

## ***IP7 for InformaCast Installation and Configuration Guide***

The Digital Acoustics' ***IP7 for InformaCast*** product line is supported by Singlewire's ***InformaCast for IP Paging and Emergency Notification*** software. The ***IP7 for InformaCast*** supports both voice and high quality audio with sample rates up to 44k. ***IP7 for InformaCast*** products are available in the following configurations:

- **IP Enabled Speakers** providing 8 watts of audio, connected to the network by a PoE RJ-45 cable (802.3af compatible - requires 15.4W)
- **IP Amplifiers** capable of driving a single zoned consisting of one or more speakers. IP Amplifiers are available in 8 watt, 20 watt and 40 watt models
- **IP Endpoints** designed to drive traditional analog amplifiers (hundreds of watts) capable of driving a single zone consisting of many speakers

### **Network Requirements**

- The ***IP7 for InformaCast*** requires DHCP
- InformaCast Server must be accessible and appropriate ports must be open
- Multicast must be enabled

### **IP Enabled Speaker Installation:**

1. Attach one of the included ID# labels (last six digits of the MAC Address) to the Speaker Enclosure to uniquely identify the speaker.
2. Record the ID# (MAC Address), speaker location, and IP7 Model Number (required during software configuration)
3. Connect the IP7 to the network via an RJ-45 PoE cable (802.3af compatible - requires 15.4W)
4. Mount Speaker in desired location

### **IP Amplifier with one or more speakers Installation:**

1. Refer to the appropriate ***IP7 for InformaCast Getting Started Guide***, available at:  
<http://www.digitalacoustics.com/informacast>

### **IP Endpoints designed to drive analog amplifier Installation:**

2. Refer to the ***IP7-ST/STx for InformaCast Getting Started Guide*** for InformaCast at:  
<http://www.digitalacoustics.com/informacast>

## Configure IP Speakers via InformaCast

### MAC Address

The *IP7 for InformaCast* uses 001b61 as the first six digits of MAC address. The last six digits of the MAC address (ID#) are printed on the IP7's label. Extra ID# labels are included for speaker identification and installation diagrams.

Configuring the *IP7 for InformaCast* Speakers:

- Logon to the InformaCast webpage and wait 1 minute
- Select menu option **Speakers**
- The message **New Speakers have been detected** will appear at the top of the page. Press the **View** button

### Speakers | Edit IP Speakers

InformaCast has detected new IP Speakers on the network. 

- Select new speaker by matching the **MAC address** displayed on the screen to the ID# label on the Speaker and press the **Add** button

### Speakers | Edit IP Speakers

MAC address	Registration Status	Action
001b61033ea4	Registered at Fri Mar 29 10:00:47 CDT 2013 (can play high quality audio), IP=10.3.3.67	 

- Assign a **Name**, **Description** and set the **Volume** to a value between 1 and 10 (max of 9 is recommended), then press the **Add** button

### Speakers | Edit IP Speakers | Add IP Speaker



IP Speaker Name:  (required)

Speaker Description:

Dial Code:  (numeric shortcut for optional phone interface)

MAC Address:  (required, 12 hex digits)

Volume:

- Select the Speaker and press the **TEST** button to verify the installation

	Name	Description and Status	Dial Code	Vol	MAC address	Action
<input type="checkbox"/>	1st Floor Entrance Hallway	SPKR-IP-System1 Status: Registered at Fri Mar 29 14:38:45 CDT 2013 (can play high quality audio), IP=10.3.3.67		6	001b61033ea4	  

## IP Speaker Software Configuration

The InformaCastSpeaker000000000000.cfg (where 000000000000 is the MAC address of a single IP7) is used to configure a specific *IP7 for InformaCast* device. If a MAC specific configuration file is not found, the default InformaCastSpeaker.cfg is used to configure the IP7.

### Required configuration parameters:

The default InformaCastSpeaker.cfg file is created during the installation of the InformaCast software. The **Servers** keyword identifies the IP Address of the InformaCast server. The *IP7 for InformaCast* supports connection to up to three InformaCast Servers.

```
<Servers
    <InformaCast url="http://xxx.xxx.xxx.xxx:8081/InformaCast/admin?cmd=spkr"/>
</Servers
```

### Optional configuration keywords:

```
<DigitalAcoustics
    username="admin"
    password="16978"
    debug = "1"
    relay="TRUE"
    beep="TRUE"
>
```

The **DigitalAcoustics** keyword is used to configure the following options:

- **username / password** – these keywords are used to override the default values used to logon to the *IP7 for InformaCast* Web page. If not specified, the default UserName and Password both default to admin. If these keywords are present, they will
  - o override any **username** and **password** that have previously been set in the IP7
  - o override any **username** and **password** that are changed thru the IP7 Web Page
- **beep** – when this option is set to **TRUE**, the IP7 will play a beep when it first connects to InformaCast. This is typically used when first setting up the system to let the installer know that the speaker has registered to InformaCast. When this option is set to **FALSE**, the option will be disabled. If this parameter is present, it will
  - o override the previously set **beep** value
  - o override the **beep** value set thru the IP7 Web Page
- **relay** – when this option is set to **TRUE**, the IP7's Relay will be activated while audio is played on the IP7. This feature is only available on the IP7-ST/STx and is used with analog Paging Amplifiers that require a contact closure to activate the audio channel the IP7 is connected to. When this option is set to **FALSE**, the option will be disabled. If this parameter is present, it will:
  - o override the previously set **relay** value
  - o override the **relay** value set thru the IP7 Web Page
- **debug** – this option should only be used when directed by Digital Acoustics Support.

```
<IdleAudio
  address="225.0.0.254"
  port="4000"
  volume="2"
>
```

The **IdleAudio** keyword is used to setup parameters used to play background music from an IP7 Audio Injector. The IP7 Audio Injector is connected to an analog music source such as a CD Player, iPod, etc and the music is sent over the network to the specified multicast IP Address and Port.

