MicroComm DXI

Intercom Master Station

Operating Instructions

November, 2003

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Section 1 - Introduction

Purpose of This Manual

This manual is intended to familiarize you with the operation of the MicroComm DXI's Series of Intercom Master Stations.

Regardless of whether your particular Intercom Master Station is a rack mount, panel mount, or desktop style, the operation is the same.

Your Intercom Master Station may include optional items such as a telephone handset or headset. If it does not, just disregard any references to those items.

Similarly, your system may or may not include paging, visiting booth stations, program distribution, etc. Again, if your system does not include any of those items, just disregard those instructions.

- **Note:** If you find that the functions displayed on the bottom line of the Master Station display are very different than those shown in this manual, you are probably using a 200 Series Intercom Master Station. For 200 Series instructions, refer to the manual titled "Voice-Type Inmate Call System - Master Station Operating Manual".

Welcome to the MicroComm DXI

The MicroComm DXI intercom system is designed to make your job easier. Here are some of the DXI'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 a 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 DXI 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,

- a *SAC computer* (Service, Administration, and Control computer), at which all activities are logged and/or printed. The control computer is also used for system administration and maintenance

- *central equipment* that connects the Intercom Stations, Master Stations, SAC computer and other system devices. The central equipment provides the systems switching and signal processing functions

- *other system devices* such as paging speakers, program sources, telephone type stations, etc.

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

The Master Station

You can use your 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

- set up conference calls between more than two stations

- transfer an intercom call to another Master Station

- place an intercom call request on hold as a reminder that it needs further attention

- disable an output control point

- enable an output control point

The System Administrator

When the MicroComm DXI is first installed at your facility, the *System Administrator* "sets up" the system. This involves, among other things:

- assigning ID Numbers and Names to Intercom Stations, alarm monitor points, and output control points

- specifying which Intercom Stations can communicate with a given Master Station(s)

- specifying which alarm points will report to a given Master Station(s)

- setting values, e.g., the priority levels for Intercom Stations and alarm monitor points, and

- selecting options, e.g., will the Intercom Stations be identified by station Name only, by station ID Number only, or by both station Name and ID Number?

Most of these things do not directly affect your work with the DXI.

The "Family" of DXI Manuals

This manual is one of a set of manuals for the MicroComm DXI system:

Manual	Intended Users
Intercom Master Station Operating Instructions	Control Room Operator
MicroComm DXI Administration Manual	System Administrator/System Installer/Maintenance Staff
MicroComm DXI Maintenance Manual	System Administrator/ System Installer/Maintenance Staff
SAC Computer Installation Manuals	System Installer
Intercom System Equipment Installation Manuals	System Installer
MicroComm DXI Troubleshooting Guide	System Installer/Maintenance Staff

This Operating Manual

This operating manual is designed to help you learn to use all of the important features of the 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 DXI 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 flashing text on the LCD display to represent such things as a selected Intercom Station or which list you are viewing. In this manual, flashing text is represented by text that is in *bold italics*, as shown in the example on the right.

```
 ┌─────────────────────────┐   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
 │  ┌──────────────────┐   │   │CLEAR│ │1│ │2│ │3│ │HEAD│
 │  │ 1 Stn 1       3  │   │   └────┘ └─┘ └─┘ └─┘ └────┘
 │  │ 2 Stn 2       0  │   │   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
 │  │ 3 Stn 3       0  │   │   │ ↑  │ │4│ │5│ │6│ │MUTE│
 │  │ NEXT CALL CTRL CHK➤│  │   └────┘ └─┘ └─┘ └─┘ └────┘
 │  └──────────────────┘   │   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
 │                         │   │ ↓  │ │7│ │8│ │9│ │    │
 │  ┌┐ ┌┐ ┌┐ ┌┐ ┌→┐        │   └────┘ └─┘ └─┘ └─┘ │PTT │
 │  └┘ └┘ └┘ └┘ └─┘        │   │ENTER│ │*│ │0│ │#│ └────┘
 └─────────────────────────┘   └────┘ └─┘ └─┘ └─┘
```
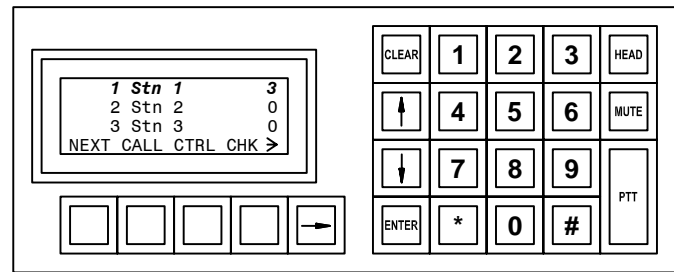
Flashing display items are represented by *bold italic* characters

Section 2 - Getting Started

What is a DXI Station?

In a MicroComm DXI system, a *Station* refers to a group of inputs or outputs connected to the system. A Station may consist of:

- an Intercom Station or Intercom Station Master Station with up to four associated switch inputs and one output control point

- a monitor or control point with any combination of up to four switch inputs and one control output.

How the DXI System Handles Alarms

The MicroComm DXI is an integrated system that handles a wide variety of alarms, in addition to intercom call requests. To simplify operation of the system, the DXI 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 DXI 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 DXI 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.
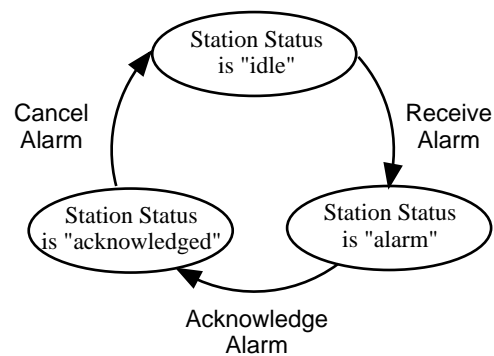
How the DXI Handles Call Requests

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 DXI removes the Intercom Station from the Event Queue and adds it to the Acknowledged List, 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 communicated with the Intercom Station, you have two options:

- if you have not fully attended to the call, you may place the call on "hold". The station remains on the Acknowledged List. This helps to remind you that some additional action is required. You may call back at any time.

- if you have fully attended to the call, you may "end" the call. This will cancel the call request and remove it from the Acknowledged List.

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 (a) decide whether the time-out alarm is triggered by a failure to acknowledge the alarm within a set time, or by a failure to cancel the alarm within a set time, and (b) set the time allowed before the time-out alarm is generated.

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 on the SAC computer so that they can be printed and accessed for review.
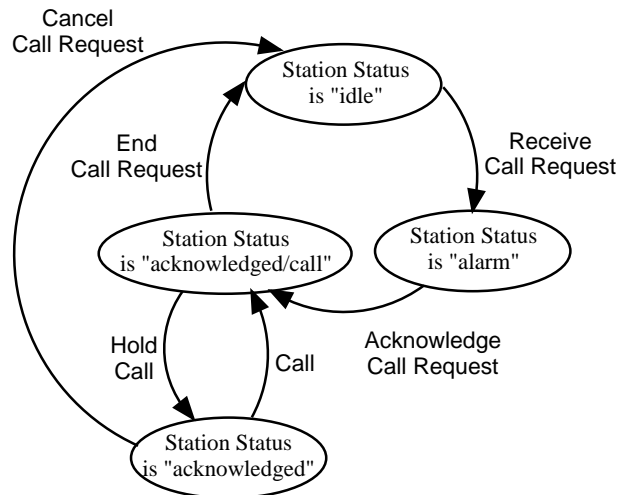
Intercom Stations

A typical Intercom Station consists of:

- a call switch

- a loudspeaker and 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 canceled.

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:

- you initiate a call to the Intercom Station, or

- you acknowledge a call request. (In this case, the Master Station is automatically connected to the Intercom Station.)

When you call an Intercom Station, a *call announce tone* sounds (this indicates to the party at the Intercom Station that you are calling, or that you have acknowledged the call request).

> **Note:** An Intercom Station cannot initiate a conversation with the Master Station. The Intercom Station can only communicate with the Master Station when the Master Station calls the Intercom Station, or acknowledges a call request from an Intercom Station.

Station Identification

When the System Administrator sets up the system, he decides how Stations will be identified for your installation. There are three options Stations may be identified by:

- ID Number only,
- Name only, or
- both ID Number and Name.

The System Administrator assigns values for the Station ID number and/or Name.

Station Priority

Each Station is assigned a *call request priority* by the System Administrator. Call request priority determines the order in which Stations that have initiated call requests are displayed on the Event Queue.

A new call request with a high priority will appear on the Event Queue ahead of previously received call requests with lower priority.

The Master Station

The Master Station consists of:

- a display,
- a keyboard,
- a beeper
- a loudspeaker and microphone, and
- a handset and/or headset (optional)

Intercom Master Station

Display

The display is a four-line by 20-character LCD with backlighting that provides information you need to perform intercom functions.

Keyboard

The keyboard consists of:

- a standard telephone-type numeric keypad,
- four control keys,
- five function keys, and
- three audio keys.
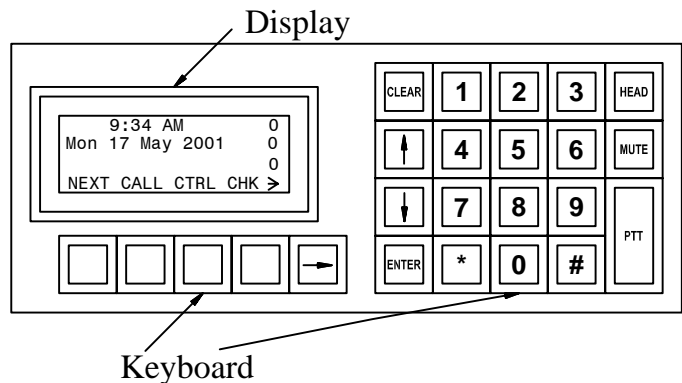
Keypad

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 (volume and backlight levels).
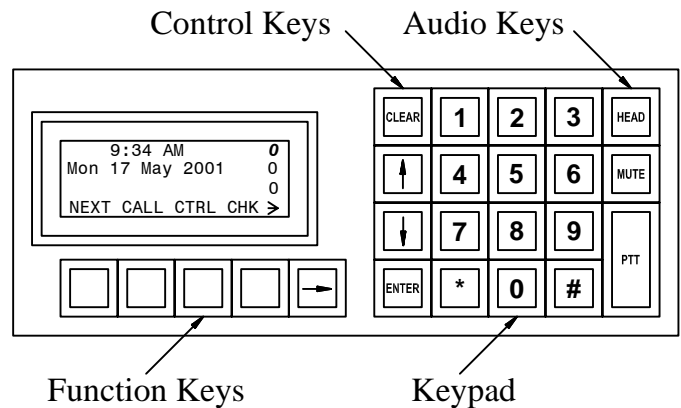
Control Keys

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 ENTER key is used to enter values and confirm changes.

