RTS
Audiocom

Technical Data Sheet

Innovating the Future of Global Communications

ES-4000A
Intercom Expansion Station

The ES-4000A is an Expansion Station for the US-2002 User Station. It interfaces four (4) additional intercom channels to the US-2002, and it provides talk, listen and call buttons for the four (4) additional channels. There are also four (4) additional program inputs on the back of the ES-4000A, one (1) for each added channel. Up to four (4) ES-4000A Expansion Stations may be connected to the US-2002 to add up to 16 channels (18 channels total). The ES-4000A typically utilizes the US-2002 microphone and speaker (or microphone headset) for communication with the added channels. The ES-4000A also has individual speaker outputs for independent monitoring of one (1) or more of the four (4) channels if desired.

Features

Digi-Latch Technology
Separate Listen, Call, and Talk buttons with Digi-Latch technology gives users complete control of system communications while maintaining ease of operation.

Backlit Buttons
Backlit buttons with lettering on the button allows users to see which button to push even in darkened room environments.

Rack Mountable
Rack mountable in a variety of modular configurations with one (1) of several optional rack mount kits.

Mic Kill
Turn off all microphones on a selected expansion channel, or all channels, using the master station's Mic Kill key.

Dedicated Program Inputs
Each expansion channel has its own program input. Connect any line-level audio source for monitoring in the master station's speaker or headset and for routing to the expansion channel if desired. When program audio is routed to the channel it can be set to interrupt while the master station operator is talking on the channel.

Clear-Com Compatible

Line Drawings
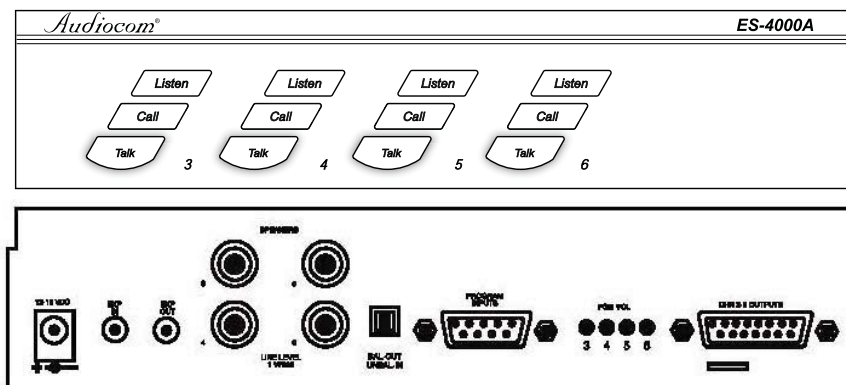
Specifications

General

Power Requirements:

Voltage:

Phantom Power: .... 24 VDC nominal (12 to 30 VDC)

Local Power (with PS-L Wall-pack Power Supply
or equivalent): .... 14 to 15 VDC

Current: .... 65 mA, quiescent; 150 mA maximum

Dimensions: .... 1.75" (44.5 mm) high,
8.25" (209.6 mm) wide,
10.0" (250 mm) deep

Environmental Requirements:

Storage: .... -20°C to 80°c; 0% to 95% humidity,
non-condensing

Operating: .... -15°c to 50°C; 0% to 95% humidity,
noncondensing

Intercm Channels, Balanced Mode
(BAL/UNBAL switch set to BAL position)

Output Level: ....1 Vrms nominal

Input Impedance: .... 300 Ω

Bridging Impedance: .... greater than 10,000 ohms

Sidetone: .... -40 dB, 35 dB adjustable range

Call Signaling:

Send: .... 20 kHz ±100 Hz, 0.47 Vrms ± 2dB

Receive: ....20 kHz ±800 Hz, 100 mVrms

Mic-Kill Frequency:

Send: .... 24 kHz ±100 Hz, 0.5 Vrms ± 2dB

Receive: ....24 kHz ±800 Hz, 100 mVrms

Noise Contribution: ....less than -70 dB

Common Mode Rejection Ratio: ....greater than 50 dB

Intercom Channel, Unbalanced Mode
(BAL / UNBAL switch set to UNBAL position)

Output Level: .... 0.75 Vrms ±10%

Input Impedance: .... 200 Ω

Bridging Impedance: ....10,000 Ω ±5%

Sidetone: ....-40 dB, 35 dB adjustable range

Call Signaling:

Send: .... 11 ±3 VDC

Receive: ....4 VDC

Speaker Output

Level: .... 1.0 Vrms, ±2 dB (0 dBu nominal)

Impedance: .... 1000 ohms nominal

Program Input

Voltage Gain Adjustment Range
(program Input to channel
output, with 100 mVrms input): ..... 25 ±3 dB (2.6 Vrms maximum,
unit is factory-set to 1.0 Vrms)

Input Impedance: ....Balanced, 75 K ±10%;
unbalanced,38 K ±10%

Frequency Response

EXP IN to/from Channel, EXP IN to/from EXP OUT,

Channel to Speaker: .... 200 Hz to 8 kHz +1/-3 dB

Total Harmonic Distortion: ....Less than 0.5 %

Connector Pin-outs
12-15 VDC Jack

Connector Type: .... 2.0 mm DC jack

Internal pin: ....+12 to 15 VDC

External Ring: ....Common

EXP IN Jack

Connector Type: .... 3.5mm stereo phone jack

Tip: .... Listen input

Ring: .... Talk output

Sleeve: ....Common

EXP OUT Jack

Connector Type: .... 3.5mm stereo phone jack

Tip: .... Talk output

Ring: ....Listen input

Sleeve: ....Common

SPEAKER Jacks

Connector Type: .... RCA Phono jack

Tip: .... Speaker output high

Sleeve: ....Common

PROGRAM INPUTS Connector

Connector Type: ....DB-9F Female, 9-pin D-subminiature

Pin 1: ....Common

Pin 2: ....Channel 3 program in low

Pin 3: ....Channel 4 program in low

Pin 4: ....Channel 5 program in low

Pin 5: ....Channel 6 program in low

Pin 6: .... Channel 3 program in high

Pin 7: .... Channel 4 program in high

Pin 8: .... Channel 5 program in high

Pin 9: .... Channel 6 program in high

CHANNEL 3-6 OUTPUTS Connector

Connector Type: ....DB-15F Female, 15-pin D-subminiature

Pin 1: ....Channel 3 intercom audio input/output high

Pin 2: .... Channel 3 intercom audio input/output low

Pin 3: ....Common

Pin 4: ....Channel 5 intercom audio input/output high

Pin 5: .... Channel 5 intercom audio input/output low

Pin 6: ....Common

Pin 7: ....Common

Pin 8: ....Common

Pin 9: ....Common

Pin 10: ....Channel 4 intercom audio input/output high

Pin 11: .... Channel 4 intercom audio input/output low

Pin 12: ....Common

Pin 13: ....Channel 6 intercom audio input/output high

Pin 14: .... Channel 6 intercom audio input/output low

Pin 15: .... Power (30 VDC)

Order Information

•   ES-4000A • Intercom Expansion Station

For ordering information, contact your regional sales representative at:
http://rtsintercoms.com/us/intercom/contact

The specification information is preliminary and is subject to change without notification.
Brand names mentioned are the property of their respective companies.

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