

# **MicroComm DXL**

## **IMS-640 VoIP Intercom Master Station**

### **Operating Instructions**

November, 2009



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## Section 1 - Introduction

### ***Purpose of This Manual***

This manual is intended to familiarize you with the operation of the MicroComm DXL IMS-640 VoIP Intercom Master Station. The IMS-640 is a telephone style intercom station that uses Voice over Internet Protocol (VoIP). The IMS-640 connects to an exchange via the inter-exchange Network (an Ethernet network).

The menus are similar to those used by the IMS-440 series of intercom master stations. You should easily master the operation of the IMS-640 if you are already familiar with the operation of the IMS-440.

### ***Welcome to the MicroComm DXL***

The MicroComm DXL intercom system is designed to make your job easier. Here are some of the DXL's main features:

- an Intercom Station can request your attention when needed
- you can call an Intercom Station at any time
- you can communicate with other Master Stations in your system
- if you do not respond to a call request within a specified time, another Master Station will be notified (assuming there are at least two Master Stations in your facility)
- you can make zoned paging announcements directly from your Master Station
- you can “step” through Intercom Stations to monitor what is happening at their locations
- you can control whether program is distributed to intercom stations and paging zones
- you can adjust the volume of your Master Station and the Intercom Station you are speaking with during the call
- all important activities are logged and saved for printing or reference, and
- for ease and speed of maintenance, the system generates alarms whenever wiring faults and other internal system failures are detected

### ***Elements of the System***

The DXL system consists of:

- *Intercom Stations*
- *Master Stations* that can communicate with Intercom Stations and other Master Stations
- *Secondary Master Stations*, at which call requests not answered by a Master Station in a timely manner, and other alarms are annunciated,
- *Digital Communications Controller (DCC)*, contains process control card, master control card and up to two station control cards,
- *Digital Communications Expander (DCE)* contains process control card (with reduced functionality) a master control card and up to two station control cards.

- *other system devices* such as paging speakers, page zone expanders (PZE), talk back expanders (TBE), program sources, telephone type stations, etc.

All of these elements are linked together in a communications network.

### ***The Master Station***

You can use your IMS-640 Master Station to perform a wide range of intercom and alarm functions. From your Master Station you can:

- call an Intercom Station
- call another Master Station
- respond to an intercom call request
- disable an Intercom Station or alarm monitor point
- (re)enable an Intercom Station or alarm monitor point
- monitor the intercom status of every Intercom Station that is connected to your Master Station
- make public address announcements to Intercom Station and loudspeaker zones
- turn program distribution to Intercom Stations and zones on or off

### ***This Operating Manual***

This operating manual is designed to help you learn to use all of the important features of your Intercom Master Station. It will also serve as a handy reference document.

The manual is divided into eight sections, each one dealing with a key aspect:

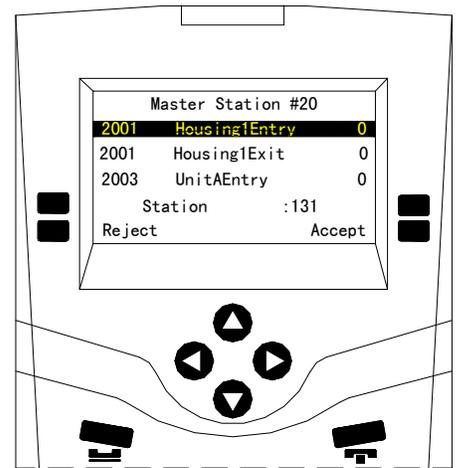
Section 1	Introduction
Section 2	Getting Started
Section 3	Principles of Operation
Section 4	Intercom Procedures
Section 5	Enabling and Disabling Stations
Section 6	Monitoring Procedures
Section 7	Alarm Handling Procedures
Section 8	Other Master Station Procedures

Remember that the DXL is an intercom system designed to help you do your job more effectively.

The more familiar you are with its operation, the easier your job will be!

**Notation Used in This Manual**

Your Intercom Master Station uses text on a dark background of the LCD display to represent such things as a selected Intercom Station or which list you are viewing. In this manual, the selected text is shown as inverted text.



**Selected text is represented by inverted text**



## Section 2 - Getting Started

### What is a DXL Intercom Station?

In a MicroComm DXL system, an *Intercom Station* refers to a speaker/microphone combination from which audio communications can be carried out. Associated with the Intercom Station are one or more switches that can be used to generate call request, select programs or other possible functions.

### How the DXL System Handles Alarms

The MicroComm DXL is an integrated system that handles a wide variety of alarms, in addition to intercom call requests. To simplify operation of the system, the DXL treats call requests and alarms in the same basic fashion. (The only difference between the two is that, with call requests, intercom functions are available.)

First we will discuss how the DXL handles alarms.

Normally, the Stations that communicate with your Master Station are in the “idle” state.

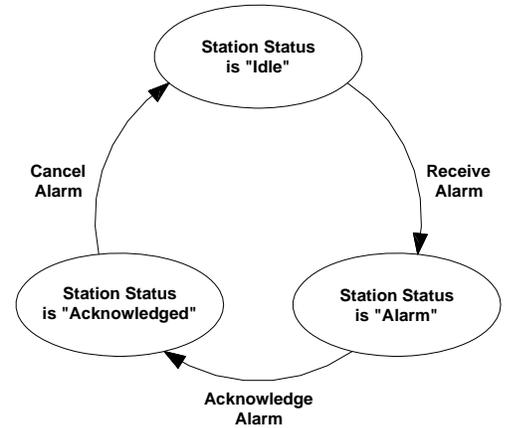
When a Station initiates an alarm, the alarm is sounded at your Master Station, and the system changes the state of that Intercom Station from “idle” to “alarm”.

When an alarm is acknowledged, the system changes the status of the Station from “alarm” to “acknowledged”.

And when the alarm is canceled, the system changes the status of the Station from “acknowledged” back to “idle”.

The DXL keeps track of the status of all Stations and displays this information for you - as lists of Stations with “alarm” and “acknowledged” status.

Now let’s look at call requests.



### How the DXL Handles Call Requests

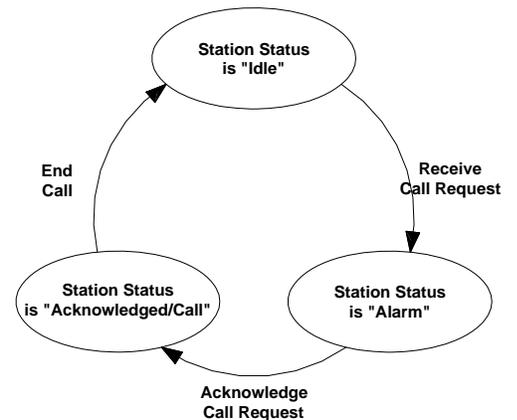
When a *call request* is initiated at an Intercom Station, the Master Station alerts you (with a beep). The station that initiated the call request is added to the Event Queue. Until the call request is acknowledged, the Master Station will sound an *alarm reminder beep* at a regular interval.

When you acknowledge the call request:

- a tone sounds at the Intercom Station to let the calling party know that the call request has been acknowledged,
- the DXL removes the Intercom Station from the Event Queue, and
- your Master Station is connected to the Intercom Station.

Once you are connected, you may speak to the calling party, or listen.

When you have completed your communications with the Intercom Station you may “end” the call.



After a fixed interval, if the call request is not acknowledged (or canceled), it will “time out” and a *call request time-out alarm* will be annunciated at the Secondary Master Station. (The original call request remains queued at the Master Station.)

**Note:** When the system is set up, the System Administrator will set the time allowed before a time-out alarm is triggered by a failure to respond to the call request.

A Secondary Master Station is simply another Master Station designated to receive time out calls, fault reports as a back up function.

All intercom activities (call requests, calls, cancels, etc.) are logged so that they can be printed and accessed for review.

### **Intercom Stations**

A typical Intercom Station consists of:

- a call switch
- a loudspeaker/microphone, which enables two-way communication.

Intercom Stations may also take the form of telephone handsets, talkback loudspeakers with call request buttons, etc. Whatever their configuration, they include a means to place a call request and a means of two-way communication. They may include *call indicator lights* to signal that call requests have been placed or that calls have been acknowledged.



**Typical Intercom Station**

### **Initiating a Call Request**

A call request is initiated by pressing the call request switch (lifting the telephone handset, etc.) at the Intercom Station.

A call request will not be able to be initiated from an Intercom Station if:

- the Station is disabled, or
- the Station has initiated a call request that has not yet been acknowledged.

### **Disabled Stations**

If you disable an intercom or other station, it can no longer initiate a call request. However, you may call a disabled Intercom Station.

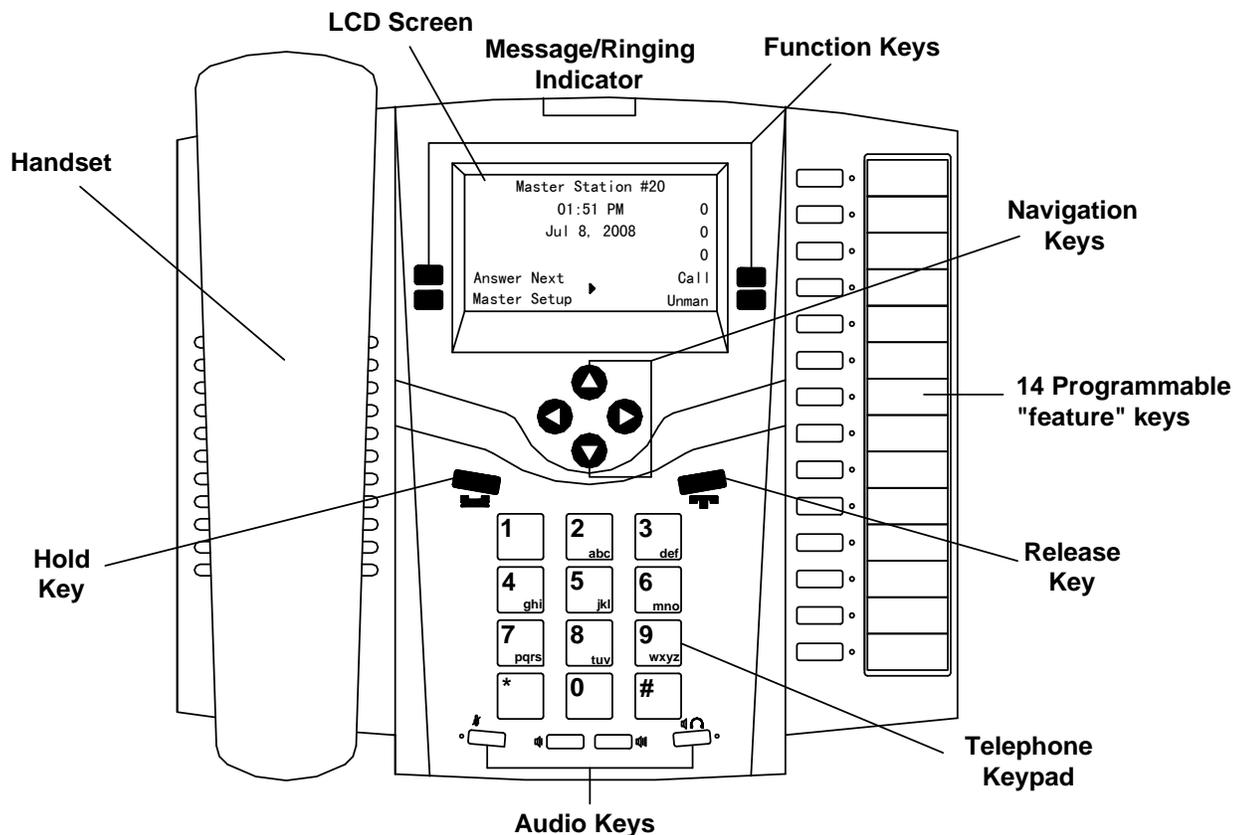
At any time, you may enable a disabled Station, which puts it back into operation.

When you disable a Station, it is added to the Disabled List. When you enable a disabled Station, it is removed from the Disabled List.

### **Intercom Calls**

Your Master Station will be connected to the Intercom Station whenever:





**IMS-640 showing keyboard and display**

## Display

The display is a 128 x 64 pixel LCD screen with backlighting that provides information you need to perform intercom functions.

## Telephone keys

The telephone keys consist of:

- a standard telephone-12 key numeric keypad,
- four navigation keys,
- four function keys
- a Hold key (The operation of this key is disabled when the IMS-640 functions as a DXL master station)
- a Release key
- four audio keys.
- 14 programmable “feature” keys, each with an LCD indicator

## Telephone Keypad

The keypad consists of a numeric key set - (0 to 9), (\* ) and (#) - in a standard telephone layout. These keys are used to speed up station selection when performing intercom functions and to set level controls.

## Navigation Keys

There are four control keys:

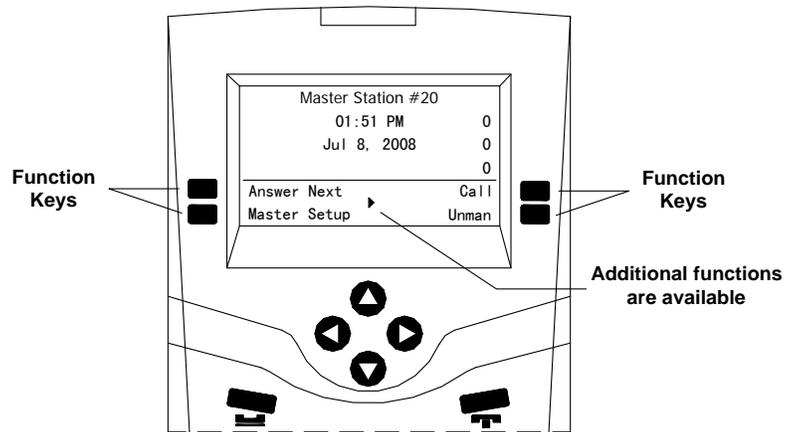
- The Up-Arrow key  and Down-Arrow key  are used to scroll through the displayed list of stations and to adjust settings and volumes.
- The Right Arrow  key is used to scroll to a new menu
- The Left Arrow  key is used to scroll back to a previous menu

## Function Keys

Function keys are used to perform the intercom functions that appear beside them on the display. Each key is associated with the function name that appears directly beside it.

If a function name does not appear beside a function key, the key is not operative. (If you press it nothing happens).

The functions that you may perform at any one time will change, according to the keys you have pressed, the list displayed and the station selected.



## Four Function Keys

The center arrow head  indicates additional functions are available and will be displayed if you press the Right-Arrow key . Additional functions are available *only* if a right-arrow head appears in the center of the bottom two lines of the display.

## Hold Key

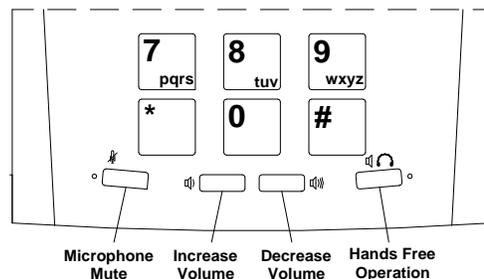
The HOLD key () is not used in the operation of the IMS-640 and its operation is disabled

## Release Key

The RELEASE key () is used to abort a value entry and return to previous settings. (The RELEASE key operation is similar to the CLEAR key operation in an IMS-440.)

### Audio Keys

- The MUTE key is used to temporarily suspend audio communication during a call. It will mute the Master Station microphone and allow the operator to listen to the connected station. A green LED indicates when the microphone is muted.
- Two volume control keys are used to either increase or decrease the volume of the incoming speech.
- The HANDS FREE key is used to allow hands free operation. A green LED comes on when the master station is in hands free operation.



**Audio Switches on the IMS-640**

### Beeper

The Master Station contains a beeper. Various conditions will cause a beep:

- *new alarm beep*  
a single tone will sound when a new call request or other alarm is received
- *an error beep*  
a single tone will sound when you press a numerical key
- *reminder beep*  
a double beep will sound at a fixed interval (from 5 to 60 seconds) as long as all call requests have not been acknowledged.

The reminder beep interval is set in the Administrator Software.

**Note:** If you are in a call, the reminder beep and new alarm beep will be disabled for the duration of your call. Once your call is completed the reminder beep and new alarm beep will automatically be re-activated.

### Loudspeaker and Microphone

A loudspeaker and microphone are included in the IMS-640. They are used for hands-free communication with Intercom Stations and other Master Stations. When using the loudspeaker and microphone to communicate, the communication is one way at any one time so each party must take turns speaking. The Master Station operates with a Voice operated switch (VOX) and the communication path will switch automatically so that it routes the signal from the person speaking to the person listening.

**Handset**

The handset can also be used to communicate with Intercom Stations or other Master Stations. When the handset is lifted from its cradle, the loudspeaker and microphone are automatically disconnected.

Handset communications to Intercom Stations are one way as for loudspeaker and microphone communications. When speaking to another Master Station using its handset, both parties can speak and listen at the same time as for normal telephone communications.

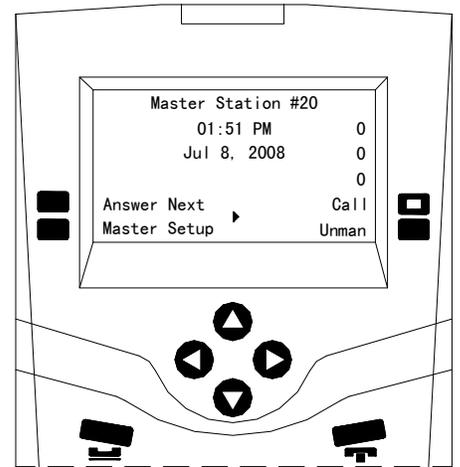


### Section 3 - Principles of Operation

#### Menu System

A compact Master Station requires a small display and a limited sized keyboard. To achieve this goal and still provide the required functionality, the DXL IMS-640 uses four programmable keys (called function keys) and a menu system that defines the function of the keys. The bottom two line of the display shows the different functions. Each time you press a function key either the specified action will be carried out or the menu will change allowing you to make further choices. The structure of menu system resembles an inverted tree, starting at the top level the menu is called the “Idle menu”.

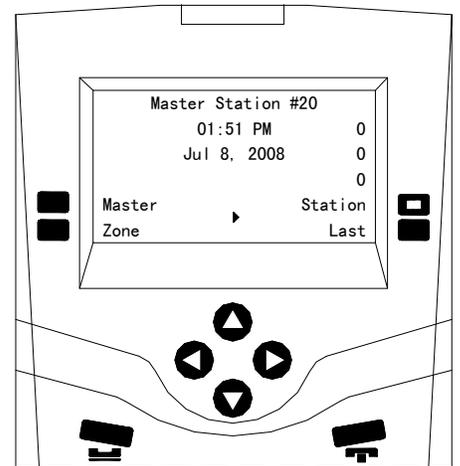
From the “Idle menu” if we press one of the function keys, for example **Call**, we move down the tree to a lower level menu (similar to moving to one of the tree branches).



If you press this key the ‘Call’ function is performed.

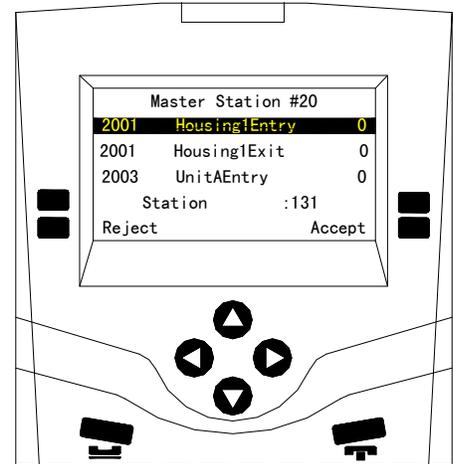
In this case the menu will change and the function keys will indicate the various lists that can be called. These include a list of Master Stations (Master), a list of Intercom Stations (Station), a list of Page Zones (Zone), and a convenient entry (Last) that allows you to call the last station you called. Pressing the  navigation key will bring up a new set of lists that can be called.

Pressing a function key from this menu, for example “Station” will again change the display and present the list of Stations that you may call. In place of the menu functions the display will now indicate that you are on the “Station” list, as well as indicate the total number of Stations on the list.



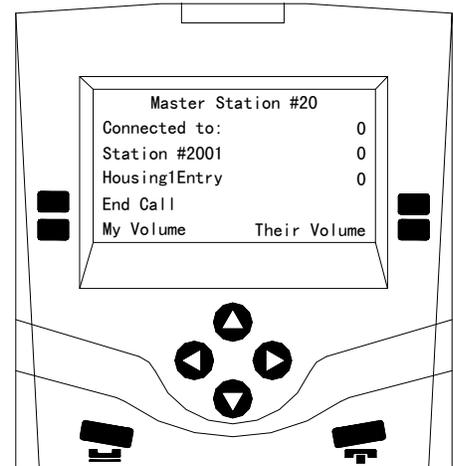
If you press this key the ‘Station’ list will be displayed

With the limited display area, three station names can be displayed at one time; however you can use the scroll keys  and  to move through the list of stations until you reach the particular station you want to call. Pressing the **Accept** function key will connect you to that station.



The list of Stations that you can call.

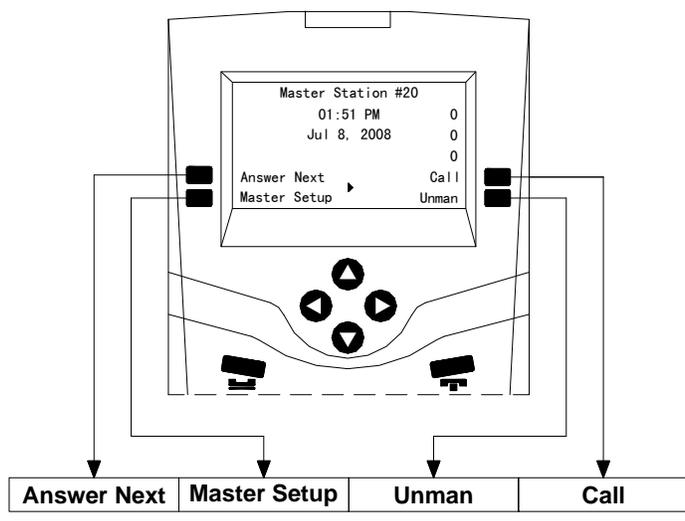
The menu system will now change and one of the **End Call** function key will allow you to terminate the call.



Screen Display during a call

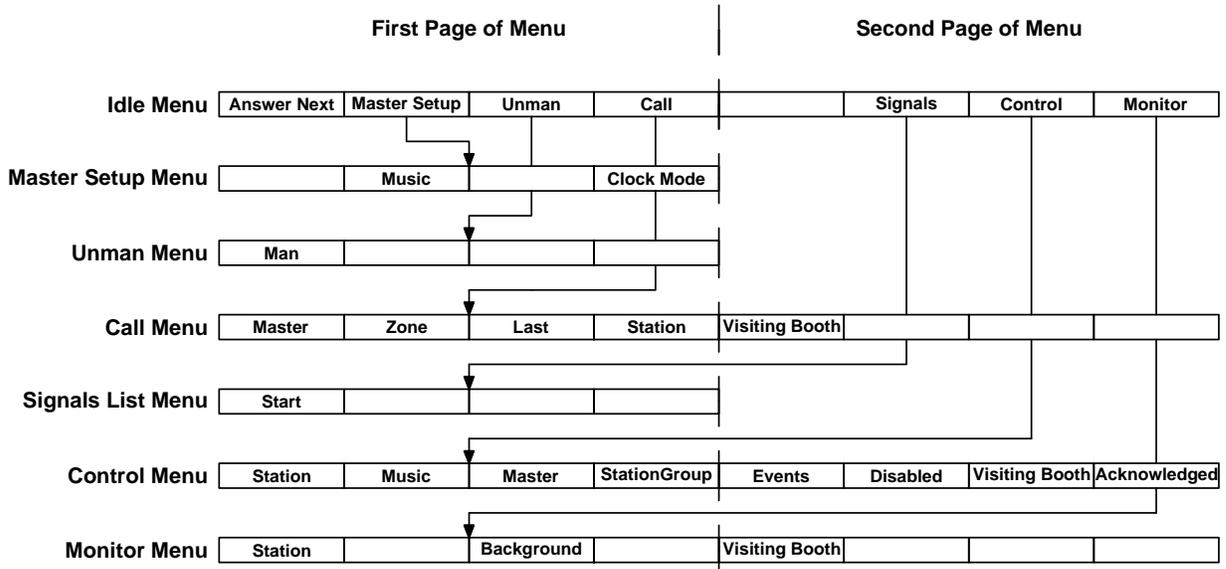
**Function menus**

The functions have been grouped together for your convenience into menus. A menu consists of all the functions you can perform at a point in time. The following diagram gives a pictorial representation of the menus that can be reached from the top level “Idle menu” The “Idle menu” is normally displayed when there is no system activity. (By repeatedly pressing the “RELEASE” key you can always return to the “idle” menu. Often a menu will consist of two pages; if a second page is available the right arrow in the center of the bottom two lines of the display will be present. Pressing the right arrow navigation key  will display the second page of the menu.



Mapping of Function keys to Representation in Document

The following diagram shows the “idle” menu and the menus or lists that will be displayed by pressing the various function keys. Pressing the Signals function key does not bring up a menu but a list of Signals that are in the DXL configuration.

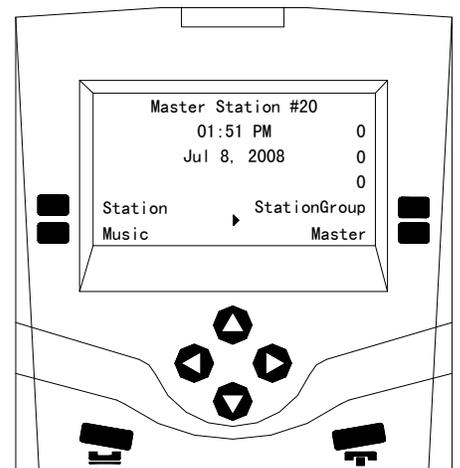


**Menus reached from the top level “idle” menu**

**Use of the Right-Arrow Key**

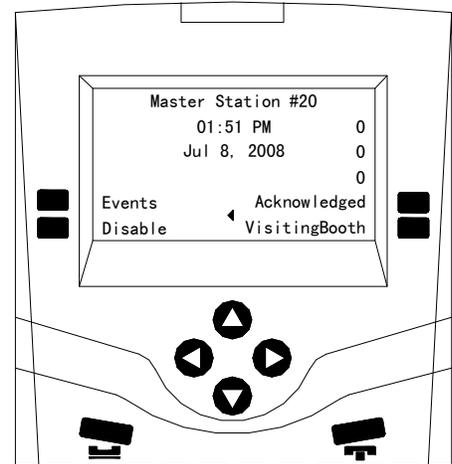
The two bottom lines of the display shows the different functions you may perform by pressing the ‘function key(s)’ adjacent to the display. Up to four functions are shown at one time. Each one corresponds to the key directly beside the function name.

If a Right-Arrow Head ► is displayed in the center of the two bottom lines of the display line, it means there are additional functions available on a second page of the menu.



**Right-Arrow indicate more functions available**

When you press the Right-Arrow navigation key , additional functions will appear. Notice the arrow direction in the display changes direction, and now pressing the Left Arrow navigation key  will return you to the first page of the menu.



**Additional menu keys are displayed**

**List of Functions**

Here is a list of functions that you may perform on the DXL system. The "function key label" is the term that will appear on the display.

Note: Only those functions that you may use at any one time will be displayed. Pressing an unlabelled function will do nothing.

**Function**

<b>Key Label</b>	<b>Meaning</b>
Acknowledged	After you press 'Control', pressing this key will cause the Acknowledged List to be displayed.
Accept	Pressing this function key will make an audio connection to a selected station.
Answer Next	Pressing this key will acknowledge the highest priority event in the Event Queue.
Background	Pressing this key will bring up a menu which allows you to select stations or station groups that can be added to the monitoring list.
Call	When you press this key from the Idle menu the function display will allow you to select a list of Master Stations, Page Zones, Stations or Visiting Booths that can be called.
Clock Mode	After pressing 'Master Setup', you can adjust the time format of the clock to either display AM/PM, or military time (MT).
Call Request	Pressing this key will give you the ability to enable or disable the Call Request Button of an Intercom Station.
Control	When you press this key, the function key menu will display the types of things you can control.
Disabled	When you press this key, you will disable the station that is selected. (Remember, if the Intercom Station that you disable has initiated a call request that has not been acknowledged, the call request will be acknowledged when you disable the station).
Disabled	After you press 'Control', pressing this key will cause the Disabled List to appear.

