



ICS-2003 Front View

## FEATURES

- **Brilliant, high-contrast electro-luminescent graphic display panel**
- **16-button keypad offers extensive programming capability, plus station and DTMF dialing**
- **Individually variable listen levels with the Matrix Plus 3 system**
- **Allows both local and system-wide programming**
- **Swap window mode provides a second window for an additional 12 key destinations**
- **Broadcast-quality audio with shaping circuitry for enhanced intelligibility**
- **Twelve dual-action, momentary/latching talk and listen keys, with talk and listen LED's**
- **Listen keys can be assigned independently of Talk keys**
- **Keys are programmable for momentary-only operation**
- **Answer-back key with display of received calls**
- **Direct DTMF dialing can be programmed to station keys**
- **Ability to add up to 60 additional selector keys using XP and XPL expansion panels**
- **High-output speaker with on/off switch**
- **Inputs for headset or optional gooseneck mic, with auto-select feature**
- **Auxiliary connector offers program input and logic inputs to control various station functions**
- **Provisions for binaural headset operation**

## DESCRIPTION

The ICS-2003 is the premier intercom/control station for the Matrix Plus digital intercom system. It offers both local and system-wide programming capabilities. When the station is connected to the matrix, it is "hot-patchable" and "self-initiating" – instantly programmed by the matrix system with its correct configuration. The bright, high-contrast EL display can be seen from a wide viewing angle, even in high-light conditions.



ICS-2003 Rear View

A 16-button keypad gives the operator the ability to directly assign labels to keys, select a station to communicate with, and program the entire system. The keypad also generates DTMF tones, enabling the user to make direct telephone calls from the station. The station and its various other features may be enabled, disabled, or password protected as desired.

The front panel has both a headset connector and a jack for an optional gooseneck microphone. Headsets are detected automatically when connected. The station features a low-noise, broadcast-quality adjustable microphone preamp with a limiter circuit to keep voice levels constant, high-power earphone and speaker amplifiers, and specially contoured audio response for clear, articulate communications in all environments.

Special digital circuitry lowers the speaker's output level when the microphone is activated, eliminating feedback. The exclusive "nearby station" feature reduces feedback between adjacent stations, even when operating at high volumes.

## SELECTOR KEYS

The selector keys on Matrix Plus stations have a very broad, powerful range of functions. Twelve dual-action, momentary/latching toggle keys are activated by pushing up for listen and down for talk. Associated red and green LED's light when a particular talk or listen is active. The display window above each key identifies the current key assignments.

Keys may be programmed for momentary-only Talk operation, or for one-touch direct telephone dialing. Keys may also be programmed for IFB interrupt, call signaling, relay control, and other functions. Up to four talk or control labels – representing four different stations, interfaces, or control labels – may be assigned to any key(s), creating a mini group. The ICS-2003 has a "swap window" mode that gives the user an additional 12 key assignments, for a total of 24.

Other buttons include mic select, mic on/off, and speaker on/off, along with a dual-function button that activates the variable listen levels or sends out a call signal.

*Matrix Plus 3*  
DIGITAL INTERCOM

by Clear-Com

**SPECIFICATIONS****LINE INPUT/OUTPUT**

Type: Transformer Balanced  
 Input Impedance: 8K Ohms Bridging  
 Output Impedance: 150 Ohms  
 Level: 0 dBv nominal  
 Freq. Resp.: 50 Hz - 15 kHz, +/-2 dB

**PANEL MICROPHONE INPUT**

Type: Electret with proprietary phone jack  
 Input Level: -40 dBv  
 Gain Adjustment Range: +/-5 dB (software)  
 Impedance: 200 Ohms

**HEADSET MICROPHONE INPUT**

Type: Dynamic  
 Input Level: -55 dBv  
 Gain Adjustment Range: +/-5 dB (software)  
 Impedance: 200 Ohms

**HEADPHONE OUTPUTS**

Impedance: 50 - 600 Ohms  
 Power: 1/2 Watt into 50 Ohms

**LOGIC INPUTS #1 & #2**

Type: Requires closure to ground

**MUTE RELAY/STATION RELAY**

Contact Type: SPDT  
 Voltage Rating: 24 Volts DC @ 1 Amp.

