MOTOTRBO™ Phone Patch Interface Notes

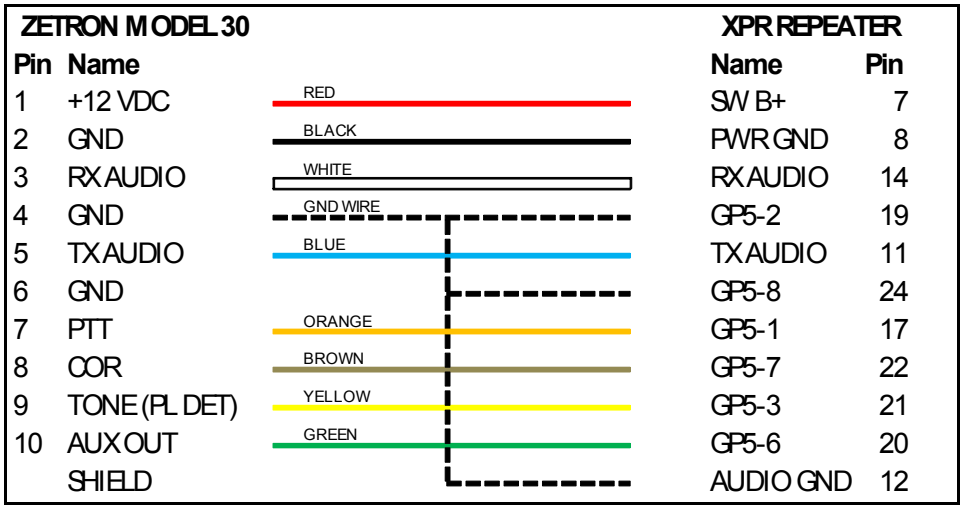
This document is a guide for interfacing a Zetron Model 30 Worldpatch (L3284) with a MOTOTRBO™ Radio System. The Phone Patch should be collocated with and interfaced directly to the MOTOTRBO™ XPR 8400 repeater. Please refer to the Operators Manual provided with the Phone Patch for detailed information and troubleshooting. The instructions in this document are for the non-SelCall version of the Zetron Model 30; other Phone Patch models may require different settings. If you have further questions, please contact the Motorola Project Manager or System Engineer for your site.

Required Equipment and Options:

- Zetron Model 30 World Patch (SelCall and non-SelCall models available). Configuration is different depending on Phone Patch model.
- Repeater to Phone Patch Interface Cable. Assembly required, see instructions below.
- Digital Telephone Interconnect Upgrade Entitlement ID (HKVN4049). Software license provided by Motorola.
- (Optional) 19" Rack Mount Panel (TT04061AA). Allows Phone Patch to be mounted to cabinet rails.

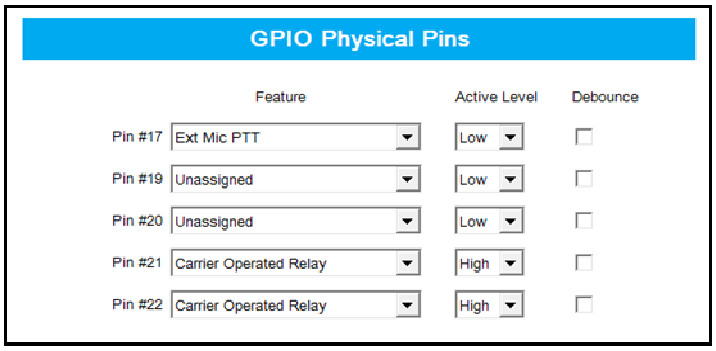
Phone Patch Interface Cable:

- A cable must be constructed to interface P1 on the Zetron Model 30 to the Repeater Rear Accessory Connector.
- The pin-outs for this cable are as follows:

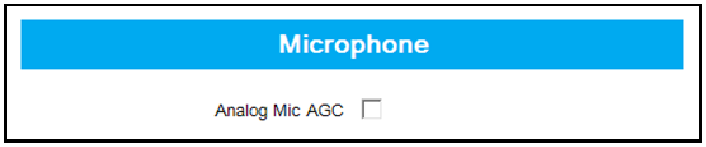


Repeater Configuration:

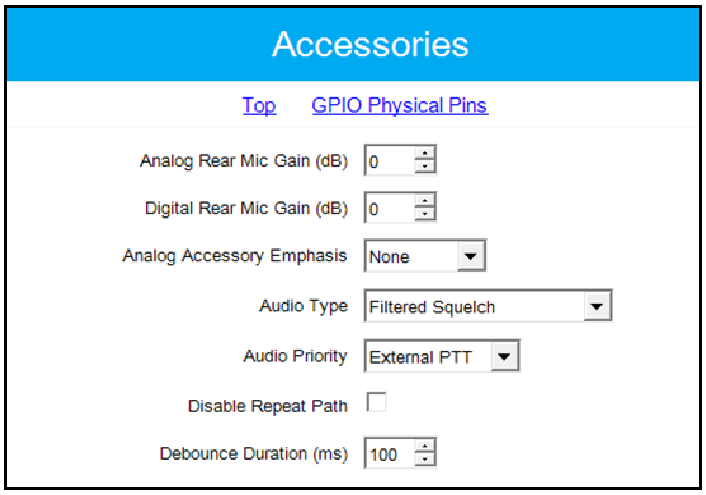
- The Repeater codeplugs will be provided with the hardware interfaces and settings already configured.
- The following settings should be configured in the repeater codeplug:
    - GPIO Physical Pins Settings:



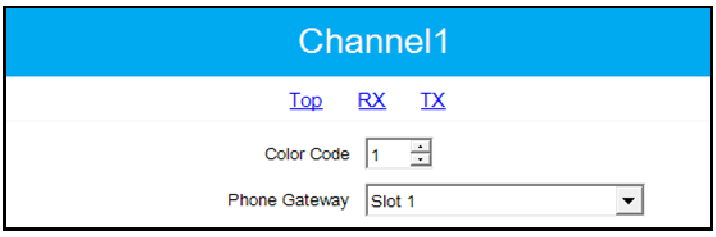
- General Settings: Analog Mic AGC: Unchecked



- Accessories: Analog Rear Mic Gain: 0
- Accessories: Analog Accessory Emphasis: None
- Accessories: Audio Type: Filtered Squelch

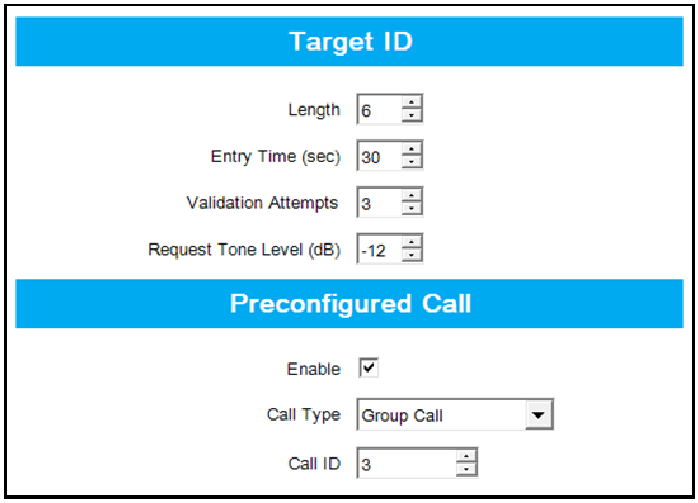


- Channels: Zone1: Channel1: Phone Gateway: Slot 1 (or whichever timeslot is used for the Phone Patch



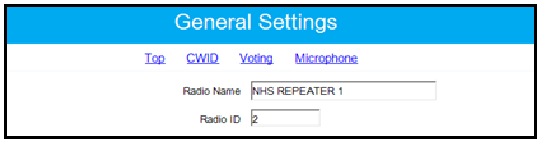
- The Deaccess Code setting on the Phone System Page should match the setting in the Phone Patch. Refer to Phone Patch Manual for proper Deaccess code.

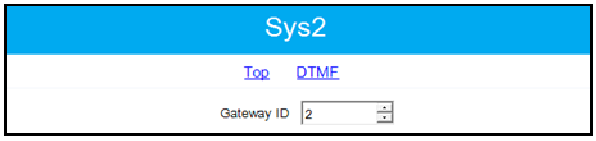
- The Target ID and Preconfigured Call settings are used to configure a default call talkgroup, and should not be changed unless directed by Motorola Engineering:



Subscriber Configuration:

- The Subscriber codeplugs will be provided with the Phone Patch settings already configured.
- A separate phone system will need to be configured for each Phone Patch (more than one if multiple Repeaters have a Phone Patch at the site). This is under the Signaling Systems tab in CPS.
- It is important that the "Radio ID" of the Repeater matches the "Gateway ID" of the correlating phone system in the Portable codeplug.





- Access Code and Deaccess Code setting on the phone system profile should match the setting in the Phone Patch. Refer to Phone Patch Manual for proper Deaccess code.
- Each channel with Phone Patch capability should have the correlating phone system profile selected on the Channel Configuration page.
- Advanced features, like Phone Contact List and Phone Manual Dial, can be configured as needed. These changes will require approval by the Program Manager (via Motorola Engineering).

Zetron Phone Patch Configuration:

- Open the Phone Patch and set the jumpers to the following configuration:
  - JP1 = A : Low RX Gain
  - JP2 = A : SPKR Audio
  - JP3 = B : Low TX Gain

- JP6 = B : PL Detect Input
- JP7 = B : External COR
- JP8 = B : COR Active High

- The Phone Patch should first be reset to factory defaults. To do this, hold the "CONNECT" button on the front panel while applying power to the unit (plugging into the Repeater). Continue to hold the "Connect" button until the "PHONE" LED begins to flash.
- Connect the Phone Patch to the telephone line.
- The Phone Patch can be configured from any phone by DTMF commands. Dial the phone number for the Phone Patch and after about 14 rings, it will answer and provide two beeps. Enter the Program Access Code and listen for five quick beeps. Commands can be entered at this point (each ending in "#") and each will be confirmed with five quick beeps. The following changes need to be made from the default configuration:
  - "40#" : Half Duplex mode (Phone Patch will allow two-way voice traffic)
  - "62#" : Direct Access mode (Phone Patch will connect to repeater immediately requiring no "answer")
  - "53# 5#" : Phone Patch will hang up after 5 seconds of dial tone (keeps Phone Patch from holding the line with no caller on the other end)
  - When complete, use "99#" exit programming mode.