Application Note 6

Subject: Controlling a WX0B SixPak with Two Top Ten Devices Source Driver Band Decoders

Background

Some relay systems require that a source of positive 12 Vdc be applied to a certain terminal to activate the relay. Examples of these are the relays available from Ameritron and DX Engineering. Recently, Array Solutions has introduced the WX0B SixPak, and Top Ten Devices current and potential customers have requested information on how the SixPak could be controlled automatically.

Description

The normal band decoders from Top Ten Devices are configured to switch a relay control line to ground, that is provide a sink for the relay current. A modification is available that will ADD the capability to source the relay voltage, as is required by the Ameritron, DX Engineering, and SixPak relay units. Please note that the source driver modification leaves the existing sink driver circuit intact.

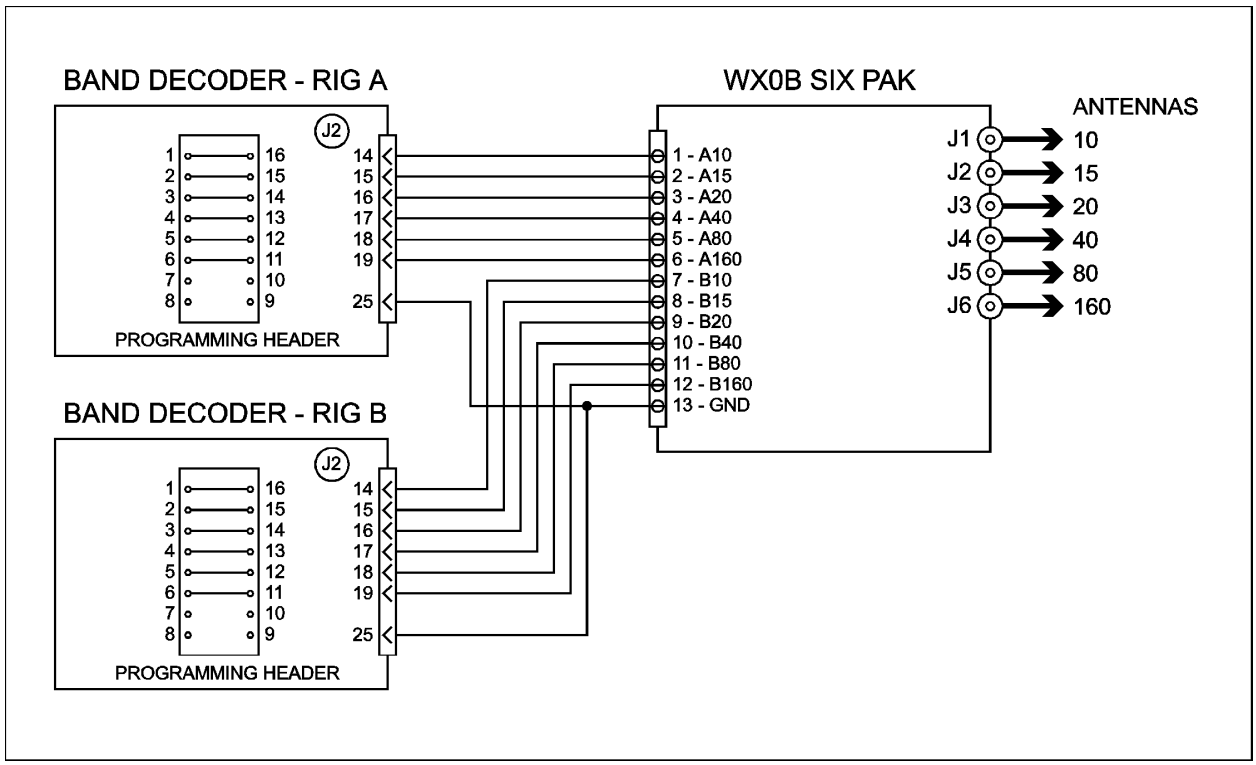
Source driver models are available both in decoders for Icom and Yaesu transceivers. The modification can be either ordered from the factory, or installed by the end user. Send e-mail to n3rd@ix.netcom.com for information on the loose modification kits.

SixPak Control Wiring

By using two Top Ten Devices band decoders, fully automatic control of the SixPak can be achieved. Please take note of the following:

1. Both band decoders need to be equipped with the source driver modification.
2. Both decoders must be programmed identically. Although the normal configuration would be for the case where monoband feedlines are used, for which jumpers are placed on the decoder programming headers, other configurations are possible.
3. The decoders may be used in place of any other control box. By placing the two decoders in a location where both operators can easily see them, it is quickly determined which bands are in current use by the two transceivers by viewing the band indication LEDs on the decoders.
4. Relay current is 100 mA. Control wiring size should be selected to limit the voltage drop to approximately 1 volt or less. This criteria should pose no problems if standard rotator control cable is used.

The following diagram shows how to connect two decoders to the SixPak for fully automatic control of the SixPak:



Please contact Dave, N3RD, at n3rd@ix.netcom.com, if you have any questions on this topic.