- The CLEAR key is used to abort value entry and return to previous settings.

Function Keys

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

If a function name does not appear above a function key, the key is not operative (an error beep will sound if you press it).

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.

The key with the Right-Arrow (→) is used to display additional functions, if there are more available. Additional functions are available *only* if a Right-Arrow appears on the bottom line of the display.

Audio Keys

There are three audio control keys:

- The Press-to-Talk (PTT) key is used when you want to speak from the Master Station to the Intercom Station. If your system is set up for automatic voice switching, it can be used when you want to speak to an Intercom Station located in a noisy area.

- 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 for as long as the switch is held down. This only works if your system is set up for automatic voice switching.

- The HEAD key is used to alternately turn on and off audio to your headset, if your Master Station is equipped with that option.

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 key that is not operative at that time

- *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 System Administrator sets the reminder beep interval. You may adjust the volume of the Master Station beeper to suit your needs.

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 normally included within the Master Station panel. 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 System Administrator will have set your Master Station for one of two possible operating modes:

- Voice operated switching (VOX), or

- Push to talk

You cannot change the mode from your Master Station.

In the voice operated switching (VOX) mode, the communication path will switch automatically so that it routes the signal from the person speaking to the person listening. The press-to-talk (PTT) and microphone mute (MUTE) pushbuttons can be used at the Master Station to override the automatic switching.

In the press-to-talk mode, the Master Station is normally listening to the other station. The press-to-talk switch must be depressed when speaking into the Master Station to switch the direction of the speech path.

The System Administrator determines whether your Master Station will operate in the automatic (VOX) mode or the manual press-to-talk mode.

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.

Handset with push-to-talk switch.

The handset includes a "push-to-talk" audio switch to control the direction of communication. It operates the same as the push-to-talk switch on the Master Station control panel.
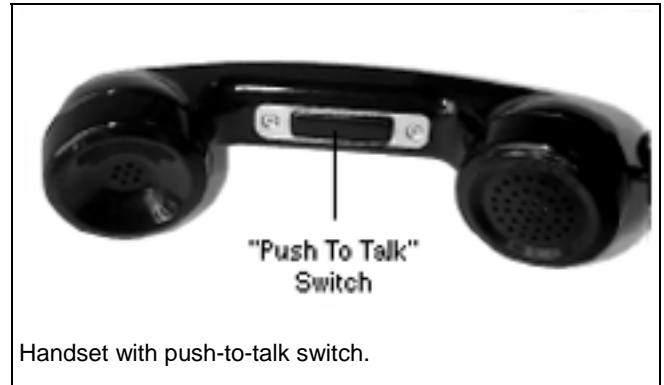
Headset

If your Master Station is equipped with a headset, it must be plugged in to the headset jack to operate. When using your headset, you should disable the loudspeaker with the HEAD pushbutton.

- *Remember to reactivate your loudspeaker by depressing the HEAD pushbutton when you remove your headset.*

Headsets are available in various styles. Refer to the headset manufacturer's instructions that came with your headset for further information.

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 DXI Master Stations uses four programmable keys (called function keys) and a menu system that defines the function of the keys. The bottom 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, staring 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).
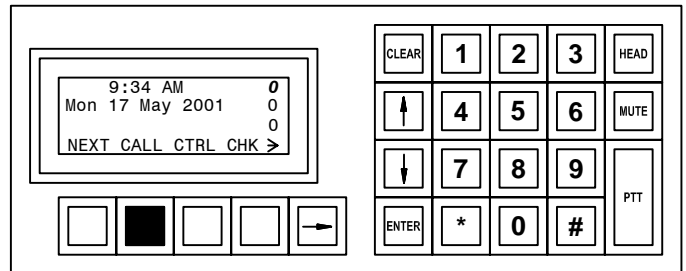
If you press this key the 'CALL' function is performed.

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 (MSTR), a list of Intercom Stations (STN), a list of PageZones (ZONE), as well as other lists. Pressing a function key from this menu, for example 'STN', 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.
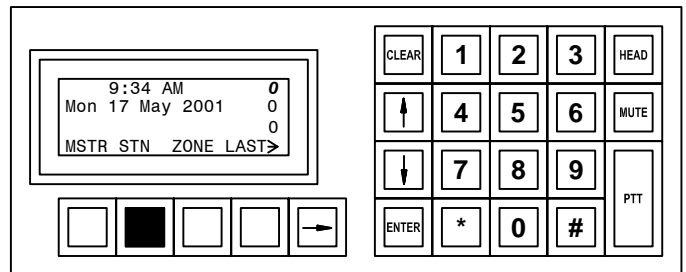
If you press this key the 'STN' list will be displayed

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 "ENTER" key will connect you to that Station. The menu system will now change and one of the function keys 'END' will allow you to terminate the call.
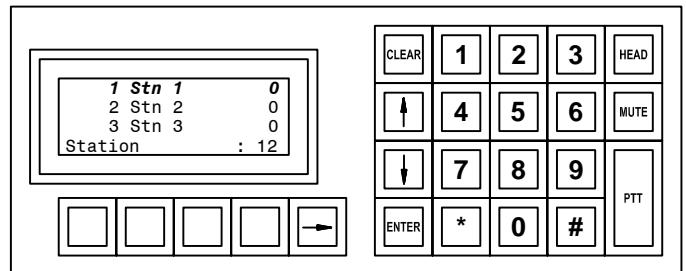
The list of Stations that you can call.

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 "CLEAR" key you can always return to the "Idle menu".)

| NEXT | CALL | CTRL | CHK | MON | SETU | DSBL | UNMN | LOG | SGNL | | |

| MSTR | STN | ZONE | LAST | TEL | | CONF | STAF | HOLD | RAD | | |

| MSTR | STN | ZONE | VBTH | ALRM | ACKD | DSBL | PROG | TEL | | |

| STN | | CTRL | END | VBTH | RAD | | |

| LANG | BKLT | PROG | VOL | RATE | CLK | | |

| DSBL | | | |

| Signal | | : 1 |
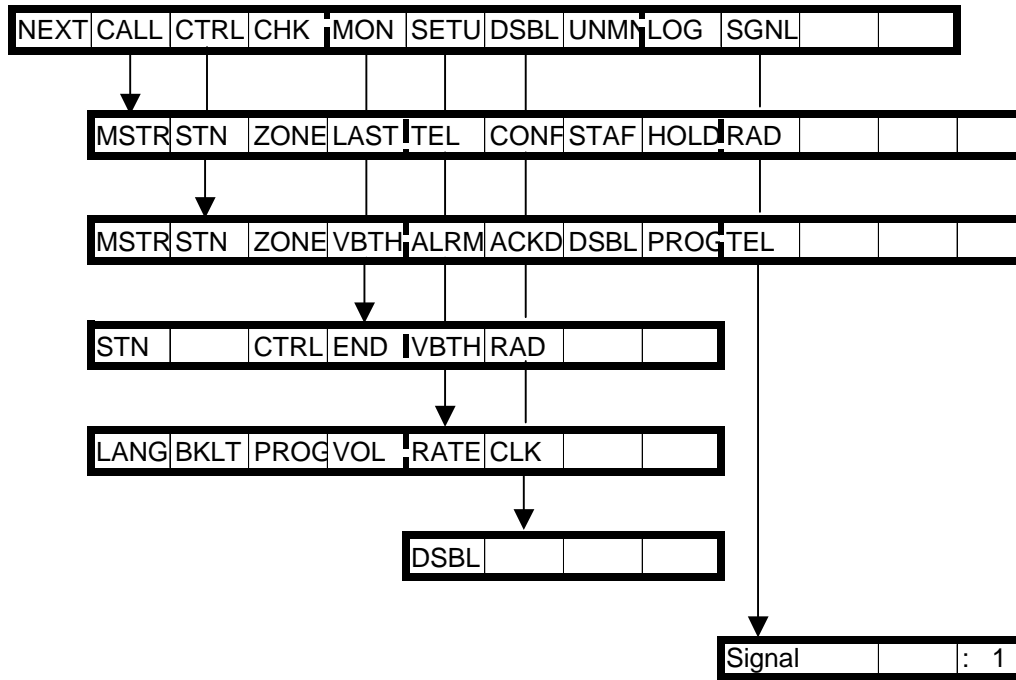
Menus reached from the top level 'Idle menu'

Use of the Right-Arrow Key

The bottom line of the display shows the different functions you may perform by pressing the function key(s) immediately beneath the display. Up to four functions are shown. Each one corresponds to the key directly below the function name.

