

Talk Master™

intercom system

Software Users' Guide



Ethernet Intercoms

Models OEM, EDB, EDW



**DIGITAL
ACOUSTICS**
CORPORATION

Table of Contents

1. TalkMaster	1
Welcome.....	1
Release Notes	1
System Requirements	1
2. Using TalkMaster	3
TalkMaster Overview	3
TalkMaster Main Screen.....	4
Listen Mode	8
Talk Mode	9
Preferences	10
Audio Player	12
Capture Audio Archive.....	12
Play Audio Archive.....	12
3. TalkMaster Console Forwarding	15
Forward Intercoms.....	15
Retrieve Intercoms.....	15
Unattended Console	15
4. TalkMaster Menu Options	17
File Menu	17
View Menu	17
Tools Menu.....	17
Console Menu.....	18
Help Menu	19
5. Configuring Intercoms	21
Configure Intercoms	21
Advanced Configuration	21
Intercom Configuration - TalkMaster Clients	22
Intercom Configuration - Direct Mode.....	24
Updating Firmware	27
NIC Firmware Updating	28
ICOM Firmware Updating	29
Troubleshooting	29
6. Intercom Configuration Tool Menu Options.....	31
Configuration File Menu	31
Configuration View Menu	31
Configuration Action Menu	31
Configuration Help Menu	31
7. Index	33

TalkMaster

Welcome

Welcome to TalkMaster™! ii3 Ethernet Intercoms and TalkMaster™ are Digital Acoustics Corporation products.

If you are upgrading from an earlier version of TalkMaster™, please review the Release Notes.

To setup and configure your ii3 series intercoms, please review Configure Intercoms.

If you would like Help on using TalkMaster™, please review TalkMaster Main Screen functions.



Release Notes

TalkMaster™ 1.5 contains the following enhancements:

- Simplified screen
- Password protected Intercom search and configure
- Console forwarding and retrieval
- Enhanced Audio Archive functions
- The Door Open function appears on the main screen
- Keyboard control of the Talk and Listen buttons

New firmware is available for the ii3 IP Intercoms. Units must be flashed with new firmware in order to accommodate the following features. Please refer to Configure Intercoms for details:

- Location names flashed into the Intercom
- Audio sent to multiple intercoms is sent as a single a UDP broadcast
- Console forwarding and retrieval
- Specify alternative IP addresses for intercom forwarding in the event of TalkMaster™ console failure
- Specify duration of time for activation of door/open relay within the ii3 IP Intercom

System Requirements

To utilize all of the features of TalkMaster, you need the following:

- Windows 98SE, Windows 2000, or Windows XP
- Pentium III 750mHz or faster

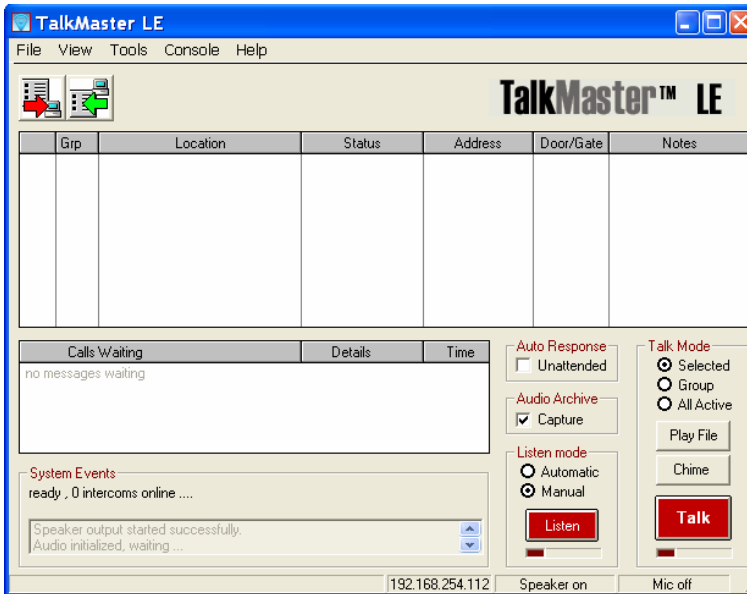
- 128 MB RAM (256 MB suggested)
- 50 MB Available Disk Space
- Windows supported Sound Card with microphone and speakers

Using TalkMaster

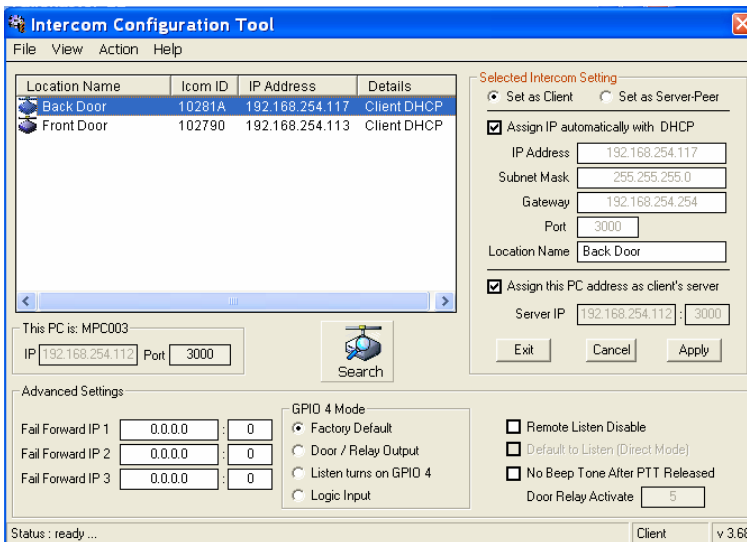
TalkMaster Overview

TalkMaster™ is designed to work with Digital Acoustics' ii3 Intercoms. TalkMaster™ has two main functions. First, TalkMaster™ must be used to configure the IP address information and related features for your ii3 intercoms.

Secondly, it allows multiple intercoms to connect to the software so they can be monitored by the TalkMaster™ console operator. The audio from an intercom can be heard on the PC's speakers and the PC's microphone is used to send audio to an intercom. Calls can be initiated from any intercom to TalkMaster™ or vice versa.



TalkMaster main screen



TalkMaster configuration screen

TalkMaster Main Screen

Before you begin using your Digital Acoustics ii3 Intercoms, they must be configured with IP address information. Please see Configure Intercoms.

The following sections describe the areas of the TalkMaster™ main screen.

Tool Bar



Forward Intercoms to an alternate TalkMaster Console. Please see Forward Intercoms for details.



Retrieve Intercoms from an alternate TalkMaster Console. Please see Retrieve Intercoms for details.

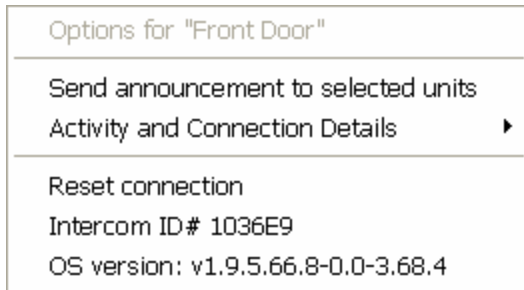
Active Intercom List

This list will show all of the intercoms that have connected to the TalkMaster™ server during this session. Clicking on an intercom allows you to communicate with it by clicking the **Talk** or **Listen** buttons. Right clicking on an open area in the list will de-select the active intercom.