End Call	Pressing this key from the Monitor menu will exit you from the Monitor menu and stop the monitoring of the Station.
Events	When you press this key after 'Control', the Event Queue is displayed.
Last	Pressing this key after 'CALL' will place the last call made from the Master Station.
Man	Pressing this key will change the status of a master station from unmanned to manned.
Monitor	Pressing this key will bring up the monitoring options available.
Master	When you press this key, the display will change to show you the directory list of Intercom Station Master Stations.
Music	Pressing Music from the Unman menu the display will change to show the list of music sources that can be selected to be broadcast at the master station.
Music	Pressing Music from the Control menu will change the display and allow you to select the list of Stations, Page Zones or Station Groups that can receive programmed music.
My Volume	When you press this key, you will be able to adjust the sound level for your Master Station. This function will be available during a call.
Signal	When you press this key, the function menu will change to display the list of signals that you can activate.
Start	When you press this key from the Signals list the selected signal will start.
Station	Pressing this key will change the Master Station display to show the Station Directory.
Their Volume	When you press this key, you be able to adjust the sound level at the Intercom Station you are communicating with. This function is available during a call.
Unman	After pressing this key will set the Master Station into Unmanned mode. A password is required to return the master into operation.
Visiting Booth	Pressing this key will change the Master Station display to show the Visiting Booth Directory.
Zone	Pressing this key will change the Master Station display to show the Paging Zone Directory.

## Lists

The MicroComm DXL uses two types of lists to perform its functions:

- Active Lists - these are lists that change as calls and alarms are placed, acknowledged and canceled. Active lists help you know what is happening at your station at any time.
- Directory Lists - these are lists that contain all the Master Stations, Intercom Stations, paging zones, and visitor booths that your Master Station can communicate with. Directory lists let you find stations that you need to communicate with or control.

The number of stations on the Active Lists will vary from time to time.

The length of the Directory Lists, on the other hand, is constant.

Unless they are doing the same job, your Master Station will probably have different Directory Lists than the other Master Stations in the system.

The following describes the Active Lists:

Event Queue	this is a list of stations whose call requests have not been acknowledged
Acknowledged List	this is a list of stations whose call requests have been acknowledged, but not canceled.
Disabled List	this is a list of stations that have been disabled
Last Call List	this list always contains only one entry. You use it to recall the last station you were talking to. Every time you talk to a different station, this list is updated.
Monitor List	this is a list of all intercom stations that are automatically monitored in sequence.

The following describes the Directory Lists:

Station List	this is a list of all Intercom Station that can communicate with your Master Station
Station Group list	this is a list of all Station Groups that can be controlled with your master station
Master List	this is a list of all Master Stations that can communicate with your Master Station
Paging Zone List	this is a list of all paging zones that you can make announcements to from your Master Station.
Signal List	this is a list of signals that your Master Station can activate.
Visiting Booth List	this is a list of all visiting booth stations that you can communicate with, monitor, and control their on/off status.

## How Lists are Displayed

The display on your Master Station is divided into three parts:

- Alarm Code and ID Number and Name for each station on the list

Note: A maximum of three stations can be displayed at one time.

- The current list sizes of the Event Queue, Acknowledged List and Disabled List. These values appear on the right-hand side of the display in the top three rows. They are always displayed.

Remember that these lists vary in size from time to time. Even if the list size is zero, a value will still appear.

- A set of functions that you can perform by pressing the function keys immediately beside the display.

Let's look at this information in more detail:

## Alarm Code

The alarm code indicates the type of alarm that has been received:

Alarm Code	Meaning
I	Intercom Station Call Request
A	Audio Level Alarm Call Request
t	Call Request Time-out Alarm
d	Disabled Station Alarm
M	Master Station or Staff Call Request
F	Fault Alarm

T Tamper Alarm

**Note:** t and d alarms are displayed only at the Secondary Master Station.

**ID Number and Name**

All the stations in your facility are identified by ID Number and Name. The ID Number is a numeric value (between 1 and 65,535) assigned to the given station. It has no special significance other than the fact that it is a unique identification for that station only. The Name describes the Station in terms commonly used in your facility. The Name may contain any characters, including numbers and punctuation and it may be up to 20 characters long. On the display Stations are identified by both ID Number and Name

**List Order**

Each list has its own default order. The default order is the order in which the DXL normally displays the Stations on that list.

- Event Queue

Stations are sorted according to call request priority. (The DXL Administrator Software is used to set the priorities of the Intercom Stations.) If two or more Stations have equal priority, they will appear in the order in which their call requests were received.

- Acknowledged List

Stations are sorted in the order in which they were acknowledged.

- Disabled List

The Disabled List display stations in order of Station ID Numbers.

- Directory Lists

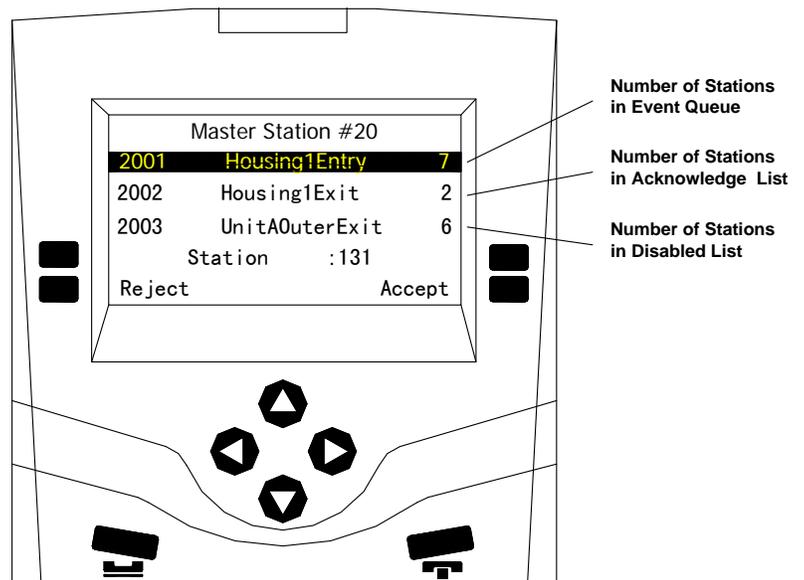
The order will be by ID Number.

**List Sizes**

The three numbers on the right hand side of the display indicate the current number of Stations on each of the three variable-length lists:

- TOP -- Event Queue
- MIDDLE -- Acknowledged List
- BOTTOM -- Disabled List

Remember that these values will vary. At any one time, the list size may be zero or some number up to the total number of stations



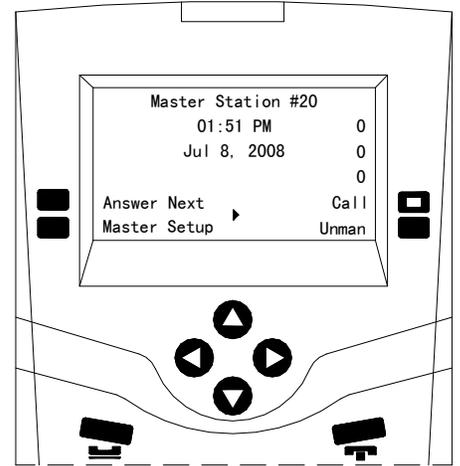


## Section 4 - Intercom Procedures

### *How to Select a List*

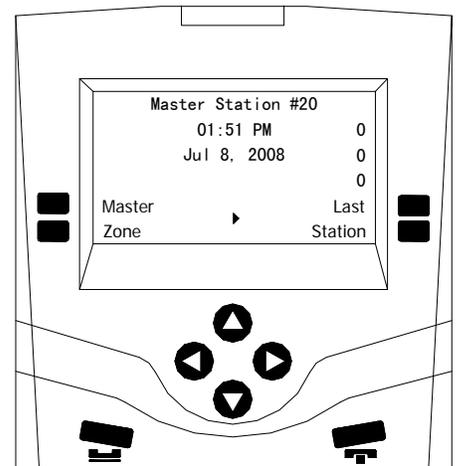
You can select a list through the **Call**, **Signal**, **Control**, and **Monitor** functions on the “idle” menu. Which function key you choose is based upon the operation you wish to perform.

Once you select one of the functions you wish to perform, the list of available devices you can select is displayed.



**Master Station “Idle”  
menu.**

For example, if you select the **Call** function, you can then select whether you wish to call a **Master Station**, **Paging Zone**, **Intercom Station** or **Visiting Booth**.



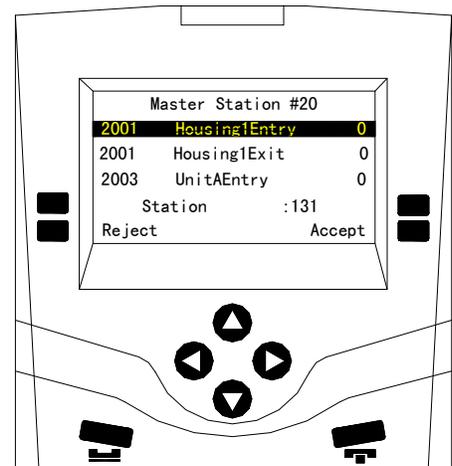
**When “Call” is pressed, the above  
choices appear.**

If you decide to call an Intercom Station, press the **Station** function key to display the Intercom Stations that are available for your master station.

