



# **IP7 EDx/ESx**

## **Intercom**

# **Reference Manual**



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# Table of Contents

<b>Overview</b> .....	<b>1</b>
<b>Available Models</b> .....	<b>2</b>
<b>Specifications</b> .....	<b>2</b>
<b>IP7 EDx/ESx Layout</b> .....	<b>3</b>
<b>LED Indicators</b> .....	<b>5</b>
<b>Connecting to an Ethernet Network</b> .....	<b>6</b>
<b>Connecting Power</b> .....	<b>6</b>
External Power .....	6
PoE .....	6
<b>Connecting Mic In or Audio Out</b> .....	<b>6</b>
Mic In .....	6
Audio Out .....	6
<b>Setting Volume Levels</b> .....	<b>6</b>
<b>Software Configuration</b> .....	<b>7</b>
IP Configuration .....	7
Intercom Options .....	7
<b>Physical Dimensions</b> .....	<b>8</b>
<b>Environmental</b> .....	<b>8</b>
<b>Troubleshooting</b> .....	<b>9</b>
Reset to Factory Defaults .....	9
<b>Contacting Technical Support</b> .....	<b>9</b>

## Overview

The Digital Acoustics IP7 EDx/ESx models are IP (Internet Protocol) based Intercoms that provide the functional audio equivalent of the basic "push to talk" intercom. Simply power it up, connect it to a 10/100 Ethernet switch, configure its IP address information and communicate to a PC running TalkMaster™ software.

The IP7 EDx/ESx models replace the previous ii3 series EDx/ESx Intercoms. Refer to the bottom label to ensure you have an IP7 series Intercom.

Standard features include:

- Integrated microphone and speaker
- Talk to/from an IP7 EDx/ESx to TMEE server or SIP2.0 server
- Talk to/from an IP7 EDx/ESx to an IP7 using a Direct Mode Pair
- High quality, clear transmit and playback audio
- Hands-free operation for the end user
- Highly scalable and seamless expansion
- Static or DHCP compliant IP assignment
- External 9VDC power
- Optional PoE (802.3af) available
- Available with "surface mount" bottom plate
- Field upgradeable OS using internal Flash memory



The IP7 EDx/ESx must be configured using the TalkMaster™ software before being used. Please consult the configuration section of the software manual for details.

## Available Models

IP7-EDW-110 – White Desktop with 110 power supply

IP7-EDW-220 – White Desktop with 220 power supply

IP7-EDW-PoE – White Desktop with PoE option

IP7-ESW-110 – White Surface Mount with 110 power supply

IP7-ESW-220 – White Surface Mount with 220

IP7-ESW-PoE – White Surface Mount with PoE option

IP7-EDB-110 – Black Desktop with 110 power supply

IP7-EDB-220 – Black Desktop with 220 power supply

IP7-EDB-PoE – Black Desktop with PoE option

IP7-ESB-110 – Black Surface Mount with 110 power supply

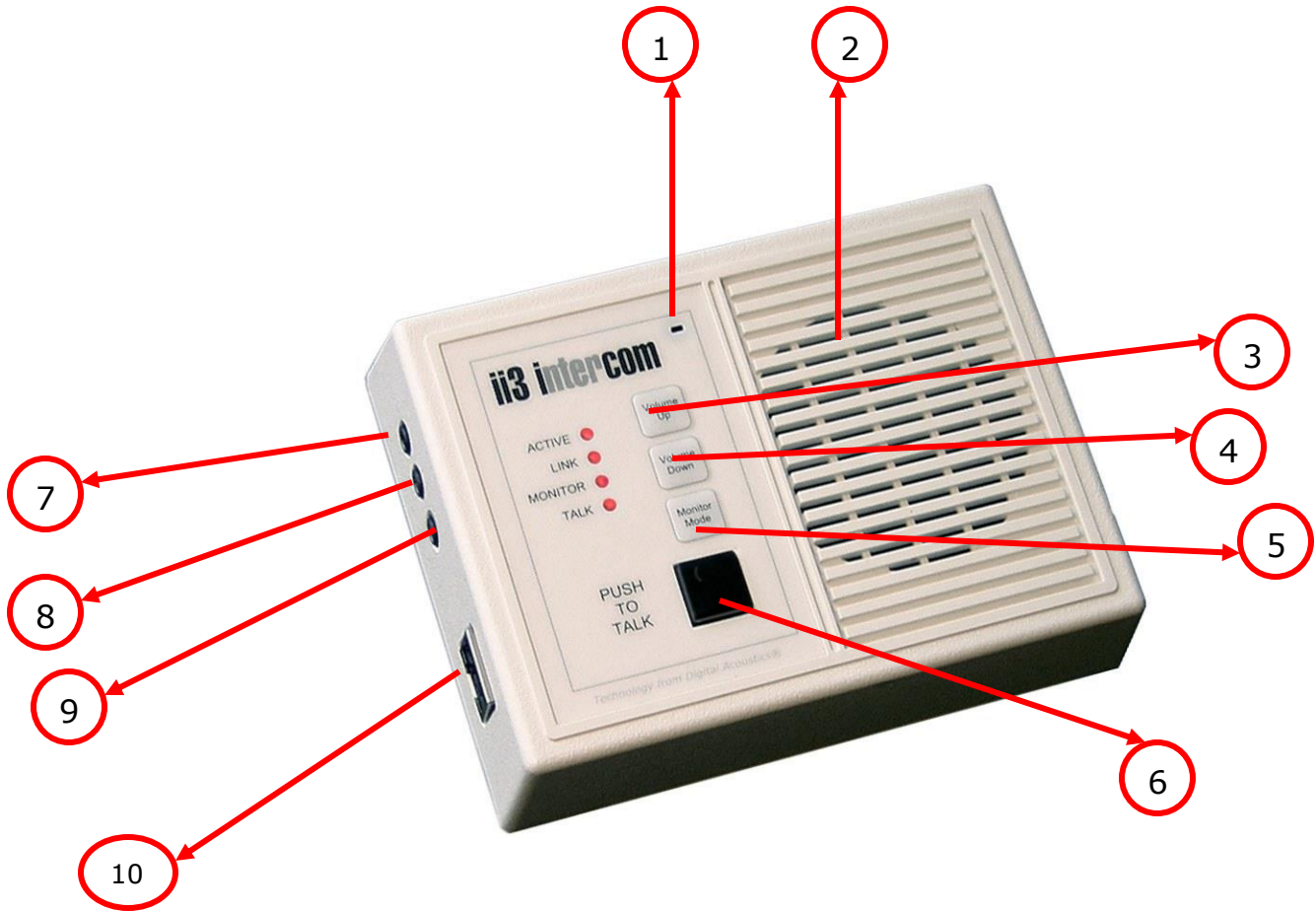
IP7-ESB-220 – Black Surface Mount with 220 power supply

IP7-ESB-PoE – Black Surface Mount with PoE option

## Specifications

Items	Specifications
Hardware Protocols	TCP, UDP, SIP, ARP, ICMP, IGMP V2/V3, Multicast
Network Interface	10/100 Ethernet (Auto detection, Auto MDIX)
Command protocols	Proprietary
Audio Rate	64kbs
Audio Resolution	G.711 (8-bit PCM and 16-bit uLaw)
Audio Sample Rate	8K (Voice) – 22K (Background Music)
Audio Frequency	4000 Hz
Internal Amplifier	1 Watt @ 8 Ohms
Humidity	10~90%
Power	External Power 9VDC @ 5 watts
	PoE (802.3af) Requires 7 watts from PSE
Size	135mm x 102mm x 37mm

# IP7 EDx/ESx Layout



## Connections and Controls

Refer to the preceding pictures for the Connector number.

Number	Description	Notes
1	Integrated Microphone	Uni-directional microphone
2	Integrated Speaker	8Ω speaker
3	Volume Up	Increase speaker volume (max 7 levels)
4	Volume Down	Decrease speaker volume (max 7 levels)
5	Monitor/Open	Used for <b>Direct Mode Server</b> <sup>1</sup> : Depress < 2 seconds to toggle Monitor, Depress > 2 seconds to activate Client Door Relay
6	Push To Talk (PTT)	Initiate a call and/or transmit audio
7	External Mic In Jack	3.5mm External Microphone Jack
8	External Audio Out Jack	3.5mm External Audio Out Jack
9	Power	9VDC at 500ma
10	10/100 Ethernet	10/100 Auto sensing, Auto MDIX

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<sup>1</sup> Refer to the "**Direct Mode Configuration**" Application Note for configuring two Intercoms to operate without the need of a PC. Available on the TalkMaster Installation CD or the Digital Acoustics' Website

## LED Indicators

### *Intercom LEDs*

There are four LEDs present on the front of the product. These LEDs indicate status of the unit.

LED	Description
Active	Indicates whether the unit has connected to a Server
Link	Indicates whether the unit has a valid network Connection
Monitor	Indicates whether the remote end is being listened to
Talk	Indicates whether audio is being transmitted or received

### *LED Status Table*

Description	Active	Link	Monitor	Talk
Normal operational mode. Intercom can communicate with its Server	On	On	Off	Off
Playing Audio	On	On	Off	Flashing
Playing Broadcast Audio	Fast Flash	On	Off	Flashing
Sending Audio	On	On	Off	On
Waiting for a connection or unit has not been configured	Slow Flash	On	Off	Off
LAN connection is inactive. The RJ45 may be unplugged	Slow Flash	Off	Off	Off
Unit has been detected by the Intercom Configuration Tool	Fast Flash	On	Off	Off
Server Mode – Monitoring Client	On	On	On	Any
Server Mode – “Door Open” Sent	On	On	Flash	Any

### *LAN Connector LEDs*

On the **Ethernet 10/100** RJ-45 connector:

- The Green LED tracks to the **Ready** LED
- The Yellow LED tracks to the **Link** LED



## Connecting to an Ethernet Network

The **Ethernet 10/100** connector allows the unit to be attached to a standard Ethernet 10/100 network.

- Plug a Cat5 cable into the RJ-45 connector labeled **Ethernet 10/100** and connect the other end to a 10/100 switch
- The **Ethernet 10/100** connector supports auto "MDIX" and can be plugged directly into a PC for diagnostic purposes

## Connecting Power

### *External Power*

- The 2.1mm Power Jack (center tip positive) accepts 9VDC

### *PoE*

- Plug a Cat5 cable from an 802.3af compliant switch or injector into the Ethernet 10/100 connector. 7 watts will be requested from PoE (802.3af compatible) Power Source Equipment (PSE).

## Connecting Mic In or Audio Out

### *Mic In*

- The 3.5mm **Mic In** jack accepts a standard electret or dynamic mic. Use of this jack overrides the integrated mic
- Mono Jack required

### *Audio Out*

- The 3.5mm **Audio Out** Jack is capable of driving headphones or an external amplifier. Use of this jack overrides the integrated speaker
- Mono Jack required

## Setting Volume Levels

The IP7 EDx/ESx supports seven volume levels for the internal speaker.

- Press the "Volume Up" or "Volume Down" button one time to increase or decrease the speaker volume
- Pressing the "Volume Up" or "Volume Down" button seven times sets the unit at its highest or lowest setting
- Refer to the software manuals for setting the volume via software

## **Software Configuration**

### ***IP Configuration***

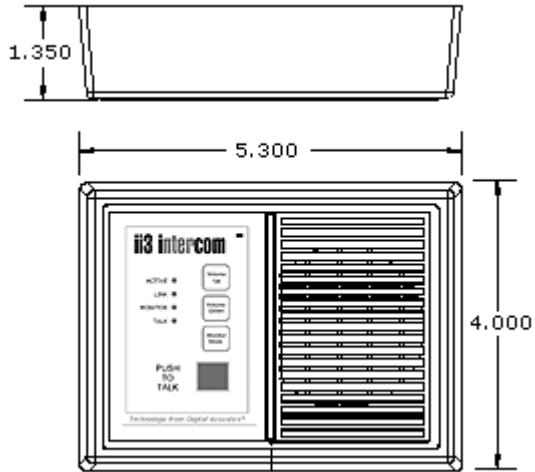
Refer to the software manuals for instructions on setting the IP address information.

### ***Intercom Options***

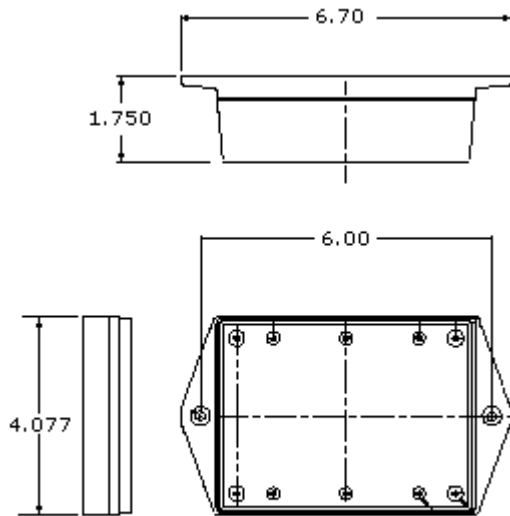
The IP7 EDx/ESx uses the internal **Relay** and **Sensor**. Do not make any configuration changes to either of these.

## Physical Dimensions

The IP7 EDx/ESx Dimensions are as follows:



Dimensions for the optional Surface Mount bottom:



## Environmental

The IP7 EDx/ESx is designed to operate indoors.

## **Troubleshooting**

Always refer the LED Indicator table when troubleshooting.

The unit can be reset to factory defaults by following this procedure:

### ***Reset to Factory Defaults***

The IP Address information and all Intercom options can be reset to factory defaults by the following procedure:

- Unplug the Power
- Press and hold the "Volume Up" and "Volume Down " buttons
- Power the unit
- Wait till the unit plays a 3 tone beep (about 5 seconds)
- Release the "Volume Up" and "Volume Down " buttons
- Refer to the software manuals for instructions on configuring the IP address information

## **Contacting Technical Support**

Information online at [www.digitalacoustics.com](http://www.digitalacoustics.com)

***Email support:***

[esupport@digitalacoustics.com](mailto:esupport@digitalacoustics.com)

## Index

2.1mm Power Jack .....	6	LED Status .....	5
Audio Out.....	4, 6	LEDs.....	5
Dimensions.....	8	Mic In .....	4, 6
<b>Direct Mode Server</b> .....	4	Monitor/Open .....	4
<b>Ethernet 10/100</b> .....	6	PoE .....	6
Factory Default .....	9	Power .....	6
Intercom Options .....	7	PTT .....	<i>See</i> Push to Talk
Intergrated Microphone.....	4	Push To Talk.....	4
Intergrated Speaker .....	4	Volume .....	6
IP Configuration .....	7	Volume Down .....	4
LAN Connector LED.....	5	Volume Up .....	4
LED .....	5		



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