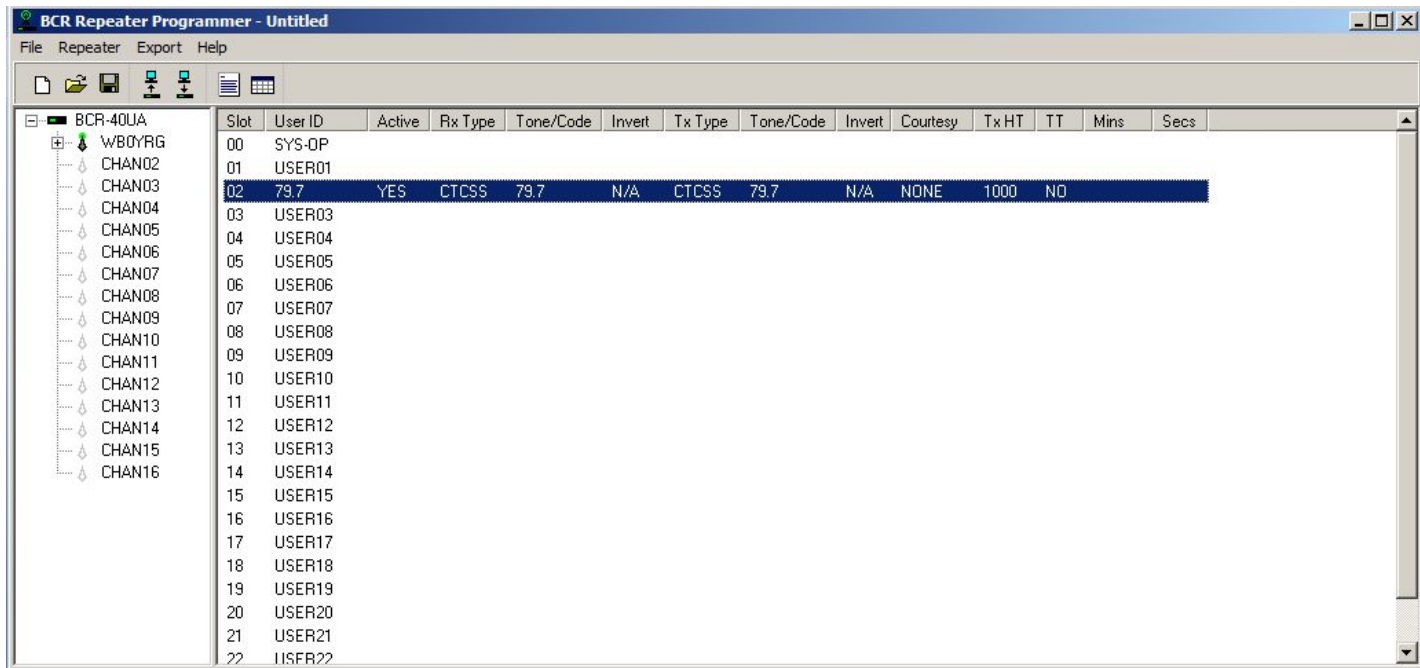
Check the COS Settings box to ensure the COS line asserts based on VALID SIGNAL. When this box is checked, the COS line on PIN 17 of the ACCESSORY Connector will go low when the repeater decodes a VALID CTCSS tone. See screen shot:



Next, you'll want to create a USER for SLOT2. **DO NOT CREATE A USER FOR SLOT1** as SLOT1 needs to be left blank. The reason is as follows: When the EXTERNAL PTT line is asserted, the BCR Repeater will mix Audio with the SUB Tone in SLOT1. This is by design. When transmitting digital data, you do not want to mix a sub-audible tone in with your DATA. Therefore, leave SLOT1 blank and use SLOT2. See screen shot example:



The user information screen shot is follows:



Once programmed, the internal repeater controller will handle analog calls using 79.7 and sit IDLE while digital calls are being handled.