	Grp	Location	Status	Address	Door/Gate	Notes
	<input type="checkbox"/>	Front Door	Connected	192.168.254.114		
	<input type="checkbox"/>	Back Door	Connected	192.168.254.116	Open	

- The first column indicates if the intercom is connected or not.
- The Grp column allows you to create a group of intercoms to send audio to by checking this box
- The Location column identifies the Intercom by Name
- The Status column displays the Intercoms status
- The Address column contains the Intercoms IP address
- The Door/Gate column indicates whether the Intercom has a Door Relay option configured. Clicking the green circle will turn on the Door Relay for the amount of time that has been configured in the intercom. For Intercoms that do not have the latest firmware, the Door Relay will turn on for 5 seconds
- The Notes column displays information about intercom communications

You can right click on an Intercom to display detailed information about the intercom.

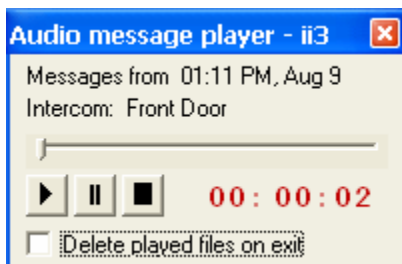


Calls Waiting

This list shows calls that have come in while another call was in progress. A call is considered "in progress" when either the Talk or Listen button is active.

Calls Waiting	Details	Time
Front Door	message in at 07:57 AM	00:03

- If you single click on the entry, the intercom becomes the current selection in the Active Intercom List allowing you to communicate with it
- If you double-click on it, the Audio Player pops up so you can play back the original call



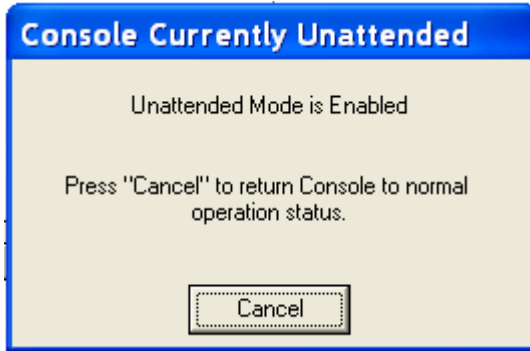
- Once you play the audio clip, the "Delete played files on exit" is automatically checked and clicking the X in the right hand corner closes the Audio Player and deletes the clip
- If you choose to leave the Audio Player open, you can delete a call by right clicking on it and selecting the Delete option

Auto Response

The **Auto Response** function allows you to temporarily suspend the console's operation. This function can also be activated by using the menu **Console → Unattended Console**.



Once you check the **Unattended** box, a dialog pops up reminding you that this mode has been set.



Any intercom that tries to contact the console is notified that no one is available to take their call. Please see Unattended Console for more information.

Clicking the **Cancel** button returns the console to normal operation.

This setting is saved between TalkMaster™ sessions.

Audio Archive

Checking the **Capture** box allows you to archive speaker and microphone audio for playback at a later time. This function can also be activated by using the menu option **File → Capture Audio Archive**. Please refer to Capture Audio Archive for more information.



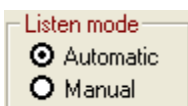
To play back archived audio, use the menu option File → Play Archive Audio.

Un-checking the **Capture** box turns off the archiving feature.

This setting is saved between TalkMaster™ sessions.

Listen Mode

The **Listen Mode** determines how the **Talk** and **Listen** buttons function in TalkMaster™ and how the PTT (Push to Talk) button works on the Intercom.



When set to **Automatic**, the PTT button on the intercom can be controlled by the TalkMaster™ Software allowing the intercom to operate in near "hands free" mode.

When set to **Manual**, the PTT button on the can be controlled by the TalkMaster™ software or by the intercom.

For more information, see Listen Mode

This setting is saved between TalkMaster™ sessions.

Talk Mode

The **Talk Mode** setting determines which intercoms you will be communicating with.



Selected - refers to the intercom currently highlighted in blue in the **Active Intercom List**

Group - refers to any intercom that has an **X** in the **Grp** column of the **Active Intercom List**.

All Active - refers to all intercoms in the **Active Intercom List**.

For more information, see Talk Mode.

This setting is saved between TalkMaster™ Sessions.

Switching from **Selected** to either **Group** or **All Active** will automatically change the **Listen Mode** to **Manual**.

Listen button

The **Listen** button either turns on or is turned on by the PTT button on an Intercom selected in the **Active Intercom List**. You may only listen to a single intercom at one time.



The state of the Listen button can be toggled by:

- Single clicking the button with the mouse or
- Pressing the escape key

Talk button

The **Talk** button turns on the PC's microphone and allows you to speak to the selected intercom(s) selected in the **Active Intercom List**.



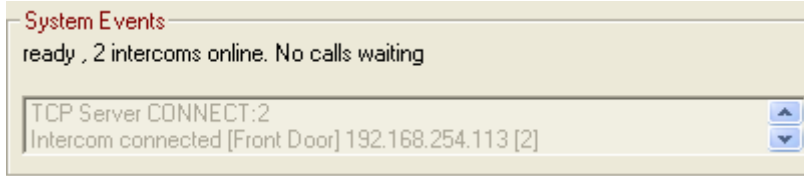
By default, the state of the Talk button can be toggled by:

- Single clicking the button with the mouse or
- Pressing the space bar

Please see Preferences for an alternate way to control the **Talk** button.

System Events

The **System Events** window tracks activities from TalkMaster™. Information in this window can be used by Digital Acoustics Technical Support for diagnosing support issues.



Listen Mode

Listen mode determines how the **Listen** and **Talk** buttons in TalkMaster™ and the Intercom PTT button will be used. In **Automatic** mode the buttons will work in a predefined method. In **Manual** mode, the TalkMaster™ operator can decide how the buttons will be used.

Automatic Mode assumes that the Intercom user will be operating in an almost "Hands Free" environment. If the Intercom user initiates a call to TalkMaster™, they will have to press and hold the PTT Button to start the conversation. When the Intercom user releases the PTT button, the TalkMaster™ operator will take control of the buttons and the Intercom operator will be able to participate Hands Free.

*Please note that the following example uses the default action of single clicking the mouse or tapping the space bar to activate the **Talk** button. Please see Preferences for an alternate method of controlling the **Talk** button*

Example:

Intercom user presses and holds the PTT button on one of the Intercoms and begins speaking.

The Intercom will be automatically selected in TalkMaster™ and the audio will be played through the PC speakers.

The Intercom user releases the PTT button when done speaking

The TalkMaster™ operator responds by, clicking the **Talk** button or tapping the **space bar** on the keyboard and begins speaking into the microphone.

When done speaking, the TalkMaster™ operator clicks the **Talk** button or taps the space bar. This action turns off the **Talk** button and turn on the **Listen** button. This automatically activates the PTT button on the Intercom and allows the Intercom user to operate "Hands Free"

Each time the TalkMaster™ operator clicks the **Talk** button or taps the space bar, the **Talk** and **Listen** buttons are toggled.

To end the conversation with an Intercom, the TalkMaster™ operator clicks the **Listen** button or presses the **Escape key** on the keyboard while the **Listen** button is active.