If a Right-Arrow is displayed at the end of the bottom line, it means there are additional functions available.

```
        9:34 AM        0
Mon 17 May 2001        0
                       0
NEXT CALL CTRL CHK →
```

Right-Arrow indicate more functions available

When you press the Right-Arrow key (→), additional functions will appear.

```
        9:34 AM        0
Mon 17 May 2001        0
                       0
MON  SETU DSBL UNMN→
```
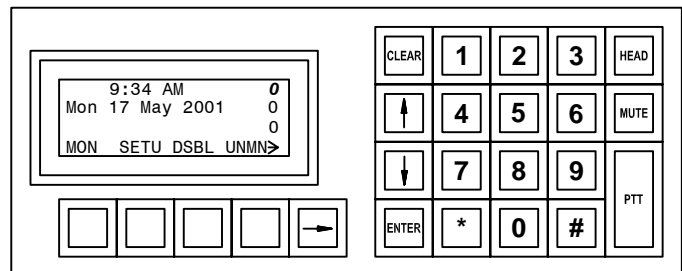
Additional menu keys are displayed

When you press the Right-Arrow key (→), additional functions will appear.

```
 9:34 AM        0
Mon 17 May 2001  0
                 0
LOG  SGNL        ➤
```

```
CLEAR  1  2  3  HEAD
  ↑    4  5  6  MUTE
  ↓    7  8  9
ENTER  *  0  #  PTT
```
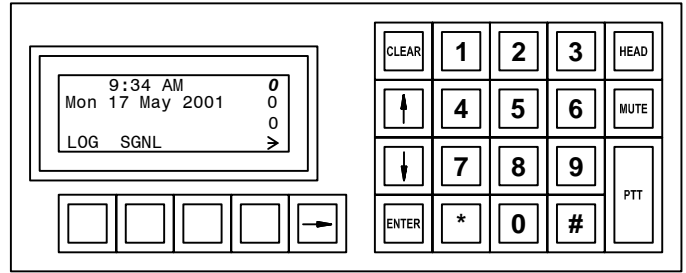
Additional menu keys are displayed

If you continue to press the Right-Arrow key (→), you will return to the functions that first appeared when you accessed this display.

```
 9:34 AM        0
Mon 17 May 2001  0
                 0
NEXT CALL CTRL CHK ➤
```

```
CLEAR  1  2  3  HEAD
  ↑    4  5  6  MUTE
  ↓    7  8  9
ENTER  *  0  #  PTT
```
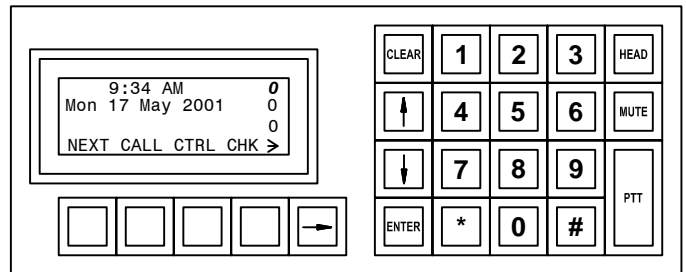
Pressing the Right-Arrow key returns you to the original function key menu.

List of Functions

Here is a list of functions that you may perform on the DXI 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 key will generate an error beep.

Function

Key Label	Meaning
ACKD	After you press 'CTRL', pressing this key will cause the Acknowledged List to be displayed
ALRM	When you press this key after 'CNTL', the Event Queue is displayed.
AUTO	Pressing this key when you are monitoring Intercom Stations will cause you to automatically "step" through the stations being monitored.
BKLT	When you press this key after 'SETU', you can adjust the backlight level on your display.
BUZZ	When you press this key after 'SETU', you can adjust the volume of the buzzer on the Master Station
CALL	When you press this key, the function display will indicate the types of stations you may call.
CHK	When you press this key, you can are to check-in under a Staff ID.
CLK	After pressing 'SETU', you can adjust the time format of the clock to either display AM/PM, or 24 hour time.
CONF	After pressing 'CALL', a list of available conferences will be displayed. If pressed during a call to either a station or Master Station, a list of available stations will be displayed to create/join a conference call.

CRQ   Pressing this key will give you the ability to enable or disable the Call Request Button of an Intercom Station.

CTRL   When you press this key, the function key menu will display the types of things you can control.

DSBL   This key performs three separate functions:

                (a) If you press this key from the "Idle menu", the Master Station disable sequence will be initiated.

                (b) After you press 'CTRL', pressing this key will cause the Disabled List to appear.

                (c) Otherwise, 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)

EMRG   Pressing this key will give you the ability to enable or disable the Emergency Request button of an Intercom Station.

END   When you press this key, your call to a Station will end. (Note: If your call is in response to a call request or to an acknowledged call request, the call request will not be canceled.)

EXIT   Pressing this key from the MON menu will exit you from the MON menu, but will not stop the monitoring of the Stations.

HOLD   Pressing this key after having placing or acknowledging a call will place the call on hold. To return to this call, press 'CALL' + '→' +'HOLD', your call will be reconnected to the held call.

LANG   After pressing 'SETU', this key will let you change the language of being displayed on the Master Station.

LAST   Pressing this key after 'CALL' will place the last call made from the Master Station

LOG   After pressing this key, you will be asked to enter your Staff Log-in ID, followed by your password

MAN   Pressing this key when you are monitoring Intercom Stations will cause you to change to the manual "step" mode. Instead of the system automatically changing from one monitored Station to the next, it will continue to listen to the Station currently being monitored until you tell it to step to the next station.

MON   Pressing this key will bring up the monitoring options available.

MSTR   When you press this key, the display will change to show you the directory list of Intercom Station Master Stations.

MVOL   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.

NEXT   Pressing this key will acknowledge the highest priority event in the Event Queue.

PAGE   Pressing this key after 'SETU', you will be able to change the 'PAGE' volume of the Master Station.

PROG   This key performs two different functions:

                (a) After pressing the 'SETU' key, will allow you to adjust the Programming MusicVolume of the Master Station.

                (b) After pressing the 'CTRL' key and selecting a station, you will be able to enable or disable the Programming Music Button of the station.

RAD   Pressing this key will display the two-way Radio Stations list.

RATE   When you press the 'RATE' key, you will be able to change the time that the system monitors an Intercom Station before switching to the next station. This affects the AUTO mode only.

SETU   When you press this key, the function menus will change to display system settings that you can change. Those include language, backlighting, program, volume, rate, and the clock.

SGNL   When you press this key, the function menu will change to display the list of signals that you can activate.

SPAN   Pressing this key after the 'LANG' key will cause all the Names and functions to be displayed in Spanish.

                Note: Spanish Names will only be displayed if they have been programmed by the System Administrator.

STAF   Pressing this key after the 'CALL' key will call the specified Staff member logged in.

STN   Pressing this key will change the Master Station display to show the Station Directory.

SVOL   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.

TEL   Pressing this key will change the Master Station display to show the Telephone Directory.

UNMN   After pressing this key will set the Master Station into Unmanned mode. A password is required to return the master into operation.

VBTH   Pressing this key will change the Master Station display to show the Visiting Booth Directory.

VOL   When you press this key after the 'SETU' key, a list of Master Station volumes you can adjust.

XFER   Pressing this key will bring up a list of available Master Stations, and once a master is selected, the current call will be transferred to that Master Station.

ZONE   Pressing this key will change the Master Station display to show the Paging Zone Directory.

Lists

The MicroComm DXI 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 communicated 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.

The following describes the Directory Lists:

Station List   this is a list of all Intercom Station and non-Intercom Stations that can communicate with your Master Station

Master List   this is a list of all Master Stations that can communicate with your Master Station

Staff List   this is a list of all staff members with DXI staff ID codes. If they are logged in at a Master Station, you can call them through this list.

Telephone List   this is a list of all telephone numbers that you can directly select from your Master Station.

Paging Zone List   this is a list of all paging zones that you can make announcements to from your Master Station.

Music Zone List   this is a list of all music zones that you can control from your Master Station.

Monitor List   this is a list of all intercom stations that are automatically monitored in sequence.

Radio List   this is a list of all the two-way radio channels you can communicate with from your Master Station.

Radio Monitor List   this is a list of two-way radios that are monitored in sequence automatically

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.

Conference Call List   this is a list of pre-defined conference call groups that you can activate by selecting them.

How Lists are Displayed

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

• Alarm Code and ID Number and/or 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 beneath 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

E   Emergency Call Request

T   Telephone Call Request

C   Cell Alarm

S   Security Alarm

t   Call Request Time-out Alarm

d   Disabled Station Alarm

L   Log-in Alarm

M   Master Station or Staff Call Request

U   Unmanned Alarm

F   Fault Alarm

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

ID Number and/or Name

The System Administrator will decide whether stations in your facility are identified by ID Number only, by Name only, or by both ID Number and Name. In this manual, we are assuming that Stations will be identified by both.

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. You may sort Stations on any list, numerically, by ID Number.

The Name describes the Station in terms commonly used in your facility. The Name may contain any characters, including numbers and punctuation. It may be up to 20 characters long.
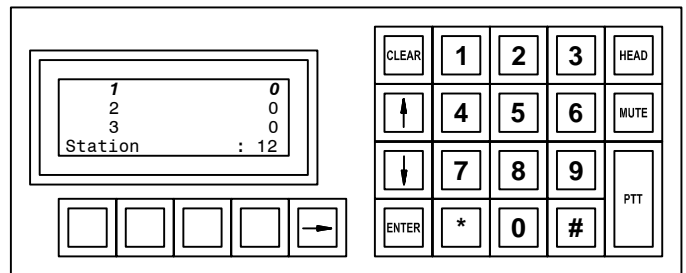
Stations identified by ID number
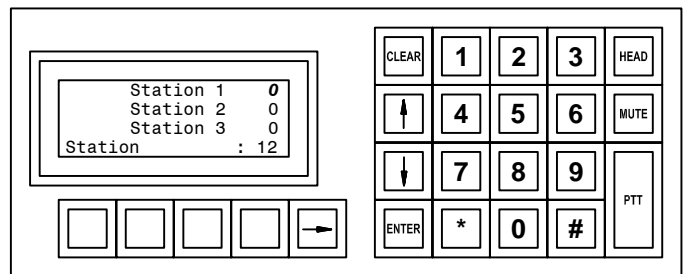
Stations identified by Name
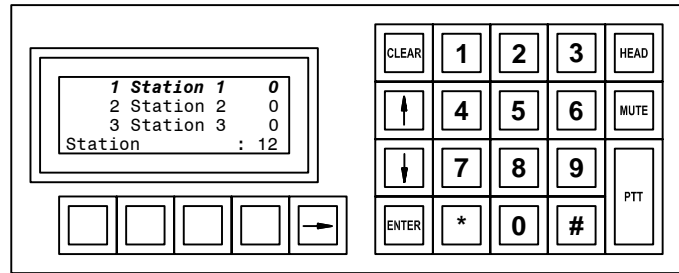
Stations identified by Name and ID number

If the Name is longer than the space allowed on the display, only the first part of the name will appear. The last character will be a (...), to indicate that the name has been cut off.

