

# Your Interoperability Solution.



## ***True Triple Repeater Controller for only \$525 including LED Display Cabinet***

Not just another three-port controller, the S-COM 7330 is a low-cost, highly flexible *triple repeater controller* with all the features you need to handle three full-duplex repeaters, cross-band repeaters, RF links, Internet links, and so on.

The 7330 saves you money and rack space by incorporating state-of-the-art SoC (System-on-a-Chip) technology to replace numerous ICs.

Features that are extra-cost options on other controllers are standard in the 7330. Digital audio delay, user-created digitized speech, and CTCSS encode with reverse burst is

provided for each port, eliminating cumbersome modules and daughterboards. A space-saving 1U rackmount cabinet with an informative LED display is included at no extra cost.

Other controllers have only one tone generator and audio storage system for all repeaters, resulting in delays when repeaters must wait to use a resource. The 7330 has separate tone and digital audio generators for each port, allowing any message to be immediately sent to any transmitter. And, the flexible digital audio file playback system replaces obsolete speech synthesizers and short-duration audio recording ICs.

### ***All of these features are standard and included in our low price:***

- ✓ Three receiver interfaces
- ✓ Three transmitter interfaces
- ✓ Three DTMF decoders
- ✓ Three dual tone generators with remote level adjust
- ✓ Three digital audio players with remote level adjust
- ✓ Three CTCSS encoders with reverse burst
- ✓ Three adjustable digital audio delays
- ✓ Three 5 V/25 V A/D inputs
- ✓ Four logic inputs
- ✓ Eight logic outputs
- ✓ Two RS-232 ports
- ✓ 16 MB flash memory
- ✓ 512 kB CMOS SRAM
- ✓ 1,600 digitized speech words supplied
- ✓ 2,000 words (13 minutes) user-created digitized speech
- ✓ 100 scheduler setpoints
- ✓ 340 customizable macros
- ✓ Real-time clock with TCXO timebase
- ✓ Fast firmware upgrades via RS-232
- ✓ Mix or prioritize receivers to each transmitter
- ✓ Improved and expanded command set (vs. our 7K)
- ✓ Per-path programming (courtesy, timeout, etc.)
- ✓ Per-transmitter programming (ID, tail, etc.)
- ✓ 5-pole LP filters on tone & digital speech generators
- ✓ 5-pole LP filters on CTCSS generators
- ✓ Wide-range power supply (9 V to 36 V DC)
- ✓ Reverse polarity power supply input protection
- ✓ Large, non-polarized audio coupling capacitors
- ✓ Push-on jumpers for pullup resistors
- ✓ Push-on jumpers for RX de-emphasis
- ✓ Push-on jumpers for RX gain (normal/high)
- ✓ Push-on jumpers for TX gain (normal/low)
- ✓ Push-on jumpers for COR, CTCSS, and PTT inversion
- ✓ Socketed PTT/logic output driver ICs
- ✓ Locking DC power input connector
- ✓ DE-9F connector for each radio
- ✓ 1U rack cabinet only 7 inches deep (w/o connectors)
- ✓ 28-LED front panel status display
- ✓ Rear panel RESET and INITIALIZE pushbuttons
- ✓ Legendary S-COM quality and reliability



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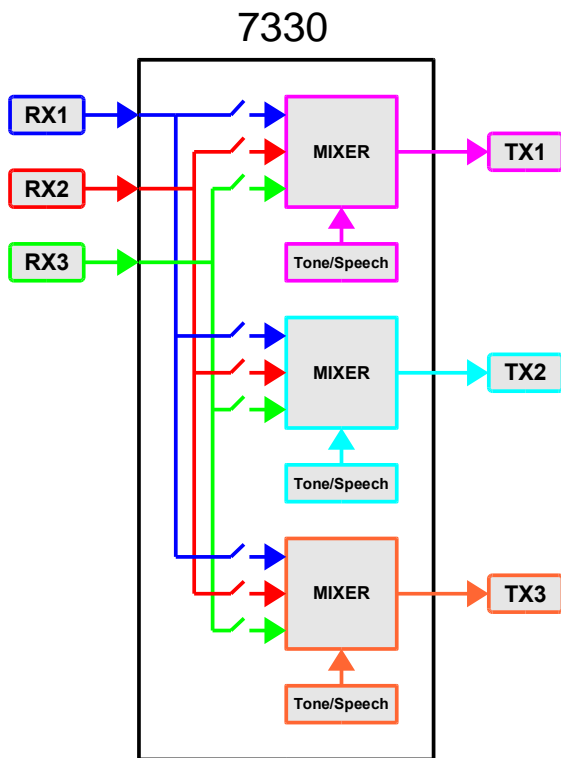
**Download the 7330 User Manual, white papers, and other information at [www.scomcontrollers.com](http://www.scomcontrollers.com).**