*An important benefit of using **Automatic mode** is that any other intercom is prevented from interrupting your "conversation" because the **Talk** or **Listen** button is always active. TalkMaster™ will not interrupt a call if there is already one in progress. Any other intercom that tries to contact TalkMaster™ will be placed in the **Calls Waiting list**.*

In **Manual Mode**, the TalkMaster™ operator decides if the intercom user will operate in an almost "Hands Free" environment or in a traditional PTT environment. If the Intercom operator initiates a call to TalkMaster™, they will have to press and hold the PTT Button to start the conversation. When the Intercom user releases the PTT button, the TalkMaster™ operator can decide whether the Intercom user will be need to use the PTT button any more.

Please note that the following example uses the default action of single clicking the mouse or tapping the space bar to activate the **Talk** button. Please see Preferences for an alternate method of controlling the **Talk** button

Example:

Intercom user presses and holds the PTT button on one of the Intercoms and begins speaking. The Intercom will be automatically selected in TalkMaster™ and the audio will be played through the PC speakers.

The Intercom user releases the PTT button when done speaking

The TalkMaster™ operator responds by, clicking the Talk button or tapping the space bar on the keyboard and begins speaking into the microphone.

When done speaking, the TalkMaster™ operator clicks the Talk button or taps the space bar. This action turns off the PC's microphone.

The TalkMaster™ operator can then click the Listen button or press the escape key to turn on listen mode or can allow the Intercom user to use the PTT button to respond.

In Manual mode, it is possible for another intercom to interrupt your conversation by pressing the PTT button when neither the Talk or Listen button is active.

Talk Mode

Talk Mode determines which intercom(s) will hear audio sent from TalkMaster™.



When using **Selected** mode, audio is sent to the intercom using a single TCP/IP stream. This allows you to communicate with an Intercom located anywhere that you can connect to through TCP/IP.

When using **Group** or **All Active** modes, audio is sent to the intercoms using a single UDP Broadcast stream. Since UDP Broadcasts are filtered by many routers, the **Group** and **All Active** options may only work on the current segment of a Local Area Network.

Pressing the **Talk**, **Chime**, or **Play File** button will send audio to the intercom(s) you have indicated.

Play File - Allows you to select a pre-recorded .wav file to be played on the intercom(s).

Chime - plays the page.wav file from the iSupport subdirectory located under the TalkMaster™-ii3 program directory. Page.wav is a recording of four successive beeps. If you wish, you can re-record page.wav with an audio clip of your choosing.

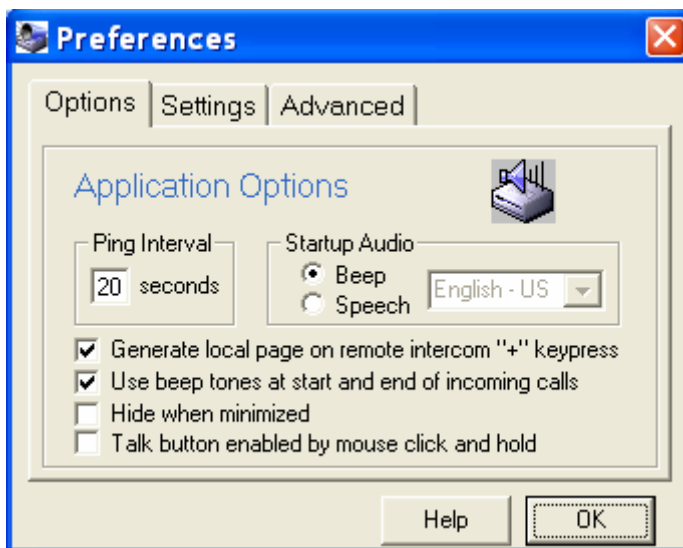
Talk will turn on the PC's microphone to send the audio out. By default, single clicking the **Talk** button or tapping the space bar activates **Talk** button. Please see Preferences for an alternate method of activating the **Talk** button.

To play a .wav file on the Intercom(s), audio files must be encoded in either 8khz 8 bit PCM or 16 bit uLaw format. Commercial or free software is available to create these formats.

Preferences

Preferences are used to specify various settings for TalkMaster™. This can be accessed from the menu option **View → Preferences**.

The **Options** tab sets options that affect the behavior of all intercoms.



Ping Interval - sets how often TalkMaster™ will send a Ping command to the intercoms to verify the connection

Startup Audio - Determines if a beep or a wav file is played when the Intercom connects to TalkMaster™. If you select Speech, you can select from a variety of .wav files or record your own.

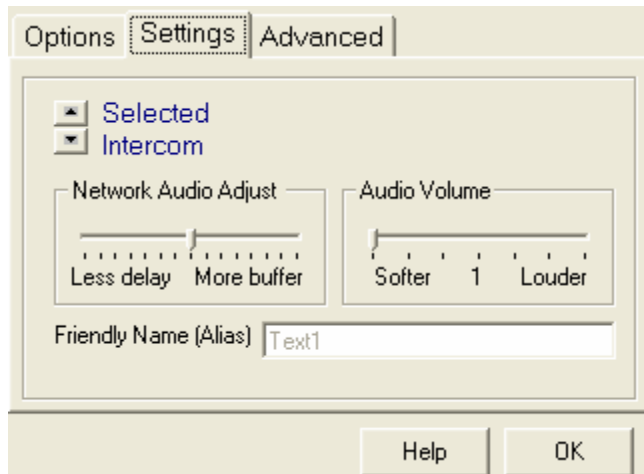
Generate local page on remote intercom "+" keypress - When this is checked, pressing and holding the Volume Up button on the Intercom generates a beep at the TalkMaster™ console.

Use beep tones at start and end of incoming calls - When this option is checked an beep is inserted into the audio stream when the Intercom's PTT button is pushed and released.

Hide when minimized - When this option is checked and TalkMaster™ is minimized, TalkMaster™ can only be recalled by double clicking the TalkMaster™ ICON in the system tray.

Talk button enabled by mouse click and hold - When this option is checked, the **Talk** button can be activated by clicking and holding it with the mouse button or by pressing and holding down the space bar. This overrides the default action of single clicking the **Talk** button or tapping the space bar to activate the **Talk** button.

The **Settings** tab is used to make adjustments to individual Intercoms.



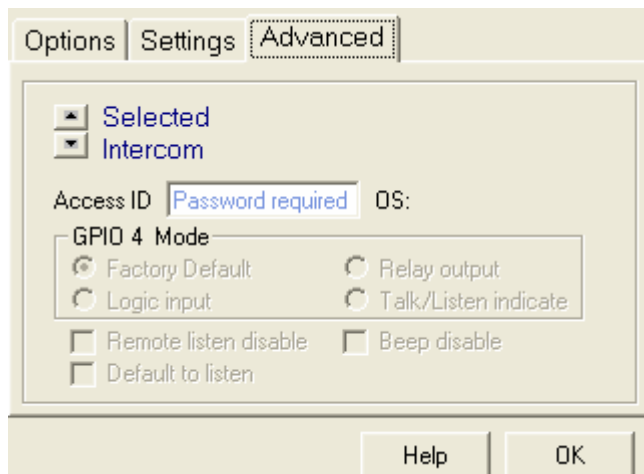
Selected Intercom - You can use the up and down arrows to select an Intercom from the list of intercom connected to TalkMaster™.

Network Audio Adjust - This section is no longer functional.

Audio Volume - sets the audio volume on the selected Intercom. This can be overridden at the Intercom by using the Volume Up and Volume Down buttons.

Friendly Name (Alias) - Displays the selected Intercom's Name.