You may sort the Stations on any list by Name.
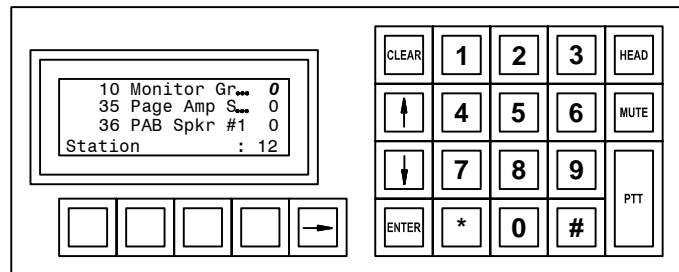
Last character (…) indicates that Name has been shortened.

If there are no Stations on the list that is displayed (list size is zero), the time and date will appear where the alarm code and Station ID/Name are normally displayed.
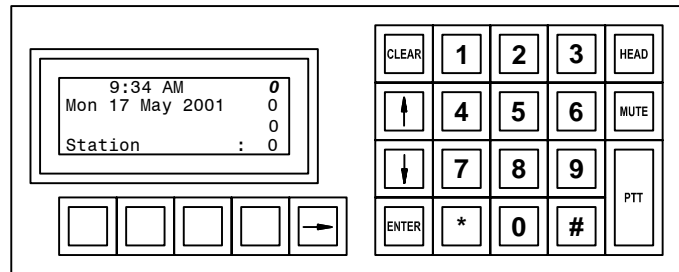
If there are no Stations on Station list, time and date will appear

List Order

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

- Event Queue

Stations are sorted according to call request priority. (The System Administrator assigns priorities to 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 their call requests were acknowledged.

- Disabled List

If the System Administrator has set up the system to display Station ID Numbers, the default order will be by ID number. If only Station Name is displayed, the default order will be by Station Name.

- Directory Lists

If the System Administrator has set the system up to display station ID Numbers, the default order will be by ID Number. Otherwise, it will be by Station Name.

You may re-sort a list at any time, either by ID Number or Name.

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.

How to Tell Which List you are on

The flashing number indicates which list is currently displayed.

If the TOP list size is flashing, the Event Queue is displayed.
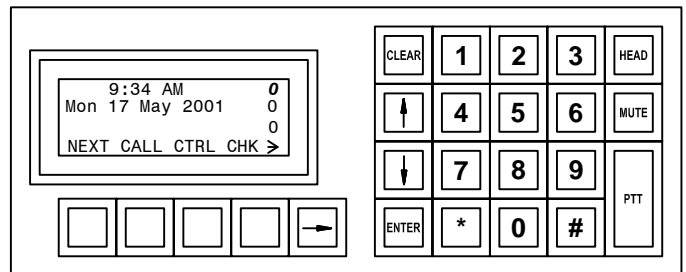
Event Queue is displayed

If the MIDDLE list size is flashing, the Acknowledged List is displayed.
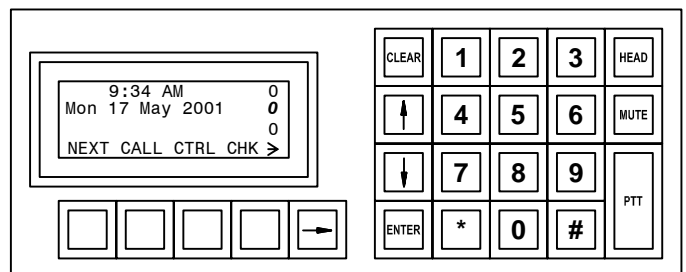
Acknowledge List is displayed

If the BOTTOM list size is flashing, the Disabled List is displayed.

```
┌─────────────────────────────┐
│  ┌────────────────────────┐ │   ┌────┐┌─┐┌─┐┌─┐┌────┐
│  │    9:34 AM         0   │ │   │CLEAR││1││2││3││HEAD│
│  │ Mon 17 May 2001    0   │ │   └────┘└─┘└─┘└─┘└────┘
│  │                    0   │ │   ┌─┐  ┌─┐┌─┐┌─┐┌────┐
│  │ NEXT CALL CTRL CHK ➤   │ │   │↑│  │4││5││6││MUTE│
│  └────────────────────────┘ │   └─┘  └─┘└─┘└─┘└────┘
│                             │   ┌─┐  ┌─┐┌─┐┌─┐┌────┐
│                             │   │↓│  │7││8││9││    │
│  ┌─┐┌─┐┌─┐┌─┐┌──┐           │   └─┘  └─┘└─┘└─┘│ PTT│
│  │ ││ ││ ││ ││→ │           │ ┌─────┐┌─┐┌─┐┌─┐│    │
│  └─┘└─┘└─┘└─┘└──┘           │ │ENTER││*││0││#│└────┘
└─────────────────────────────┘ └─────┘└─┘└─┘└─┘
```
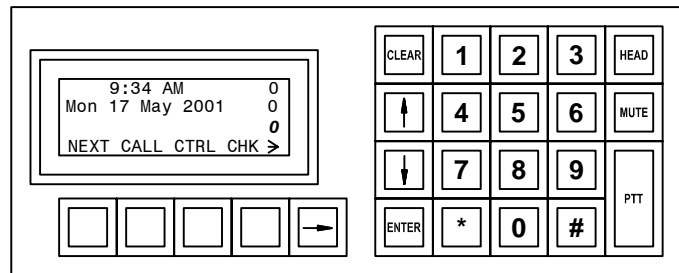
Disabled List is displayed

If NO list size is flashing, one of the Directory Lists is displayed. You can tell which Directory List you are looking at by the List Name at the bottom left of the display.

```
┌─────────────────────────────┐
│  ┌────────────────────────┐ │   ┌────┐┌─┐┌─┐┌─┐┌────┐
│  │   1 Station 1      0   │ │   │CLEAR││1││2││3││HEAD│
│  │   2 Station 3      0   │ │   └────┘└─┘└─┘└─┘└────┘
│  │   3 Station 3      0   │ │   ┌─┐  ┌─┐┌─┐┌─┐┌────┐
│  │ Station       : 41     │ │   │↑│  │4││5││6││MUTE│
│  └────────────────────────┘ │   └─┘  └─┘└─┘└─┘└────┘
│                             │   ┌─┐  ┌─┐┌─┐┌─┐┌────┐
│                             │   │↓│  │7││8││9││    │
│  ┌─┐┌─┐┌─┐┌─┐┌──┐           │   └─┘  └─┘└─┘└─┘│ PTT│
│  │ ││ ││ ││ ││→ │           │ ┌─────┐┌─┐┌─┐┌─┐│    │
│  └─┘└─┘└─┘└─┘└──┘           │ │ENTER││*││0││#│└────┘
└─────────────────────────────┘ └─────┘└─┘└─┘└─┘
```
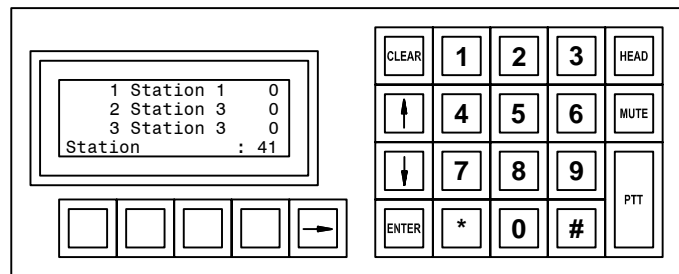
Station List is displayed

Section 4 - Intercom Procedures

How to Select a List

You can select a list through the 'CALL', 'CTRL', 'MON', and 'SGNL' 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 available lists you can select will be displayed.

```
     9:34 AM      0
Mon 17 May 2001   0
                  0
MSTR STN  ZONE LAST➤
```
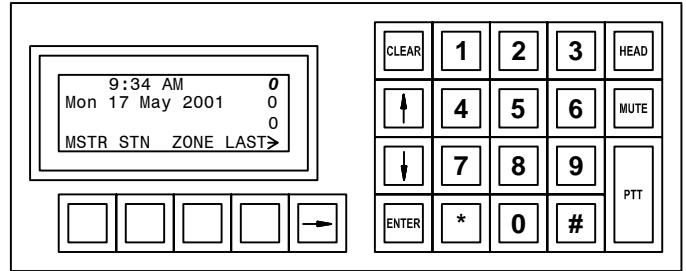
Master Station "Idle" menu.

For example, if you select the call function, you can then select whether you wish to call a Master Station, Intercom Station, paging zone, etc.

```
     9:34 AM      0
Mon 17 May 2001   0
                  0
NEXT CALL CTRL CHK ➤
```
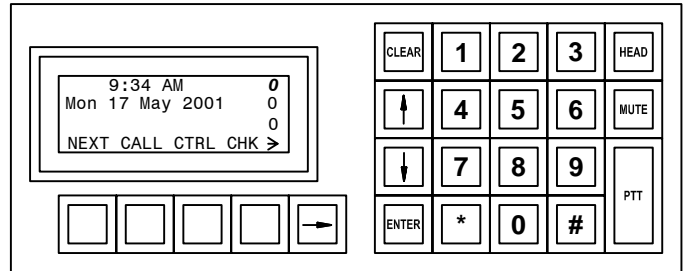
When "CALL" is pressed, the above choices appear.

If you decide to call an Intercom Station, press 'STN' to display the Intercom Station list.

```
  1 Stn 1        0
  2 Stn 2        0
  3 Stn 3        0
Station       : 15
```
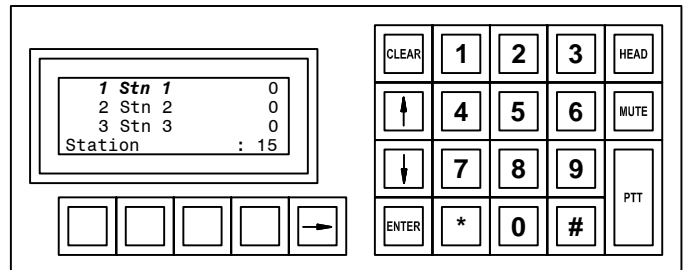
When "STN" is pressed, the list of Intercom Stations appears.

How to Select a Station

Before you perform a function, the station you want must be selected.

The alarm code, station ID, and station name of the currently selected station will be flashing.

