Programming

This section provides instructions for programming the KTD-304 keypad and for using it to program other components in the DIGIPLEX system, including:

- Pan/Tilt/Zoom Receiver Programming
- Video Switcher Programming
- Alarm Interface Programming
- CyberDome Programming

P/T/Z receiver programming and initial entry into programming for other system components is provided; please refer to component manuals for complete programming instructions.

Helpful Hint: For large DIGIPLEX systems, the KTD-311 Software Download Package can be used to easily download camera titles.

Initial Programming

For new installations, these instructions should be followed in the order in which they are presented. If any programmed data needs to be changed at a later date, the menu associated with that data can be accessed by entering the appropriate programming mode and using the designated key(s) to advance to the menu.

KTD-304 Programming

The KTD-304 offers many programming choices which identify how it will function in the system. A separate code is used to access the menus that describe these choices.

Programming choices for the KTD-304:

- System Size
- Camera Access
- Multiplexer Type
- Annunciation
- Monitor Offset
- Monitor Access
- Multiplexer Views
- Entry Verification

Use the following steps to program the KTD-304:

Step 1) Supply power to the unit. The LCD will momentarily display the Kalatel name and the type of keypad. Next, the normal operating display menu will appear:

Normal Operating Display

Figure 8: Normal Operating Display

```
CAMERA 000
MONITOR 01
```

Step 2) Enter the programming mode by pressing and holding the [set] key until the following display appears:

Code Entry Display

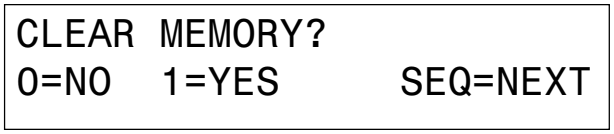
Figure 9: Code Entry Display

```
ENTER PROGRAMMING
CODE:
```

Enter the access code [5], [7], [9], [seq]. The display will automatically advance to the next menu.

Clear Keypad Memory

Figure 10: Clear Memory Display



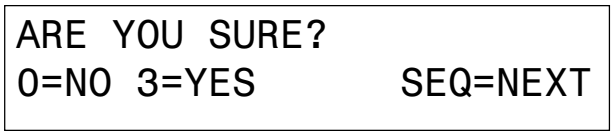
Helpful Hint: Pressing the [seq] key will forward you through programming without changing the set parameters.

Step 3) The CLEAR MEMORY option will erase all data in the controller keypad's nonvolatile memory and reload factory default values.

To clear the keypad's memory, press [1]. The display will automatically advance to the menu shown in Figure 11.

If the CLEAR MEMORY function is not to be used, press [0] and go to Step 5.

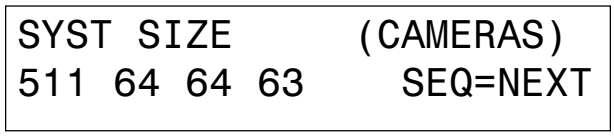
Figure 11: Second Clear Memory Display



Step 4) This menu offers a safety check. If a [3] is entered, the controller keypad's memory will be reloaded with factory default values. If a [0] is entered, there will be no change. The display will automatically advance to the next menu.

System Size

Figure 12: System Size Display

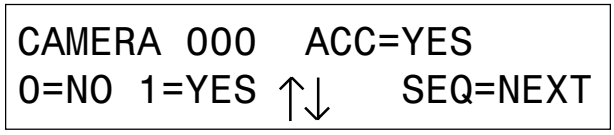


Step 5) This menu is used to set the system size. Use the numerical keys to enter the largest camera number, largest monitor number, largest multiplexer number, and largest preset number in the system. Maximum entries are: cameras-511, monitors-64, multiplexers-64, and presets-63.

Press [seq] to advance to the next column, or move the joystick left or right to switch between columns. Once all entries are made, the display will automatically advance to the next menu.

Camera Site Access

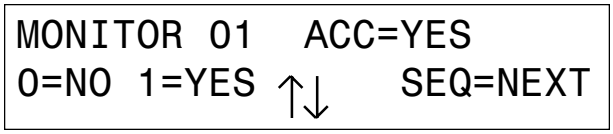
Figure 13: Camera Site Access Display



Step 6) This menu is used to deny or permit the controller keypad's access to certain camera sites. Press [0] to deny access or [1] to permit access. After each selection, the next camera number will appear. Move the joystick up or down to switch between cameras. When done, press [seq] to advance to the next menu.

