



**Audio Specialties Group
Products Division**

**MODEL DHA-2
DUAL COMMUNICATIONS
HEADSET ADAPTER**



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INTRODUCTION

The DHA-2 Dual Headset Adapter provides a convenient and consistent method of interfacing two or more dynamic headsets to a single intercom user station. Additionally, since the headset connectors are field replaceable, the DHA-2 can support a variety of connector styles. Most common headset standards including male and female XLR type in four, five and six pin varieties are supported. Various mounting configurations can be accommodated using the available rack mounting kit or under counter brackets.

SECTION 1: SPECIFICATIONS

1.1 Functional Specifications

The dual channel capability of the DHA-2 allows two users to speak and listen to one user station. Each user has a separate listen VOLUME control and a MIC ON/OFF SWITCH with green ON indicator. The MIC switch is a three-position type that is center OFF. Pressing down is a momentary function the UP position is latching for hands free speaking. From the factory, the volume control is full range. A fixed minimum listen level is available by removing the shunt on J41 and J42 inside the unit. With these shunts removed, the user can not completely turn off the listen signal thereby allowing critical communications to not be missed.

Individual headset microphone level adjustments are made using rear-panel screw driver adjustable controls. Clockwise rotation will increase the level of the individual headset microphone, counterclockwise will reduce the level of the microphone but will not allow it to be muted completely. The trim controls are factory set for unity or 0dB gain.

The rear panel has two DB-9 connectors that are a loop of each other. Multiple units can be cascaded to allow up to 4 users to share. The cascading is theoretically unlimited, but to maintain proper

noise levels only two should be cascaded. Additionally, the loop connector can be used to access the remote-logic contacts separate from the headset cable.

Maximum distance between the DHA-2 and the user station is eight feet. Exceeding that length will increase environmental noise and interference beyond stated specifications.

J101/J102 DB-9

| | |
|---|-----------------------|
| 1 | Talk Ground |
| 2 | Listen Ground |
| 3 | PTT Remote |
| 4 | MIC Active Logic COM |
| 5 | MIC Active Logic N.O. |
| 6 | Talk Output (+) |
| 7 | Listen Input (+) |
| 8 | +12V DC Loop |
| 9 | MIC Active Logic N.C. |

Power supply for the DHA-2 is from the supplied AC power adapter. Any adapter with the proper output of 12V DC with a minimum of 300mA will work. The connector is a 2.5mm coaxial type.

The MIC Active logic can be configured to be a dry closure type or an open collector logic type. The Factory setting is for dry closure, which requires a shunt jumper on J7. Open collector is available by moving the shunt to J6.

1.2 Electrical Specifications

Power Requirements:

12V DC @ 300mA

Earpiece Amplifier

Power:

2V AC RMS @ 25ohm

.15W

Frequency Response:

85Hz to 10KHz (-3dBv)

Noise:

-60dBv C-Weighted

Microphone Amplifiers:

Maximum input level:

+10dBv

Output impedance:

240 ohm

Maximum Gain I/O

2.8dBv

Frequency Response:

50Hz – 10KHz (-3dBv)

MIC Active relay contacts:

24V DC, 500mA

Open collector current:

10mA Maximum 12V DC

Mechanical:

Height: 1.57 inches (40 mm)

Width: 6.5 inches (165 mm)

Depth: 4.7 inches (119 mm)

Weight: 18 Oz

Finish:

Light Grey powder-coat with textured clear sealer.

Mounting Configurations

As a desktop unit, no additional accessories are required. Brackets are available for under-counter mounting: Part Number DHA2-BRK-1

For 19" Rack mounting, order Part Number DHA2-BRK-2

Either kit requires assembly by the user.

SECTION 2: INSTALLATION

2.1 Electrical Installation

The use of shielded wire for the cable from the user station to the DHA-2 is extremely important. Non Shielded wire will allow the induction of noise and earpiece cross-talk.

Unless otherwise specified or ordered, the DHA-2 is shipped with Male XLR-4 pin connectors. These connectors attach to the printed circuit board with a wire harness, which plugs into J1 (headset #1) and J2 (headset #2). Also on J1/J2 are two additional pins, one for dual ear headsets and one for remote microphone "ON"

J1/J2 (Headset)

- | | |
|---|-----------------------|
| 1 | MIC Ground |
| 2 | MIC High |
| 3 | Ear Low |
| 4 | Ear High |
| 5 | Ear High |
| 6 | MIC "ON" Remote Logic |

2.1.1 Clear-Com Headset Cable Diagram
ICS-92, ICS-101, ICS-2002, ICS-2003

| DB-9M/F | XLR-4F | |
|---------|--------|----------|
| 1 | 1 | Shield |
| 2 | 3 | Shield |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | 2 | MIC High |
| 7 | 4 | EAR High |
| 8 | | |
| 9 | | |

2.1.2 Clear-Com Logic Cable Diagram
ICS-92, ICS-101, ICS-2002, ICS-2003

| DB-9M/F | DB-15M | |
|---------|--------|-------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | 4 | GND |
| 5 | 5 | Logic In #1 |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |