

DIGITAL ACOUSTICS

IP7-ST / STX

Getting Started Guide



Introduction

The IP7-ST/STx IP Intercom endpoint enables 2-way IP audio from an analog call station with TalkMaster™ software and/or VoIP Systems supporting industry standard SIP 2.0 (VoIP) protocols. Standard features include, PoE/External Power, Dual Ethernet ports and Talk/Relay/Sensor connections.

The ST(x) supports several types of call stations:

- PNL-CISx Single Transducer call stations. Single Transducer call stations use a single speaker as both a speaker and as a microphone
- Aiphone™ LE / LS series 3-wire call station
- Aiphone™ IE / IF series 2-wire call station
- Call stations with a separate microphone, speaker and Call button

The ST(x) may also be used to drive an Analog Paging Amplifier.

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

IP7-ST/STX Installation

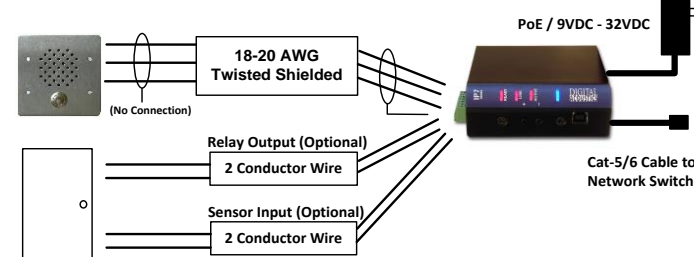


Please refer to the IP7-ST/STx Reference Manual available on the **Software Installation CD** for additional information on installation and setup

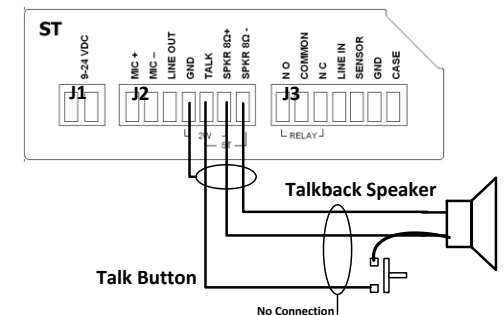
Important Installation Guidelines

- Use 18-20 AWG **shielded**, twisted wire for microphone signals
- Use 18 AWG wire for speaker and signaling connections.
- Avoid sharing AC power and audio in conduit runs
- Do not install near power distribution equipment or noise generating equipment such as stepper motors
- Conform to industry standard practices for grounding

PNL-CISx Single Transducer Call Station Installation

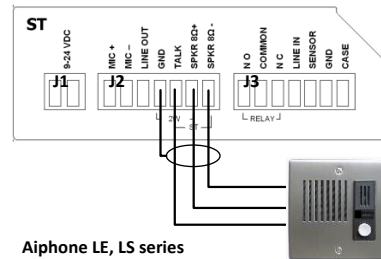


- Set the internal **ST-MIC** switch to the **ST** setting
- Connect **SPKR 8Ω+** and **SPKR 8Ω-** (J2-6 and J2-7) to the speaker terminals on the call station (polarity independent)
- Connect **TALK** (J2-5) to one contact on the call station's TALK button
- Jumper the remaining contact on the call station's TALK button to one of the speaker terminals (this wire should be limited to 10ft or 3 meters)
- Connect **GND** (J2-4) to the shield of the shielded wire. Do not connect the shield at the door station



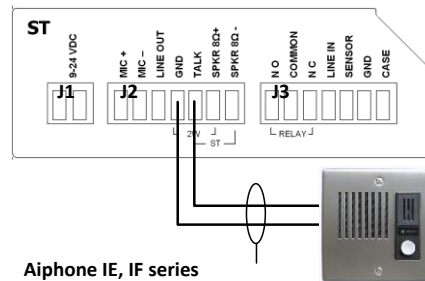
Aiphone™ LE / LS series 3-wire Call Station Installation

- Set the internal **ST-MIC** switch to the **ST** setting
- Remove Aiphone shorting link between E and - terminals
- Connect **SPKR 8Ω+** and **SPKR 8Ω-** (J2-6 and J2-7) to the “1” and “E” terminals on the Aiphone call station
- Connect **TALK** (J2-5) to Aiphone “-“ (minus) terminal
- Connect **GND** (J2-4) to the shield of the shielded wire. Do not connect the shield at the call station



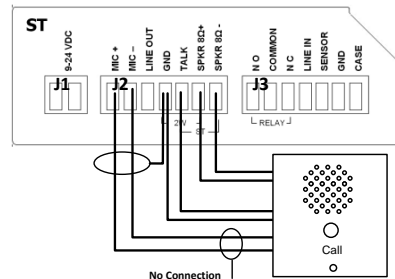
Aiphone™ IE / IF series 2-wire Call Station Installation

- Set the internal **ST-MIC** switch to the **MIC** setting
- Connect **GND** and **TALK** (J2-4, J2-5) to Aiphone terminals 1 and 2 (polarity independent)
- Connect **GND** (J2-4) to the shield of the shielded wire. Do not connect the shield at the door station



