# IEDA524-H / IED0520DTB

# DIGITAL MICROPHONE STATION

Installation Instructions



REV: 12-12 DOC: 369B

# INTRODUCTION

# Description

The IED 524 digital microphone station is a 4-button device for initiating audio/visual announcements, messages, and pages with the GLOBALCOM and vACS Series Announcement Control Systems. It is a network appliance with a unique IP address that simplifies installation and configuration. The 524 features four zone group selection buttons plus a push-to-talk button located on the hand-held microphone.

Just like IED's other digital microphone stations, the 524 uses a single Ethernet interface for audio and control data. The 524 station is fully compatible with IEEE 802.3af standard for Power over Ethernet (PoE), allowing the 524 to be powered directly from any standard off-the-shelf PoE switch. The processing power for the 524 comes from the onboard 32-bit processor. This powerful processor manages the input buttons, Ethernet interface, audio signal processing, and self-test diagnostics.

This, and all IED LAN-based GLOBALCOM components, are designed to maximize the benefits of a standard 100 Mbps Ethernet LAN based network, using off-the-shelf switches and structured CAT5e or better cabling. The 524 Digital Microphone Station utilizes CobraNet® technology.

# **Ordering Options**

| IEDA524-H  | 4-button microphone station with handheld microphone for wall-mount applications |
|------------|--|
| IEDA520DTB | Optional base for desktop mounting applications                                  |



IEDA524-H Wall-mount Configuration

IEDA524-H shown with optional IEDA520DTB base



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#### **Features**

The 524 digital microphone station provides immediate digitization of full bandwidth audio and transmission over a standard Ethernet connection. It utilizes the IED 501HH teardrop handheld microphone that includes a programmable push-to-talk button. The station uses a metal magnet landing area for the 501HH to provide a storage position for the microphone.

In the standard configuration, it can be mounted using a standard 2-gang electrical box or a 1-gang electrical box using the included plastic backbox. An optional weighted base (IEDA520DTB) is available for desktop mounting configurations.

#### **Buttons**

The 524 series digital microphone station features four selection buttons. These buttons are configured using the announcement controller configuration software to function as one-touch action buttons to trigger any of the following types of announcements or messages:

- · A live page to a designated zone group
- · A recorded page to a designated zone group
- · A permanent message playback to a designated zone group (e.g., customer reminder or emergency message)
- · Any action type available in the GLOBALCOM configuration software

# **Network Requirements**

The 524 digital microphone station utilizes CobraNet® technology licensed from Cirrus Logic®.

Live audio on the data network is time sensitive and requires minimal latency through the network to ensure uninterrupted audio. The 524 digital microphone station and CobraNet operate on Layer 2 (MAC Layer) of the OSI Model. This traffic will not operate on a Layer 3 Router or above. VLAN's (Virtual Local Area Networks) may be required for managing traffic as well as Quality of Service (QoS) and Prioritization configuration of network switches. All connections to the 524 digital microphone station must be full duplex 100 Mbps Ethernet auto-negotiation.



IEDA520DTB Desktop Base

#### IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions. 1
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5 Do not use this apparatus near water.
- 6. Clean only with dry cloth.
- Install in accordance with the manufacturer's instructions
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Only use attachments/accessories specified by the 9. manufacturer.
- 10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

#### SAFETY SYMBOLS

Labeling on products and the Installation Instructions & User Manual may use safety related graphical symbols as shown below to note safety requirements.



Lightning Bolt: The lightning flash with arrowhead symbol, within an equilateral triangle, WARNING symbol, is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be sufficient in magnitude to constitute a risk of electric shock to persons or domestic animals. Exclamation Point: The exclamation point within an equilateral triangle, CAUTION symbol, is in-tended to alert the user to the presence of important operating and maintenance (servicing) instructions, or a hazard that can damage equipment

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous condition and have taken appropriate steps.

#### **SPECIFICATIONS**

| Electrical           | Frequency Response  |
|----------------------|---|
|                      | 22 Hz - 22 kHz, Input Level = 0 dBu                           |
|                      | Total Harmonic Distortion, THD                                |
|                      | 22 Hz - 22 kHz, Input Level = 0 dBu                           |
|                      | Signal-to-Noise Ratio, S/N>85 dB                              |
|                      | 22 Hz - 22 kHz, Input Level = 0 dBu                           |
|                      | Compressor  |
|                      | Compression Threshold15 dBu                                   |
|                      | Ratio   |
|                      | Attack Time   |
|                      | Release Time  |
|                      | Maximum Output (Line Output)+5 dBu                            |
|                      | Analog-to-Digital Converter, A/D                              |
|                      | Internal Processing   |
|                      | Sample Rate48 kHz   |
|                      | Latency (Through a maximum of 6 network switch hops) 5.7 mSec |
| Mechanical           | Desktop Size  |
|                      | Wall Mount Size   |
| Standards Utilized   | Full-Duplex Operations  |
|                      | Fast Ethernet, 100Mbps  |
|                      | Data Terminal Equipment Power                                 |
| Connecting Cable     | Digital Audio/Power/Control                                   |
| Environmental        | Operating Temperature Range                                   |
| Power<br>Consumption | Supply Power<2W Supply Voltage = 48VDC                        |

NOTE: This unit is not compatible with 500, 510, or 520 series Announcement Control Systems (ACS).