**How to Select a Station**

Before you perform a function, the station you want must be selected. The selected station will be displayed with a dark background

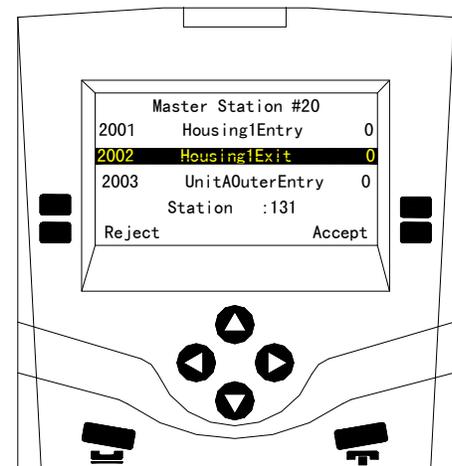
If you station you want is not currently selected, you can scroll through the Station List to the station you want - see the next heading for scrolling. As shown on the right the top station is currently selected



**When “Station” is pressed, the list of Intercom Stations appears.**

**Scrolling**

If the station you want is not selected, you can use the Up-Arrow key (“↑”) and Down-Arrow key (“↓”) to scroll up or down the list. Each time you press the arrow key, you will move up or down the list by one station.



**The second Station is selected**

**If you know the ID Number of the Station**

If you know the ID Number, you can select the station directly by simply typing in the Station ID Number. For example if you press “2” “0” “0”; “2” you will be connected to the Station with ID Number 2002.

**A Shortcut to Help With Long Lists**

For lists that are sorted by ID Number you can sometimes shorten the list of displayed stations by typing in the first number of the station i.e. by typing in a “2” only the stations with ID numbers that start with “2” will be displayed.

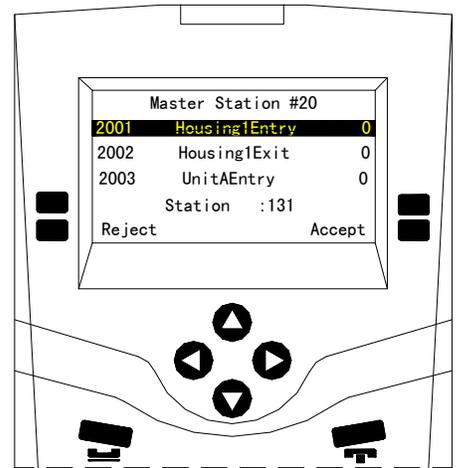
Now you can use the Up-Arrow ▲ and Down-Arrow ▼ keys to scroll through the shortened list to make your final selection.

Let’s say the ID Number of the station you want starts with a “2”. Press “2” and only those stations beginning with ID Numbers beginning with “2” will be displayed - this would include “2”, “20 ...29”, “200 ...299”, “2000”, “2001” ... “2999”, etc.

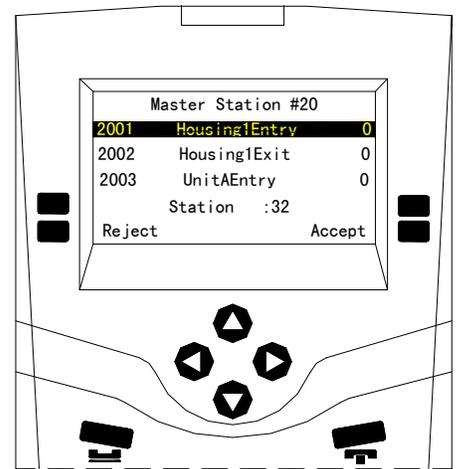
At any point you can stop and use the Up-Arrow and Down-Arrow keys to make your final selection.

If you know the second digit typing it in will further reduce the displayed list of stations. In this example the list contains 131 stations.

If you now type in a “0” only those stations with ID numbers that start with “20” will be displayed. In this example the displayed list is shortened and contains only 32 stations.



**Station List – only those Stations whose ID numbers begin with “2” are displayed**



**Station List – only those stations whose ID numbers begin with “20” are displayed**

**To Back Out of Your Selection**

If you press “RELEASE”, you will “back out” of your selection - in the reverse order in which you enter the digits. Each time you press “RELEASE”, you go back one key stroke.

**Example:** Let’s say you enter “2” “0”. The list will display only stations whose ID Numbers begin with “20”. If you now press “RELEASE” once, the list will display only those stations whose ID Numbers begin with “2”. If you press “RELEASE” again, the entire list will be displayed. If you press “RELEASE” again you will return to a previous menu.

### Making a Call to a Station

This procedure is used for making a call to an Intercom Station.

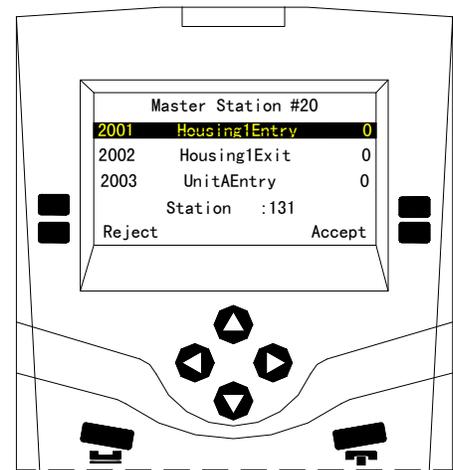
You may call an Intercom Station from any list on which it appears.

**Reminder:** When you acknowledge a call request from the Event Queue, you will automatically be connected to the Intercom Station.

**Caution:** If you call a station from the Station List or from the Disabled List and that station is also listed on the Event Queue, the system will treat your call as though you had acknowledged the call request.

To access the Station List press **Call** followed by **Station**. Now select the Station you want from the Station List.

In this example, we will make a call from the Station List.



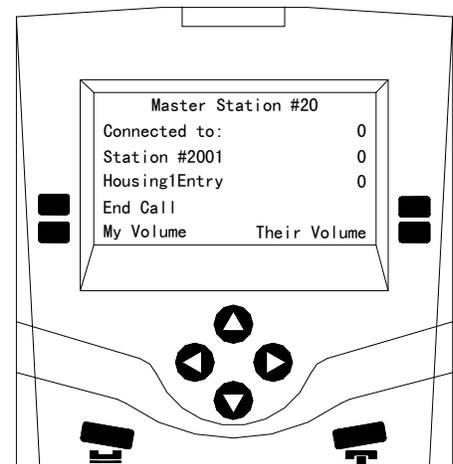
Station List

When you press the **Accept** function key the screen displays the ID Number and Name of the station you are calling. You are now connected to the station.

Through the loudspeaker, handset, or headset, you will be able to hear the audio at the station.

To speak to the intercom, use the station mic (located next to the loudspeaker), the handset, or the headset.

When you have finished your conversation, press the **End Call** function key. You will return to the Main Menu.



Press "End Call" when you have completed the call

**Functions Available When You are Making a Call**

The following functions are available for you to use during a call:

- End Call                      This key will terminate the call and return you to the ‘Idle menu’.
- My Volume                    This key allows you to adjust the sound volume at your Master Station.
- Their Volume                This key allows you to adjust the sound volume at the Intercom Station to which you are connected.

**Note:** When you change the sound volume at an Intercom Station, the new value can be saved and is re-used on subsequent calls to that station.

See Level Setting Adjustments below.

**Level Setting Adjustments**

This procedure is used to adjust sound volume at the Master Station (“My Volume”), and the sound volume at the Intercom Station (“Their Volume”).

The current setting is displayed as a bar (on the bottom line of the display), replacing the function menu.

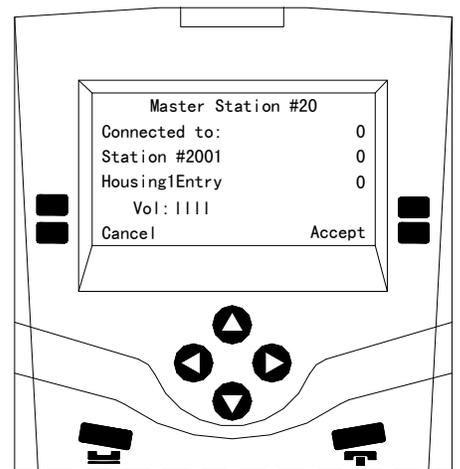
There are two ways to adjust the setting:

- You may use the Up-Arrow key ▲ and Down-Arrow key ▼ to adjust the level of the Master Volume or Station Volume, or
- You may press the numbers on the keypad - a “0” gives you the lowest setting; a “7”, “8” or “9” gives you the maximum setting. Other numbers give settings in between.

**Note:** If at any time, you want to return to your initial setting, press “RELEASE”.

After you have adjusted the setting press the **Accept** function key to save your setting. You will return to the display from which you started. The function menu will once again be displayed on the bottom line of the display.

The display at the right is appears when you select **My Volume** function key while you are connected to a Station. If you press the **Accept** function key the setting will be saved, if you press the **Cancel** function key you will return to the original setting.



**Display while adjusting incoming volume levels.**

## **Call Requests**

When a call request is received, the Master Station will beep and the Intercom Station initiating the call request will be added to the Event Queue (according to priority and order received).

You may ignore the call request for the time being, or you may acknowledge it immediately.

**Caution:** If you do not respond promptly to the call request:

- a call request reminder beep will sound periodically to remind you that the call request has not been acknowledged, and
- after an interval, a call request time-out alarm may be annunciated at the Secondary Master Station.

