Introduction

This *KTD-405/405A/405-2D Keypad Quick Guide* contains step-by-step instructions for performing basic functions on a KTD-405/405A/405-2D Keypad. This quick guide helps operators use the KTD-405/405A/405-2D Keypad to control cameras, digital recorders, matrixes, and multiplexers.

Included in this quick guide:

KTD-405   **KTD-405A**

Note: The KTD-405-2D (not shown) is similar to the KTD-405, but with a 2-axis joystick instead of a 3-axis joystick.

Tip. You'll find special items such as tips and notes in the page margins.

If you have a problem configuring or operating your keypad, try these solutions in this order:

1. Read this quick guide.

2. Read the corresponding section of the appropriate user manual.

3. Call technical support:
   Monday through Friday, excluding holidays, between 5 a.m. and 5 p.m. Pacific Time).

   Toll-free in the US, including Alaska and Hawaii; Puerto Rico; Canada): **888.GESECURity** (888.437.3287)

   Outside the toll-free area: **503.885.5700**.

   Outside the US: **011-1-541-754-9134**.

Installation types

The type of installation you have—zone or Digiplex—determines your keypad operation.

Zone installations

If your system uses one or more DVR digital video recorders or GE multiplexers as the main switching devices, then the system is a zone installation. A zone installation can have as many as 32 zones, each zone having one DVR or multiplexer that serves from 1 to 32 cameras. The outputs from the zone's switching device connect directly to dedicated monitors.
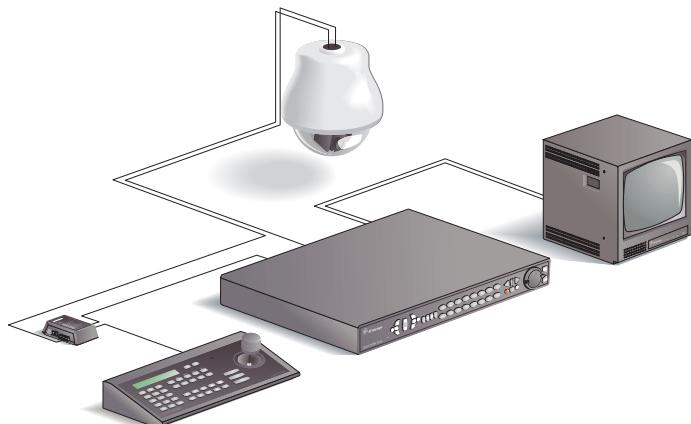
Zone mode

If you have a zone installation, your keypad should be in *zone mode*. If your keypad is in zone mode, the LCD panel shows zone, camera, and monitor fields.

```
ZONE --
CAMERA --        MONITOR -
```

Note: See *DVR operation* on page 7 to control a DVR when the keypad is in zone mode.

System information. Use the *System information table* on page 16 to record the numbers and descriptions of the DVRs and multiplexers in your system.

Digiplex installations

If your system uses one or more GE matrix switchers as the main switching devices, then the system is a Digiplex installation. A Digiplex system can have 512 cameras, one or more matrix switchers with 64 monitor outputs, up to 32 multiplexers, and up to 32 recorders. In addition, optional recording devices (DVR, DSR, or VCR) can connect to the matrix switcher. Digiplex systems do not require dedicated monitors for each DVR.
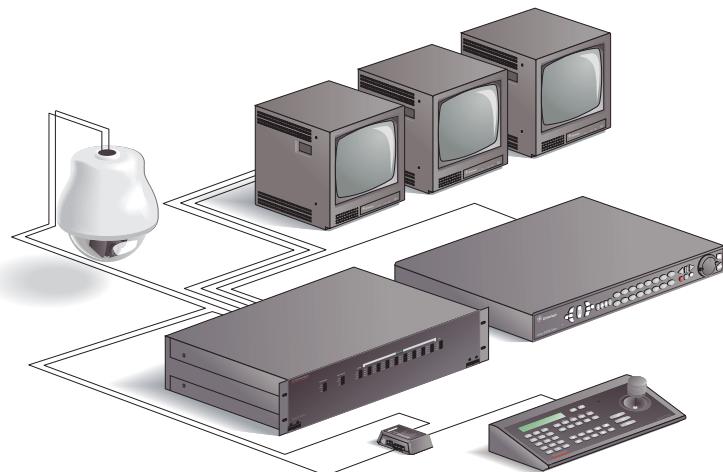
Digiplex mode

If you have a Digiplex installation, your keypad should be in *Digiplex mode*. If your keypad is in Digiplex mode, it shows the active camera and monitor numbers.

```
CAMERA 0
MONITOR 1
```

See *DVR operation* on page 7 to control a DVR when the keypad starts in Digiplex mode.