**FRONT PANEL CONTROLS AND CONNECTORS**

Selector Keys: 12  
 Keypad Keys: 16  
 Answer Back Selector Key: 1  
 Volume Controls: intercom and program  
 Headset Connector: XLR-4M  
 Panel Mic Connector: Locking 1/4" phone jack

**REAR PANEL CONNECTORS**

Miscellaneous: DB-15F  
 To Matrix: DB-15M and RJ-45  
 OPT-100 Option: DB-9F

**TEMPERATURE**

Operating: 0° - 50° C (32° - 125° F)  
 Humidity: 20% to 90%, non-condensing

**POWER**

In-Line Power Supply, with 3-pin EIA connector,  
 UL approved  
 Voltage: 90 - 250 VAC, 50 - 60 Hz, 50 VA max.

**DIMENSIONS**

3.5" H x 19" W x 6.75" D  
 (89 x 483 x 172 mm)

**WEIGHT**

5.0 lbs. (2.3 Kg)

**OPT-100 AUXILIARY AUDIO OPTION**

Audio,

Output Signal Levels: 0 dBv nominal  
 Impedance: 600 Ohms, transformer balanced  
 Frequency Response: 50 Hz - 15 kHz, +/-2 dB

SA Relay,

Contact Type: SPDT  
 Voltage Rating: 24 Volts DC @ 1 Amp.

*All specifications are subject to change without notice.*

**ANSWER-BACK KEY**

The answer-back key is used to answer calls from other stations not currently assigned to a key, or can be used to call a destination that is assigned to it from the keypad. This momentary-only key, along with the display panel, allows the user to identify and answer those calls. It is supported by the answer-back "stack", which lists incoming calls on the EL screen in the order in which they were received.

**EL DISPLAY SCREEN**

The EL (electro-luminescent) display screen is divided into functional areas. A symbol area shows what "page" is currently on-screen, and whether another station is listening in. The answer-back window displays the labels of incoming calls. A message window communicates station status and error messages. The listen window shows any assigned listen for a particular key. And the talk window displays up to four talk destination labels for each key.

When the Menu button on the keypad is pressed, the display can access the system information, configuration, maintenance, system programming, and other menus. It will provide all necessary feedback for both local and system-wide programming.

**THE ICS-2003 KEYPAD**

The 16-button keypad on the ICS-2003 opens up a host of specialized functions. These multi-function buttons allow the station operator to select stations, assign labels (stations, interfaces, or controls) to keys, access the menus, program the station or the system, control the EL display cursor, enter local studio-announce mode, directly address another station, or dial a telephone number.

By pressing a selector key that is connected to a telephone interface through the matrix, the station operator can receive a dial tone and place a telephone call. Pushing the Dial button creates a touch-tone keypad, generating DTMF tones and permitting phone calls to anyone, anywhere from the station.

The UPIC (for "you pick") button is a "hot key" that can be programmed for rapid direct access to many of the available menu functions. If a programming task is likely to be repeated on a regular basis, this key may be assigned to reach that task directly.

**CONNECTIONS**

Simple station-to-frame wiring uses CAT-3 data cable with RJ-45 connectors. The four-pair connection routes talk and listen audio signals, and provides data input and data output paths.

Accessory panels allow up to an additional 60 keys to be connected to a station. Program interrupt (IFB) assignment panels may also be connected, allowing up to 79 sources and destinations to be routed for talent cueing, sending audio sources, assignment to telephone interfaces, or intercom communications.

The "Miscellaneous" connector links local devices to the intercom stations. A balanced monaural program feed input may be routed through this connector. Two logic inputs are available to activate selected station functions. Both normally-closed and normally-open relay contacts are provided.

Internal connectors are provided so that a binaural headset jack can be installed on the front panel, allowing binaural headset operation.

The optional OPT-100 Auxiliary Audio board adds Studio Announce audio and relay outputs, a Hot Mic output, and two additional normally open and normally closed relay contacts.