Installation
Manual

KTD-312
Computer Interface/Data-merger

GE Interlogix

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For technical support before and after installation, call 800-469-1676.

Technical support is available 24 hours a day, 7 days a week.

Call:	**Tech Support**	800-469-1676 (6 A.M. – 5 P.M. PST Monday through Friday)
	Tech Support	541-740-3589 (all other times)
	Main	800-343-3358 or 541-754-9133
Fax:	**Tech Support**	541-752-9096 (available 24 hours a day)
	Main	541-754-7162
Web:	www.ge-interlogix.com	

Item number 1040057A / October 2003

BEFORE YOU BEGIN

Read these instructions before installing or operating this product.

Note: This installation should be made by a qualified service person and should conform to local codes.

This manual provides installation and operation information. To use this document, you must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical hookups

Use this product only for the purpose for which it was designed.

Customer Support

For assistance in installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact Technical Support:

> **GE Interlogix, Video Systems Group**
> Call: 800-469-1676
> Fax: 541-752-9096

Note: You should be at the equipment, ready with details before calling Technical Support.

Conventions Used in this Manual

Boldface or button icons highlight command entries. The following **WARNING, CAUTION,** and **Note** statements identify potential hazards:

* **WARNING:**
Improper use of this equipment can cause severe bodily injury or equipment damage.

** **CAUTION:**
Improper use of this equipment can cause equipment damage.

Note: Notes contain important information about a product or procedure.

* This symbol indicates electrical warnings and cautions.
** This symbol indicates general warnings and cautions.

INTRODUCTION

The KTD-312 Interface Unit provides a communication link between the Digiplex® CCTV control system and an external computer, enabling the computer to have control of the system. The KTD-312 can also function as a Digiplex "data merger" for combining Digiplex control signals from two sources. The KTD-312 cannot function simultaneously as a data merger and a computer interface. The following describes the interface protocol and how the KTD-312 is installed in the Digiplex system. Refer to the ASCII Protocol Document for control protocol information.

COMPUTER INTERFACE

The computer interface is standard RS232. Five of the RS232 lines are used: TX, RX, COMMON, RTS, & CTS. RTS is not currently recognized. CTS is normally asserted but is turned off for a short interval at the end of each command string. If the internal buffer of the KTD-312 is full, CTS will remain off until space is available.

The serial format is 8 bit data with no parity. The most significant bit is always 0. This is equivalent to 7 bit data with parity always 0.

DATA MERGER

NORMAL MERGE

Merge permits two incoming Digiplex control data streams to form a single data-stream output that contains the control information from both inputs (subject to some restrictions).

The merge input does not pass time/date functions (as from a KTS-253) or alarm functions (as from a KTD-463). It also does not pass programming information (from KTD-404s to KTD-405s or KTD-463s). Thus, the merge input is best suited for serial from other controllers (such as KTD-404s or KTD-405 s which do not have KTS-253 or KTD-463 "upstream") in normal control operation. In addition, if the merge input receives more data than the unit is capable of moving to the output stream, that data is discarded.