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.

```
┌──────────────────────────────────┐
│  ┌────────────────────────┐  ┌────────────────────────────┐ │
│  │ 1 Stn 1          0     │  │CLEAR│ 1 │ 2 │ 3 │HEAD│      │
│  │ 2 Stn 2          0     │  │                            │
│  │ 3 Stn 3          0     │  │  ↑  │ 4 │ 5 │ 6 │MUTE│      │
│  │Station       : 15      │  │                            │
│  └────────────────────────┘  │  ↓  │ 7 │ 8 │ 9 │          │
│                              │                        PTT │
│  [ ][ ][ ][ ][→]             │ENTER│ * │ 0 │ # │          │
└──────────────────────────────────┘
```
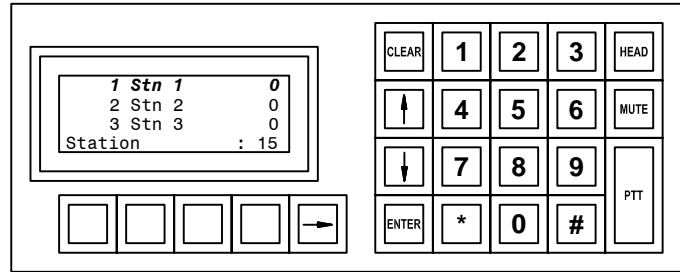
The top Station is currently selected

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.

```
┌──────────────────────────────────┐
│  ┌────────────────────────┐  ┌────────────────────────────┐ │
│  │ 1 Stn 1          0     │  │CLEAR│ 1 │ 2 │ 3 │HEAD│      │
│  │ 2 Stn 2          0     │  │                            │
│  │ 3 Stn 3          0     │  │  ↑  │ 4 │ 5 │ 6 │MUTE│      │
│  │Station       : 15      │  │                            │
│  └────────────────────────┘  │  ↓  │ 7 │ 8 │ 9 │          │
│                              │                        PTT │
│  [ ][ ][ ][ ][→]             │ENTER│ * │ 0 │ # │          │
└──────────────────────────────────┘
```
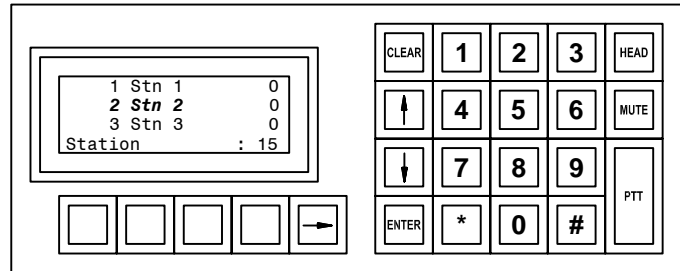
The second Station is selected

If you know the ID Number of the Station

If you know the ID Number, you can select the station directly. If the list is displayed by order of ID Number you can simply type in the Station ID Number. (Pressing the "#"" key will place the list in order of ID Number). For example if you press "5" "1" "ENTER" you will be connected to the Station with ID Number 51.

```
┌──────────────────────────────────┐
│  ┌────────────────────────┐  ┌────────────────────────────┐ │
│  │ 51 Cell 1        0     │  │CLEAR│ 1 │ 2 │ 3 │HEAD│      │
│  │                  0     │  │                            │
│  │                  0     │  │  ↑  │ 4 │ 5 │ 6 │MUTE│      │
│  │Station     51:  1      │  │                            │
│  └────────────────────────┘  │  ↓  │ 7 │ 8 │ 9 │          │
│                              │                        PTT │
│  [ ][ ][ ][ ][→]             │ENTER│ * │ 0 │ # │          │
└──────────────────────────────────┘
```
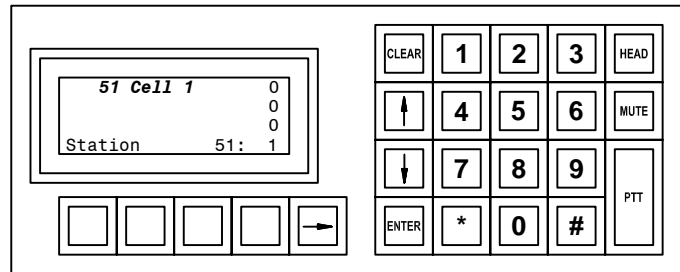
Only the Station # 51 is displayed

Re-Sorting a List

You may (temporarily) re-sort a list at any time, by ID Number or by Name. However, after you perform an intercom function the list will revert to its default order.

Any time that a list is displayed, you can change the order of stations as follows:

- If you press the "star" key on the keypad "*", the stations will be (re)displayed in order of

  Name.

  Note: The "*" key will not work if Names are not displayed.

- If you press the "pound" key on the keypad "#'", the Stations will be (re)displayed in order of ID Number.

  Note: The "#" key will not work if ID Numbers are not displayed or the system is not set up to allow dialing without ID Number display.

Remember that after you perform an intercom function, the list will revert to its default order.

```
┌─────────────────────────┐   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  ┌───────────────────┐  │   │CLEAR │ │1│ │2│ │3│ │HEAD│
│  │ 51 Cell 1      0  │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  │ 52 Cell 2      0  │  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  │ 10 Monitor Gr. 0  │  │   │  ↑   │ │4│ │5│ │6│ │MUTE│
│  │ Station    51: 1  │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  └───────────────────┘  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│                         │   │  ↓   │ │7│ │8│ │9│ 
│                         │   └──────┘ └─┘ └─┘ └─┘ │PTT
│  ┌──┐┌──┐┌──┐┌──┐┌──→┐   │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│  └──┘└──┘└──┘└──┘└───┘   │   │ENTER │ │*│ │0│ │#│ 
└─────────────────────────┘   └──────┘ └─┘ └─┘ └─┘ 
```
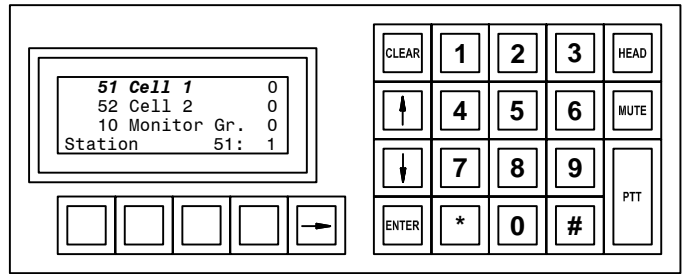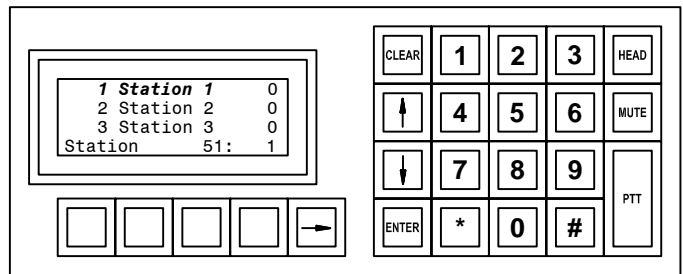
Station List –sorted by Name

```
┌─────────────────────────┐   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  ┌───────────────────┐  │   │CLEAR │ │1│ │2│ │3│ │HEAD│
│  │  1 Station 1    0 │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  │  2 Station 2    0 │  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  │  3 Station 3    0 │  │   │  ↑   │ │4│ │5│ │6│ │MUTE│
│  │ Station    51:  1 │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  └───────────────────┘  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│                         │   │  ↓   │ │7│ │8│ │9│ 
│                         │   └──────┘ └─┘ └─┘ └─┘ │PTT
│  ┌──┐┌──┐┌──┐┌──┐┌──→┐   │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│  └──┘└──┘└──┘└──┘└───┘   │   │ENTER │ │*│ │0│ │#│ 
└─────────────────────────┘   └──────┘ └─┘ └─┘ └─┘ 
```

Station List – sorted by ID Number
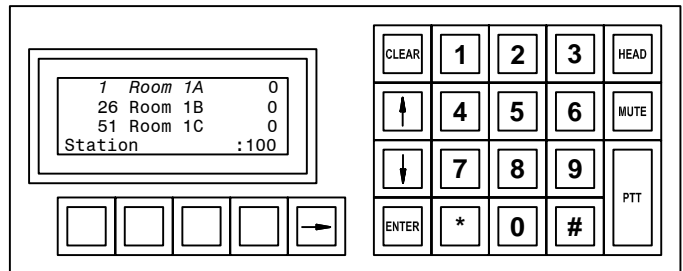
A Shortcut to Help With Long Lists

For lists that are sorted alphabetically sometimes, you know that the Station you want is, for example, close to the end of the list. If the list is long, it would take quite a while to scroll through the list using arrow keys.

```
┌─────────────────────────┐   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  ┌───────────────────┐  │   │CLEAR │ │1│ │2│ │3│ │HEAD│
│  │  1  Room 1A    0  │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  │ 26  Room 1B    0  │  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│  │ 51  Room 1C    0  │  │   │  ↑   │ │4│ │5│ │6│ │MUTE│
│  │ Station    :100   │  │   └──────┘ └─┘ └─┘ └─┘ └────┘
│  └───────────────────┘  │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│                         │   │  ↓   │ │7│ │8│ │9│ 
│                         │   └──────┘ └─┘ └─┘ └─┘ │PTT
│  ┌──┐┌──┐┌──┐┌──┐┌──→┐   │   ┌──────┐ ┌─┐ ┌─┐ ┌─┐ 
│  └──┘└──┘└──┘└──┘└───┘   │   │ENTER │ │*│ │0│ │#│ 
└─────────────────────────┘   └──────┘ └─┘ └─┘ └─┘ 
```

You are now at the top of the Station List

If you now press "9" on the keypad, you will instantly move 90% of the way through the list.

Any number key that you press will move you (1/10 times that number) of the way through the list, e.g., "1" will move you 10% of the way through the list; "2" will move you 20% of the way, etc.

Now you can use the Up-Arrow ("↑")and Down-Arrow ("↓")keys to make your final selection.

Note: This does not work if the list is sorted by ID Number.