#### CONNECTIONS

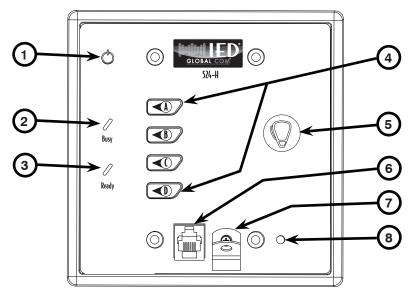


Figure 1 - IEDA524-H Front View

#### 1. Power LED

This LED will illuminate when the microphone station is powered on.

#### 2 Busy LFD

This red LED will flash if a button is pressed to make an announcement to indicate that the announcement cannot be made at this time because the system is busy.

#### 3. Ready LED

This LED will flash and beep to indicate that the microphone station is ready for an announcement. It will illuminate solid when the push-to-talk switch on the handheld microphone is pressed and the announcement is active. If there are time limits on announcements, it will begin to flash when the end of the time limit approaches.

#### 4. Selection Buttons

These four buttons are used to activate announcements or messages on the announcement controller. Their exact function is configured in the announcement controller software.

#### 5. Microphone Attachment Location

This marks the location for the magnetic receiver where the 501HH handheld microphone is to be placed when not in use. The actual magnet is located on the back of the 501HH handheld microphone.

#### 6. Microphone Input Connector

This RJ connector is used to connect the 501HH handheld microphone to the microphone station.

#### 7. Microphone Cable Strain Relief

This clip is used to secure the microphone cable to the microphone station to prevent unnecessary strain on the RJ connector as well as deterring unwanted microphone removal. Remove the screw and insert the microphone cable in the clamp and then reattach to the station.

#### 8. Reset Button

There is a small button located on the circuit board through this hole. Use a small tool to press the button and reset the station.

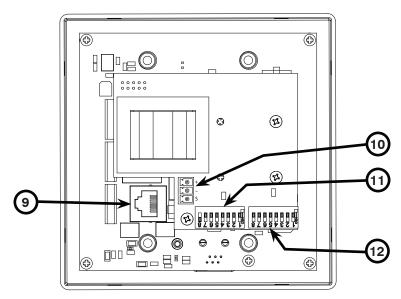


Figure 2 - IEDA524-H Rear View

#### 9. Ethernet Connector

Use this RJ45 connector to connect the device to a PoE network switch using Category 5e or better cable. The PoE power consumption for the device is less than 2W.

#### 10. Line Level Audio Output

When the Line Level Output Enable DIP switch is on, the audio from the microphone will be routed to this output connector when the network communications to the announcement controller is lost. This output can be wired to a local amplifier to provide backup local paging in the event that the microphone station cannot communicate with the announcement controller.

#### 11. Group and Line Level Output Enable DIP Switches

DIP switches 1 through 5 are used to set the group number for this microphone station. This group number must match the system number of the announcement controller that will own this microphone station. DIP switches 6 and 7 are not used. DIP switch 8 will enable the line level audio output when turned to the ON position. Refer to "Group DIP Switch Settings" on page 9 for details on setting the proper group number on the DIP switches.

#### 12. Mic Number DIP Switches

Use these DIP switches to set the mic number of this microphone station. This number is used to associate this microphone station with the configuration in the announcement controller software. Each microphone station owned by an announcement controller must have a unique mic number. Refer to "Mic Number DIP Switch Settings" on page 10 for details on setting the proper mic number on the DIP switches.

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#### **INSTALLATION**

# IEDA524-H Attached to Standard 2-Gang Electrical Box

The IEDA524-H is designed to fit in a standard 2-gang electrical box. Install the unit into a box as shown in Figure 3. This is the preferred installation method for wall mounting or any other flush-mount applications. When this mounting method is used, you should remove the included plastic back box and store it for any future needs and use the included screws for mounting the device in the 2-gang electrical box.

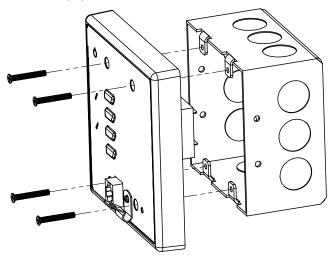


Figure 3 - 2-Gang Electrical Box Installation

# **IEDA520DTB Desktop Base**

The IEDA520DTB is available as an option when a desktop mounting solution is preferred. The IEDA524-H ships with the plastic back box that you can then use to attach the unit to the base as shown in Figure 4. The unit is then secured to the base by tightening the retaining screws using the nuts located on the back of the base mounting plate. The microphone station can be removed from the base by loosening the retaining screws using the nuts located on the back of the base mounting plate. The plastic box contains keyhole slots, so you simply loosen the screws and slide the unit up to remove it from the base. You can then access the DIP switches, connect the cable(s) and re-attach it to the base. Simply tighten the retainer screws with the nuts to secure the unit to the base.

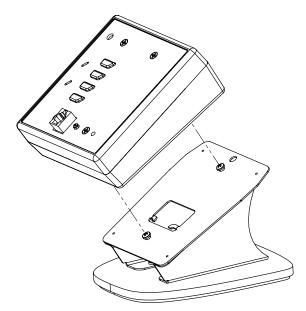


Figure 4 - IEDA520DTB Desktop Base Installation

# **Alternative Single-Gang Electrical Box Installation**

The IEDA524-H is shipped with a plastic back box that can be used if the installation does not allow for the recommended 2-gang electrical box installation. This box can also be used if you later decide to mount the unit to a desktop base. The box has two keyholes that fit a standard single-gang electrical box hole pattern. This allows you to install the unit in an installation where you may already have single-gang boxes installed. The box provides a slight forward slant which is excellent for surface mounting the unit in a console. Figure 5 illustrates the process for mounting the unit in such an application. The washers shown are optional and can be used to prevent the unit from being forced off of the box due to the keyhole mounting points.