Monitor Access

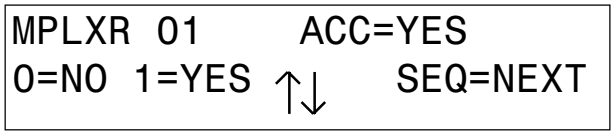
Figure 14: Monitor Access Display



Step 7) This menu is used to deny or permit the controller keypad's access to certain monitors. Press [0] to deny access or [1] to permit access. After each selection, the next monitor number will appear. Move the joystick up or down to switch between monitors. When done, press [seq] to advance to the next menu.

Multiplexer Enabled

Figure 15: Multiplexer Enabled Display



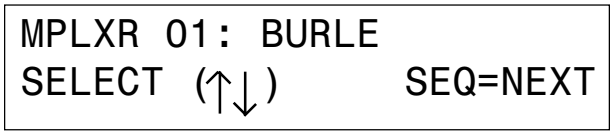
Step 8) This menu determines which multiplexers can be enabled (accessed) from the keypad. This must be done for each keypad in the system. To enable a multiplexer, press [1]. When enabled, the Multiplexer Select Menu display (Figure 16) will appear. Pressing [0] will advance to the next multiplexer in the system. Moving the joystick up or down will switch between multiplexer brands. Press [seq] to advance to the monitor offset menu display (Figure 18).

NOTE:

If no multiplexers are enabled, the message "No multiplexers have been programmed" will be displayed any time the [mplx] key is pressed.

Multiplexer Select

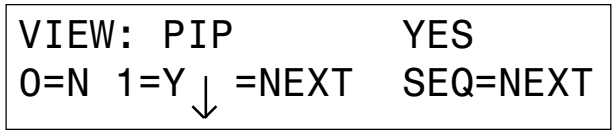
Figure 16: Multiplexer Select Display



Step 9) When a multiplexer has been enabled, this menu allows selection of different models of multiplexers. Use the joystick to scroll through the list. The models are listed in alphabetical order. After selecting the appropriate multiplexer, press [seq] to advance to the next menu.

Multiplexer View

Figure 17: Multiplexer View Display



Step 10) This menu determines which views will be enabled when the keypad is in multiplexer operating mode. (When in multiplexer operating mode, pressing the (view) key toggles through the views selected here.) Move the joystick down to scroll through the list of views available. For each view, press [1] to accept or [0] decline. When all views have been selected, press [seq] to return to the Multiplexer Enabled menu display. **Note:** Some multiplexers do not allow specific view selection and will skip this menu.

Monitor Offset

Figure 18: Monitor Offset Display

```
MONITOR OFFSET
NUMBER? 00        SEQ=NEXT
```

Step 11) The default program for the keypad dictates that the selected monitor number will correspond to the number of the matrix switcher output to which it is connected. For example, if Monitor 12 appears in the keypad's display window and a camera selection is made, the monitor that is connected to output 12 of the matrix switcher will switch to that camera.

In some applications, a user may prefer to have the monitors numbered simply as "1", "2", "3", etc., instead of using the matrix switcher output number. To allow for the difference in numbers, simply subtract the desired monitor number from the matrix switcher output number, and enter the result as the monitor offset.

Example: Suppose a keypad has a monitor that is connected to matrix switcher output #12. To enable the monitor to be addressed as Monitor #1, subtract 1 from 12 and enter the result (11) as the monitor offset.

(Matrix Switcher Number) - (Monitor Number) = (Offset)

(12) - (1) = (11)

In this particular example, if more than one monitor were to be controlled from the keypad, additional monitors would be connected to matrix switcher outputs 13, 14, 15, etc. and would be controlled as Monitor 2, Monitor 3, Monitor 4, etc.

NOTE:

The keypad will deny any monitor offset number that conflicts with "Largest Monitor" and "Monitor Access" programming choices that were made earlier in this section (Refer to Step 4 and Step 6).

After the entry, the display will automatically advance to the next menu:

Annunciation

Figure 19: Annunciation Display

```
ANNUNCIATION?        NO
0=NO 1=YES       SEQ=NEXT
```

Step 12) When placed in the annunciation mode, the KTD-304 will annunciate call-in requests generated by access control receivers or a KTD-463 Alarm Chassis. In this mode, the keypad will stack 32 calls in the order in which they are received.

