

ComLink™ CS-540X 40-Watt Cross Band



Introducing the ComLink™ CS-540X Cross-Band FM repeater system by BridgeCom Systems, Inc. The CS-540X provides simplex-to-simplex operation for the VHF and UHF frequency ranges. Ideal for public safety, private, or government use where interoperability is required.

Features

40-Watt RF transmitter

Built-In 10A Power Supply: No need for purchasing a power supply. It's included!

Battery Backup with Built-in Charging Circuit: Automatically switches to external battery when AC-Line fails. Charging circuit keeps battery fully charged. Battery not supplied.

13.8 Volts Output: Perfect for powering peripherals requiring high current and saving valuable site resources.

Cooling Fans: Each transmitter has its own cooling fan. In addition, a central exhaust fan. Fans can be programmed for TX only or continuous operation.

Front Panel Speaker: Ideal for monitoring the primary channel.

External Speaker Out: Connect an external speaker for 10 Watts output into an 8Ω load. Great for routing received audio to another room.

Excellent Receive Sensitivity of 0.25μV

25-pin Accessory Connector: All the signals are here to connect the CS-540X to just about anything:

- RX Discriminator Out
- External PTT In
- TX Audio In
- Broadband Audio In
- +13.8V Out (1A Max)
- COS Output
- Multipurpose I/O

Keypad Lock: Prevent tampering when repeater is in service at site.

Channel Spacing: 12.5 kHz/25 kHz

Transmitter Fine-Tune Alignment from Front Panel:

- Mic Gain
- Sub Audible Deviation
- Overall TX Deviation
- TX Frequency
- TX Power

Over-the-Air Programming and Maintenance via DTMF Tone Sequences: For example, deactivate the UHF-to-VHF path or VHF-to-UHF path.

TX Timeout Timer: Limit TX time to protect against 'stuck mic' situations.

Per User Features:

- Air Time Logging
- Courtesy Tone (0, 500, 1000, 1500)
- TX Hang Timer
- Tone-In-Tail Selectable*

*Makes for quicker decodes

Built-in CWID for both sides:

Programmable broadcast interval and transmission rate (11 or 22 wpm).

CSQ Repeat: Channel can be set up to repeat all incoming transmissions regardless of signaling.

Feature-Rich Carrier Operated Switch (COS): Dedicate one output pin of the accessory connector to become a COS output. Select the COS to toggle based on either carrier or valid signaling. Polarity of the output pin can be either active high or active low.

Windows® Based Programmer: The CS-540X is setup and programmed using the PGM-540 programming software. No expensive programming box or cable required! Uses an off-the-shelf DB9 male-female for the programming cable. (Cable included with programming software package.)

BridgeCom
SYSTEMS



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General	CS-540X UHF Side	CS-540X VHF Side
Operating Voltage:	11 V DC Min / 13.8 V DC Nominal / 15 V DC Max	
Channel Spacing:	5kHz/6.25kHz/Splinter	
Current Drain:	10A Max	
Duty Cycle w/o Duplexer:	Transmit: 100 % duty @ 33W output	
Weight:	18.5 lbs.	
Weight w/ Duplexer:	19.5 lbs.	
Frequency Range: *	450-480 MHz	148-174 MHz
Dimensions (W x H x D):	19.0" x 3.5" x 14.0"	
Frequency Stability:	+/- 1.0 ppm	+/- 2.5 ppm
Operating Temperature Range:	-22° F to +140° F (-30° C to +60° C)	
Receiver		
Local Oscillator:	Low-side injection	High-side injection
Sensitivity (12 dB SINAD):	< 0.25 μ V @ 12.5 kHz < 0.25 μ V @ 25.0 kHz	
Squelch Threshold:	Open 12dB SINAD/ Close 8dB SINAD	
Selectivity:	62dB @ 12.5kHz 72dB @ 25.0kHz	
Spurious Rejection:	75dB	
Intermodulation Rejection:	72dB @ 12.5kHz	72dB @ 25.0kHz
Antenna Connector:	N-Type	
Antenna Impedance:	50 Ω	
Transmitter		
RF Output (w/o duplexer): Programmable	450-470 @ 0-40W 471-480 @ 0-35W	148-174 @ 0-40W
Modulation:	16K0F3E, 11K0F3E	
Maximum Deviation:	+/- 5kHz (25 kHz) +/- 2.5 kHz (12.5 kHz)	
FM Hum and Noise:	36dB @ 12.5kHz 42dB @ 25.0kHz	
Antenna Connector:	N-Type	
Antenna Impedance:	50 Ω	

* Commercial frequency range listed, however both VHF and UHF versions operate in their respective amateur region of the spectrum.

Specifications per EIA Standards. In our on-going commitment to quality specifications are subject to change without notice.