The **Advanced** tab is used to change options on individual Intercoms. It is retained for compatibility with older intercoms as these options are now included in the Configure Intercoms menu item. **This will only affect Intercoms with an ICOM version being with 1.8 or earlier.**



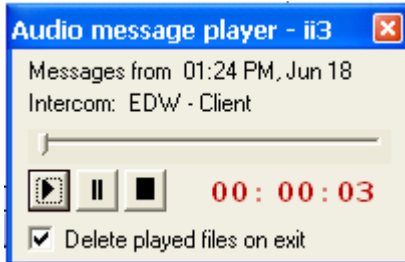
Selected Intercom - You can use the up and down arrows to select an Intercom from the list of intercom connected to TalkMaster™.

Access ID - Enter the administrator password to continue to make changes. The default value is **admin** but this can be changed. Please see Configuration File Menu for more information.

Please refer to the Advanced Configuration section of the Intercom configuration tool for the definition of these options.

Audio Player

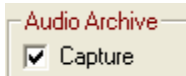
The Audio Message Player is automatically started when clicking on messages in the **Calls Waiting** list. It allows messages that have arrived while communicating with another intercom to be played back. Files will be automatically deleted after playback unless you uncheck the **Delete played files on exit** option. Closing this dialog will select the corresponding intercom in the **Active Intercom List** so you can begin a new call session.



By default, the clip will be deleted when you exit. However, if you had selected to Capture Audio Archive, the clip will still be available via the Play Audio Archive option off of the File menu.

Capture Audio Archive

This option will capture all audio data to the file system. It can be started from the menu option **File → Capture Audio Archive** or by checking the box on the main display.



Each time microphone or speaker output is produced, a separate file is created using the following naming convention

XXX-YYYYYYYYYYYY-HHMMSS.wav where:

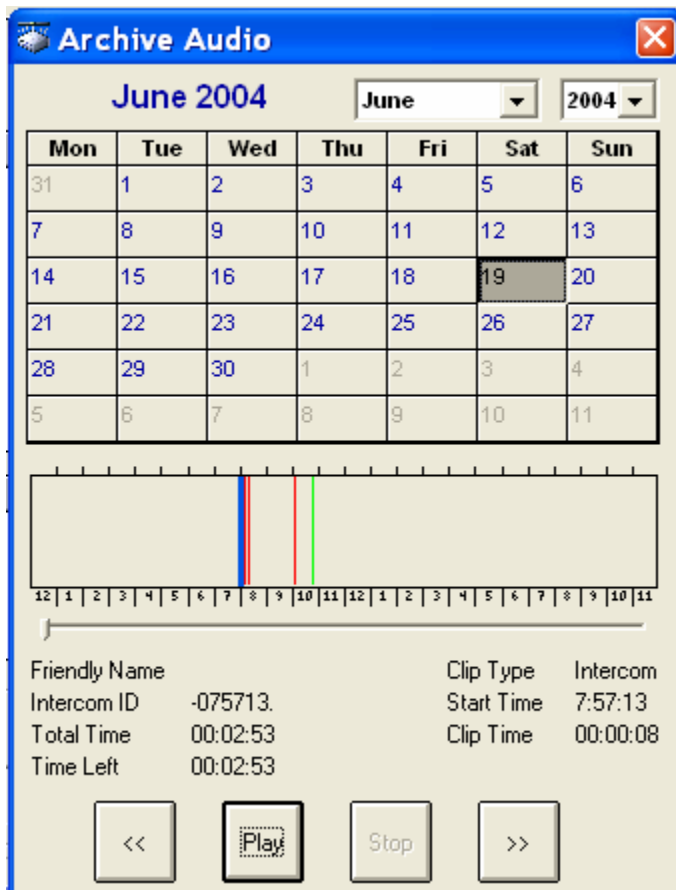
- **XXX - IN** for speaker audio, **OUT** for microphone audio
- **YYYYYYYYYYYY** - the twelve digit Ethernet MAC address of the intercom that was communicated with.
- **HHMMSS** - Hours, minutes and seconds of the day in 24 hour format
- **.wav** - standard PCM wave file format.

The files are stored under the TalkMaster-ii3/iArchive directory. Each day an additional sub-directory is created so all audio archives for a single day are stored in a single directory. The directory name is formatted as YYYYMMDD.

The Play Audio Archive function can be used to easily find and play audio files for any date and time.

Play Audio Archive

The Play Audio Archive function allows you to select and play a series of audio clips that have been archived. It can be accessed from the menu option **File → Play Audio Archive**.



Use the drop down boxes to select the month and year and then click on the day. Any audio streams which have been recorded are shown with vertical lines above the hour of the day.

The green lines represent the start of microphone audio and the red lines represent the start of speaker audio. The blue bar indicates the current position for the Play button.

Click on a vertical bar and click **Play**. The audio will be played to the end of the audio clip you selected. As the audio is played, the text underneath changes to indicate which intercom the audio came from or was sent to.

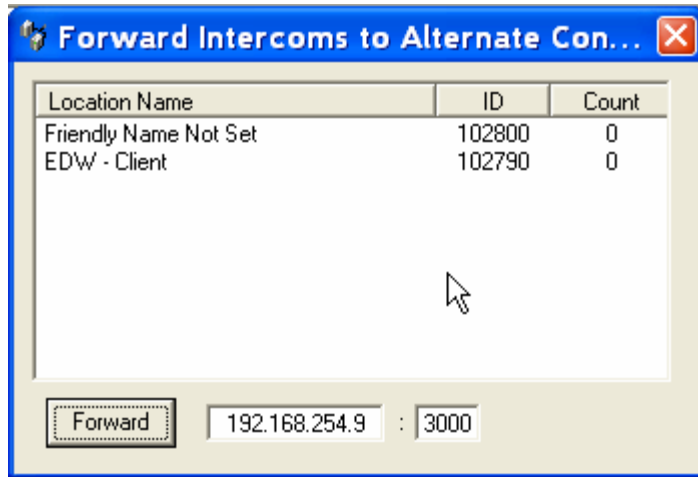
If you want to skip backwards or forward between audio clips, use the << or >> keys.

TalkMaster Console Forwarding

Forward Intercoms

The Forward Intercoms function allows you to temporarily assign all of your intercoms to another PC running TalkMaster™. This option can be accessed from menu option **Console →**

Forward Intercoms or from Tool Bar ICON



Once you forward the intercoms, the **Forward** Intercom window will stay open and the **Forward** button will change to **Return**. Pressing the **Return** button will send a message to the alternate console indicating that the intercoms will be retrieved. If the alternate console does not respond within 15 seconds, you will be asked if you want to retrieve the intercoms anyway.

If you need to shut down the TalkMaster™ console while this dialog is open, the Intercoms will stay forwarded to the Alternate Console. To return the Intercoms to this console, you will need to use the menu option **Console → Retrieve** when you open up TalkMaster™ the next time.