Annunciation will change the LCD menu on the Normal Operating Display. The numbers of the first three sites to call in will appear in the LCD window, as shown below:

Figure 20: Normal Operating Display with Annunciation

```
CAM 000  1ST 2ND 3RD
MON 01
```

For annunciation, press [1]. The LCD menu will display Figure 21.

For no annunciation, press [0], and go to Step 14.

Tone Type

Figure 21: Tone Selection Display

```
CALL TONE TYPE? MULT
0=SINGLE 1=MULT SEQ=NEXT
```

Step 13) If the KTD-304 has been programmed for annunciation, it will produce an audible tone when a call-in request is received. This tone can be programmed to be a single frequency or multiple frequency (warble).

Select the desired call tone. The display will automatically advance to the next menu.

Entry Verification

Figure 22: Entry Verification Display

```
ENTRY VERIFICATION? NO
0=NO 1=YES      SEQ=EXIT
```

Step 14) This option changes how camera and monitor numbers are selected while the keypad is in the normal operating mode.

For example, without entry verification, keying in [0] [0] [9] would automatically call up camera site number 9. With entry verification, keying in [9], [enter] will perform the same task.

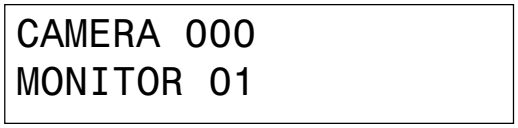
Enabling entry verification changes the function of the [talk] key on the KTD-304 desktop keypad, and the [face] key on the KTD-304R rack-mount keypad. Both become the [enter] key. An [enter] keycap has been supplied with the unit. Refer to *Keycap Replacement*, Appendix B.

Once an entry is made, the LCD menu will return to the Normal Operating Display (Figure 8).

System Component Programming

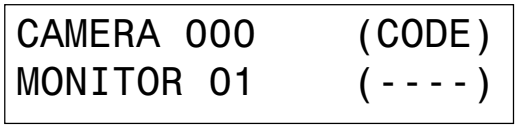
To program system components through a KTD-304 keypad, begin at the normal operating display and proceed as follows:

Figure 23: Normal Operating Display



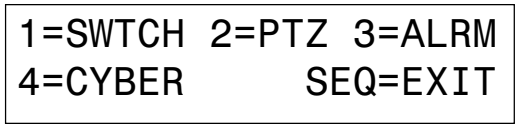
Step 1) Press and hold the [set] key until the following display appears:

Figure 24: Code Entry Display



Step 2) Enter the access code [9], [5], [1], [seq]. The display will automatically advance to the next menu.

Figure 25: First Menu Display



From this menu it is possible to perform video switcher programming, P/T/Z receiver programming, alarm interface programming, and CyberDome programming by pressing the corresponding number on the keypad.

P/T/Z receiver programming instructions can be found on the following pages. For detailed programming instructions on the CyberDomes, alarm interfaces, and video switchers, please refer to the product programming instructions.

NOTE:

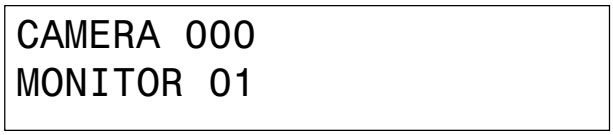
If you are programming a CyberDome Day-Nite or CyberDome Select with a KTD-304 keypad, the [1st] key can be used to step backwards while in the programming menus.

Pan/Tilt/Zoom Receiver Programming

Each receiver offers mode of operation choices, many of which can be programmed using a KTD-304 series keypad. The keypad can also store preset position information, if applicable.

The following steps outline the receiver setup procedure. Beginning at the normal operating display, proceed as follows:

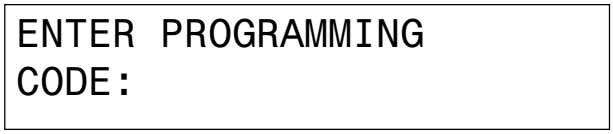
Figure 26: Normal Operating Display



Accessing the Receiver Setup Menus (Steps 1-3)

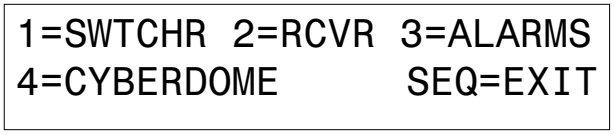
Step 1) Press and hold the [set] key until the following display appears:

Figure 27: Code Entry Display



Enter the access code [9], [5], [1], [seq]. The display will automatically advance to the next menu.