Hybrid zone mode

You can use the keypad to control a DVR in a Digiplex installation. In this case, the keypad is in *hybrid zone mode*. If your keypad is in hybrid zone mode, it shows zone, camera, and monitor numbers, plus the DVR type.

```
ZONE 01     DVMRe TRI
CAM --      MON A  ESC=EXIT
```

PTZ camera operation

Camera selection

There are two methods for camera selection. For example, to select camera 1, do one of the following:

- If you have fewer than ten cameras, press **1**. If you have tens of cameras, press **0**, **1**. If you have hundreds of cameras, press **0**, **0**, **1**. Or
- Press **1**, ↵ .

Preset programming

To program presets, move the camera to the desired position and do the following:

Standard presets. Press **store**, <preset number>, **store** to store presets.

Autopan limits. Press **store**, ◄II or II► , **store** to set autopan limits.

Quick store. Press **store**, [aux 1 to 4], **store** to store preset positions 58 to 61.

Preset selection

To move a PTZ camera to a preset position, press **find** then <preset number>.

Tour initiation

To initiate a previously programmed tour on a PTZ camera, press **tour** then <tour number>.

> **Presets.** PTZ cameras can store up to 32 (numbered 00 to 31) or 64 (numbered 00 to 63) preset positions, depending on the camera model. Preset numbers 62 and 63 are reserved for autopan limit settings.
>
> If you intend to reprogram a large number of existing presets, we recommend you clear all presets stored in memory.

Switcher and monitor operation

Switcher control

To view a camera on a specific monitor, at the default keypad menu, enter the monitor number then the camera number. To initiate a camera *sequence tour*, press **seq** , <sequence routine number 1 to 7>.

To initiate a *group sequence*, do the following:

1. Press **esc** and **zone**.

2. At the prompt, press **tour**.

3. At the prompt, enter the group sequence number. For single digit numbers, press <number key**>**, ↵. For double digit numbers press <first digit key>, <second digit key>.

To enable or disable the alarm mode for a monitor, press **alarm**. If the alarm mode is enabled, *A* appears on the affected monitor.

Monitor selection

There are two ways to select a monitor. For example, to select monitor 1, do <u>one</u> of the following:

- Press **mon**, **1**, ↵.
- Depending on the number of monitors in your system, press one of the following:
  - Press **1**   (1 to 9 monitors).
  - Press **0**, **1**   (10 to 99 monitors).
  - Press **0**, **0**, **1** (100 to 128 monitors).

DVR operation

DVR selection in zone mode

To select a DVR when in zone mode, do the following:

1. Press **zone**.
2. Enter the zone number.

Note: See *Zone mode* on page 3.

DVR selection in Digiplex mode

To select a DVR when in Digiplex mode, do the following:

1. Press **zone**. The keypad switches to hybrid zone mode.
2. Enter the DVR/zone number.

Note: See *Digiplex mode* and *Hybrid zone mode* on page 4.

Multiscreen views

To call up multiscreen views on a Triplex or DVR (zone or hybrid zone mode only), do one of the following:

- Press **view**, <number keys 1 to 9>; or
- Press **view**, **5** repeatedly to step through the available views.

To call up multiscreen views on other DVR models and multiplexers, press **view** repeatedly to step through the available views.

System information. You must know the DVR/zone number to call a DVR from the keypad. If you don't know that information, contact your system installer, integrator, or administrator and record that information on the *System information table* on page 16.

Hybrid zone mode. Press **esc** to return from hybrid zone mode to Digiplex mode. You do not have PTZ control of cameras in hybrid zone mode.

Error. The keypad beeps when you enter a zone number that does not exist or if the keypad is not communicating with the DVR.

DVR recorded event search

To initiate a search, press 🔍 . The *Disk Analysis* screen appears on the monitor.

Disk Analysis screen

The default view shows the entire time period currently saved on the disk.