Press "9".

```
         73 Room 23C       0
         98 Room 23D       0
         23 Room 24A       0
       Station         :100
```

Now you are 90% of the way through the Station List

A Shortcut to Help with Lists Sorted by ID Number

To sort a list by ID Number, press "#".

Sometimes you know the first digits of the ID Number, but you can't remember the whole number.

If you press "#" to put the list in the ID Number order, followed by a number on the keypad, the list

will be reduced to only those stations beginning with that number.

```
          9:34 AM          0
       Mon 17 May 2001      0
                            0
       NEXT CALL CTRL CHK ➤
```

Station List – sorted by ID Number

Let's say the ID Number of the station you want starts with a "5". Press "#" "5" and only those stations beginning with ID Numbers beginning with "5" will be displayed - this would include "5", "50", "51", ... "500", "501", ..., "5000", etc.

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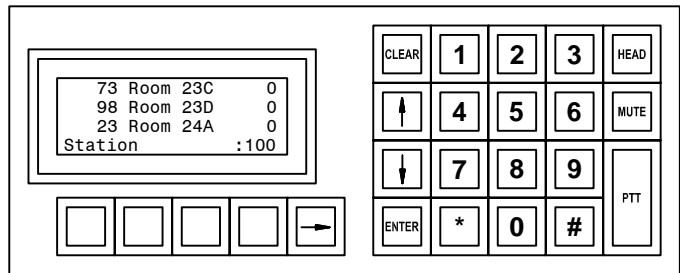
Down-Arrow keys to make your final selection.

If no match is found, the station will beep.

```
          5 Station 5      0
         50 Station 50     0
         51 Station 51     0
       Station        5: 11
```

Station List – only those Stations whose ID numbers begin with "5" are displayed
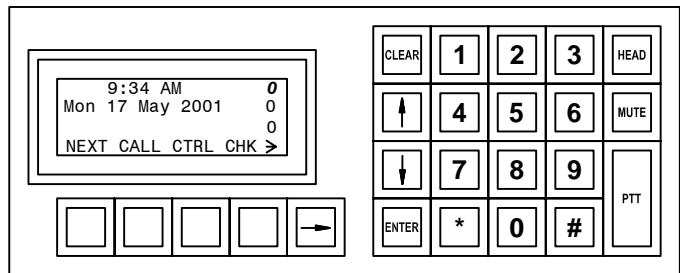
To Back Out of Your Selection

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

> **Example:** Let's say you enter (#)(5)(1). The list will display only stations whose ID Numbers begin with "51". If you now press CLEAR once, the list will display only those stations whose ID Numbers begin with "5". If you press CLEAR again, the entire list will be displayed. If you press CLEAR a third time, the list will revert to its default order.
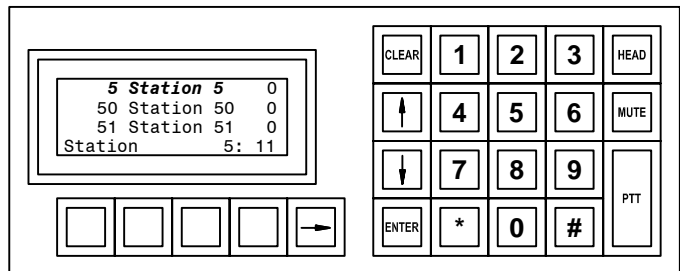
Station Status

In the procedures described in the following pages, the Intercom Station status will change as indicated in the illustration.

- Stations with "alarm" status are listed in the Event Queue. (ALRM)

- Stations with "acknowledged" status are displayed on the Acknowledged List. (ACKD)

- Stations with "disabled" status are displayed on the Disabled List (DSBL)

```
┌──────────────────────────┐   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ ┌──────────────────────┐ │   │CLEAR│ │1│ │2│ │3│ │HEAD│
│ │    9:34 AM        0  │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ │ Mon 17 May 2001   0  │ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ │                   0  │ │   │ ↑  │ │4│ │5│ │6│ │MUTE│
│ │ ALRM ACKD DSBL PROG➤ │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ └──────────────────────┘ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐
│ ┌──┐┌──┐┌──┐┌──┐ ┌──┐     │   │ ↓  │ │7│ │8│ │9│ ┌──┐
│ │  ││  ││  ││  │ │ ➝│     │   └────┘ └─┘ └─┘ └─┘ │PTT│
│ └──┘└──┘└──┘└──┘ └──┘     │   ┌─────┐┌─┐ ┌─┐ ┌─┐ └──┘
│                          │   │ENTER││*│ │0│ │#│
└──────────────────────────┘   └─────┘└─┘ └─┘ └─┘
```
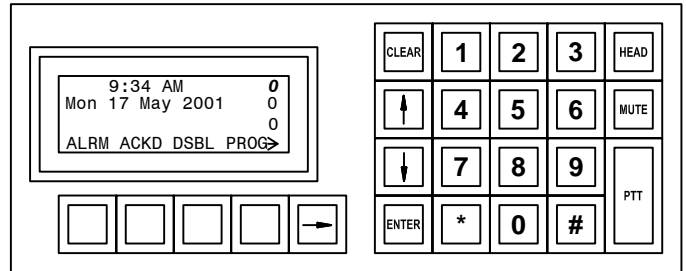
Making a Call to a Station

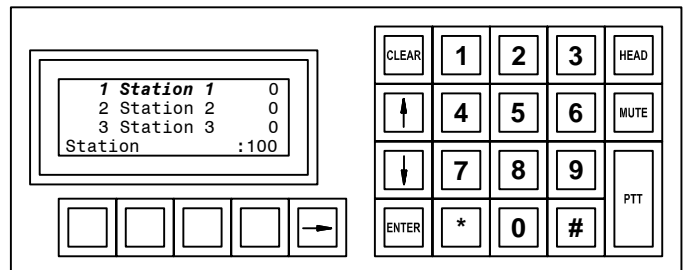This procedure is used for making a call to an Intercom Station.

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 'STN". Now select the Station you want from the Station List.

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

```
┌──────────────────────────┐   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ ┌──────────────────────┐ │   │CLEAR│ │1│ │2│ │3│ │HEAD│
│ │ 1 Station 1       0  │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ │ 2 Station 2       0  │ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ │ 3 Station 3       0  │ │   │ ↑  │ │4│ │5│ │6│ │MUTE│
│ │ Station        :100  │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ └──────────────────────┘ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐
│ ┌──┐┌──┐┌──┐┌──┐ ┌──┐     │   │ ↓  │ │7│ │8│ │9│ ┌──┐
│ │  ││  ││  ││  │ │ ➝│     │   └────┘ └─┘ └─┘ └─┘ │PTT│
│ └──┘└──┘└──┘└──┘ └──┘     │   ┌─────┐┌─┐ ┌─┐ ┌─┐ └──┘
│                          │   │ENTER││*│ │0│ │#│
└──────────────────────────┘   └─────┘└─┘ └─┘ └─┘
```
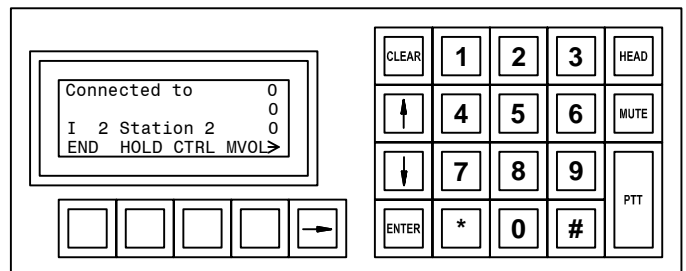
Station List

When you press "ENTER", the screen displays the ID Number and Name of the station you are calling. You are 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 either the station mic

(located next to the loudspeaker), the handset, or the headset.

```
┌──────────────────────────┐   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ ┌──────────────────────┐ │   │CLEAR│ │1│ │2│ │3│ │HEAD│
│ │ Connected to      0  │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ │                   0  │ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐ ┌────┐
│ │ I  2 Station 2    0  │ │   │ ↑  │ │4│ │5│ │6│ │MUTE│
│ │ END  HOLD CTRL MVOL➤ │ │   └────┘ └─┘ └─┘ └─┘ └────┘
│ └──────────────────────┘ │   ┌────┐ ┌─┐ ┌─┐ ┌─┐
│ ┌──┐┌──┐┌──┐┌──┐ ┌──┐     │   │ ↓  │ │7│ │8│ │9│ ┌──┐
│ │  ││  ││  ││  │ │ ➝│     │   └────┘ └─┘ └─┘ └─┘ │PTT│
│ └──┘└──┘└──┘└──┘ └──┘     │   ┌─────┐┌─┐ ┌─┐ ┌─┐ └──┘
│                          │   │ENTER││*│ │0│ │#│
└──────────────────────────┘   └─────┘└─┘ └─┘ └─┘
```

Press 'END' when you have completed the call

When you have finished your conversation, press 'END'. You will return to the Main Menu.

Functions Available When You are Making a Call

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

CHK   This key will let you check whether a staff member is logged in.

CONF   This key will let you establish a conference call by adding another Intercom Station, Master Station, or telephone.

CTRL   This key will display a station control menu that will enable you to *CRQ, EMRG, PROG*

END   This key will terminate the call and return you to the Main Menu.

HOLD   This key will terminate your call, but not cancel it. The station will be placed on the Acknowledged List to remind you to return to it for further attention.

MVOL   This key allows you to adjust the sound volume at your Master Station.

SVOL   This key allows you to adjust the sound volume at the Intercom Station to which you are connected.

XFER   This key will allow you to transfer the call to another Master Station

Note: When you change the sound volume at an Intercom Station, the new value is 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 Master Station beep volume (BUZZ), sound volume at the Master Station (MVOL), and the sound volume at the Intercom Station (SVOL).

The procedure for setting backlight level is discussed in Section 8.

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 "CLEAR".

When you have adjusted the setting, press "ENTER" 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 'MVOL' while you are connected to a Station. If you press 'ENTER' the setting will be saved, if you press 'CLEAR' you will return to the original setting.
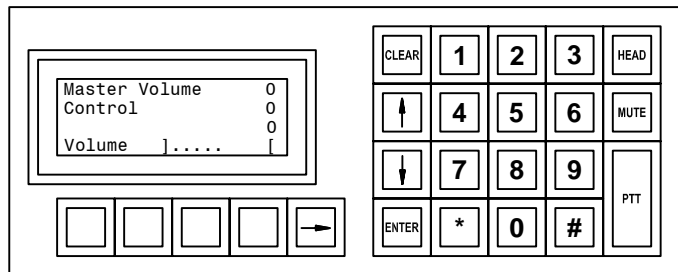
Display while adjusting incoming volume levels.

