GENERAL SYSTEM SPECIFICATIONS

Intercom Line

Line Impedance:	*200 Ohms*
Line Level:	*-14 dB, +5 dB max*
Wire Type:	*22-gauge, 2-conductor shielded mic cable 30pF/ft to meet published specifications.*
Line Length (powered)	
Single Channel:	*Up to 5,000 ft, usable to 20,000 ft*
Two-Channel:	*1,000 ft for <50 dB crosstalk*
Dynamic Range:	*75 dB*

Signaling

Call Signal Send:	*+11 VDC*
Call Signal Receive:	*+4 VDC*
Amplifier Design:	*Solid-state IC amplifiers, current limited and short-circuit protected*

System Specs

Signal-to-Noise:	*-75 dB*
Station Bridging Impedance:	*>15k Ohms*
EMI & RFI Rejection:	*>60 dB*
Sidetone Adjustments:	*>30 dB*

Mic Preamp

Headset Mic Impedance:	*200 Ohms*
Mic Gain:	*41 dB*
Limiter Range:	*26 dB*
Frequency Response:	*200 Hz - 12 kHz, contoured for maximum intelligibility*

Output Amp

Output Level:	*+20 dB max*
Gain:	*35 dB*
Headset Impedance:	*>50 Ohms*
Speaker Power Output:	*4 watts @ 8 Ohms*
Frequency response:	*100 Hz - 18 kHz, 2 dB*
Program Input	
Line Level:	*0 dB nominal, electronically balanced*
Mic Level:	*-55 dB nominal, electronically balanced*
Announce Output:	*Balanced line level, 0 dB*

Environmental

Operating Temp Range:	*0-70 C (32-158 F)*
Humidity:	*0-90% relative*

Power Supplies

(115/230V, 50-60 Hz mains, or universal 90 -240V, 50 - 60 Hz selectable)

Output Voltage:	*30 VDC regulated, short-circuit protected*
Hum and Noise:	*< 2mV RMS.*

** 0dB is referenced to 0.775 volts rms.*
Specifications are subject to change without notice.

Clear-Com® COMMUNICATION SYSTEMS

CLEAR-COM TECHNICAL BRIEF

SIMPLICITY, RELIABILITY, AND PERFORMANCE COMBINED IN AN APPLICATION-ORIENTED DESIGN.

OVERALL SYSTEM

Clear-Com is a distributed amplifier intercom system, meaning that each station and beltpack contains its own mic preamp and power amplifier for the headset and/or speaker. Stations are connected together with standard two-conductor shielded microphone cables. One wire carries audio information, and the other wire carries DC power, with the shield acting as ground. Stations bridge the intercom line at a very high impedance, thus keeping audio levels constant — even when stations leave or join the line. A Main Station or Power Supply provides the DC power (30 volts) and the line termination (200 ohms) for the system. Clear-Com intercoms are virtually immune to RF and dimmer noise. All components have reverse-polarity protection to prevent damage in the event of an improper hookup.

INTERCOM STATIONS

Clear-Com intercom stations are available in one-, two-, four-, eight-, and twelve-channel configurations and can be divided into three categories: Remote Stations, Main Stations, and Master Stations.

Remote Stations are available in beltpack, rackmount, and wall/console-mount configurations. Remote stations can be located anywhere, regardless of available AC electricity because they draw their power directly from the intercom line and need not be connected to an AC power mains. Anywhere from 20 (speaker) to 60 (beltpack) Remote Stations on a single channel can be connected along one mile of wire with a 2-amp power supply. For multiple-channel applications, cables can be run up to 1000 feet while achieving -50dB crosstalk isolation. A Remote Mic Kill feature enables beltpack mics to be shut off from another location to eliminate undesired mic pickup. Call Signaling provides a flashing light on all stations that attracts the attention of people who have removed their headsets or turned off their speakers.

Main Stations have all the features of Clear-Com remote stations, plus a built-in "No-Fail" power supply, one or more auxiliary "program" inputs, and Announce/Paging circuitry. Many have additional features such as channel linking and program feed to SA out.

Master Stations are powerful multi-channel microprocessor-controlled intercom stations with programmable features and functions that make them ideal control centers for television, performing arts and industrial/aerospace applications. Available in an eight- or twelve-channel model, a Master Station requires AC power but does not provide power to the intercom system.

NO-FAIL POWER SUPPLIES

The proprietary 30-volt DC "No-Fail" power supply built into Clear-Com Main Stations and Power Supplies ensures that even with a momentary short on the intercom line, the intercom system continues operating normally. If a short does occur, the system will reset instantly when the short is cleared, even under full-load conditions.

STAGE/STUDIO ANNOUNCE (PAGING)

All Main Stations, Master Stations, and some Remote Stations provide a line-level, balanced "Announce" output from the mic preamp. A front-panel button activates this output, allowing the operator s voice to be sent to an external speaker/amp system. This button can also mute the operator s voice output to the intercom channels. In addition, in some stations the program feed can be routed to the SA output.

PROGRAM INPUT AND INTERRUPT

All Main Stations, Master Stations, and some Remote Stations accept one or more mic-level or line-level program inputs which can be monitored in the headset and/or speaker. The "program" audio is assignable to any or all channels, and mixes with the intercom audio. The volume of the "program" feed to the intercom channels is adjustable, as is the volume for the operator s headset and/or speaker.

All stations with program inputs can be configured as Program Interrupts or "IFB" circuits that allow talent to monitor program audio on an intercom channel, and allows directors and stage managers to interrupt the program in order to cue talent.