To scroll forward or backward in disk time, push the joystick up or down, or press **esc** + ‖ or **esc** + ▶ . The black indicator arrows move left and right to show the selected time.

To view shorter or longer spans of time, push the joystick left or right, or press ◀◀ or ▶▶ . There are four view levels.

To view playback of the currently selected time period, press ↵ .

To specify search parameters, press 🔍 . The *Motion Search* menu appears.

Motion Search menu

At the *Motion Search* menu, select a time parameter.

To navigate through the options, push up of down on the joystick, or press **esc** + ‖ or **esc** + ▶ .

To select an option push left or right on the joystick, or press **esc** + ◀‖ or **esc** + ‖▶ .

To initiate a search on a selected preset time parameter, press ↵ . Playback begins and the *Motion Search Setup* screen appears.

To customize a time period to search, select **custom** and press ↵ . The *Custom Time* menu appears.

To apply filters to a custom or preset time parameter, press 🔍 . The *Search Filters* menu appears.

Custom Time menu

At the *Custom Time* menu, customize a time period to search.

To navigate through the date and time fields, push left or right on the joystick, or press **esc** + ◀‖ or **esc** + ‖▶ .

To change settings for each option, press **esc** + ‖ or **esc** + ▶ .

To accept the customized time settings, press ↵ . Playback begins and the *Motion Search Setup* screen appears.

Note: To exit the search function, continue pressing esc until all search menus disappear from the monitor.

Search Filters menu

At the *Search Filters* menu, select custom search parameters.

To navigate through the main options in the left column, push the joystick up or down, or press **esc**+ ▮▮ or **esc**+ ▮▶ .

To select /deselect a box in the left column, push right on the joystick, or press **esc**+ ▮▶ . If you select a box, the right column for that item becomes editable.

To navigate through the options in the right column, push the joystick left or right, or press **esc**+ ◀▮▮ or **esc**+ ▮▶ . To change settings push the joystick up or down, or press **esc**+ ▮▮ or **esc**+ ▶ . To accept settings, press ↵ . The left column becomes active.

To select/deselect cameras, press the number keys. For single-digit camera numbers, press <number key>, ↵ . For double-digit camera numbers, press <first digit key>, <second digit key>. Press ⊕ to toggle between selecting all cameras or only camera 1.

To start a search, select **Start Search** and press ↵ . The appropriate search results menu appears.

Motion Search Setup screen

At the *Motion Search Setup* screen, enable or disable areas for motion detection.

To move the selection box around the screen, use the joystick

To toggle the selection box between active and neutral mode, press ▮▮ . If the box is in active mode, a checkmark appears in the box. Move the box over areas you want to enable for motion detection.

To toggle a selected box between disabled and neutral mode, press ■ . If the selected box is in disabled mode, an ✗ will appear in the box. Move the box over areas you want to disable for motion detection.

To start the search, press ↵ . The appropriate search results menu appears.

Search Results menu

At either the activity, test, motions and alarm search results menu or the time/date search results menu, select an entry.

If your search produced no results, press ⟋ to return to the *Search Filters* menu.

To scroll through the results, use the joystick, or press **esc** + ▮▮ or **esc** + ▶ .

To play a selection, press ↵ .

During playback, to set an event replay continuously, press **seq**. *Repeat* appears at the top of the monitor screen.

During playback, to return to the *Search Results* menu, press ⟋ .

To stop playback, press ■.

Keypad key and joystick operation

DSR, VCR, DVR, and multiplexer operation

dsr/vcr	Press **dsr/vcr**, <device number> in Digiplex mode to address a remote recording device (not a DVR)
zone	Press **zone,** <zone number> in zone or Digiplex mode to select a DVR.
●	Start record mode.
■	Stop record or playback mode.
▶	Start playback mode.
❚❚	Pause playback.
▶▶	Fast forward playback.
◀◀	Rewind playback.
❚▶	Reverse-play: shift to forward play. In pause mode: step playback forward one frame.
◀❚	Play: shift to reverse-play. In pause mode: step playback in reverse one frame.
🔍⊕	Toggle between 2X zoom and normal
⟋	Initiate a search on a DVR.

view	Step selected monitor through programmed multiplexer multiscreen views. If using a Triplex, press **view**, <1 to 9> to select a view. For newer model cameras, hold for 3 seconds to view camera name and number.
Joystick	In play or pause mode: Right: fast forward.
	• Left: rewind.
	• Up/down: skip forward/ backward frame by frame.
	• Twist right: step forward at a variable rate.
	• Twist left: step in reverse at a variable rate.
	• Return to center: resume pause mode.
	With 2X magnification on:
	• Right: pan right. Left: pan left.
	• Up/down: pan up or down.