Retrieve Intercoms

The Retrieve Intercoms function will retrieve Intercoms that have been forwarded with the Forward Intercoms or that have been automatically forwarded via the Fail Forward function. Only those Intercoms that have their default Server IP set to this TalkMaster™ console will be returned to this console. This option can be accessed from menu option **Console → Forward**

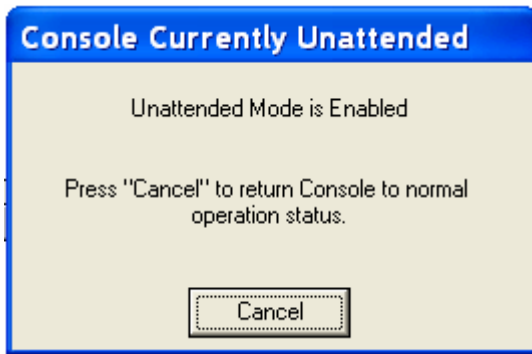
Intercoms or from Tool Bar ICON



Unattended Console

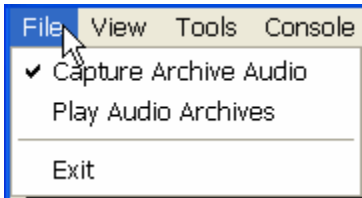
Setting the TalkMaster™ software to Unattended mode makes the console temporarily unavailable. If the PTT button is pushed on an intercom, a message indicating that says "We are unavailable to take your call at this time" will be sent. This message can be changed by re-recording the unavailable.wav file in the iSupport subdirectory of the TalkMaster-ii3 directory.

The wav file must be recorded in either 8khz 8 bit PCM or 16 bit uLaw format.



TalkMaster Menu Options

File Menu



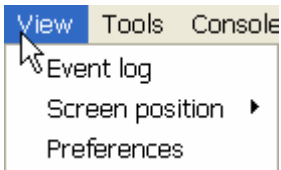
The File menu has three options:

Capture Audio Archives - toggles on and off the capture of mic and speaker audio.

Play Audio Archives - opens up a dialog that allows you to select audio archives by date and time.

Exit - will end the TalkMaster™ server session.

View Menu



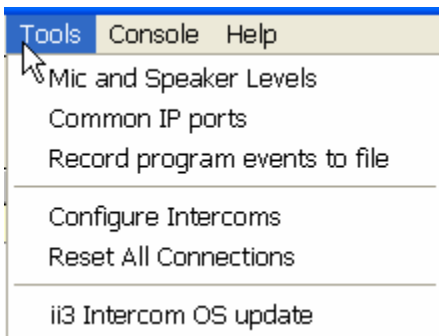
The View menu has three options:

Event Log - allows you to display the TalkMaster™ event log and save it as a text file.

Screen Position - has two options: **Save current view** saves the current window size and **Reset to default** - sets it back to the size that the product originally shipped with.

Preferences - opens up the Preferences dialog.

Tools Menu



Mic and Speaker Levels - adjusts audio levels sent to and received from the intercoms. You can also change the source used for the Talk button from the microphone to Internet/Line In which allows you to play other sources of audio through the intercoms.



Common IP Ports - is a list of commonly used port numbers. You may reference this if you need to change the standard ports used by TalkMaster™ or the ii3 intercoms.

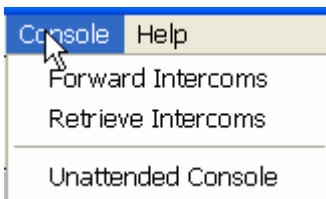
Record program events to file - should only be checked if directed by Digital Acoustics Technical Support. Leaving this option checked for an extended period of time can cause TalkMaster™ performance to be affected.

Configure Intercoms - brings up the Intercom Configuration Tool. This is used to setup the intercoms with IP addresses, other configuration information and to load new firmware.

Reset All Connections - will cause TalkMaster™ to drop all current IP connections to active intercoms and force them to reconnect to TalkMaster™.

ii3 Intercom OS update - is retained for compatibility with Intercoms that have OS version beginning with 1.8 or earlier. It should only be used under the direction of Digital Acoustics Technical Support.

Console Menu



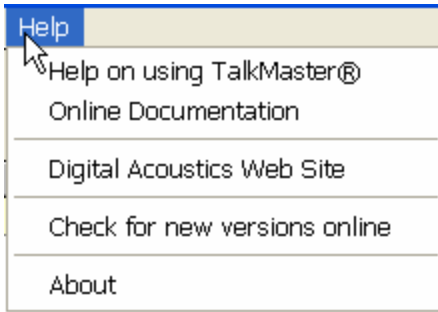
Forward Intercoms - brings up a dialog box allowing you to temporarily forward all of the active intercoms to another PC running TalkMaster™. Refer to Forward Intercoms for complete instructions.

Retrieve Intercoms - will retrieve any intercoms from other PC's running TalkMaster™ that have this PC's IP address assigned as their primary server to connect to. This can be used to retrieve intercoms that have been forwarded to another console or have failed forward to another console.

Unattended Console - allows you to temporarily suspend the console's operation. Any intercom that tries to contact the console is notified that no one is available to take their call. A dialog pops up reminding you that this mode has been set. Clicking the **Cancel** button returns the console to normal operation.

This setting is saved between TalkMaster™ sessions.

Help Menu



Help on using TalkMaster - Opens up Help

Online Documentation - Directs you to online documents on the Digital Acoustics Web site

Digital Acoustics Website - Directs you to the Homepage for ii3 Intercoms

Check for new versions online - Runs an automatic software update check to see if you are running the most current version of the TalkMaster™

About - Displays the current version information about TalkMaster™

Configuring Intercoms

Configure Intercoms

When Intercoms are shipped from Digital Acoustics, they do not have any IP address information configured. To configure them, you must connect them to your network, install TalkMaster™ and select the menu option **Tools → Configure Intercoms**. You will be asked for a Password. Enter the default password of **admin** to continue.



The Intercom Configuration Tool will immediately search for all Digital Acoustics intercoms connected to your current network segment. You can then configure their IP address information and the IP address of the server they will connect to.

If you have intercoms located in a different network segment, you may not find them since many routers filter out UDP Broadcasts. You can either install these intercoms on the current network segment or you can install a copy of TalkMaster™ in the other network segment to configure your intercoms.

To configure Intercoms to connect to TalkMaster™, see Intercom Configuration - TalkMaster Clients.

To configure two Intercoms to communicate with each other in Direct Mode, see Intercom Configuration - Direct Mode.

PLEASE CHANGE THE DEFAULT PASSWORD:

Before leaving the Intercom Configuration Tool, change the default password by selecting the menu option **File → Set Administrator Password**. Make sure to record your new password in a secure place or you will not be able to access the Intercom Configuration Tool.

Advanced Configuration

When the Advanced Configuration option is checked in the Intercom Configuration Tool **View Menu**, you can specify addition options for an ii3 Intercom.

If these options are grayed out, you have an intercom with older firmware. You can configure these options from the main TalkMaster™ screen using the menu option **View → Preferences** and selecting the Advanced tab. To update the firmware, see Updating Firmware.

Fail Forward IP 1,2,3 allow you to specify up to three IP addresses of alternate TalkMaster™ consoles that this Intercom will attempt to connect to if it's current TalkMaster™ console becomes unavailable. If an Intercom has failed forward to an alternate IP and it's default TalkMaster™ console is restarted, the default TalkMaster™ console can reacquire the intercom by using the menu option **Console → Retrieve Intercoms**.

GPIO 4 Mode allows you to specify how General Purpose I/O (GPIO) port 4 is used.

- **Factory Default** - on EDW/EDB units, the **Factory Default** is set to use the Monitor button for GPIO 4. On all other units, GPIO 4 is available.
- **Door / Relay Output** - on ii3 Intercom models that include a relay for opening a door or gate, the Door/Gate button will become visible in the **Active Intercom List**. This option is used in conjunction with **Door Relay Activate** (see below) which sets the amount of time the relay will stay active
- **Listen turns on GPIO 4** - used with custom developed applications. This option turns on GPIO 4 when ever the Intercom is in Listen mode.
- **Logic Input** - used with custom developed applications to monitor other equipment.