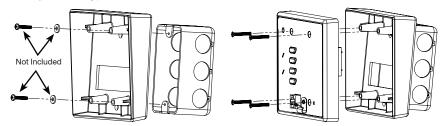


Figure 5 - Alternate Single-Gang Electrical Box Method A

Figure 6 illustrates an alternative mounting option where the box has been rotated 180° to provide a slight backward slant to the microphone station. In this case, you must use appropriately sized washers when attaching the box to the electrical box to prevent it from sliding off due to the keyhole mounting points. When the plastic box is attached in this orientation, you will no longer have direct access to the DIP switches or connectors. You will need to set the DIP switches and make any connections prior to placing the unit in the box. Use care when routing the cables as the clearance between the connector and the box is minimal.

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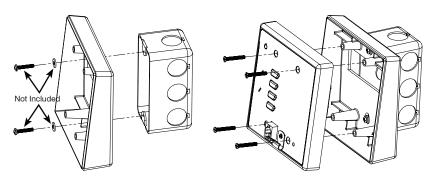


Figure 6 - Alternate Single-Gang Electrical Box Method B

# **Line Level Audio Output Connection**

If used, connect a balanced audio cable to the line level audio output connector using the supplied connector as shown in Figure 7. Ensure that DIP switch 8 is set to the ON position. Connect the other end of the cable to an appropriate audio device. This line level output will become active if the microphone station loses communications with the announcement controller.

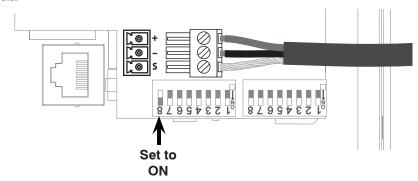


Figure 7 - Line Level Audio Output

#### CONFIGURATION

All microphone station operational functions are configured in the announcement controller software. You must correctly set the DIP switches on the microphone station so that it is correctly addressed on the network in order to communicate with the announcement controller. Refer to Figure 8 for the DIP switch functions. The DIP switches use binary encoding with DIP switch 1 referencing the least significant bit (LSB). Tables have been provided containing the correct switch combinations for each available group and mic number.

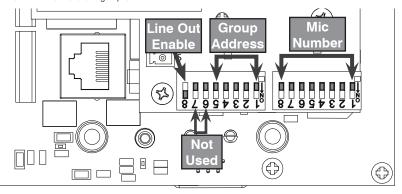


Figure 8 - 524 DIP Switch Locations

# **Group DIP Switch Settings**

| Switch | 1   | 2   | 3   | 4   | 5   |
|--------|-----|-----|-----|-----|-----|
| Group  |     |     |     |     |     |
| 1      | ON  | OFF | OFF | OFF | OFF |
| 2      | OFF | ON  | OFF | OFF | OFF |
| 3      | ON  | ON  | OFF | OFF | OFF |
| 4      | OFF | OFF | ON  | OFF | OFF |
| 5      | ON  | OFF | ON  | OFF | OFF |
| 6      | OFF | ON  | ON  | OFF | OFF |
| 7      | ON  | ON  | ON  | OFF | OFF |
| 8      | OFF | OFF | OFF | ON  | OFF |
| 9      | ON  | OFF | OFF | ON  | OFF |
| 10     | OFF | ON  | OFF | ON  | OFF |
| 11     | ON  | ON  | OFF | ON  | OFF |
| 12     | OFF | OFF | ON  | ON  | OFF |
| 13     | ON  | OFF | ON  | ON  | OFF |
| 14     | OFF | ON  | ON  | ON  | OFF |
| 15     | ON  | ON  | ON  | ON  | OFF |
| 16     | OFF | OFF | OFF | OFF | ON  |
| 17     | ON  | OFF | OFF | OFF | ON  |
| 18     | OFF | ON  | OFF | OFF | ON  |
| 19     | ON  | ON  | OFF | OFF | ON  |
| 20     | OFF | OFF | ON  | OFF | ON  |
| 21     | ON  | OFF | ON  | OFF | ON  |
| 22     | OFF | ON  | ON  | OFF | ON  |
| 23     | ON  | ON  | ON  | OFF | ON  |
| 24     | OFF | OFF | OFF | ON  | ON  |
| 25     | ON  | OFF | OFF | ON  | ON  |
| 26     | OFF | ON  | OFF | ON  | ON  |
| 27     | ON  | ON  | OFF | ON  | ON  |
| 28     | OFF | OFF | ON  | ON  | ON  |
| 29     | ON  | OFF | ON  | ON  | ON  |
| 30     | OFF | ON  | ON  | ON  | ON  |
| 31     | ON  | ON  | ON  | ON  | ON  |
| 32     | OFF | OFF | OFF | OFF | OFF |