- **address** – specify the Multicast listening Address for the *IP7 for InformaCast* speaker
- **port** – specify the associated Multicast listening port
- **volume** – specify the volume setting used for playing background music. Select a value between 1 and 10 (this is typically lower than the volume set for normal paging operations). If this is omitted, the volume set by the IP7's Vol+ and Vol- buttons determines the volume of the background music

```
<Firmware
  sw7file=1.0.1.0.sw7
  version=1.0.1.0
  downgrade="no"
>
```

The **Firmware** keyword is used to update the *IP7 for InformaCast* firmware to a new version.

- **sw7file** – specify the name of the *IP7 for InformaCast* firmware file. The InformaCast server must be running a TFTP Server and the firmware file must exist in the TFTP server's directory
- **version** – specify the version of the firmware that the *IP7 for InformaCast* will be upgraded to
- **downgrade** – specifies whether the IP7's firmware should be downgraded if its current firmware version is higher than that specified in the **version** keyword

### Sample InformaCastSpeaker.cfg file

```
<InformaCastSpeakerConfiguration>
  <Servers>
    <InformaCast url="http://10.3.3.248:8081/InformaCast/admin?cmd=sprk"/>
  </Servers>

  <Firmware sw7file="1.0.1.1.sw7" version="1.0.1.1" downgrade="no"/>

  <IdleAudio address="225.0.0.254" port="4000" volume="3"/>

  <DigitalAcoustics username="admin" password="jx951M"/>
</InformaCastSpeakerConfiguration>
```

### **IP7 for InformaCast Web Page**

To logon to the *IP7 for InformaCast* Web Page, enter <http://xxx.xxx.xxx.xxx/status> (where xxx.xxx.xxx.xxx is the IP Address of the IP7) into a web browser. Enter the **User Name** and **Password** (both default to: admin).

Options set in the InformaCastSpeaker.cfg configuration files, will **always** override the changes made on the IP7's web page.

The *IP7 for InformaCast* Web page provides the following capabilities:

- Change the default **User Name** and **Password** used to logon to the web page
- Set the **Beep on Connection** and/or the **Activate Relay on Speaker** options.
  - The **Beep on Connection** option plays a beep when it first connects to InformaCast. This is typically used when first setting up the system to let the installer know that the speaker has been configured and registered to InformaCast
  - The **Activate Relay on Speaker** option activates the IP7's Relay while audio is played. This should only be used on the IP7-ST/STx connect to analog Paging Amplifier that requires a contact closure to activate the audio channel the IP7 is connected to
- Update the IP7's firmware by entering the **TFTP IP Address** and the **Firmware Filename**. The Firmware File must exist on the TFTP Server
- **Reboot** the IP7

After pressing the **Submit** or **Reboot** buttons, the IP7 will take about 20 seconds to reboot before it is available again.

After pressing the **Upgrade Firmware** button, the firmware update will take approximately 60 seconds to reboot, before it is available again.

The screenshot shows the 'Digital Acoustics IP7 for InformaCast' web interface. It is divided into several sections. The top section displays system information: MAC Address (00:1b:61:03:3e:a4), Version (v1.0.0.55), Status (Registered to 1 of 1 servers), Connection Type (DHCP), IP Address (10.3.3.67), Subnet Mask (255.255.255.0), Gateway (10.3.3.1), DNS Server 1 (192.168.254.242), and DNS Server 2 (0.0.0.0). Below this is a login section with fields for User Name (admin), New Password, and Re-enter Password, followed by a Submit button. The next section contains two checkboxes: 'Beep on Connection' and 'Activate Relay on Speaker', with a Submit button. The following section has fields for 'TFTP IP Address' and 'Firmware Filename', with an 'Upgrade Firmware' button. At the bottom is a 'Reboot' button. A copyright notice 'Copyright 2012, Digital Acoustics LLC' is visible at the very bottom.

## Troubleshooting

If the **New Speakers have been detected** message does not appear on the Speakers screen:

- On the *IP7 for InformaCast*, verify that the green **LINK** LED on the **Ethernet 10/100** connector is on solid OR that the red **LINK** LED on the front bezel is on solid
- Verify that DHCP is available on the network
- In a Web browser, enter <http://xxx.xxx.xxx.xxx/status> (where xxx.xxx.xxx.xxx is the IP Address of the IP7) into a web browser. Enter the **User Name** and **Password** (both default to: admin) to verify the *IP7 for InformaCast* is recognized on the network
- In the InformaCast online help, refer to the **Verify that your Network is Configured for Multicast** topic