Remote Listen Disable - disables the ability of TalkMaster™ to have it's Listen button turn on the PTT button on the Intercom. With this option set, the Intercom Operator must press the PTT button on the Intercom for the TalkMaster™ operator to hear audio from the intercom.

Default to Listen (Direct Mode) - is only available if option **Set as Server-Peer** is enabled. Enables the Server intercom in Direct Mode to automatically start-up listening to the other Intercom.

No Beep Tone After PTT Released - turns off the soft beep that is played on the intercom after the PTT button is released

Door Relay Activate - on ii3 Intercom models that include a relay for opening a door or gate, this option sets the number of seconds that the intercom's relay will stay active when the Door/Gate button is pressed in the Active Intercom List. This is used in conjunction with **GPIO 4 - Door / Relay Output**

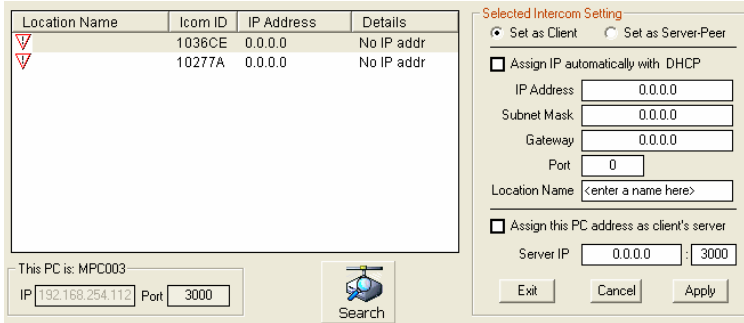
Intercom Configuration - TalkMaster Clients

Configuring intercoms for use with TalkMaster (Point to MultiPoint)

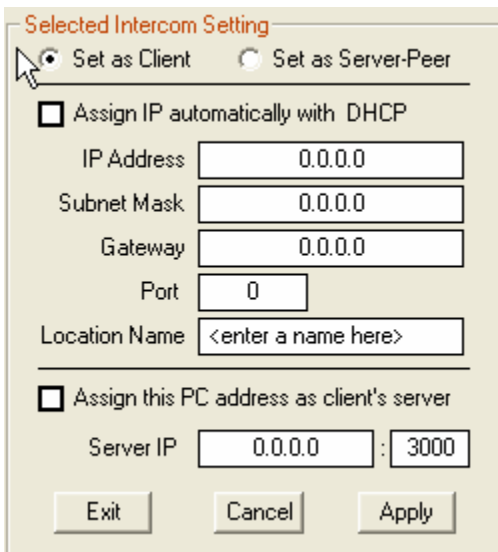
This procedure configures Intercoms to connect to the Server IP address of the PC running TalkMaster™.

To configure two intercoms to connect to each other, please see Intercom Configuration - Direct Mode.

From the main TalkMaster™ screen, select the menu option **Tools → Configure Intercoms** and enter your password to proceed. The system will scan the local network segment using a UDP Broadcast to find all ii3 Intercoms. New Intercoms will show up with IP addresses of zero.



If you have intercoms located in a different network segment, you may not find them since many routers filter out UDP Broadcasts. You can either configure these intercoms on the current network segment prior to installing them on the desired network or you can install a copy of TalkMaster™ in the other network segment to configure your intercoms.



For each intercom that you want to configure, click on it and then set the options as follows:

- **Set as Client** - Click this option
- **Assign IP automatically with DHCP** - This option determines how the Intercom's IP address is assigned. The Intercom IP address information can be assigned as a Static IP address or can be dynamically assigned if your network has a DHCP server. To use DHCP, check the box Assign IP automatically with DHCP.

Your system MUST have DHCP assignment capability if you choose to use this option. If you are unsure do NOT use DHCP.

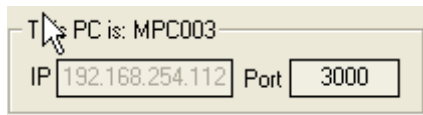
To assign a Static IP address, uncheck the box **Assign IP automatically with DHCP** and fill in the **IP Address**, **Subnet Mask** and **Gateway**. You do not have to fill out the **Port**.

- **Location Name** - Set an easily recognizable text name to reference a specific Intercom. This name will identify the Intercom in the main TalkMaster™ screen.

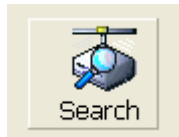
- **Assign this PC address as client's server** - This option determines the TalkMaster™ IP address that the Intercom will connect to. To assign this PC as the TalkMaster™ console for this intercom, check **Assign this PC address as the client's server**. To specify a different TalkMaster™ console, uncheck the box and fill in the IP address and the default Port number of 3000.
- **Apply** - This option will save your settings to the selected intercom. After applying changes to an intercom, the unit will be reset and will be unavailable for 10-15 seconds
- **Cancel** - This option cancels changes that have not been Applied

Exit - This option closes the Intercom Configuration Tool screen and returns to the main screen *after you have completed configuring all intercoms.*

This PC is: XXXXXXXX - This option allows you to change the default Port number used by TalkMaster™. If you change this setting, it will be reflected in the **Assign this PC address as client's server** for you.



Search - will re-search for all Digital Acoustics' ii3 Intercoms so you can verify all of your changes. Please note, that if you **Apply** changes to an intercom, the unit will be unavailable for 10 -15 seconds. If an intercom does not appear in the list, try searching a second time.



If you need to change other options on the intercoms, make sure that you check menu option **View → Advanced**. Refer to Advanced Configuration for details.

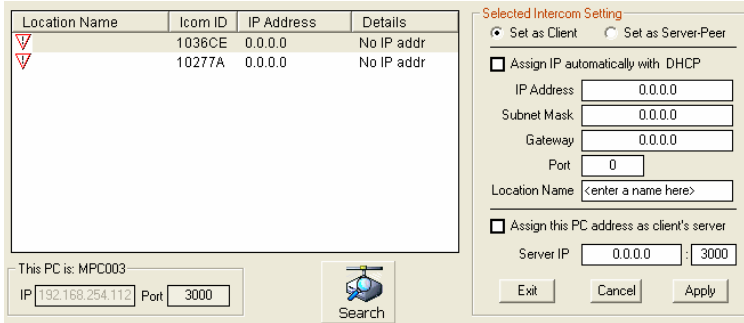
Intercom Configuration - Direct Mode

Configuring two intercoms in Client-Server mode (Direct Mode - No PC required)

This procedure configures two Intercoms to connect to each other. This connection can be on a LAN or across the Internet on a WAN.

To configure intercoms to connect to TalkMaster™, please see Intercom Configuration - TalkMaster Clients.

From the main TalkMaster™ screen, select the menu option **Tools → Configure Intercoms** and enter your password to proceed. The system will scan the local network segment using a UDP Broadcast to find all ii3 Intercoms. New Intercoms will show up with IP addresses of zero.