MERGE WITH COMPUTER REPORTING

When configured to operate as a merger, the received data is still available as an output to a computer. This output operates at the same baud rate as the merge input.
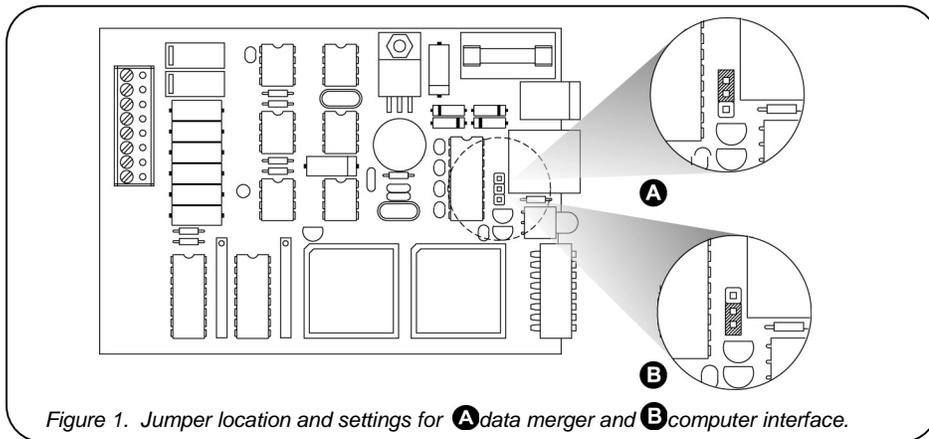
To utilize this output, connect the computer as described for computer interface operation. All transmissions by the computer are ignored at the unit.
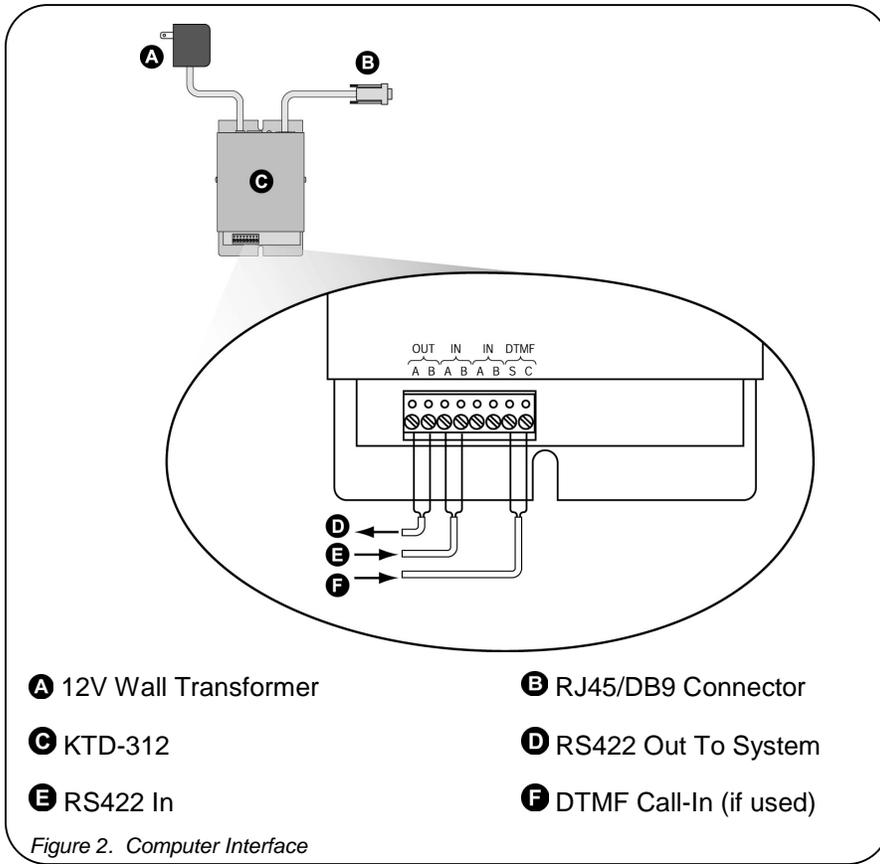
INSTALLING THE **KTD-312**

JUMPER SETTING

See Figure 1 and perform the following:

1)   Remove the KTD-312 cover.

2)   Locate the jumper near the DIP switch.

3)   Set the jumper for the appropriate function (**A** data merger or **B** computer interface (see Figure 1).

Figure 1. Jumper location and settings for **A** *data merger and* **B** *computer interface.*

CABLE CONNECTIONS FOR COMPUTER INTERFACE

A 12V Wall Transformer   **B** RJ45/DB9 Connector

C KTD-312   **D** RS422 Out To System

E RS422 In   **F** DTMF Call-In (if used)

Figure 2. Computer Interface

1) Connect wires as indicated in Figure 2.

2) Connect the RJ45/DB9 to the computer serial communication port.

> **Note:** The computer cable supplied with the KTD-312 is an RJ45 cable, which plugs directly into the KTD-312. An RJ45 to DB9 adaptor is supplied for connection to the computer's serial communication port.

3) Plug in the power supply to the unit.

CABLE CONNECTIONS FOR DATA MERGER

Figure 3 shows cable connections to be used when operating as a data merger

Note: CALL SIGNAL IN is optional and is used to handle DTMF annunciation from door receivers.