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 (flashing) you can respond to the call by pressing 'NEXT'.

> **Caution:** If you call a Station from the Station List or Disabled List and that Station is listed on the Event Queue, the system will treat your call as though you had made it from the Event Queue. The call request will be acknowledged, and the station will be moved from the Event Queue to the Acknowledged List.

Acknowledging vs. Canceling

Your most frequent response to a call request will be to acknowledge it. When you acknowledge the call request, a call is placed to the station that initiated it.. You may want to talk to that person and determine what attention they require. You would normally not cancel the call until that person requires no further attention.

You have the option of canceling the call request without acknowledging it. In this case, the call request will immediately disappear from the Event Queue , and you will have no reminder that a call request was initiated from that station.

Acknowledging the Call Request

To acknowledge the top call request in the queue, press 'NEXT'.

To acknowledge a call request that is selected, press "ENTER".

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 'END'. 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. The call will then be removed from the Acknowledged list

Canceling the Call Request

To cancel a call from the Event Queue, go to the Event Queue (done by pressing 'CTRL' + '→' + 'ALRM'). Select the call request which you wish to cancel and press "ENTER". From the new choice of options, press 'CNCL'. This will cancel the call request displayed on the screen, and will remove the request from the Event Queue. The request will not go in the Acknowledged list.

Placing a Call on Hold

To place your current call on hold, press 'HOLD'. This will move the call from Event Queue and place the call in the Acknowledged List. This will also free up the Master for other calls. The Master Station will then be returned to the main, "Idle menu".

Note: Only one call may be placed on hold at any one time. If you attempt to place a second call on hold, the Master Station will generate an error tone, and that attempt will be ignored.

Returning to a Call Placed on Hold

When you ready to return to the held call, press 'CALL' followed by 'HOLD'. This will reconnect you to the call which was placed on hold. This will not remove the call from the Acknowledged List until you END the call.

You may continue your call normally.

The call may be put on hold again, should the need arise.

Section 5 – Enabling and Disabling Stations

Enabling/Disabling a Master Station

If a Master Station has a Secondary Master Station (the Secondary Master is specified in the Software Configuration for this Master) then it can be disabled. When in the disabled state all incoming events (i.e. CRQ requests) that this Master would normally respond to are automatically transferred to the Secondary Master Station. The Master Station can be disabled (or enabled) from either the Secondary Master or from the Master Station itself. In the disabled state the only operation that can be performed at the disabled Master is to make a call request to the Secondary Master. When the Secondary Master Station operator responds to the call request an audio channel is established between the two Masters.
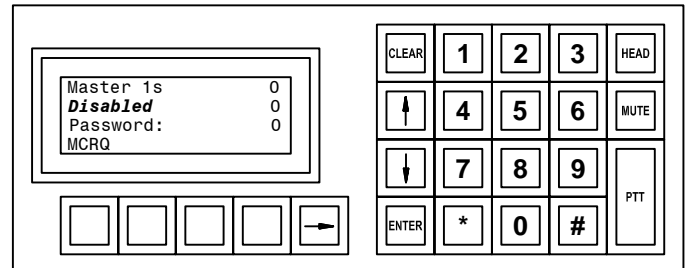
Disabling a Master Station from the Station itself

In order to disable a Master Station the operator selects the 'DSBL' function from the "Idle menu", as shown in the following diagram. A new function menu is presented with the single entry 'DSBL'.

NEXT	CALL	CTRL	CHK	MON	SETU	DSBL	UNMN	LOG	SGNL		
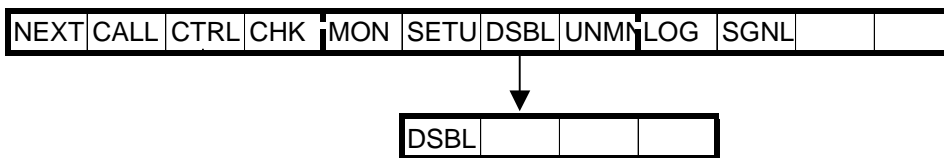
DSBL			

Pressing the function key 'DSBL' will disable the Master Station and the display will change, as shown on the right.

The function key 'MCRQ' is operative and if pressed will send a call request to the Secondary Master Station. Once an audio link is established you can request that the Secondary Master Station enable your Master Station.

```
Master 1s        0
Disabled         0
Password:        0
MCRQ
```

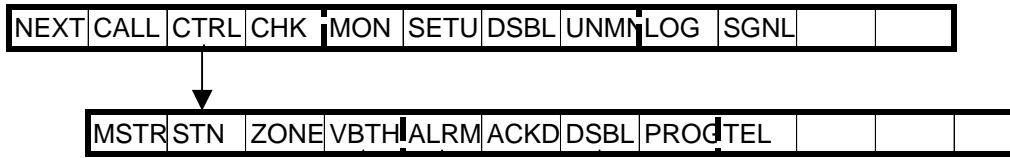You can also disable your Master Station by following the sequence:

- From the "Idle menu" press the function key 'CTRL'

- On the new menu select the function key 'MSTR".

- Use the scroll keys to select your Master Station and press "ENTER".

- Use the ("↑") and ("↓") keys to select "Disable", then press the "ENTER" key.

Enabling a Master Station from the Station itself

In order to enable a disabled Master Station the operator must type in the correct password, followed by pressing the "ENTER" key. The Master Station will then be Enabled and return to the "Idle menu'.

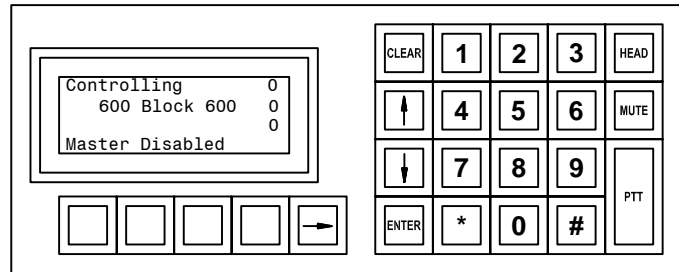**Disabling/Enabling a Master Station from the Secondary Master Station**

In order to Enable/Disable a Master Station from its Secondary Master Station the operator at the Secondary Master Station must press the function key 'CTRL' while in the "Idle menu".

| NEXT | CALL | CTRL | CHK | MON | SETU | DSBL | UNMN | LOG | SGNL | | |

| MSTR | STN | ZONE | VBTH | ALRM | ACKD | DSBL | PROG | TEL | | | |

From this new menu press the function key 'MSTR' to bring up the list of Master Stations that you can Enable/Disable. Sort through the list until you select the Master Station you wish to Enable/Disable.

Once you have selected the correct Master Station press the "ENTER' key. The display will change as shown on the right.

You can now use the toggle keys ("↑") and ("↓") to change the display between "Enabled" and "Disabled". When you have selected the desired condition press the "ENTER" key. The Master Station is now Enabled/Disabled.

```
Controlling        0
  600 Block 600    0
                   0
Master Disabled
```

```
CLEAR  1  2  3  HEAD
  ↑    4  5  6  MUTE
  ↓    7  8  9
                 PTT
ENTER  *  0  #
```

## *Enabling/Disabling Switches at an Intercom Station.*

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

- Call Request Button

- Emergency Request Button

- Program (Music) Button

- Change Audio Level Alarm Threshold

You can disable any or all of the above functions for each individual Station. Even though a Station may have some of its functions disabled, you can still place calls to that Station and communicate with it from your Master Station. Every function that you disable on a station will increase the list size of the Disabled List. However, only one instance of the disabled Station will be present.

Enabling/Disabling an Intercom Station's switches is carried out by first pressing the 'CTRL' function on the "Idle menu", followed by selecting 'STN" on the new menu. This will bring up a list the list of Stations.

Sort through the list and select the desired Station. Press the "ENTER" key and you will be presented with a menu as shown on the right. From this menu you can select the call request switch ('CRQ'), emergency request switch ('EMRG'), the programmed music switch ('PROG'), or the audio level alarm) call request switch ('THRS'). The 'CRQ', 'EMRG' or 'PROG' switches can be set to Enabled/Disabled. Once you select a particular switch you will be presented with a display that allows you to use the toggle keys ("↑") and ("↓") to switch between Enabled/Disabled. You then press the "ENTER" key to implement the selection.
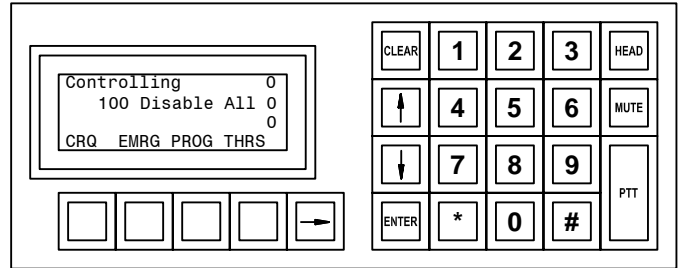
Switches that can be Enabled/Disabled at an Intercom Station.

Selecting the 'THRS' switch allows you to select Disabled/Level1/Level 2/Level 3/Level4. You can scroll through these setting using the toggle keys ("↑") and ("↓"). Press "ENTER" to implement the selection.

Note that depending on the facility not all of these switches may be available at an Intercom Station.

