

# IP7-FD

## Getting Started Guide



### Introduction

Digital Acoustics IP7-FD enables Full Duplex IP audio to support simultaneous speaking in hands free conversation with TalkMaster™ software and/or VoIP Systems supporting industry standard SIP 2.0 (VoIP) protocols. The “FD” is designed to work in tandem with Digital Acoustics’ “Full Duplex” call stations and enclosures for a compete ‘endpoint’ solution. Standard features include PoE/External Power, Dual Ethernet ports and Talk/Relay/Sensor connections.

The FD is configured using the TalkMaster Admin Console software. This *Getting Started* booklet covers basic hardware installation and software configuration of the IP7-FD.

## IP7-FD Installation



Please refer to the IP7-FD Reference Manual available on the **Software Installation CD** for additional information on installation and setup

### Important Installation Guidelines

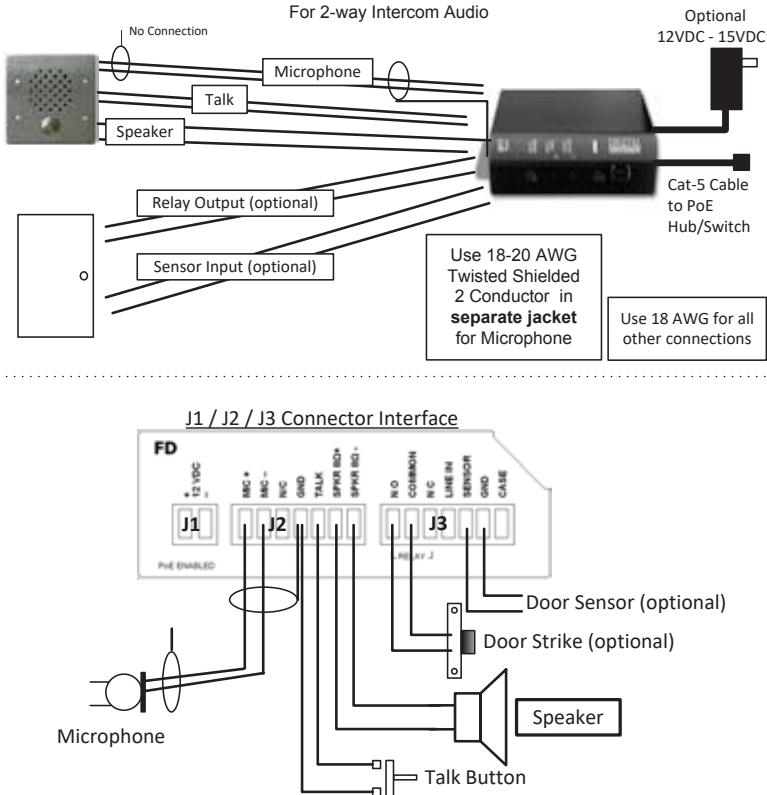
- Use two conductor 18-20 AWG twisted, **shielded** wire for Microphone connections. **The Microphone wire can not be in the same jacket as the Speaker wire**
- Select 18 AWG for Speaker connections. The TALK, RELAY and Sensor wire wires may share the same jacket as the Speaker wire
- Avoid sharing AC power with audio in long conduit runs
- Do not install near power distribution equipment or noise generating equipment such as stepper motors
- Conform to industry standard practices for grounding

### IP7-FD Full Duplex - Call Station Installation

The IP7-FD is designed to be used with full duplex call stations supplied by Digital Acoustics. Contact Technical Support for recommended design criteria for other call stations.

- Connect **MIC+** (J2-1) and **MIC-** (J2-2) from the IP7-FD to the Microphone terminals in the call station. **The Microphone wire can not be in the same jacket as the Speaker wire**
- Connect **GND** (J2-4) from the IP7-FD to the shield of the shielded wire on the Microphone cable. Do not connect the shield at the call station
- Connect **SPKR 8Ω+** (J2-6) and **SPKR 8Ω-** (J2-7) from the IP7-FD to the terminals of the 8 ohm speaker in the call station (polarity independent)
- Connect **TALK** (J2-5) from the IP7-FD to one contact on the call station’s TALK button
- Connect the 2nd contact of the call station’s TALK button to **GND** (J2-4). Or connect the 2nd contact of the call station’s TALK button to either of the speaker terminals in the call station