# **Mic Number DIP Switch Settings**

| Switch   | 1         | 2          | 3          | 4          | 5          | 6          | 7          | 8          |
|----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| Mic      |           |            |            |            |            |            |            |            |
| 1        | ON        | OFF        |
| 2        | OFF       | ON         | OFF        | OFF        | OFF        | OFF        | OFF        | OFF        |
| 3        | ON        | ON         | OFF        | OFF        | OFF        | OFF        | OFF        | OFF        |
| 5        | OFF<br>ON | OFF<br>OFF | ON         | OFF<br>OFF | OFF<br>OFF | OFF<br>OFF | OFF<br>OFF | OFF<br>OFF |
| 6        | OFF       | OFF        | ON         | OFF        | OFF        | OFF        | OFF        | OFF        |
| 7        | ON        | ON         | ON         | OFF        | OFF        | OFF        | OFF        | OFF        |
| 8        | OFF       | OFF        | OFF        | ON         | OFF        | OFF        | OFF        | OFF        |
| 9        | ON        | OFF        | OFF        | ON         | OFF        | OFF        | OFF        | OFF        |
| 10       | OFF       | ON         | OFF        | ON         | OFF        | OFF        | OFF        | OFF        |
| 11       | ON        | ON         | OFF        | ON         | OFF        | OFF        | OFF        | OFF        |
| 12       | OFF       | OFF        | ON         | ON         | OFF        | OFF        | OFF        | OFF        |
| 13       | ON        | OFF        | ON         | ON         | OFF        | OFF<br>OFF | OFF<br>OFF | OFF        |
| 14<br>15 | OFF<br>ON | ON         | ON         | ON         | OFF<br>OFF | OFF        | OFF        | OFF<br>OFF |
| 16       | OFF       | OFF        | OFF        | OFF        | ON         | OFF        | OFF        | OFF        |
| 17       | ON        | OFF        | OFF        | OFF        | ON         | OFF        | OFF        | OFF        |
| 18       | OFF       | ON         | OFF        | OFF        | ON         | OFF        | OFF        | OFF        |
| 19       | ON        | ON         | OFF        | OFF        | ON         | OFF        | OFF        | OFF        |
| 20       | OFF       | OFF        | ON         | OFF        | ON         | OFF        | OFF        | OFF        |
| 21       | ON        | OFF        | ON         | OFF        | ON         | OFF        | OFF        | OFF        |
| 22       | OFF       | ON         | ON         | OFF        | ON         | OFF        | OFF        | OFF        |
| 23       | ON        | ON         | ON         | OFF        | ON         | OFF        | OFF        | OFF        |
| 24       | OFF       | OFF<br>OFF | OFF<br>OFF | ON         | ON         | OFF        | OFF<br>OFF | OFF        |
| 25<br>26 | ON<br>OFF | OFF        | OFF        | ON         | ON<br>ON   | OFF<br>OFF | OFF        | OFF<br>OFF |
| 27       | ON        | ON         | OFF        | ON         | ON         | OFF        | OFF        | OFF        |
| 28       | OFF       | OFF        | ON         | ON         | ON         | OFF        | OFF        | OFF        |
| 29       | ON        | OFF        | ON         | ON         | ON         | OFF        | OFF        | OFF        |
| 30       | OFF       | ON         | ON         | ON         | ON         | OFF        | OFF        | OFF        |
| 31       | ON        | ON         | ON         | ON         | ON         | OFF        | OFF        | OFF        |
| 32       | OFF       | OFF        | OFF        | OFF        | OFF        | ON         | OFF        | OFF        |
| 33       | ON        | OFF        | OFF        | OFF        | OFF        | ON         | OFF        | OFF        |
| 34       | OFF       | ON         | OFF        | OFF<br>OFF | OFF<br>OFF | ON         | OFF<br>OFF | OFF        |
| 35<br>36 | OFF       | ON<br>OFF  | OFF<br>ON  | OFF        | OFF        | ON<br>ON   | OFF        | OFF<br>OFF |
| 37       | ON        | OFF        | ON         | OFF        | OFF        | ON         | OFF        | OFF        |
| 38       | OFF       | ON         | ON         | OFF        | OFF        | ON         | OFF        | OFF        |
| 39       | ON        | ON         | ON         | OFF        | OFF        | ON         | OFF        | OFF        |
| 40       | OFF       | OFF        | OFF        | ON         | OFF        | ON         | OFF        | OFF        |
| 41       | ON        | OFF        | OFF        | ON         | OFF        | ON         | OFF        | OFF        |
| 42       | OFF       | ON         | OFF        | ON         | OFF        | ON         | OFF        | OFF        |
| 43       | ON        | ON         | OFF        | ON         | OFF        | NO         | OFF        | OFF        |
| 44<br>45 | OFF<br>ON | OFF<br>OFF | ON         | ON         | OFF<br>OFF | ON<br>ON   | OFF<br>OFF | OFF<br>OFF |
| 46       | OFF       | OFF        | ON         | ON         | OFF        | ON         | OFF        | OFF        |
| 47       | ON        | ON         | ON         | ON         | OFF        | ON         | OFF        | OFF        |
| 48       | OFF       | OFF        | OFF        | OFF        | ON         | ON         | OFF        | OFF        |
| 49       | ON        | OFF        | OFF        | OFF        | ON         | ON         | OFF        | OFF        |
| 50       | OFF       | ON         | OFF        | OFF        | ON         | ON         | OFF        | OFF        |
| 51       | ON        | ON         | OFF        | OFF        | ON         | ON         | OFF        | OFF        |
| 52       | OFF       | OFF        | ON         | OFF        | ON         | ON         | OFF        | OFF        |
| 53       | ON        | OFF        | ON         | OFF        | ON         | ON         | OFF        | OFF        |
| 54<br>55 | OFF       | ON         | ON         | OFF<br>OFF | ON         | ON<br>ON   | OFF<br>OFF | OFF<br>OFF |
| 56       | OFF       | OFF        | OFF        | OFF        | ON         | ON         | OFF        | OFF        |
| 57       | ON        | OFF        | OFF        | ON         | ON         | ON         | OFF        | OFF        |
| 58       | OFF       | ON         | OFF        | ON         | ON         | ON         | OFF        | OFF        |
| 59       | ON        | ON         | OFF        | ON         | ON         | ON         | OFF        | OFF        |
| 60       | OFF       | OFF        | ON         | ON         | ON         | ON         | OFF        | OFF        |
| 61       | ON        | OFF        | ON         | ON         | ON         | ON         | OFF        | OFF        |
| 62       | OFF       | ON         | ON         | ON         | ON         | ON         | OFF        | OFF        |
| 63       | ON        | ON         | ON         | ON         | ON         | ON         | OFF        | OFF        |

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| Switch   | 1         | 2         | 3         | 4          | 5          | 6          | 7   | 8          |
|----------|-----------|-----------|-----------|------------|------------|------------|-----|------------|
| Mic      |           |           |           |            |            |            |     |            |
| 64       | OFF       | OFF       | OFF       | OFF        | OFF        | OFF        | ON  | OFF        |
| 65       | ON        | OFF       | OFF       | OFF        | OFF        | OFF        | ON  | OFF        |
| 66       | OFF       | ON        | OFF       | OFF        | OFF        | OFF        | ON  | OFF        |
| 67       | ON        | ON        | OFF       | OFF        | OFF        | OFF        | ON  | OFF        |
| 68       | OFF       | OFF       | ON        | OFF        | OFF        | OFF        | ON  | OFF        |
| 69       | ON        | OFF       | ON        | OFF        | OFF        | OFF        | ON  | OFF        |
| 70       | OFF       | ON        | ON        | OFF        | OFF        | OFF        | ON  | OFF        |
| 71       | ON        | ON        | ON        | OFF        | OFF        | OFF        | ON  | OFF        |
| 72       | OFF       | OFF       | OFF       | ON         | OFF        | OFF        | ON  | OFF        |
| 73       | ON        | OFF       | OFF       | ON         | OFF        | OFF        | ON  | OFF        |
| 74       | OFF       | ON        | OFF       | ON         | OFF        | OFF        | ON  | OFF        |
| 75       | ON        | ON        | OFF       | ON         | OFF        | OFF        | ON  | OFF        |
| 76       | OFF       | OFF       | ON        | ON         | OFF        | OFF        | ON  | OFF        |
| 77       | ON        | OFF       | ON        | ON         | OFF        | OFF        | ON  | OFF        |
| 78       | OFF<br>ON | ON        | ON        | ON         | OFF<br>OFF | OFF<br>OFF | ON  | OFF<br>OFF |
| 79       | OFF       | OFF       | OFF       | OFF        | OFF        | OFF        | ON  | OFF        |
| 80       | OFF       | OFF       | OFF       | OFF        | ON         | OFF        | ON  | OFF        |
| 81<br>82 | OFF       | OFF       | OFF       | OFF        | ON         | OFF        | ON  | OFF        |
|          |           |           |           |            |            |            |     |            |
| 83<br>84 | ON<br>OFF | ON<br>OFF | OFF<br>ON | OFF<br>OFF | ON         | OFF<br>OFF | ON  | OFF<br>OFF |
| 85       | ON        | OFF       | ON        | OFF        | ON         | OFF        | ON  | OFF        |
| 86       | OFF       | ON        | ON        | OFF        | ON         | OFF        | ON  | OFF        |
| 87       | ON        | ON        | ON        | OFF        | ON         | OFF        | ON  | OFF        |
| 88       | OFF       | OFF       | OFF       | ON         | ON         | OFF        | ON  | OFF        |
| 89       | ON        | OFF       | OFF       | ON         | ON         | OFF        | ON  | OFF        |
| 90       | OFF       | ON        | OFF       | ON         | ON         | OFF        | ON  | OFF        |
| 91       | ON        | ON        | OFF       | ON         | ON         | OFF        | ON  | OFF        |
| 92       | OFF       | OFF       | ON        | ON         | ON         | OFF        | ON  | OFF        |
| 93       | ON        | OFF       | ON        | ON         | ON         | OFF        | ON  | OFF        |
| 94       | OFF       | ON        | ON        | ON         | ON         | OFF        | ON  | OFF        |
| 95       | ON        | ON        | ON        | ON         | ON         | OFF        | ON  | OFF        |
| 96       | OFF       | OFF       | OFF       | OFF        | OFF        | ON         | ON  | OFF        |
| 97       | ON        | OFF       | OFF       | OFF        | OFF        | ON         | ON  | OFF        |
| 98       | OFF       | ON        | OFF       | OFF        | OFF        | ON         | ON  | OFF        |
| 99       | ON        | ON        | OFF       | OFF        | OFF        | ON         | ON  | OFF        |
| 100      | OFF       | OFF       | ON        | OFF        | OFF        | ON         | ON  | OFF        |
| 101      | ON        | OFF       | ON        | OFF        | OFF        | ON         | ON  | OFF        |
| 102      | OFF       | ON        | ON        | OFF        | OFF        | ON         | ON  | OFF        |
| 103      | ON        | ON        | ON        | OFF        | OFF        | ON         | ON  | OFF        |
| 104      | OFF       | OFF       | OFF       | ON         | OFF        | ON         | ON  | OFF        |
| 105      | ON        | OFF       | OFF       | ON         | OFF        | ON         | ON  | OFF        |
| 106      | OFF       | ON        | OFF       | ON         | OFF        | ON         | ON  | OFF        |
| 107      | ON        | ON        | OFF       | ON         | OFF        | ON         | ON  | OFF        |
| 108      | OFF       | OFF       | ON        | ON         | OFF        | ON         | ON  | OFF        |
| 109      | ON        | OFF       | ON        | ON         | OFF        | ON         | ON  | OFF        |
| 110      | OFF       | ON        | ON        | ON         | OFF        | ON         | ON  | OFF        |
| 111      | ON        | ON        | ON        | ON         | OFF        | ON         | ON  | OFF        |
| 112      | OFF       | OFF       | OFF       | OFF        | ON         | ON         | ON  | OFF        |
| 113      | ON        | OFF       | OFF       | OFF        | ON         | ON         | ON  | OFF        |
| 114      | OFF       | ON        | OFF       | OFF        | ON         | ON         | ON  | OFF        |
| 115      | ON        | ON        | OFF       | OFF        | ON         | ON         | ON  | OFF        |
| 116      | OFF       | OFF       | ON        | OFF        | ON         | ON         | ON  | OFF        |
| 117      | ON        | OFF       | ON        | OFF        | ON         | ON         | ON  | OFF        |
| 118      | OFF       | ON        | ON        | OFF        | ON         | ON         | ON  | OFF        |
| 119      | ON        | ON        | ON        | OFF        | ON         | ON         | ON  | OFF        |
| 120      | OFF       | OFF       | OFF       | ON         | ON         | ON         | ON  | OFF        |
| 121      | ON        | OFF       | OFF       | ON         | ON         | ON         | ON  | OFF        |
| 122      | OFF       | ON        | OFF       | ON         | ON         | ON         | ON  | OFF        |
| 123      | ON        | ON        | OFF       | ON         | ON         | ON         | ON  | OFF        |
| 124      | OFF       | OFF       | ON        | ON         | ON         | ON         | ON  | OFF        |
| 125      | ON        | OFF       | ON        | ON         | ON         | ON         | ON  | OFF        |
| 126      | OFF       | ON        | ON        | ON         | ON         | ON         | ON  | OFF        |
| 127      | ON        | ON        | ON        | ON         | ON         | ON         | ON  | OFF        |
| 128      | OFF       | OFF       | OFF       | OFF        | OFF        | OFF        | OFF | ON         |
| 129      | ON        | OFF       | OFF       | OFF        | OFF        | OFF        | OFF | ON         |

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| Switch     | 1         | 2          | 3          | 4          | 5          | 6          | 7          | 8  |
|------------|-----------|------------|------------|------------|------------|------------|------------|----|
| Mic        |           |            |            |            |            |            |            |    |
| 130        | OFF       | ON         | OFF        | OFF        | OFF        | OFF        | OFF        | ON |
| 131        | ON        | ON         | OFF        | OFF        | OFF        | OFF        | OFF        | ON |
| 132        | OFF       | OFF        | ON         | OFF        | OFF        | OFF        | OFF        | ON |
| 133        | ON        | OFF        | ON         | OFF        | OFF        | OFF        | OFF        | ON |
| 134        | OFF       | ON         | ON         | OFF        | OFF        | OFF        | OFF        | ON |
| 135        | ON        | ON         | ON         | OFF        | OFF        | OFF        | OFF        | ON |
| 136        | OFF       | OFF        | OFF        | ON         | OFF        | OFF        | OFF        | ON |
| 137        | ON        | OFF        | OFF        | ON         | OFF        | OFF        | OFF        | ON |
| 138        | OFF       | ON         | OFF        | ON         | OFF        | OFF        | OFF        | ON |
| 139        | ON        | ON         | OFF        | ON         | OFF        | OFF        | OFF        | ON |
| 140        | OFF       | OFF        | ON         | ON         | OFF        | OFF        | OFF        | ON |
| 141        | ON        | OFF        | ON         | ON         | OFF        | OFF        | OFF        | ON |
| 142<br>143 | OFF<br>ON | ON         | ON         | ON         | OFF<br>OFF | OFF<br>OFF | OFF<br>OFF | ON |
| 143        | OFF       | OFF        | OFF        | OFF        | OFF        | OFF        | OFF        | ON |
| 145        | ON        | OFF        | OFF        | OFF        | ON         | OFF        | OFF        | ON |
| 146        | OFF       | ON         | OFF        | OFF        | ON         | OFF        | OFF        | ON |
| 147        | ON        | ON         | OFF        | OFF        | ON         | OFF        | OFF        | ON |
| 148        | OFF       | OFF        | ON         | OFF        | ON         | OFF        | OFF        | ON |
| 149        | ON        | OFF        | ON         | OFF        | ON         | OFF        | OFF        | ON |
| 150        | OFF       | ON         | ON         | OFF        | ON         | OFF        | OFF        | ON |
| 151        | ON        | ON         | ON         | OFF        | ON         | OFF        | OFF        | ON |
| 152        | OFF       | OFF        | OFF        | ON         | ON         | OFF        | OFF        | ON |
| 153        | ON        | OFF        | OFF        | ON         | ON         | OFF        | OFF        | ON |
| 154        | OFF       | ON         | OFF        | ON         | ON         | OFF        | OFF        | ON |
| 155        | ON        | ON         | OFF        | ON         | ON         | OFF        | OFF        | ON |
| 156        | OFF       | OFF        | ON         | ON         | ON         | OFF        | OFF        | ON |
| 157        | ON        | OFF        | ON         | ON         | ON         | OFF        | OFF        | ON |
| 158        | OFF       | ON         | ON         | ON         | ON         | OFF        | OFF        | ON |
| 159        | ON        | ON         | ON         | ON         | ON         | OFF        | OFF        | ON |
| 160        | OFF       | OFF        | OFF        | OFF        | OFF        | ON         | OFF        | ON |
| 161        | ON        | OFF        | OFF        | OFF        | OFF        | ON         | OFF        | ON |
| 162        | OFF       | ON         | OFF        | OFF        | OFF        | ON         | OFF        | ON |
| 163        | ON        | ON         | OFF        | OFF        | OFF        | ON         | OFF        | ON |
| 164        | OFF       | OFF        | ON         | OFF        | OFF        | ON         | OFF        | ON |
| 165        | ON        | OFF        | ON         | OFF        | OFF        | ON         | OFF        | ON |
| 166        | OFF       | ON         | ON         | OFF        | OFF        | ON         | OFF        | ON |
| 167        | ON        | ON         | ON         | OFF        | OFF        | ON         | OFF        | ON |
| 168        | OFF       | OFF        | OFF        | ON         | OFF        | ON         | OFF        | ON |
| 169        | ON        | OFF        | OFF        | ON         | OFF        | ON         | OFF        | ON |
| 170        | OFF       | ON         | OFF        | ON         | OFF        | ON         | OFF        | ON |
| 171        | ON        | ON         | OFF        | ON         | OFF        | ON         | OFF        | ON |
| 172        | OFF       | OFF        | ON         | ON         | OFF        | ON         | OFF        | ON |
| 173        | ON        | OFF        | ON         | ON         | OFF        | ON         | OFF        | ON |
| 174        | OFF       | ON         | ON         | ON         | OFF        | ON         | OFF        | ON |
| 175        | ON        | ON         | ON         | ON         | OFF        | ON         | OFF        | ON |
| 176        | OFF<br>ON | OFF<br>OFF | OFF<br>OFF | OFF<br>OFF | ON         | ON         | OFF<br>OFF | ON |
| 177<br>178 | OFF       | OFF        | OFF        | OFF        | ON         | ON         | OFF        | ON |
| 179        | OFF       | ON         | OFF        | OFF        | ON         | ON         | OFF        | ON |
| 180        | OFF       | OFF        | ON         | OFF        | ON         | ON         | OFF        | ON |
| 181        | ON        | OFF        | ON         | OFF        | ON         | ON         | OFF        | ON |
| 182        | OFF       | ON         | ON         | OFF        | ON         | ON         | OFF        | ON |
| 183        | ON        | ON         | ON         | OFF        | ON         | ON         | OFF        | ON |
| 184        | OFF       | OFF        | OFF        | ON         | ON         | ON         | OFF        | ON |
| 185        | ON        | OFF        | OFF        | ON         | ON         | ON         | OFF        | ON |
| 186        | OFF       | ON         | OFF        | ON         | ON         | ON         | OFF        | ON |
| 187        | ON        | ON         | OFF        | ON         | ON         | ON         | OFF        | ON |
| 188        | OFF       | OFF        | ON         | ON         | ON         | ON         | OFF        | ON |
| 189        | ON        | OFF        | ON         | ON         | ON         | ON         | OFF        | ON |
| 190        | OFF       | ON         | ON         | ON         | ON         | ON         | OFF        | ON |
| 191        | ON        | ON         | ON         | ON         | ON         | ON         | OFF        | ON |
| 192        | OFF       | OFF        | OFF        | OFF        | OFF        | OFF        | ON         | ON |
| 193        | ON        | OFF        | OFF        | OFF        | OFF        | OFF        | ON         | ON |
| 194        | OFF       | ON         | OFF        | OFF        | OFF        | OFF        | ON         | ON |
| 195        | ON        | ON         | OFF        | OFF        | OFF        | OFF        | ON         | ON |
|            |           |            |            |            |            |            |            |    |