Section 6- Monitoring Procedures

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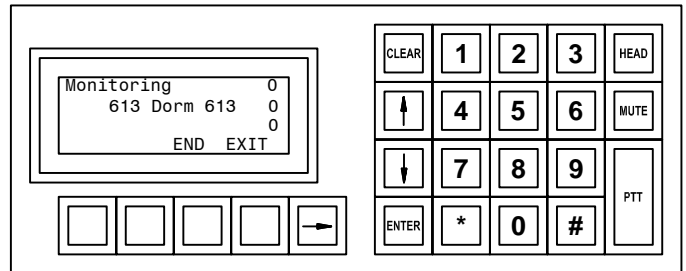
Monitoring a Station

In order to monitor a Station the operator starts from the "Idle menu" and presses the function key 'MON'.

| NEXT | CALL | CTRL | CHK | MON | SETU | DSBL | UNMN | LOG | SGNL | | |

| STN | | | CTRL | END | VBTH | RAD | | | |
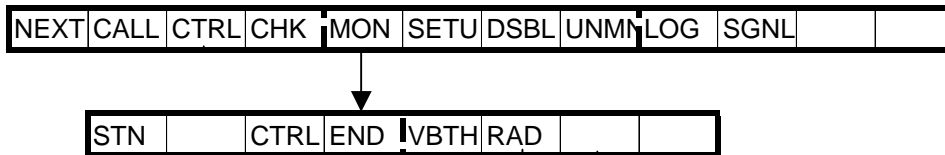
A new menu appears and if you press the function key 'STN', the list of Stations that you can monitor (the same list of Stations that you can call) will appear. Scroll through the list of Stations and select the one you wish to monitor. Press the "ENTER" key and you will start to monitor the selected Station.

At this time the display will appear as shown on the right. If you press 'END' the monitoring will stop. If you press 'EXIT' the monitoring will continue, however you will return to the "Idle menu'. You can then make or answer calls or carry out other operations. The monitoring will stop while you in the process of making a call, but will continue once the call is completed.. To end a monitor from the "Idle menu" press 'MON' followed by 'END'.

Display while monitoring a Station

If you select a Station that has been defined as a group the screen will appear as shown on the right The Station in the group that is currently being monitored is shown on the display. The monitoring can operate in one of two modes:

- Automatic--each Station in the group is monitored for a preset time. The monitoring continues in a cyclic fashion.

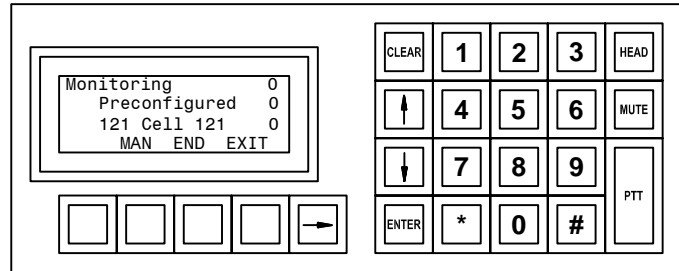- Manual--you must use the scroll keys to change the selected Station.
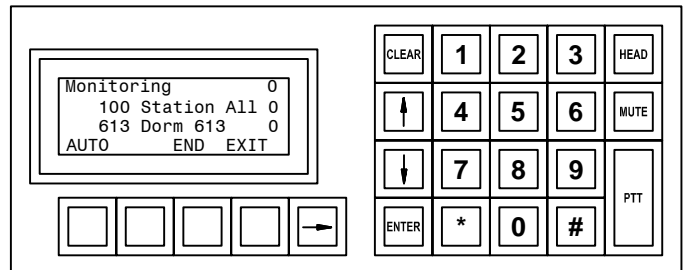
Display while monitoring a group of Stations

When the display shows the function 'AUTO' then the monitoring is in manual mode. If the display shows 'MAN' then you are in the automatic mode. Selecting 'AUTO' will change the display so that you can now select 'MAN'.

Predefined Configuration

From the "Idle menu" if you press 'MON' followed by 'CTRL' the display will show the current monitoring configuration. If you are in the predefined configuration the display will appear as follows, with the Station currently being monitored displayed.

```
Monitoring        0
   Preconfigured   0
   121 Cell 121    0
   MAN   END   EXIT
```

```
CLEAR  1  2  3  HEAD
  ↑    4  5  6  MUTE
  ↓    7  8  9
                  PTT
ENTER  *  0  #
```

Display while monitoring in predefined configuration

To Change the Monitoring Rate

To change the rate at which the master will switch between stations while it is monitoring, select 'SETU', followed by 'RATE'. Enter a number between 1-65535 (seconds) for the amount of time that the Master Station will stay at one particular station during monitoring.

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

From the "Idle menu" you can select the 'CTRL' function to bring up a menu that will allow you to select the three active lists: the Alarm List ('ALRM'), the Acknowledged List ('ACKD') or the Disabled List ('DSBL').
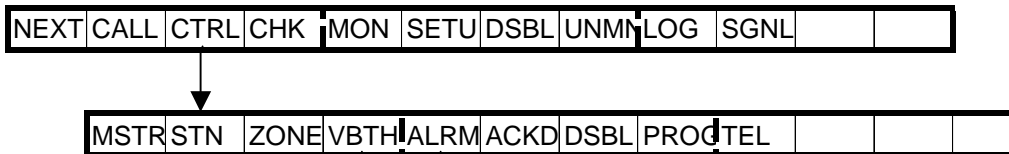

The screen on the right shows a typical Alarm List, with one of the Alarms corresponding to a hardware fault (F) and two of the Alarms corresponding to Intercom requests (I). If you select one of the Intercom requests and press "ENTER" you will move that Intercom Request to the Acknowledge List and establish an audio channel between your Master Station and the selected Station.
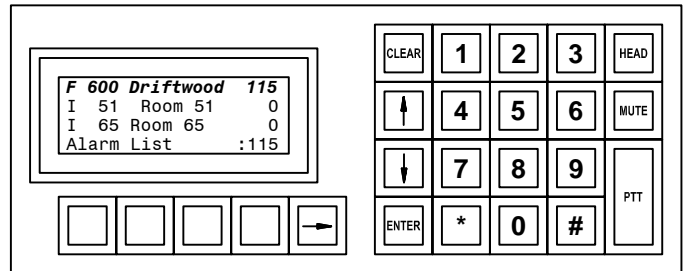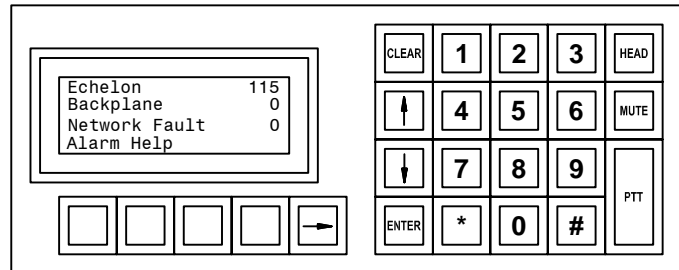

Display showing Alarm List

If you respond to a hardware fault alarm (F) by selecting the Alarm and pressing the "Enter" key, the display will change as shown. You can then Acknowledge ('ACK') the fault, this will move it 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 can Cancel ('CNCL') 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.
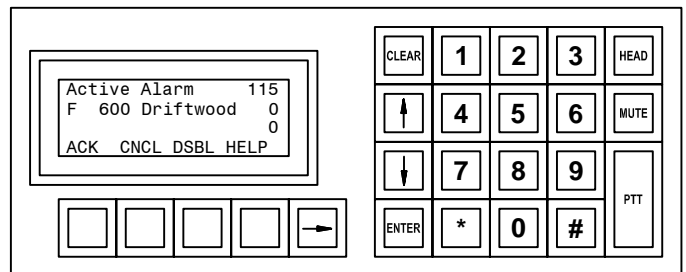
Selecting a Fault alarm.

The Help function will provide you with a brief description of the fault. A typical display is shown on the right.

```
┌─────────────────────────────────────┐
│  ┌──────────────────┐   ┌──────────────────────────┐
│  │ Echelon      115 │   │ CLEAR  1  2  3  HEAD      │
│  │ Backplane      0 │   │  ↕     4  5  6  MUTE      │
│  │ Network Fault  0 │   │  ↓     7  8  9            │
│  │ Alarm Help       │   │                    PTT   │
│  └──────────────────┘   │ ENTER  *  0  #           │
│  □ □ □ □ →              └──────────────────────────┘
└─────────────────────────────────────┘
```

Display after selecting 'HELP' function.

Section 8 - Other Master Station Procedures

Changing Master Station Display and Sound Volume Settings

Changing Backlight Level

To change the Backlight Level of a Master Station, press 'SETU', followed by 'BKLT'. Using the arrows ("↑") and ("↓"), set the backlight to a desired setting. You can also use the numerical keypad to select the intensity of the backlight. There are 9 settings from which to choose from, and each number corresponds to that particular light setting. Pressing "0" will turn the backlight off, while pressing "9" will turn the backlight to it's highest intensity. Once the desired level is obtained, press the "ENTER" key.

Changing Clock Display Mode

To change clock mode from between 12HR and 24HR time notation, press 'SETU', followed by 'CLK'. Using the arrows ("↑") and ("↓") select the time display you wish to use. To confirm your selection, press the "ENTER" key.

To Change Master Station Sound Volume

To change any of the volume settings relating to the Master Station, press 'SETU', followed by 'MVOL'. This will bring up another menu with a list of different aspects of the station which may have modifiable volume settings.

Use '**MVOL'** to change the default Master Station volume used during a call. (**Note:** This setting maybe changed during a call as well)

Use '**PROG'** to change the default Programming (Music) volume.

Use '**PAGE'** to change the default volume when being paged.

Use '**MON'** to change the volume used when using the monitoring option.

Use '**BUZZ'** to change the volume of the Master Station's buzzer.

To Change Language

To change the language in which the buttons are displayed on the screen, select 'SETU', followed by 'LANG'. You will have the choice of 'ENG', 'FREN', and 'SPAN' (corresponding to English, French, and Spanish respectively). Press any of these buttons to change the language. These commands will then be displayed in the language of choice.

Note: The System Administrator can set system parameters so that only one language choice is available.

To Change Programming (Music)

To change the programming (music) available to the Master Station, press 'SETU', followed by 'PROG'. This will bring up a list of all available program channels. You are then able to select the programming (music) of choice. Also from this menu, you are able to change the volume of the music.

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 'STOP'.

The characteristics (exact sound qualities) of the tone are setup in the hardware configuration. 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 function key 'SGNL' 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 "ENTER" key. The Signal will now be activated. The menu will change so that you can select 'STOP' or 'EXIT'. If you select 'EXIT' you will return to the "Idle menu" and the Signal will continue to be operative. 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' key.