## IP7-FD Installation



## Relay Options

- The integrated **Relay** uses **COMMON** (J3-2), along with **NO** - Normally Open (J3-1) or **NC** - Normally Closed (J3-3). Use Admin Console to configure the options

## Sensor Options

- The integrated **Sensor** can be used to monitor the status of a door by connecting **Sensor** (J3-5) and **GND** (J3-6) to a contact closure sense switch. Use Admin Console to configure the options

## Power Options

- Power over Ethernet (PoE - 802.3af compliant) - requires 15.4 Watts from Power Source Equipment (PSE)
- 12VDC at 15 watts via J1-1 and J1-2 connectors (polarity independent)
- 12VDC at 15 watts via the Aux Power 2.1mm barrel connector
- An external power supply, if detected, overrides PoE power

## Network Installation

- Connect an RJ-45 cable between the **Ethernet 10/100** connector and a network switch
- After the **Ethernet 10/100** is connected, another IP device can be connected to **Port 2 10/100** jack

## Mounting Instructions

The IP7 series is designed to be mounted on standard 35mm DIN rail or surface mounted using the surface mounting plate

- DIN Rail Clip** – Tilt top of unit (J1, J2, J3 connectors facing up with Volume buttons facing forward) back towards the DIN Rail until the IP7 DIN clip catches the top of the rail. Press in at the bottom of the IP7 to snap into place
- Surface Mount Plate** – Snap the surface mount plate in half and secure it to the back of the unit using the provided screws so that the mounting holes extend past the edges of the case

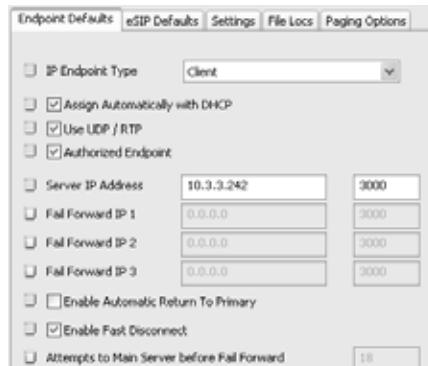
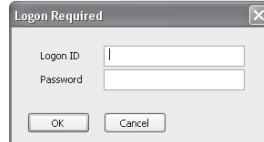
# TalkMaster™ Software

TalkMaster™ Server Software is a suite of Windows® based application used to configure and manage Digital Acoustics IP7™ and ii3™ Intercoms and Paging endpoints. Applications included with the TalkMaster Server are the **Admin Console** for configuration of the Server and IP Endpoints and the **Operator Console** for managing 2-way Intercom calls and 1-way Paging announcements.



Please refer to the *TalkMaster Admin Console Reference Manual* on the **Software Installation CD** for additional information software setup options

- Install the TalkMaster Software using the Software Installation CD
- Refer to the previous section to power up and connect the IP7 series device to the network.
- Record the unique ID# from the bottom label of the IP Endpoint and note the location where it will be installed
- Start the Admin Console and logon with an Operator ID of **admin** and the default password of **admin**
- Click the **Settings → Endpoint Defaults** tab and make any changes required for your installation. For instance, if you want to assign static IP Addresses, uncheck the **Assign Automatically with DHCP** checkbox



- Click the **IP Endpoints** tab and press the **FIND ALL** button in the lower right hand corner of the screen. Newly discovered IP Endpoints appear in the list



- Click on the IP Endpoint to be configured (the “Icom ID” column must match to the Intercom’s previously recorded ID#)

The screenshot shows the TalkMaster Admin Console interface. The top navigation bar includes tabs for Setup, Queues, IP Endpoints, Messages, Paging Groups, Operators, Audit, and Status. The IP Endpoints tab is selected. Below the tabs is a table with columns for Auth, Location Name, Icom ID, IP Address, and Queue. A single row is shown with Icom ID 0397C6, IP Address 10.3.3.21, and Queue Unassigned. To the right of the table are four tabs: Configuration, Options 1, Options 2, and Options 3. The Configuration tab is selected. It contains fields for Location Name, Assign IP automatically with DHCP (checked), IP Address (10.3.3.21), Subnet Mask (255.255.255.0), Gateway (10.3.3.1), and Port (3000). The Options 1 tab includes fields for Authorized IP Endpoint (checked), Assign the machine's address as the IP Endpoint's server IP (unchecked), Server IP (10.3.3.242), and Port (3000). The Options 2 tab includes fields for Relay Mode (Factory Defaults), Sensor (Activate when grounded (Door)), Input Source (Microphone), Enable ST/ADA Mode (unchecked), Use UDP/RTP (checked), Fixed RTP Port (unchecked), and Supports Full-Duplex Audio (checked). The Options 3 tab includes fields for Audio Settings (Disable AGC (0-63) unchecked, Default Microphone uLaw, Audio Profile PNL-710-FD, and a Set button).