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| Switch | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|
| Mic    |     |     |     |     |     |     |     |     |
| 196    | OFF | OFF | ON  | OFF | OFF | OFF | ON  | ON  |
| 197    | ON  | OFF | ON  | OFF | OFF | OFF | ON  | ON  |
| 198    | OFF | ON  | ON  | OFF | OFF | OFF | ON  | ON  |
| 199    | ON  | ON  | ON  | OFF | OFF | OFF | ON  | ON  |
| 200    | OFF | OFF | OFF | ON  | OFF | OFF | ON  | ON  |
| 201    | ON  | OFF | OFF | ON  | OFF | OFF | ON  | ON  |
| 202    | OFF | ON  | OFF | ON  | OFF | OFF | ON  | ON  |
| 203    | ON  | ON  | OFF | ON  | OFF | OFF | ON  | ON  |
| 204    | OFF | OFF | ON  | ON  | OFF | OFF | ON  | ON  |
| 205    | ON  | OFF | ON  | ON  | OFF | OFF | ON  | ON  |
| 206    | OFF | ON  | ON  | ON  | OFF | OFF | ON  | ON  |
| 207    | ON  | ON  | ON  | ON  | OFF | OFF | ON  | ON  |
| 208    | OFF | OFF | OFF | OFF | ON  | OFF | ON  | ON  |
| 209    | ON  | OFF | OFF | OFF | ON  | OFF | ON  | ON  |
| 210    | OFF | ON  | OFF | OFF | ON  | OFF | ON  | ON  |
| 211    | ON  | ON  | OFF | OFF | ON  | OFF | ON  | ON  |
| 212    | OFF | OFF | ON  | OFF | ON  | OFF | ON  | ON  |
| 213    | ON  | OFF | ON  | OFF | ON  | OFF | ON  | ON  |
| 214    | OFF | ON  | ON  | OFF | ON  | OFF | ON  | ON  |
| 215    | ON  | ON  | ON  | OFF | ON  | OFF | ON  | ON  |
| 216    | OFF | OFF | OFF | ON  | ON  | OFF | ON  | ON  |
| 217    | ON  | OFF | OFF | ON  | ON  | OFF | ON  | ON  |
| 218    | OFF | ON  | OFF | ON  | ON  | OFF | ON  | ON  |
| 219    | ON  | ON  | OFF | ON  | ON  | OFF | ON  | ON  |
| 220    | OFF | OFF | ON  | ON  | ON  | OFF | ON  | ON  |
| 221    | ON  | OFF | ON  | ON  | ON  | OFF | ON  | ON  |
| 222    | OFF | ON  | ON  | ON  | ON  | OFF | ON  | ON  |
| 223    | ON  | ON  | ON  | ON  | ON  | OFF | ON  | ON  |
| 224    | OFF | OFF | OFF | OFF | OFF | ON  | ON  | ON  |
| 225    | ON  | OFF | OFF | OFF | OFF | ON  | ON  | ON  |
| 226    | OFF | ON  | OFF | OFF | OFF | ON  | ON  | ON  |
| 227    | ON  | ON  | OFF | OFF | OFF | ON  | ON  | ON  |
| 228    | OFF | OFF | ON  | OFF | OFF | ON  | ON  | ON  |
| 229    | ON  | OFF | ON  | OFF | OFF | ON  | ON  | ON  |
| 230    | OFF | ON  | ON  | OFF | OFF | ON  | ON  | ON  |
| 231    | ON  | ON  | ON  | OFF | OFF | ON  | ON  | ON  |
| 232    | OFF | OFF | OFF | ON  | OFF | ON  | ON  | ON  |
| 233    | ON  | OFF | OFF | ON  | OFF | ON  | ON  | ON  |
| 234    | OFF | ON  | OFF | ON  | OFF | ON  | ON  | ON  |
| 235    | ON  | ON  | OFF | ON  | OFF | ON  | ON  | ON  |
| 236    | OFF | OFF | ON  | ON  | OFF | ON  | ON  | ON  |
| 237    | ON  | OFF | ON  | ON  | OFF | ON  | ON  | ON  |
| 238    | OFF | ON  | ON  | ON  | OFF | ON  | ON  | ON  |
| 239    | ON  | ON  | ON  | ON  | OFF | ON  | ON  | ON  |
| 240    | OFF | OFF | OFF | OFF | ON  | ON  | ON  | ON  |
| 241    | ON  | OFF | OFF | OFF | ON  | ON  | ON  | ON  |
| 242    | OFF | ON  | OFF | OFF | ON  | ON  | ON  | ON  |
| 243    | ON  | ON  | OFF | OFF | ON  | ON  | ON  | ON  |
| 244    | OFF | OFF | ON  | OFF | ON  | ON  | ON  | ON  |
| 245    | ON  | OFF | ON  | OFF | ON  | ON  | ON  | ON  |
| 246    | OFF | ON  | ON  | OFF | ON  | ON  | ON  | ON  |
| 247    | ON  | ON  | ON  | OFF | ON  | ON  | ON  | ON  |
| 248    | OFF | OFF | OFF | ON  | ON  | ON  | ON  | ON  |
| 249    | ON  | OFF | OFF | ON  | ON  | ON  | ON  | ON  |
| 250    | OFF | ON  | OFF | ON  | ON  | ON  | ON  | ON  |
| 251    | ON  | ON  | OFF | ON  | ON  | ON  | ON  | ON  |
| 252    | OFF | OFF | ON  | ON  | ON  | ON  | ON  | ON  |
| 253    | ON  | OFF | ON  | ON  | ON  | ON  | ON  | ON  |
| 254    | OFF | ON  |
| 255    | ON  |
| 256    | OFF |
| 200    | 011 | 011 | 0   | 011 | 011 | 011 | 011 | 011 |

NOTE: The maximum total number of microphone stations supported in GLOBALCOM is 240.

# **Line Level Audio Output Enable**

| Switch               | 8   |
|----------------------|-----|
| Line Output Enabled  | ON  |
| Line Output Disabled | OFF |

# **DIMENSIONS**

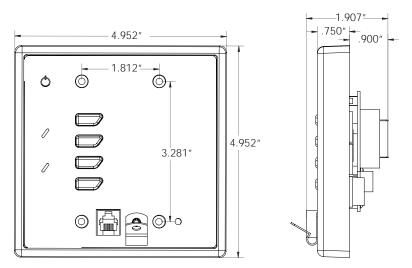


Figure 9 - IEDA524-H

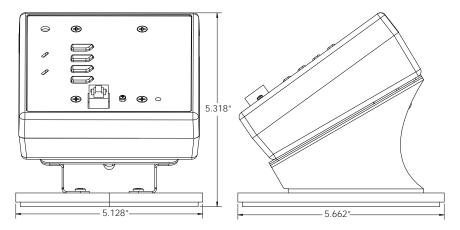


Figure 10 - IEDA524-H with optional IEDA520DTB