Call stations with a separate microphone, speaker and Call button

- Set the internal **ST-MIC** switch to the **MIC** setting
- Connect **MIC+** and **MIC-** (J2-1, j2-2) to the call stations microphone
- Connect **GND** (J2-4) to the shield of the shielded wire. Do not connect the shield at the call station
- Connect **SPKR 8Ω+** and **SPKR 8Ω-** (J2-6 and J2-7) to the call stations speaker terminals
- Connect **TALK** (J2-5) to one contact on the call station's TALK button
- Connect the other contact on the call station's TALK button to **GND** (J2-4) or jumper it to one of the speaker terminals (this wire should be limited to 10ft or 3 meters)



Driving an Analog Paging Amplifier

The IP7-ST/STX has the capability to drive a **balanced** 600 Ohm input of an analog amplifier using **SPKR 8Ω+** and **SPKR 8Ω-** (J2-6 and J2-7). Set the IP7's volume level to 6 and adjust the amplifier's volume control accordingly.



If the analog amplifier uses an **unbalanced** input, then the IP7's Line Out and GND (J2-3 and J2-4) must be used instead of SPKR 8Ω+ and SPKR 8Ω-. **Failure to do so will damage the IP7 and void its warranty.**

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 7 watts from Power Source Equipment (PSE)
- 9VDC - 32VDC external via **J1-1** and **J1-2** connectors or **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 10/100 network switch
- On the **IP7-STx**, 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 design 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 applications 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.



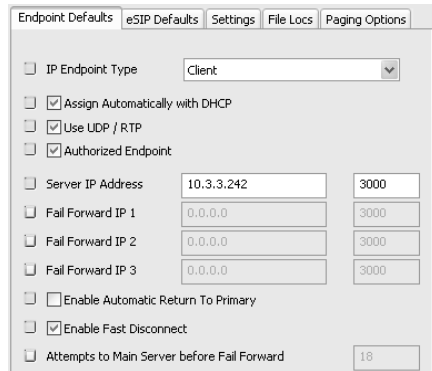
Please refer to the *TalkMaster Admin Console Reference Manual* on the **Software Installation CD** for additional information and software setup options

- 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**



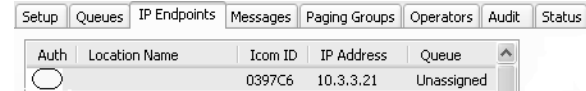
- Click the **Settings → Endpoint Defaults** tab and make any changes required for your installation. For instance, if you want to assign static IP Addresses, uncheck the **Assign Automatically with DHCP** checkbox



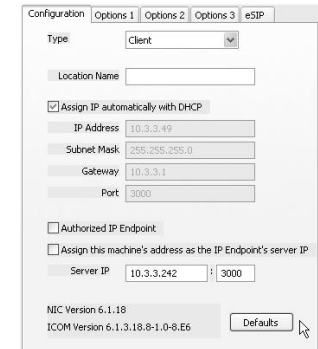
- Click the **IP Endpoints** tab and press the **FIND ALL** button in the lower right hand corner of the screen. Newly discovered IP Endpoints appear in the list



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



- Click the **Defaults** button to fill in default values from the **Endpoint Defaults** tab
- Enter a descriptive name into the **Location Name** field
- Make any other desired changes, then select the **Options 1** tab



Optional configuration options include:
Options 1 tab

Relay Options

- **Door Open** - adds an **ICON** to the **Operator Console** so the Operator can 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 MIC and/or Speaker is 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
- **Activate when Open to Ground** - when J3-5 is open to ground

Options 3 tab

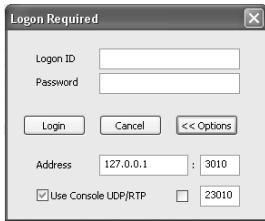
IP Endpoints can be optionally assigned to **Queues**

- **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

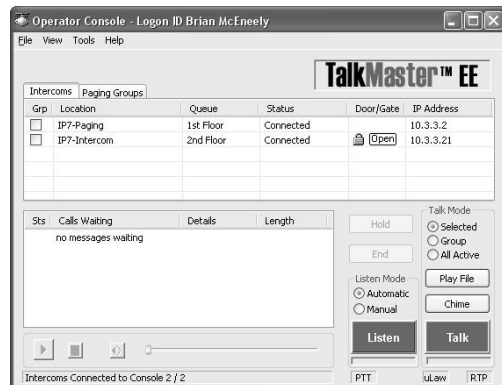
Press the **Update Now** button and close the **Admin Console**

Start the Operator Console



- Logon with an 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

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 and hold the **Talk** button, or press and hold the **Space Bar** to speak to the IP Endpoint
- Release the **Talk** button or **Space Bar** to automatically activate the **Listen** button

- All incoming calls will be listed in the **Calls Waiting** list and remain “in session” until removed from the **Calls Waiting** list by clicking the **End** button, or pressing the **Escape** key

Outbound Calls

- To make an outbound call, select an IP Endpoint by clicking on it and press the **Talk** or **Listen** button
- Click the **Listen** button or press the **Escape Key** to end the call

Open Door

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

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

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