Figure 28: First Menu Display



Step 2) Press [2]. The first receiver programming menu will appear:

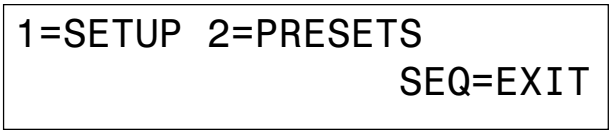
Receiver Site Select

Figure 29: Receiver Site Selection Display

Step 3) Using the numerical keys, enter the receiver site to be programmed. The display will automatically advance to the next menu.

Receiver Setup (Steps 4-16)

Figure 30: Receiver Setup Menu Display



Pan Cycle

Step 4) Press [1] to begin receiver setup. The display will automatically advance to the first setup menu.

Figure 31: Pan Cycle Display

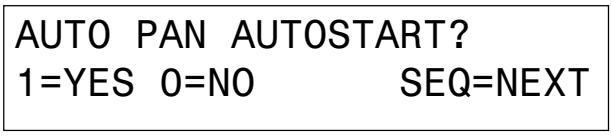
Step 6) If the pan/tilt receiver is to auto pan, enter one of the four following choices listed in the chart below:

Choice	Description
0	This choice disables the receiver's auto pan function altogether.
1	This choice assigns a 50% duty cycle when the receiver is in auto pan mode (i.e., unit alternately pans and rests for 8 second intervals).
2	This choice assigns a 100% duty cycle when the receiver is in auto pan mode (i.e., unit continuously pans).
3	This choice will cause the receiver to pan randomly when in auto pan mode.

The display will automatically advance to the next menu.

Autopan Autostart

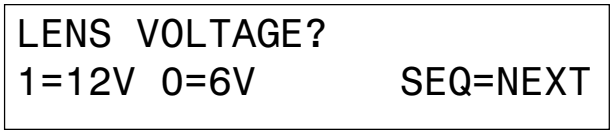
Figure 32: Autostart Display



Step 7) In the event that receiver power is lost, the receiver can be programmed to resume auto pan once power is restored. If the receiver is to auto pan when power is restored, press [1]. If not, press [0]. The display will automatically advance to the next menu.

Lens Voltage

Figure 33: Lens Voltage Display



Step 8) Select the appropriate voltage for the receiver site's motorized lens. Press [0] for 6 volts or [1] for 12 volts. The display will automatically advance to the next menu.

Invert Pan/Tilt

Figure 34: Invert Pan/Tilt Display

Zoom Direction

Step 9) This selection allows the pan and tilt directions to be reversed in an application where a camera must be mounted in an inverted position. Press [1] to invert, or [0] for normal pan/tilt operation. The next display will appear.

Step 10) The next three menus provide choices for defining the polarity of the output voltage for the motorized lens connected to the receiver.

Figure 35: Zoom Direction Display

```
ZOOM DIRECTION
0=POS 1=NEG     SEQ=NEXT
```

Press [0] if the lens requires positive voltage for "zoom in" and negative voltage for "zoom out." Press [1] if the opposite is the case. The next display will appear.

Iris Direction

Figure 36: Iris Direction Display

```
IRIS DIRECTION
0=POS 1=NEG     SEQ=NEXT
```

Step 11) Press [0] if the lens requires positive voltage for "iris open" and negative voltage for "iris close." Press [1] if the opposite is the case. The next display will appear.

Focus Direction

Figure 37: Focus Direction Display

```
FOCUS DIRECTION
0=POS 1=NEG     SEQ=NEXT
```

Step 12) Press [0] if the lens requires positive voltage for "focus near," and negative voltage for "focus far." Press [1] if the opposite is the case. The next display will appear.