Keypad conventions

, (commas) separate keys to be pressed in succession.

+ (plus signs) separate keys to be pressed simultaneously.

< > indicate numerical addresses or indicators to be entered on the number keypad.

[ ] indicate variable names for keys.

Standard key functions

mon	Press to select monitor. Press and hold for three seconds to view keypad information.
0 to 9	Use in combination with other keys to select cameras, monitors, zones, presets, etc.
esc	Refresh the monitor display. Clear an alarm. Clear a number entry if required number of digits are not entered. **esc**+[key] for shifted function. **esc**+**mon** for key function help. **esc**+**iris** (plus or minus) to change the backlight brightness on the keypad display.
↵	Press and hold until you hear a tone to enter the password menu and begin programming mode.
1st	Press to call up the first site in the annunciation queue.
autofocus	Press to place the selected camera in autofocus mode.

aux X	Field programmable keys for various site-specific applications (the default assignment is printed above the keys.
seq	Select a multiplexer/switcher sequence tour on the active monitor.
alarm	In Digiplex mode, toggle alarm mode between on and off for the current monitor. In zone mode, clear all alarms.
store	Press **store**, <preset number>, **store** to store presets. Press **store**, ◀❚❚ or ❚❚▶ , **store** to set autopan limits. Press **store**, **seq** to access sequence programming for Calibur multiplexers (zone mode only). Press **store**, [aux 1 to 4], **store** to store preset positions 58 to 61.

tour	Press **tour** <tour number> to place a PTZ receiver in tour mode. Press **tour** and hold until you hear a tone to set autopan mode for the current camera.
find	Press **find** <number keys> to view preset camera positions. Press **find**, [aux 1 to 4] to view preset positions 58 to 61.
+ zoom -	Controls the zoom function on selected receiver site's motorized lens.
+ focus -	Controls the focus function on selected receiver site's motorized lens. Temporarily disables the autofocus feature on a GE PTZ. Any joystick movement enables the autofocus.
+ iris -	Controls the iris function on the selected receivers site's motorized lens.

"Shifted" key functions

To select the "shifted" mode for key functions, press and hold **esc** then press the key. Use the help function (**esc**+**mon**) to find the current function assigned to any key.

mon	help
zone	group
1st	macro
autofocus	autopan
aux 1	unlock
aux 2	lock
aux 3	flip
aux 4	stabilize
seq	long sequence
store	group
find	step
face	card
badge	door 1
over	door 2
vol X	slow
vol X	fast

◀❚❚	joystick left
❚❚	joystick up
❚❚▶	joystick right
■	live
🔍⊕	light
◀◀	site down
▶	joystick down
▶▶	site up
●	home
🔦	0 lux
+ zoom -	grab PTZ for zoom + grab End for zoom -
+ iris -	backlight bright/dim

KTD-405A functions

These keys apply to the audio-enabled KTD-405A model only.

talk (aux 4)	Press to talk from keypad to receiver location.
face	Press to select KTR-11 Face Camera.
badge	Press to select KTR-11 Badge Camera.
over	Press to select KTR-11 Overview Camera.
vol ▲	Press to adjust volume level up.
vol ▼	Press to adjust volume level down.

Joystick control

Use the joystick to control a selected PTZ camera. (Note: Zoom joystick control only available on KTD-405/405A.)

Pan	Move the joystick left or right.
Tilt	Move the joystick up or down.
Zoom	Twist the joystick knob clockwise or counterclockwise.