## **Responding to a Call Request**

If you are in the Idle menu and the Event Queue is empty the display will show the current time and date. As soon as a call is received the Event Queue will be displayed (The Event Queue will always be displayed in the 'Idle menu' if there are unacknowledged events). If the incoming call request is the only entry in the event queue it will be selected you can respond to the call by pressing the **Answer Next** function key.

## **Acknowledging the Call Request**

To acknowledge the top call request in the queue, press the **Answer Next** function key.

To acknowledge a call request that is selected, press the **Accept** function key.

You will be connected to the Intercom Station that you have selected. A tone will sound at the Intercom Station, and the call indicator light (if present) will go on to indicate that your Master Station is connected to the Intercom Station.

You may now speak to the Intercom Station, if you wish.

## **Ending the Call**

To end a call with which you have been communicating with, press the End **Call** function key. This will disconnect you from the Intercom Station that you were communicating with. A tone will sound at the Intercom Station, and the call indicator light (if present) will turn off to indicate that your Master Station is no longer connected to the Intercom Station.

## Section 5 – Enabling and Disabling Stations

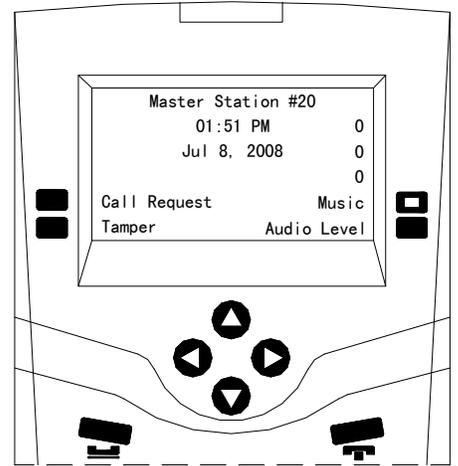
### Enabling/Disabling Intercom Stations

If, during the operation of the system, there is the need to disable a station or parts of a station this can be accomplished from the Master Station.

These functions include:

- Call Request Switch
- Tamper Alarm Switch
- Program Music Button
- Change Audio Level Alarm Threshold

Enabling/Disabling these functions is carried out by first pressing the Control function key on the second page of the “Idle menu”. A new menu appears. Press the **Station** function key to bring up a new menu as shown on the right.

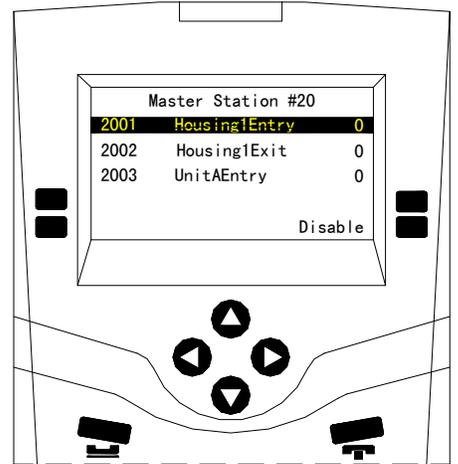


Operations that can be Enabled/Disabled at a Station

### Enabling/Disabling Call Request Switch at an Intercom Station

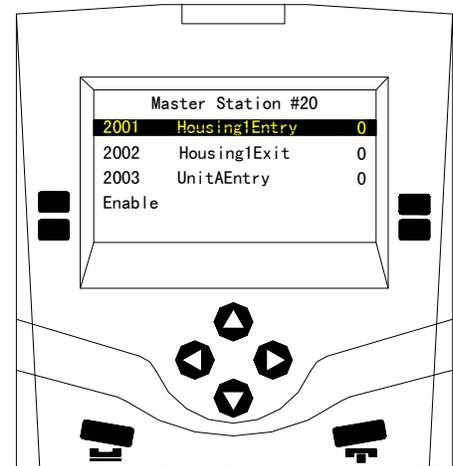
Even though a Station may have its call request switch disabled, you can still place calls to that Station and communicate with it from your Master Station.

Enabling/Disabling an Intercom Station’s call request switch is carried out by first pressing the **Control** function key on the “Idle menu”, followed by selecting **Station** function key on the new menu. This will bring up a new menu, select the **Call Request** function key; this will bring up a list of stations. Sort through the list and select the desired Station. Press the **Disable** function key to disable the station.



The Call Request switch at Station #2001 can now be Disabled

The display will now change with the **Enable** function key will now displayed.

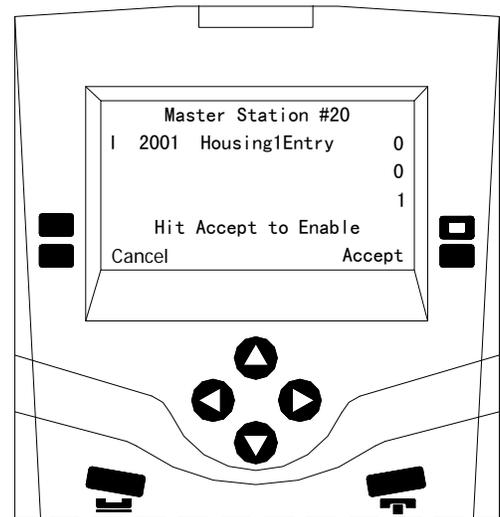


The Call Request Switch at Station #2001 can be Enabled

**Enabling Call Request Switch from the Disabled list**

A second method of enabling a disabled station is to display the Disabled list.

Selecting the **Control** function key from the “Idle menu” will bring up a new menu. Selecting the **Disabled** function key on the new menu will bring up the disabled list. Scroll to the station you wish to Enable and select the **Accept** function key to change to the selected station to an enabled state



**Enabling/Disabling Tamper Alarm at an Intercom Station**

The Tamper Alarm switch can be Enabled/Disabled following the same procedure used to Enable/Disable the Call Request switch.

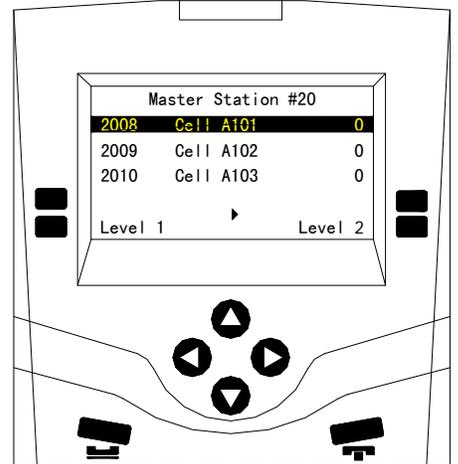
**Enabling/Disabling Music at an Intercom Station**

The Music switch can be Enabled/Disabled following the same procedure used to Enable/Disable the Call Request switch.

**Setting the Audio Level Alarm Thresholds for an Intercom Station**

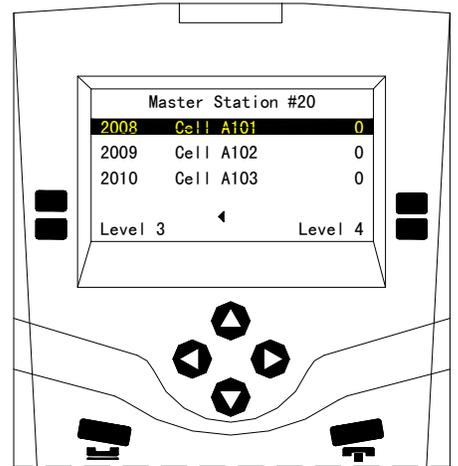
The audio level alarm setting at as is station is Enabled/Disabled using a similar procedure to that used to Enable/Disable the Call Request switch. The main difference is that when a station’s audio level alarm is enabled it can be set to one of four possible predefined ALA filter settings.

From the second page of the “Idle menu” press the **Control**, function key this brings up a new menu the “Control menu”. On this menu press the **Station** function key this brings up a new menu. Press the **Audio Alarm** function key to bring up the list of stations whose audio level alarm can be Enabled/Disabled by this master station. Scroll through the list to select the appropriate station. The **Level 1** and **Level 2** function keys are shown on the first page of the menu.



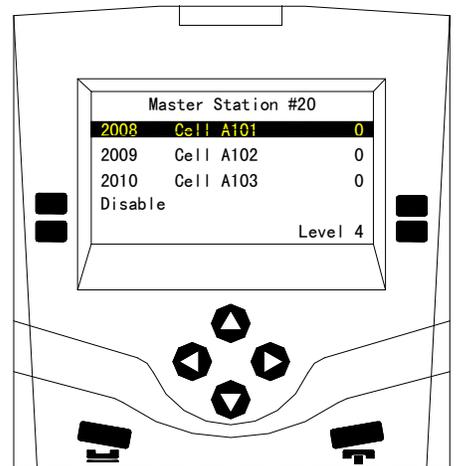
**Level 1 and Level 2 are displayed on first page of menu.**

On the second page of the menu the **Level 3** and **Level 4** function keys are displayed.



**Level 3 and Level 4 are displayed on the second page of the menu**

If we select one of the four levels as our ALA setting the function key we selected will disappear and be replaced by the **Disable** function key (The **Disable** function key entry will appear on both menu pages).