- Click the **Defaults** button and enter a descriptive name into the Location Name field
- Make any other desired changes, then select the **Options 1** tab

- Check the **Use UDP/RTP** option
- Check the **Supports Full Duplex** option
- Select the **Options 2** tab

- Click the **SET** button to select the **Audio Profile** specified for the Call Station that is connected to the IP7-FD

Optional configuration settings include:  
**Options 1** tab  
The IP7 has an on board **Relay** and **Sensor**.

## Relay Options

- **Door Open** - adds an ICON in the **Operator Console** to activate the Relay for an electronic door strike
- **PTT** - Activates the Relay when the 'Talk' switch (J2-5) is grounded
- **Activate on Speaker and/or Mic** - activates the Relay when either or both of the IP7 audio channels are active

**Sensor Options** - Used in conjunction with **Door Open Relay**. Changes the color of the ICON in the **Operator Console** when the door is open

- **Active when Closed to Ground** - when J3-5 is closed to ground
- **Active when Open to Ground** - when J3-5 is open to ground

## Options 2 tab

IP Endpoints can be optionally assigned to **Queues**

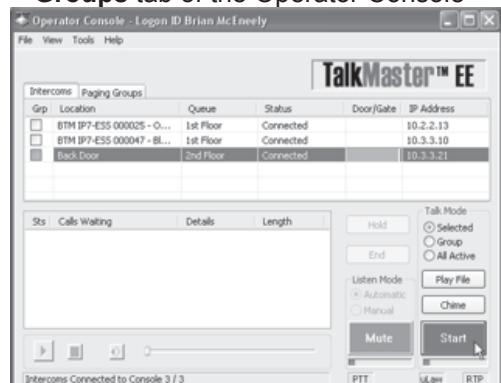
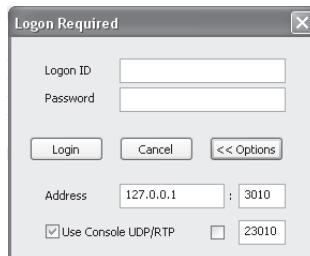
- **Assigned Queue** – select the Queue that the IP7 has been assigned to

Change additional IP7 Configuration Options and click **SAVE** when changes have been completed

Press the **Update Now** button and close the **Admin Console**

## Start the Operator Console

- Logon with the assigned Operator ID and Password or as the admin
- Specify the IP Address of the TalkMaster Server (specify 127.0.0.1 if the Operator Console is running on the TalkMaster Server PC)
- IP Endpoints will appear on the **Intercoms** tab or as part of the **Paging Groups** tab of the Operator Console



- The PC's microphone is used to send audio to an IP Endpoint.
- The audio from an IP Endpoint can be heard on the PC's speakers
- A headset or handset (such as the Polycom CX200) should be used on the PC to prevent echo at the Call Station

## Inbound Calls

- When the Talk button attached to the IP7 is pressed, Operator Console will display the Incoming Call dialog and sound an audible alarm
- Click the Start button, or tap the Space Bar to speak to the IP Endpoint
- Click the Mute/Unmute button to temporarily disable/enable the PC's microphone
- All incoming calls will be listed in the Calls Waiting and remain "in session" until removed from the Calls Waiting list by clicking the End button, or pressing the Escape key

## Outbound Calls

- To initiate an outbound call, select an IP Endpoint by clicking on it, then click the Start button
- Click the green End button or tap the Space Bar to end the call

## Open Door

- To open a door, select the Intercom, the click the Door Open Icon or press the Enter key

# IP7-FD™ Getting Started Guide

Refer to the **IP7-FD Hardware Reference Manual** for detailed information on wiring, setup, configuring IP addresses and additional software settings.

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