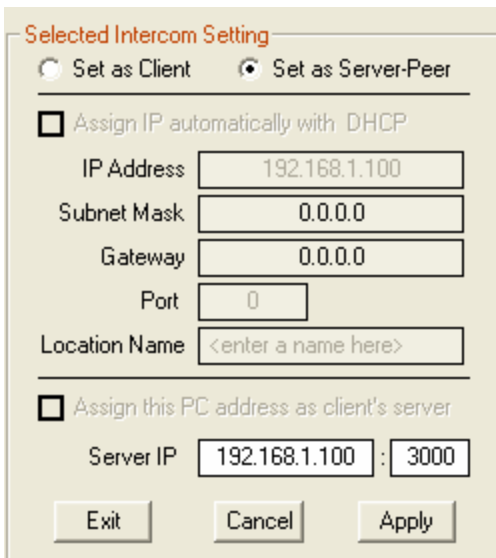
If you have intercoms located in a different network segment, you may not find them since many routers filter out UDP Broadcasts. You can either configure these intercoms on the current network segment prior to installing them on the desired network or you can install a copy of TalkMaster™ in the other network segment to configure your intercoms.

Determine which of the two intercoms will be the **Server-Peer** and which will be the **Client**.

The Server-Peer can:

- Turn on EDW/EDB Monitor/Open mode which keeps the client's PTT button on. The Server-Peer can talk to the client by pressing its PTT button. The client operates in a fully "hands free" mode
- Send a signal to an EW2W Client Intercom to open a door by pressing and holding the EDW/EDB Monitor/Open button until a dual tone beep is heard. The relay will remain active for the number of seconds specified in the **Door Relay Activate** option under Advanced Configuration.

To set up the **Server-Peer**:



- **Set as Server-Peer** - Click this option
- **Assign IP automatically with DHCP** - This option is automatically grayed out

- **Location Name** - This option is automatically grayed out
- **Assign this PC address as client's server** - Uncheck **Assign this PC address as the client's server** and enter the IP address of the Server-Peer and the Port number. You can change the default Port of 3000 as long as you specify the same port in the **Client**.
- **Apply** - This option will save your settings to the selected intercom. After applying changes to an intercom, the unit will be reset and will be unavailable for 10-15 seconds

To set up the **Client**:

Selected Intercom Setting

Set as Client Set as Server-Peer

Assign IP automatically with DHCP

IP Address:

Subnet Mask:

Gateway:

Port:

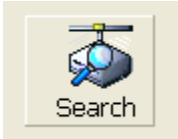
Location Name:

Assign this PC address as client's server

Server IP: :

- **Set as Client** - Click this option
- **Assign IP automatically with DHCP** - The Intercom IP address information can be assigned as a Static IP address or can be dynamically assigned if your network has a DHCP server. To use DHCP, check the box **Assign IP automatically with DHCP**. *Your system MUST have DHCP assignment capability if you choose to use this option. If you are unsure do NOT use DHCP.* To assign an IP address, uncheck the box **Assign IP automatically with DHCP** and fill in the **IP Address**, **Subnet Mask** and **Gateway**. You do not have to fill out the **Port**.
- **Location Name** - Not used in Direct Mode
- **Assign this PC address as client's server** - This is automatically unchecked so you can enter the IP address of the Server-Peer and its Port number. The Port number must match the Port number specified in the **Server-Peer** setup.
- **Apply** - This option will save your settings to the selected intercom. After applying changes to an intercom, the unit will be reset and will be unavailable for 10-15 seconds

Search - You can re-search for Intercoms to verify all of your changes. Please note, that if you **Apply** changes to an intercom, the unit will be unavailable for 10 -15 seconds. If an Intercom does not appear in the list, try searching a second time.



The configured intercoms will look something like this:

Location Name	Icom ID	IP Address	Details
Front Door	1036CE	192.168.1.100	Server
Back Door	10277A	192.168.1.50	Client

If you need to change other options on the intercoms, make sure that you check menu option **View → Advanced**. Refer to Advanced Configuration for details.

Exit - This option closes the Intercom Configuration Tool screen

The **Server-Peer** will play a short beep and the Active and Link lights will turn solid on both intercoms indicating that they have made a connection.

Updating Firmware

Updating firmware should only be done under the direction of Digital Acoustics Technical Support. Improperly flashing Intercoms can render the units inoperable.

Intercoms must have minimum firmware levels of 1.9.5.66.1-xx.x-3.68.4 to use the following features:

- Console Forwarding
- UDP Broadcast
- Fail Forward IP addresses
- Door Relay Activation time
- Location Name Stored in Intercom

Intercoms shipped with this version of TalkMaster™ 1.5 already include the most current firmware. To verify the firmware level, right click on an intercom in the main TalkMaster™ screen and view the OS version. In the following example, v1.9.5.66.8 is the ICOM version and 3.68.4 is the NIC version.



If you would like to update firmware in your intercoms, please contact Digital Acoustics Technical Support to verify upgradeability and to obtain the current firmware. Please have the Intercom ID# and OS Version available for each intercom that you would like to upgrade.

In order to update NIC Firmware, see NIC Firmware Updating

In order to update ICOM Firmware, see ICOM Firmware Updating

NIC Firmware Updating

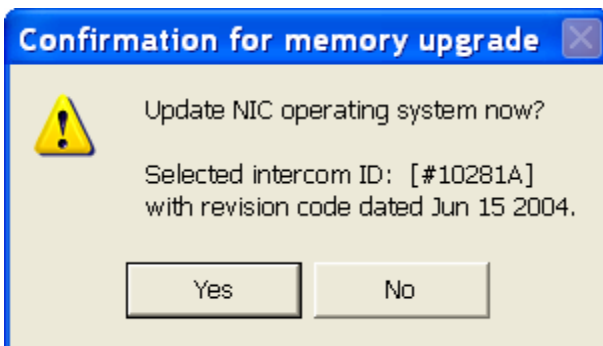
If you are going to perform a NIC firmware update, please confer with Digital Acoustics Technical Support to verify upgradeability and to obtain the current firmware. Please have the serial number and OS Version available for each intercom that you would like to upgrade.

In order to update the NIC firmware, you must configure the Intercom to connect to the copy of TalkMaster™ that you will be doing the update from. Please refer to Intercom Configuration - TalkMaster Clients.

It is strongly recommended that the update be done on a local area connection (LAN) instead of on a wide area connection (WAN) due to the critical nature of firmware updating.

Use the **Tools → Configure Intercoms** menu option to open the Intercom Configuration Tool. You will need to supply your password to access this screen.

Click on the Intercom you wish to update and select Action → NIC Firmware Upload.



TalkMaster™ will connect to the Intercom and begin uploading the firmware. When the upload is completed, a dialog box will be presented informing you that the action was successful. Once you click OK, the screen will lock for 30 seconds while the firmware re-programming takes place.

DO NOT TURN THE INTERCOM OFF WHILE THE FIRMWARE RE-PROGRAMMING TAKES PLACE!

ICOM Firmware Updating

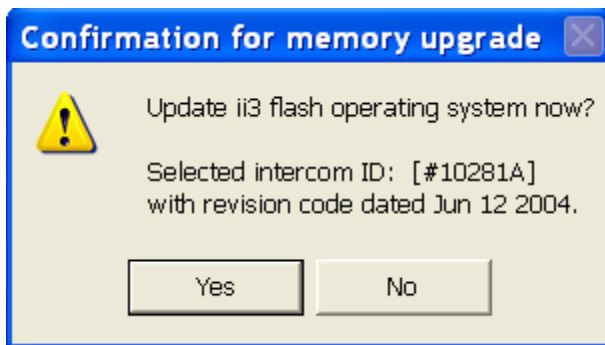
If you are going to perform an ICOM firmware update, please confer with Digital Acoustics Technical Support to verify upgradeability and to obtain the current firmware. Please have the serial number and OS Version available for each intercom that you would like to upgrade.