Price, \$525; shipping and handling, \$30  
Optional Radio Port Cables, \$39 each

Visa, MasterCard, Discover and AmEx accepted

*Interconnected repeater systems help amateur radio serve the public interest. Whether you're building a new system or expanding an existing one, get the triple repeater controller with the features you need to solve your problems – the new S-COM 7330.*

What sets the 7330 apart from other three-port controllers? See the diagram.



You can configure your system any way you wish by programming the nine paths that connect the three receivers to the three transmitters.

Each path can be set up with its own programmable courtesy beep, timeout timer, access mode, and much more.

That means any receiver and any transmitter can act as a full-duplex repeater, full-duplex link, half-duplex link, or similar device. This capability also provides complete control over the tones sent to a transmitter ó critical to meet the strict IRLP guidelines for correct operation.

A priority/mix system lets you choose which receivers are allowed to feed each transmitter. You can select whether the receivers mix or follow a priority rule when several receivers are active at the same time.

Add to that a complete set of programmable timers, messages, macros, software switches, scheduler setpoints, and digitized speech words (with 13 minutes of custom speech playback time), and you have a super-flexible solution to the problem of controlling multiple radios.

With its very flat frequency response, the 7330 won't color your audio. And your repeater stays a good neighbor thanks to 5-pole Butterworth lowpass filters that keep controller-generated CTCSS, CW, beeps, paging tones, and digital audio playback from splattering into adjacent channels.

## Hardware Specifications

-3 dB frequency response: 18 Hz to 16 kHz into 600 TX input  
 Receiver audio input impedance:  $\times 25$  k  
 Receiver de-emphasis corner frequency:  $\sim 200$  Hz  
 Receiver audio delay: 30 ms to  $>250$  ms, jumper enabled  
 COR and CTCSS input thresholds:  $\sim 2.1$  V  
 COR and CTCSS pullups: 4.7 k to +5 V, jumper enabled  
 COR and CTCSS input logic: active low/high, jumper selectable  
 Transmitter audio output impedance: 600  
 Transmitter audio output level: 2 V<sub>P-P</sub> (10 k  $\Omega$ ), 1 V<sub>P-P</sub> (600  $\Omega$ )  
 PTT output: open-drain power MOSFET, 45 V, 150 mA  
 Tone generators: 3, single/dual tone  
 Tone accuracy: 0.12% up to 1700 Hz  
 Tone purity: -35 dB THD @ 100 Hz (worst case)  
 CTCSS encoders: 3, selectable 120° or 180° reverse burst  
 CTCSS encode accuracy:  $>0.02\%$

CTCSS encode purity: -35 dB THD @ 67 Hz (worst case)  
 CTCSS encode level: 0 to 2 V<sub>P-P</sub> into 20 k  $\Omega$  load  
 Logic inputs: 4, NPN buffered  
 Logic input threshold:  $\sim 2.1$  V  
 Logic input pullups: 4.7 k to +5 V, jumper enabled  
 Logic outputs: 8, open-drain power MOSFET, 45 V, 150 mA  
 A/D inputs: 3, overvoltage protected  
 A/D input range: 0 to 5 V or 0 to 25 V, jumper selectable  
 RTC timebase: 32.768 kHz TXCO  
 RTC timebase accuracy:  $\pm 1$  minute/year, 0°C to 40°C  
 Flash memory: 128 Mb (16 MB)  
 RAM: 512 kB CMOS SRAM, lithium coin cell backup  
 Input voltage: +9 V to +36 V DC  
 Power consumption:  $\sim 1.5$  W  
 DC power input protection: reverse polarity



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*The S-COM 7330 is the new Port Authority*