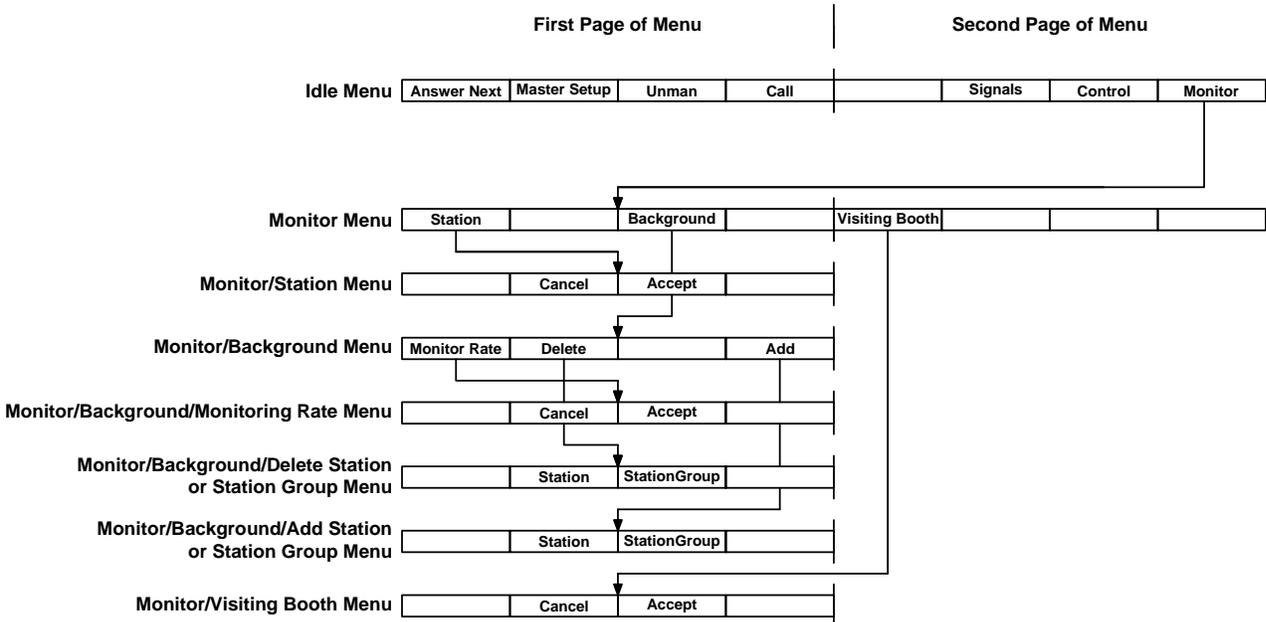
**Menu displayed after Level 3 has been selected as the active ALA setting**



## Section 6- Monitoring Procedures

A Master Station operator can monitor the audio from Intercom Stations and Visitor Booths. A Master Station can also be pre-programmed (by the System Administrator) to continuously monitor a predefined configuration of Stations and time the master station is not busy making calls or monitoring individual stations it will be monitoring in the predefined configuration.

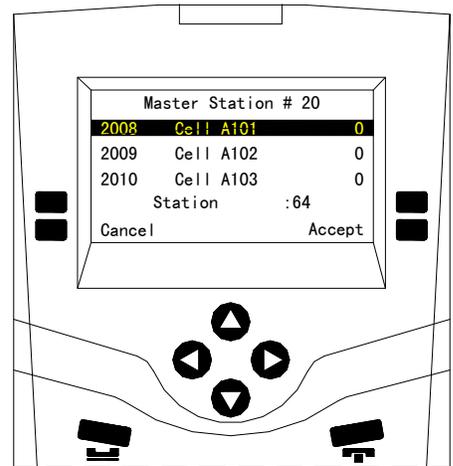
The following tree structure shows the navigation paths that can be followed after pressing **Monitor**.



**Tree Structure for Monitor Function**

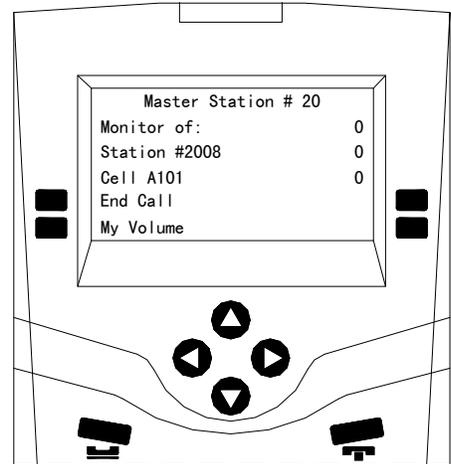
### Monitoring a Station

From the “Idle menu” when you press the **Monitor** function key a new menu appears with three function keys; **Station**, **Background** and **Visiting Booth**. If you press the **Station** function key the list of stations that you can monitor (the same list of stations that you can call) will appear. Scroll through the list of stations and select the one you wish to monitor. Press the Accept function key and you will start to monitor the selected Station.



**Selecting a Station to Monitor**

At this time the display will appear as shown on the right. If you press the **End Call** function key the monitoring will stop and you will return to the “Idle menu”. You can then make or answer calls or carry out other operations. You can change the audio volume level if you select the **My Volume** function key.

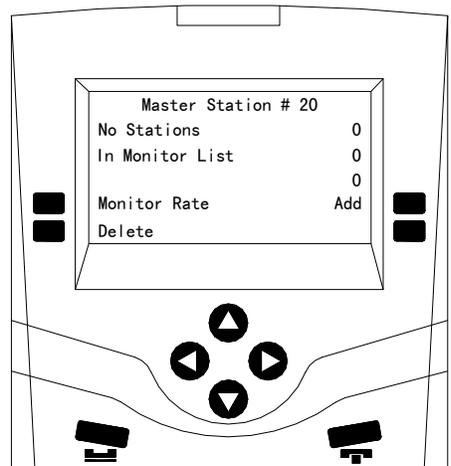


**Display while Monitoring Station #2008**

**Background Monitoring**

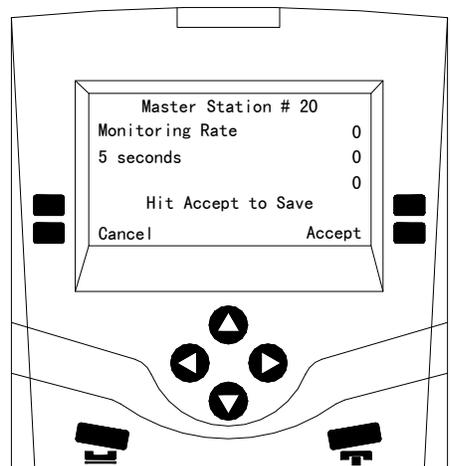
Background monitoring allows a master station to continuously monitor a station, stations or a pre-defined group of stations. Each Station in the group is monitored for a preset time. The monitoring continues in a cyclic fashion.

From the “Idle menu” pressing the **Monitor** function key brings up a new menu. Pressing the **Background** function key on this new menu brings up the following display with three function key options.



**Menu after Selecting Background Monitoring**

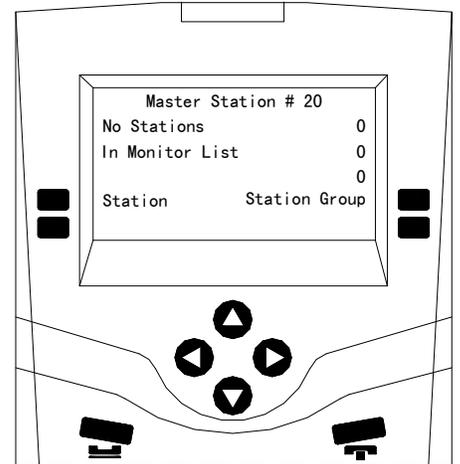
The monitoring rate specifies how long an individual station will be monitored before cycling to the next station in the monitoring list. If we press the **Monitoring Rate** function key the following menu will appear. The monitor rate can now be adjusted using the up (↑) and down (↓) arrow keys. The value can be adjusted from 1-3600 (seconds), i.e. from 1 second to 1 hour. This is the amount of time that the Master Station will stay at one particular station during monitoring. If the monitoring rate is decreased to 0 the monitoring will be **DISABLED**. This allows you to turn off the background monitoring without altering the monitoring list. Once you have set the monitoring rate you can either press the **Accept** function key or the **Cancel** function key to return to the previous rate. In either case you will return to the previous menu



**Setting the Monitoring Rate**

If we now press the **Add** function key you can add a Station or a Station Group to the list of stations to be monitored. Pressing the **StationGroup** function key brings up the list of pre-defined station groups that this master station can monitor while pressing the **Station** function key brings up a list of stations that this station can monitor. In either case once you select a station or station group you can press either the **Accept** function key to select the entry or press the **Cancel** function key to return to the previous menu.

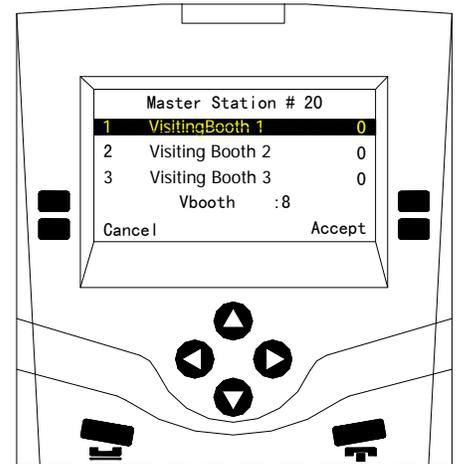
You can expand the list of stations in the background monitoring list by adding several stations or station groups to the list.



**Menu to Add Stations to the Background Monitoring List**

**Monitoring a Visiting Booth**

From the “Idle menu” when you press the **Monitor** function key a new menu appears with three **Station** function key **Background** and **Visiting Booth**. If you press the **Visiting Booth** function key, the list of Visiting Booths that you can monitor will appear. Scroll through the list of visiting booths and select the one you wish to monitor. Press the **Accept** function key and you will start to monitor the selected visiting booth.