In order to update the ICOM firmware, you must configure the Intercom to connect to the copy of TalkMaster™ that you will be doing the update from. Please refer to Intercom Configuration - TalkMaster Clients.

It is strongly recommended that the update be done on a local area connection (LAN) instead of on a wide area connection (WAN) due to the critical nature of firmware updating.

Use the **Tools** → **Configure Intercoms** menu option to open the Intercom Configuration Tool. You will need to supply your password to access this screen.

Click on the Intercom you wish to update and select Action → ICOM Firmware Upload.



TalkMaster™ will connect to the Intercom and begin uploading the firmware. When the upload is completed, a dialog box will be presented informing you that the action was successful. Once you click OK.

DO NOT TURN THE INTERCOM OFF WHILE THE FIRMWARE IS UPLOADING!

Troubleshooting

TalkMaster requires properly configured ii3-series intercoms installed on the network to operate correctly. Please check the following before contacting support:

- Verify power connections. The "Active" LED on should be on or flashing
- If you cannot detect ii3 units when you SCAN, verify that the LINK LED is on and TalkMaster is running on the SAME network segment
- Refer to the LED Indicator section in your hardware manual and review the diagnostic information presented there
- ii3 Intercoms may operate across some firewalls or VPNs if your administrator has configured the appropriate ports and IP addresses. Most likely, you will not be able to configure the Intercoms across the firewalls or VPN's since UPD traffic is blocked by most routers
- If you have multiple network cards in this PC, verify that intercoms are connected to the card that TalkMaster has recognized. You can verify the IP address that TalkMaster is using by looking in the Intercom Configuration Tool under "This PC is: XXXXXXXX":

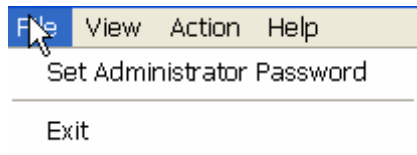


A screenshot of a configuration window with a light beige background. At the top left, there is a small icon of a mouse cursor pointing to a 'T' symbol. To the right of this icon, the text 'PC is: MPC003' is displayed. Below this, there are two input fields: the first is labeled 'IP' and contains the value '192.168.254.112'; the second is labeled 'Port' and contains the value '3000'.

- If you hear the intercom beep once every minute or so, the intercoms may not be able to find a DHCP server. Try re-scanning within 10 seconds after the beep to override the intercom's DHCP request.
- If you cannot detect any intercoms using the Intercom Configuration Utility, connect the PC directly to the ii3 intercom *using a crossover cable*. Then try to Search for the Intercom again.
- Refer to your TalkMaster ii3-m or ED series manual for additional diagnostic techniques and troubleshooting tools

Intercom Configuration Tool Menu Options

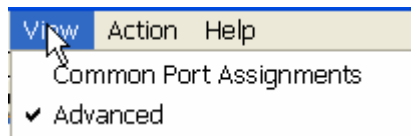
Configuration File Menu



Set Administrator Password - allows you to change the default password of **admin** used to access the Intercom Configuration Tool.

Exit - exits the Intercom Configuration Tool

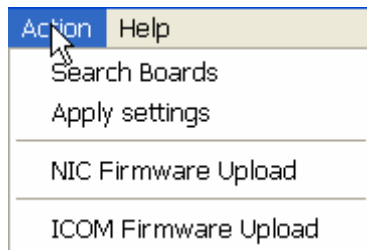
Configuration View Menu



Common Port Assignments - is a reference list of the common IP port settings

Advanced - makes the Advanced Settings section of the Intercom Configuration Tool available. Please see Advanced Configuration for details. This setting is remembered between TalkMaster™ sessions.

Configuration Action Menu



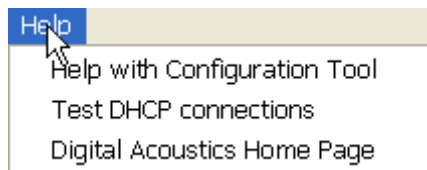
Search Boards - will search the current network segment for ii3 intercoms

Apply Settings - saves changes to made to the current intercom

NIC Firmware Upload - updates a portion of the ii3 intercom firmware

ICOM Firmware Upload - updates a portion of the ii3 intercom firmware

Configuration Help Menu



Help with Configuration Tool opens the Help window

Test DHCP connections - determines whether there is a DHCP server available on your network

Digital Acoustics Home Page - opens the default web browser to the ii3 intercom home page

Index

A

Access ID	9
Active Intercom List	3, 11, 21
Advanced Configuration	21
Advanced Settings	31
Assign IP	22, 24
Audio Archive	3, 11, 12
Audio Player	3, 11
Audio Volume	9, 17
Auto Response	3, 15, 18
Automatic Mode	3, 7

B

Beep Tone After PTT Released	21
------------------------------	----

C

Calls Waiting list	3, 7, 11
Capture Audio Archive	11, 17
Client	22, 24
Client-Server	24
Common IP Ports	17, 31
Configure Intercoms	17, 21
Console Forwarding	15, 27

D

DHCP	22, 24, 31
Digital Acoustics Technical Support	17, 28
Digital Acoustics Web site	18
Direct Mode	21, 24
Door/Gate button	21

E

Escape key	7
Ethernet MAC	11
Event Log	17

F

Fail Forward IP	15, 21, 27
Firmware	27
Flashing	27
Forward Intercoms	3, 15, 18

G

Gateway	22, 24
GPIO	21
Group	3
Grp	3

I

ICOM Firmware Upload	31
Intercom Configuration	21, 22, 24, 28, 31
Internet	9, 24
IP Address	22, 24

L

LAN	24, 28
Listen button	3, 7, 21
Listen Mode	3, 7
Location Name	3, 22, 24
Logic Input	21

M

Manual Mode	3, 7
Mic	3, 17
Monitor	21, 24
MultiPoint	22

N

New Intercoms	21, 22, 24
NIC Firmware Updating	28

O

Online Documentation	18
Options	9, 21
OS Version	27, 28

P

Password	21
Play Audio Archive	11, 12, 17
Port	22, 24
Preferences	9

R

Relay Output	21
Release Notes	1
Remote Listen Disable	21
Re-recording	15
Reset All Connections	17
Retrieve Intercoms	15, 18

S

Screen Position	17
Search Boards	22, 24, 31
Selected Intercom	9
Server IP	15, 21, 22
Server-Peer	21, 24
Set Administrator Password	31

<i>Space Bar</i>	7	<i>Tools Menu</i>	17
<i>Speaker Levels</i>	17	<i>Troubleshooting</i>	29
<i>Startup Audio</i>	9	U	
<i>Static IP</i>	22, 24	<i>UDP Broadcast</i>	22, 24, 27
<i>Subnet Mask</i>	22, 24	V	
<i>System Events</i>	3	<i>View Menu</i>	17
<i>System Requirements</i>	1	<i>Volume Down</i>	9, 17
T		<i>Volume Up</i>	9, 17
<i>Talk button</i>	3, 7, 9, 15, 21, 24	W	
<i>Talk Mode</i>	3, 8	<i>WAN</i>	24, 28
<i>TalkMaster Overview</i>	3	<i>Wav</i>	9, 11, 15
<i>Test DHCP</i>	31		



© Copyright 2004 Digital Acoustics, All Rights Reserved



1841 Centre Point Circle Suite 143 Naperville Illinois 60563
(630) 245-1445, (630) 245-1717 Fax, www.ipintercom.com