User

Manual

KTS-253/KTS-253-16

Time/Date/Title Generator

GE Interlogix

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

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Call:	**Tech Support**	800-469-1676 (6 A.M. – 5 P.M. PST Monday through Friday)
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	Main	800-343-3358 or 541-754-9133
Fax:	**Tech Support**	541-752-9096 (available 24 hours a day)
	Main	541-754-7162
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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.

CE

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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

Intended use

Use this product only for the purpose for which it was designed; refer to the product specification and user documentation.

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, please contact Kalatel Technical Support and Sales:

GE Interlogix, Kalatel division
Call: 800-469-1676
Fax: 541-752-9096

Note: You should be at the equipment and 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 that can occur if the equipment is handled improperly:

* **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.

1 INSTALLATION

CAUTION:
Do not connect power to the last two pins on the six-pin terminal strip. The last two pins are used for auxiliary in, not power. Connecting power to these pins will damage the unit.

Before making connections, remove the unit's factory-installed battery insulation strip to ensure that time is kept when power is lost.

1) Locate the clear plastic battery insulation strip on the back of the unit (see Figures 1 and 2).

2) Pull this strip until it is removed it from the chassis.

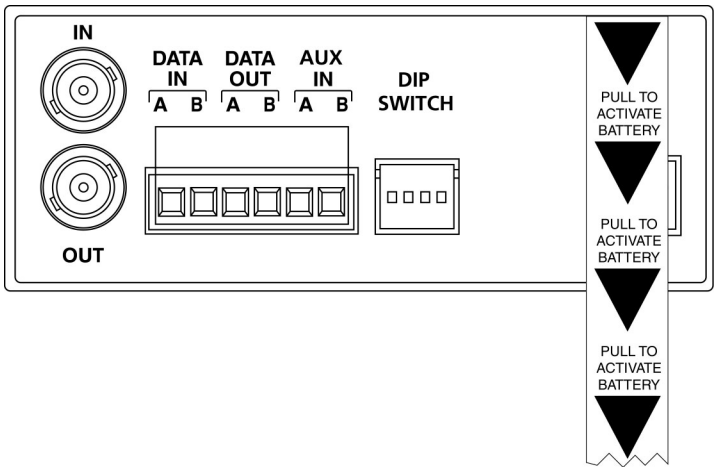


Figure 1. KTS-253 battery insulation strip

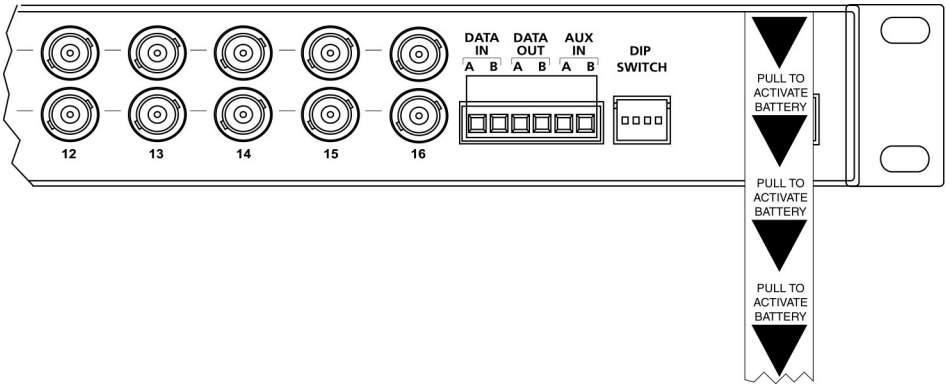


Figure 2. KTS-253-16 battery insulation strip

1.1 SINGLE CHANNEL SETUP

See Figures 3 and 4 and perform the following:

1) Attach the video out BNC connector of the camera to the IN BNC connector of the unit.

2) Attach the video in BNC connector of the monitor to the OUT BNC connector of the unit.

3) If you are installing a KTS-253-16, continue with steps 2 and 3 until all cameras and monitors are connected.

4) Supply power to the unit.

Note: If you are using a 12 VDC power supply, set the time source to Internal or Aux In (see Time Source, section 2.3.2).