**Selecting a Visiting Booth to Monitor**

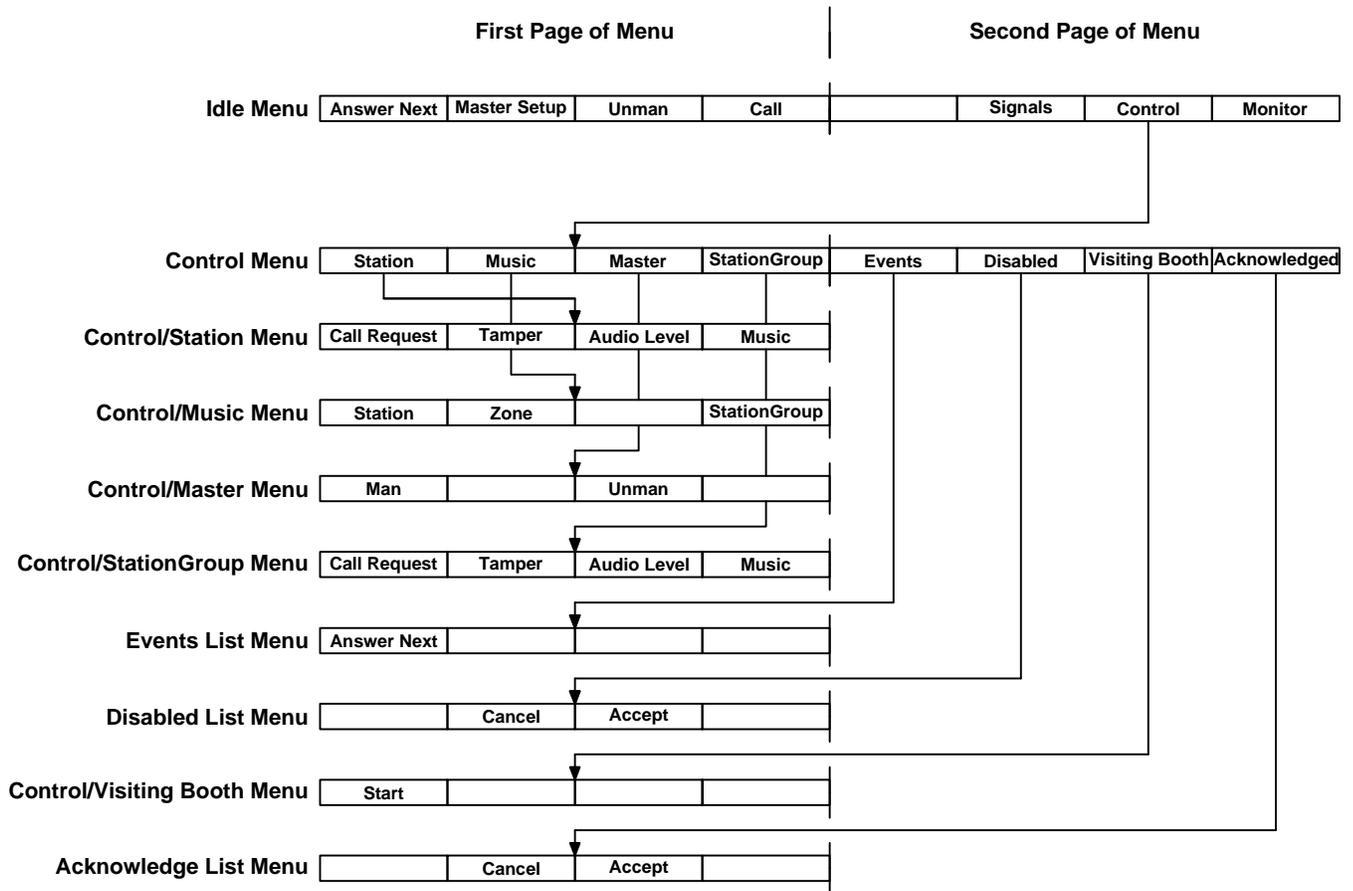


## Section 7 –Alarm Handling Procedures

In the “Idle menu” the Event List (Alarm List) is always displayed. If the list is empty the time and date will be displayed. If there are any incoming Events that have not been acknowledged they will be displayed, and the reminder beep will sound periodically.

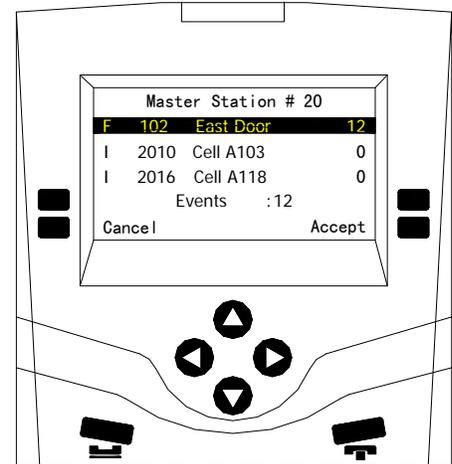
If a single Event is displayed (or the Event that is highlighted if there are more than one Event in the Alarm List) you can respond to it by pressing the **Next** function key. If it is a call request an audio channel will be established between the Master Station and the Station that generated the call request. If it is some other type of alarm and you press the **Next** function key the use of the function keys will change to indicate the possible actions you can make.

From the second page of the “Idle menu” you can select the Control function key to bring up a menu that will allow you to select the three active lists: the Alarm List **Event**, the Acknowledged List **Acknowledged** or the Disabled List **Disabled**. The tree structure for Control is shown on the following diagram.



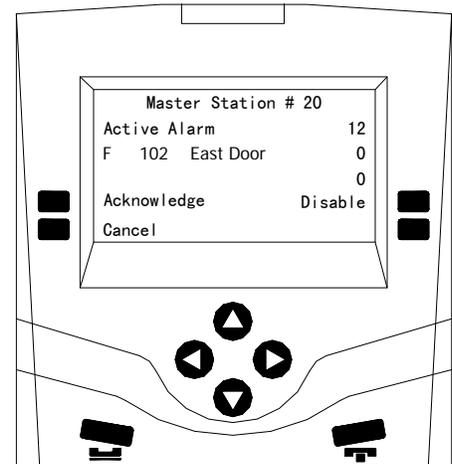
Tree Structure for Control Option

The screen on the right shows a typical Events List, with one of the Alarms corresponding to a hardware fault (F) and two of the Alarms corresponding to Intercom requests (I). If you select one of the Intercom requests and press the **Accept** function key you will establish an audio channel between your Master Station and the selected Station.



Display showing Alarm List

If you respond to a hardware fault alarm (F) by selecting the Alarm and pressing the **Accept** function key the display will change as shown. You can then press the **Acknowledge** function key and the fault will be moved to the Acknowledge List (and turn off the reminder beep if it is the only current unacknowledged alarm). If the fault has been repaired you press the **Cancel** function key to cancel the alarm. This will remove it from all lists. If the Event is generated from a switch you can disable the switch. Any subsequent faults will not cause an alarm.



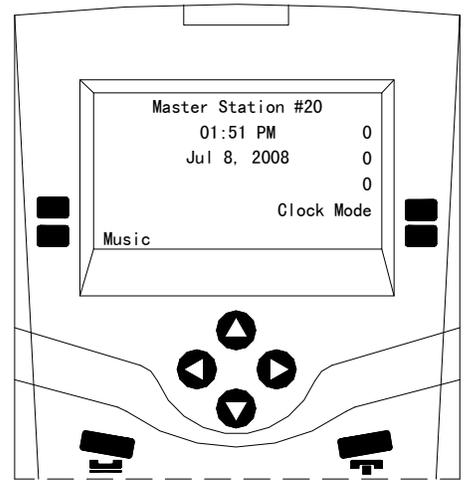
Selecting a Fault alarm.

## Section 8 - Other Master Station Procedures

### Changing Master Station Display and Sound Volume Settings

#### Changing Clock Display Mode

To change clock mode from between 12HR and 24HR time notation from the “Idle menu” press the **Master Setup** function key and a new menu shown on the right will be displayed. Press the **Clock Mode** function key.



Master Setup Menu

If you are in the AM/PM mode the **Military** function key will be displayed. Pressing this function key will change the time display to military (i.e. 24 hours) and the time will be displayed followed with an ML. The display will now change to allow you to select AM/PM.



Time Displayed in AM/PM mode



Time Displayed in Military Mode

### **To Change Programming (Music)**

To turn on the music playing at your master station from the “Idle menu” press the **Master Setup** function key. In the new menu press the **Music** function key. A new menu will list all the available music sources. Select the desired music source and press the **Accept** function key.

### **Activating a Signal**

A Signal is a tone that can be broadcast to specified Intercom Stations and/or Master Station(s). The signal may be:

- immediately and for a set length of time, or
- immediately and continue until you press the **Stop** function key.

The characteristics (exact sound qualities) of the tone are setup in the administrator software. In the software configuration the System Administrator specifies:

- the tone that will be broadcast, and
- the list of Intercom Stations and Master Stations that will receive the tone.

From the “Idle menu” when you press the **Signal** function key a list of Signals available to your Master Station will be displayed. Use the scroll keys (“↑”) and (“↓”) to select the Signal you wish to activate. Once you have selected the appropriate Signal press the **Accept** function key. The Signal will now be activated. The menu will change so that you can select **Stop** function key. If the Signal has been programmed to continue for a set length of time at the end of that time interval the Signal will stop. If the Signal has not been programmed for a specified length then it will continue until you press the **Stop** function key.