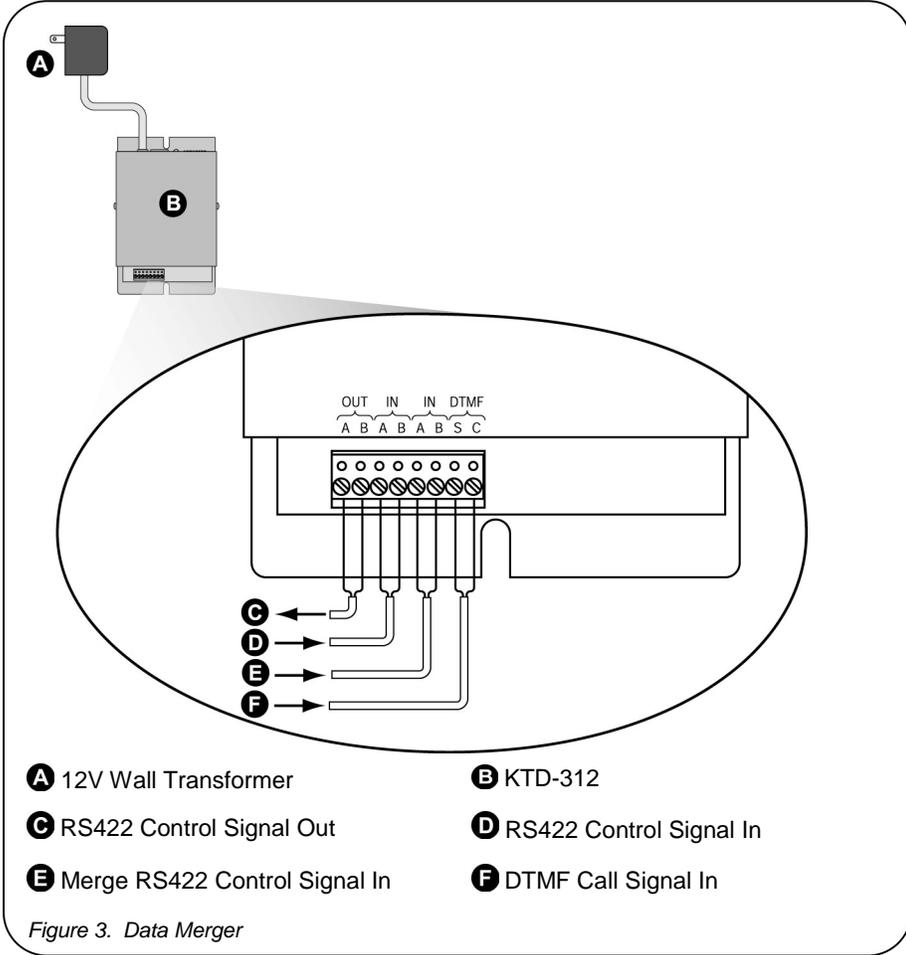See Appendix A for information about the connections to DB25 serial.

A 12V Wall Transformer	**B** KTD-312
C RS422 Control Signal Out	**D** RS422 Control Signal In
E Merge RS422 Control Signal In	**F** DTMF Call Signal In

Figure 3. Data Merger

SETTING THE DIP SWITCH

Switch 1 defines the unit type. Switches 2 and 3 are currently not used and should remain off. See Table 1.

Table 1.   Setting DIP switches for the desired mode of operation

DIP Switch	Function	Setting		
1	Mode	OFF	=	Computer Interface mode
		ON	=	Data Merger mode
2	N/A	OFF	=	Remains off regardless of mode
		ON	=	Should be in OFF position
3	N/A	OFF	=	Remains off regardless of mode
		ON	=	Should be in OFF position
4	Primary RS422 Baud Rate	OFF	=	4800
		ON	=	2400
5	RS232/Secondary RS422 Baud Rate	OFF		Interface mode= 9600 Merge mode=4800
		ON		Interface mode=2400 Merge mode= 2400
6	Not Used			
7	Not Used			
8	Not Used			

LEDs

The LED is useful for diagnosing problems with the computer interface.

ON POWER UP

- In interface mode, the green LED is on.

- In merge mode, the red LED is on.

IN USE

- In interface mode, the green LED toggles with each RS232 character received.

- In merge mode, the red LED toggles with each merge command received.

APPENDIX A

DB9 TO DB25 ADAPTOR

Adaptors can be purchased for conversion between DB9 and DB25 connectors. The adaptor needed for this should be DB9 male on one end and DB25 female on the other. If it is designed for RS232 operation, the connections should be wired together.

Note: If you cannot locate an adaptor for purchase, an adaptor can be constructed easily using a DB9 male connector, a DB25 female connector, and a cable with a minimum of five wires. For most computers, the two connectors are wired as shown in Table A1.

Table A1. RS232 Connections

Signal	DB-9 Pin	DB25-Pin
RxD	2	3
TxD	3	2
COM	5	7
RTS	7	4
CTS	8	5