

Series 4000 Communications Control System

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The Series 4000 is a communication control system designed for medium-sized communications centers. In addition to exceptional reliability, the Series 4000 offers easy programming and economical upgrades.

Unique Series 4000 capabilities include CRT based operator positions, trunked radio compatibility, and an integrated instant recall recorder that captures radio traffic on each channel.

Featuring three styles of operating positions and two common controller sizes, a Series 4000 system can be economically scaled to accommodate from 8 to 48 channels and from 1 to 16 operator positions.

Common Control Units

A Common Control Unit (CCU) is the central controller responsible for switching and routing multiple audio channels between operating positions and the external devices such as base stations, control stations, repeaters, telephones, monitor receivers, and intercoms.

The Series 4000 offers two different Common Control Units to accommodate different capacity requirements.

Product Features and Configuration

Model 4020

- ✓ Up to 20 radio or telephone channels
- ✓ Up to 6 operating positions
- ✓ Up to 10 independent cross channel patches
- ✓ No single point of failure architecture
- ✓ Channel Check IRR option
- ✓ External time source reference
- ✓ Event logging port
- ✓ Dual power supplies w/automatic switching
- ✓ Economically upgradeable to Model 4048

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Model 4048

- ✓ Up to 48 radio or telephone channels
- ✓ Up to 16 operating positions
- ✓ No single point of failure architecture
- ✓ Up to 24 independent cross channel patches
- ✓ Channel Check -IRR option
- ✓ External time source interface
- ✓ Event logging port
- ✓ Remote diagnostic monitoring
- ✓ Dual power supplies w/automatic switching



SPECIFICATIONS

Transmit Electrical Specifications		Console Interface:	3 audio pairs (Select, Unselect, MIC) and 2
Audio Output:	+10 dBm max. into 600 ohm line		data (RS-422 @ 9600 Baud)
Output Impedance:	Transmit: 600 ohm balanced. Idle: 600 or 3500 ohms	Channel Audio:	2-wire simplex/half-duplex, or 4-wire half/full-duplex
Distortion:	<2% at full output. Hum, Cross-Talk all 50 dB at full output	Channel Control:	Local, E&M, Tone Remote, DC* Remote, Telephone (end-to-end), and selected trunking radio protocols
Microphone Input:	-65 dBm for full output		Uses serial port or external contact closures
Aux. Mic Input:	-20 dBm for full output		(e.g. PTT relay, M-lead) to select up to 15
Page/Spare Input:	-15 dBm, not compressed	DC Control:	programmable currents between 0 and 15.5
Frequency Response:	-3 dB to +1 dB from 250-3400 Hz except guard tone notch		mA, positive or negative. Drives line to up to 125 V sufficient for 8000
Compression:	Input level increase of 30 dB above knee of compression causes <3 dB output increase		ohm loop resistance. Operates from 10.8 to 16 Volts DC
Receive Electrical Specifications			15 standard tones supported,
Input Impedance:	600 or 10K ohm (4-wire) 600, or 3500 ohm (2-wire)		programmable (in 100 Hz increments) to 650-2050Hz.
Line Balance:	66 dB at 1000 Hz		High Level Guard Tone
Rx Sensitivity:	-30 dBm max. at knee of compression; adjustable		duration 100-790 msec. Function Tone duration 40 msec. Guard Tone Freq.
Frequency Response:	-3dB to 1 dB from 250-3400 Hz except guard tone notch		2175 Hz, alterable. Tone freq. accuracy + 0.2%; timing accuracy +1.0
Compression:	Input level increase of 30 dB above knee of compression causes <3 dB output increase	Local Control:	PTT normally open relay contact rated 1.0 A at 24 VAC/DC
Distortion:	< 2%	E&M Control:	Tx control via PTT relay, external 48V required
Call Light:	Sensitivity 20 dB below knee of compression (vox operation)	Trunking Control:	EDACS®, MAP27, iDEN®, P25, SNSZ®, LTR®, PassPort®, NEXEDGE™
Audio Outputs:	5 watts into 4 ohms	Busy Chan.Detect:	Local Cross-Busy detection and Guard Tone
Mute:	Programmable from 0 to -50 dB "All-mute" time programmable	Time Synch:	IRIG-B (with Aux I/O Card) RS-232 (1200, 2400, 9600, 19.2 Baud)
Integrator RD Workstation		Radio Management	

Video Display:	Varies with selected monitor M4217 Audio Panel 5.25 x 19 x 4.5 inches M4219 Audio Interface 1.75 x 19 x 7 inches	Logger Port:	RS-232 (1200, 2400, 9600, 19.2 Baud)
		Modem Port:	RS-232 (1200, 2400, 9600, 19.2 Baud)
		Recorder Outputs:	1 per channel (Tx/Rx audio summation), plus 1 output per console. 0 dBm level, 600 ohm single ended
Model 4048:	Chan. Card Cage 15.75 x 19 x 9.75 inches Cons. Card Cage 17.5 x 19 x 9.75 inches Power Supply 3.5 x 19 x 9.75 inches	Power Input (M4048):	85-132 VAC 170-264 VAC 47-63 Hz 12-13.8 VDC 280 Watts maximum
Model 4020:	22.75 x 19 x 10 inches		95-240 VAC 2 amps
Dust/Liquid Ingress:	NEMA 1, IEC 60529 IP 30	Power Input (M4020):	50-60 Hz 150 Watts maximum
Operating Temp:	0°C to +45°C		
Other Electrical Specifications		Approvals:	FCC part 15, FCC part 68
Capacity (M4048):	2-48 Channels 1-16 Operating Positions (15 w/ Patch Card)		
Capacity (M4020):	2-20 Channels 1-6 Operating Positions		

4000 - Communications Control System - Control Unit