



# Raven Electronics Corporation

*Specialized Communication Solutions Since 1968*

## M4x SNR Voter/Comparator

### FEATURES

- Transmitter Steering
- Hold-off Revoting
- Designate Transmitter Defaults
- Vote on VOX/COR Activity
- Assert PTT on the Voted Channel
- Remove a Receiver from Voting
- Signal-to-Noise Voting
- Customer-defined "Custom Configurations"



We sympathize with users that have few choices and plenty of frustration in their voter/comparator options. It is with this in mind, we took our audio processing expertise and created the most flexible and cost-effective voter solutions on the market. It's the right solution at the right price.

The M4x SNR Voter/Comparator continuously monitors audio from a receiver/repeater and vote the receiver/repeater with the best quality. The voting process is based on a digital-signal-processor-based frequency analysis of the incoming audio. Several software-configurable options can be chosen to accommodate different voting applications.

### Full featured reporting capabilities—know when and why a receiver was voted!

A Raven M4x SNR Voter/Comparator can service up to 8 voting channels of audio. Using the Raven M4x Communications System Software, an "SNR vote group" can be defined wherein each individual channel of the voter/comparator can be set up to function as one of these key components of an SNR voter/comparator:

- Console connection
- Receiver to be included in voting
- Sub-comparator
- Repeater/transmitter

Audio from the voted receiver can be routed to the console or any repeater/transmitter. Raven M4x Voter/Comparators can "cascade" to create SNR vote groups as large as is needed for a particular application. Additionally, multiple independent SNR vote groups can co-exist on the same M4x Voter.



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# What is M4x?

M4x is an acronym for "Multi-Market, Mixed-Media"; x= next generation. M4x is a flexible technology that allows engineers the ability to quickly design communication solutions.

The basis of Raven's M4x technology is the ability to mix different media types within a single communication system. Several types of Raven M4x digital-signal-processor-powered modules exist to support a number of media types. M4x hardware and software tools facilitate the design of simple to complex communications solutions that might otherwise require multiple products from multiple vendors.

The compact M4x Blade, 1.25" H x 5.5" W x 12" L (optional mounting bracket or other rack mount option), is the ultimate toolkit for any radio technician right out of the box! It also serves as the best solution to solve complex system requirements. And, if you need more than 8 ports, M4x is scalable up to 160 ports.

## APPLICATIONS

- 800 MHz Rebanding
- Repeater Intertie
- Multi-user Crosspatch (network enabled)
- DTMF Crosspatch
- Communications System Troubleshooting
- 4-Wire Bridge
- SNR Voting
- Dispatch

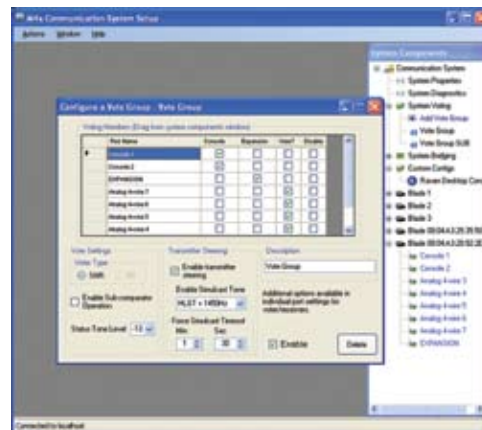
## Software-configurable SNR Voting Options

Using the Raven M4x Communications System Software, the following features are available to tailor the SNR voting system to a particular application:

- ◇ Manual or automatic transmitter steering
- ◇ Hold-off revoting until all receiver/repeaters are squelched and/or the revote timer has expired
- ◇ Designate transmitter defaults, revert to defaults manually, upon squelch, after a configurable amount of time, or with a function tone
- ◇ Start voting when status tone drops or on VOX/COR activity
- ◇ Receive and transmit audio can be independently delayed
- ◇ Remove a receiver from voting based on COR or due to receiver failure
- ◇ Manually remove a receiver from voting (via software)
- ◇ Keying tones or PTT can be used for keying transmitters
- ◇ Adjust the minimum time allowed between votes
- ◇ Adjust the number of dBs required to out-vote another channel
- ◇ Priority can be assigned to console ports
- ◇ Assert PTT on the voted channel

The flexibility of the M4x Voter is demonstrated by the firmware and software integration, allowing for customization of features.

Mobile radio professionals throughout the country are currently adopting the M4x SNR Voter/Comparator for their two-way radio applications.



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