Clear Receiver Memory

Figure 38: First Clear Memory Display

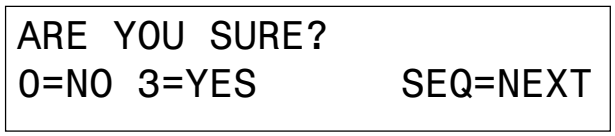
```
CLR RCVR MEM? CAM 000
0=NO  1=YES     SEQ=NEXT
```

Step 14) With the CLR RCV MEM option, the KTD-304 will instruct the P/T/Z receiver to erase all data in its nonvolatile memory and reload factory default values.

To clear the receiver's memory, press [1]. The display will automatically advance to the menu shown in Figure 39.

If the clear receiver memory function is not to be used, press [0] to return to the Receiver Site Selection menu display (Figure 29).

Figure 39: Second Clear Memory Display



Step 15) This menu offers a safety check. If a [3] is entered, the receiver's memory will be reloaded with factory default values. If a [0] is entered, there will be no change. After the choice is made, the display will return to the Receiver Site Selection menu display (Figure 29).

Step 16) Repeat steps 3 - 15 for each receiver in the system.

Setting Electronic Auto Pan Limits for Kalatel Domes

To set the electronic auto pan limits on Kalatel dome receivers, first position the dome at the limit. While holding down the [zoom in] and [zoom out] keys, move the joystick in the direction of the limit being set.

Example: To set the left limit, move the dome to the position of the desired left limit. While holding down the [zoom in] and [zoom out] keys, move the joystick left .

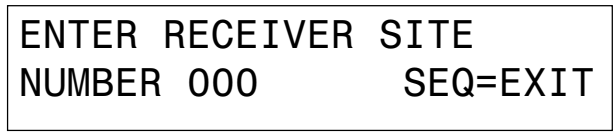
P/T/Z Receiver Preset Position Programming

If a P/T/Z receiver or a KTA-12 series P/T/Z dome is equipped for preset camera positioning (P option), the receiver can store 10 preset positions in its nonvolatile memory. Each preset position can be called up individually and, if desired, can also be included in a preset tour (i.e., camera automatically pans, tilts, zooms, and focuses through a series of preset positions). The following procedure explains how preset positions are entered for both purposes.

Step 1) Access the receiver setup menu as explained on page 16. The first receiver programming menu will appear as shown below:

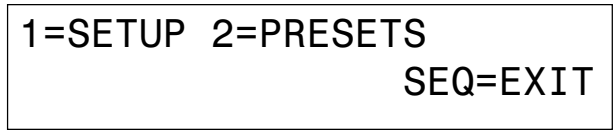
Receiver Site Select

Figure 40: Receiver Site Selection Display



Step 2) Use the numerical keys to select the P/T/Z receiver site to be programmed. The display will automatically advance to the next menu.

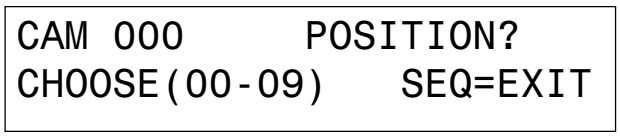
Figure 41: Receiver Setup Menu Display



Step 3) Press [2]. The display will automatically advance to the next menu.

Store Preset Position

Figure 42: Preset Display



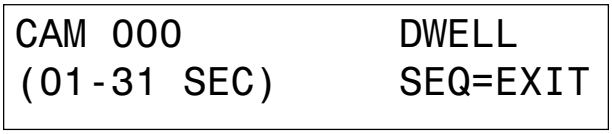
Step 4) Use the joystick and related function keys (i.e. zoom in, zoom out, etc.) to move the camera to the desired position.

Step 5) Assign a preset position number (one or two digit depending on the receiver type and largest preset number) using one of the two methods described below:

Method 1: If the position is not to be included in the preset tour, enter the preset number by using the number key(s). A tone will sound to acknowledge that the position has been entered, and the display will return to Figure 42 to allow entry of the next position.

Method 2: If the position is to be included in the preset tour, enter the preset number and hold the last digit entered until a tone sounds. The following display will appear.

Figure 43: Preset Dwell Time Display



Use the numerical keys to enter the time that the camera should remain at the position (1-31 seconds). The display will return to Figure 42 to allow entry of the next position.

Step 6) Repeat Steps 4 and 5 for each additional preset position. When done, press seq to exit to the menu shown in Figure 40.

Step 7) Repeat Steps 2-6 for each camera site using preset positioning.