System defaults

Programming settings	Defaults	Range
Keypad address	99	1 to 254
KB3 PTZ protocol	No	Yes / No
Enable remote programming	Yes	Yes / No
Keypad title	*Blank*	0 to 14 characters
Keypad lockout priority	0 = Off	0 to 9 levels
Lowest user programming	58	1 to 128
Program soft keys	No	Yes / No
Change access code	No	Yes / No
Baud rate (KBPS)	0 = Default	0, 9, 19, 38
System controller	No	Yes / No
Operating mode	Digiplex	Digiplex / Zone
System size (cameras)	511	1 to 1599
System size (monitors)	64	1 to 128
System size (multiplexers)	32	0 to 254
System size (DSR/VCR)	32	0 to 32
System size (presets)	63	0 to 127
Set access to cameras	*None set*	Level 0 to 9 per camera
Set access to monitors	*None set*	Level 0 to 9 per monitor
Set access to DSR/VCR	*None set*	Level 0 to 9 per DSR/VCR
Set access to multiplexers	*None set*	Level 0 to 9 per multiplexer
Monitor offset	0	0 to 63
Annunciation	No	Yes / No

Input/output box connections

Terminal strips

Earth ground. To ground.

RS-485 A/B. To and from a DVR or additional keypad. Observe polarity. (Optional, use if you do not use the RJ45 connection.) You can use both the wire terminals and the RJ45 connection for RS-485.

RS-422 IN A/B. In from an upstream Digiplex device such as an RS-422 keypad, alarm chassis. ASCII converter, or time/date generator. Observe polarity.

RS-422 OUT A/B. Out to downstream matrix switchers and PTZ cameras; can also connect to Digiplex controllers or ASCII converters. Observe polarity.

Speaker shield, speaker. To speaker, if used (KTD-405A only).

Power cable

For safety, use a tie-wrap to secure the power cable to the tie-in.
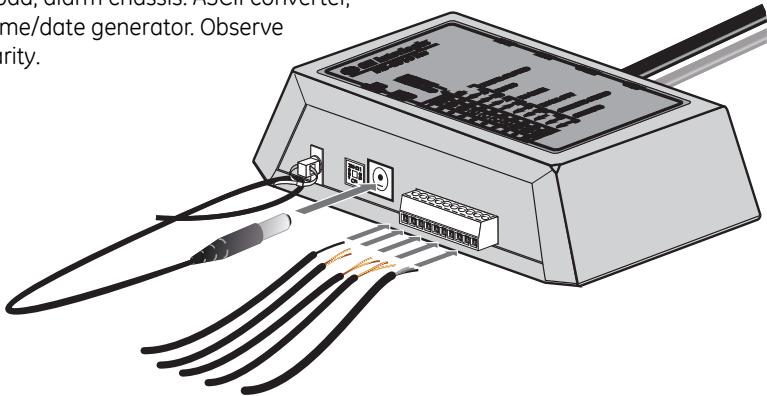
Bias switch

Use to load the RS-485 line appropriately. Slide the switch up for the ON position.

⚠️ **CAUTION:** Unless the system includes a bridge connection using fiber or Ethernet, turn on the bias switch for only one keypad per system.

⚠️ **CAUTION: Earth ground.** For surge protection you can connect to ground at every I/O box. **RS-485 shield**. Ground at only one end of each continuous segment of shield.

RJ11 and RJ45 connectors

RS-485. These are optional connectors for systems that include multiplexers or DVRs with RJ45 connectors.

Pin 3 = RS-485A

Pin 6 = RS-485B

On the terminal strip on the other side of the I/O box, there is also one RS-485 connection.

AUDIO. Connect the RJ11 cable from the keypad (KTD-405A only). This is a crossover cable.

KEYPAD. Connect the black RJ45 cable from the keypad. This is a straight-through cable.
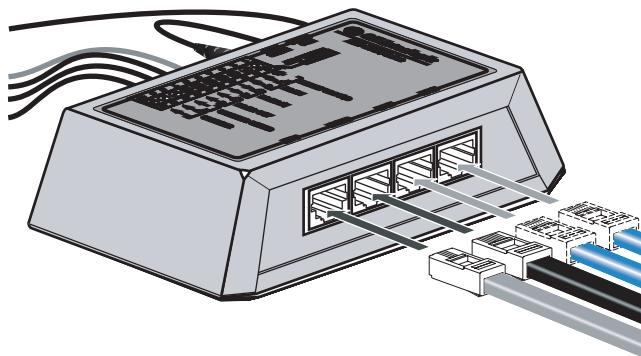
System information table

Use this table to record DVR/zones in your system.   Include a description so you can easily identify the location for each unit/zone.

Zone #	Description

Zone #	Description

Zone #	Description