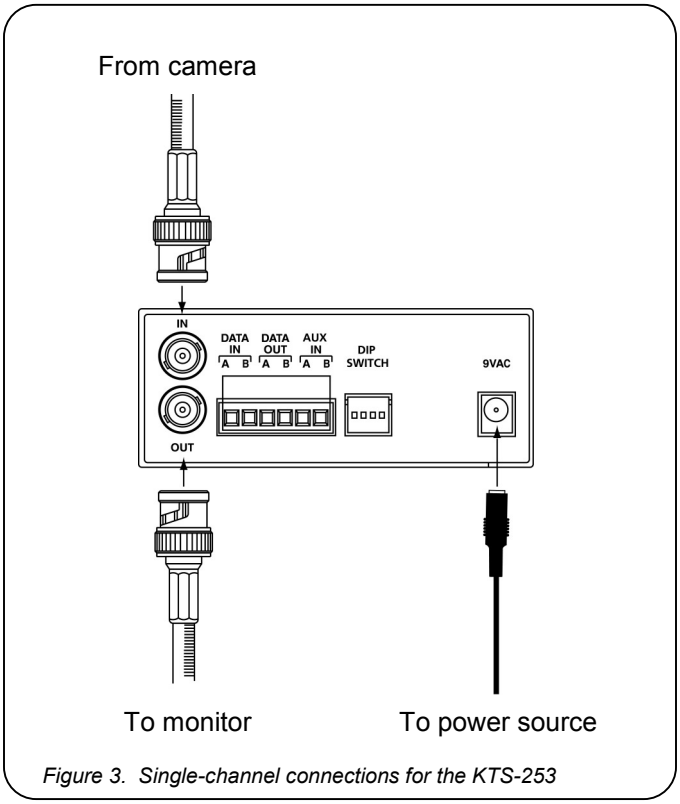


Figure 3. Single-channel connections for the KTS-253

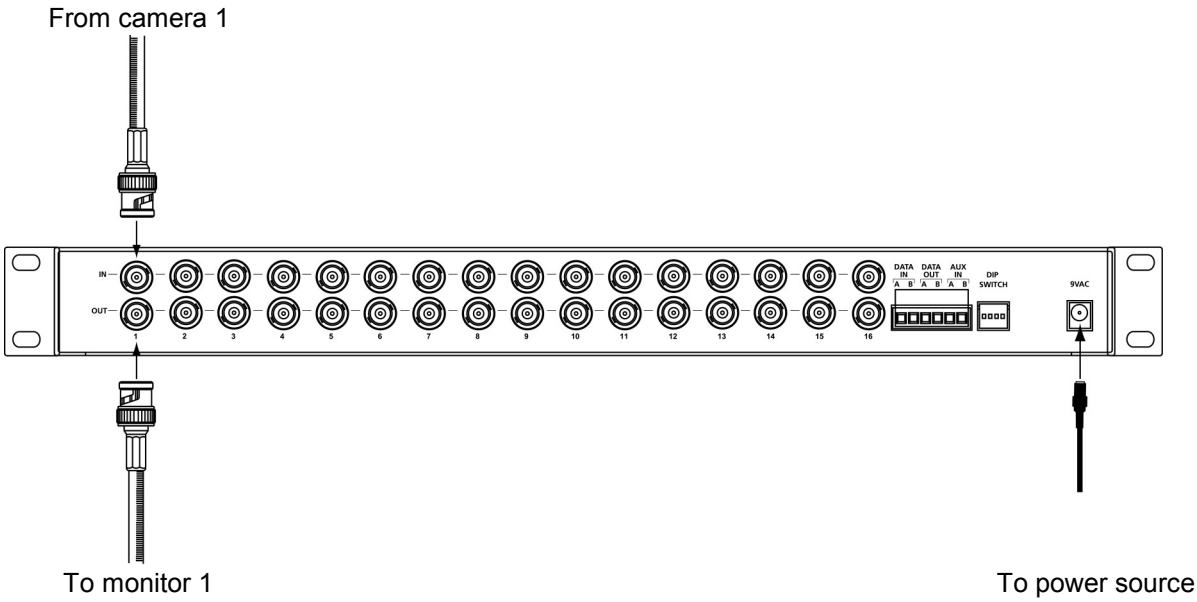


Figure 4. Single-channel connections for the KTS-253-16

1.2 MASTER/SLAVE SETUP

For master/slave configuration, use either a “daisy chain” or “star” configuration (see Figures 5 and 6). The last slave unit in a “daisy chain” must be terminated; all other slave units in the configuration must have termination turned off (see Table 1).

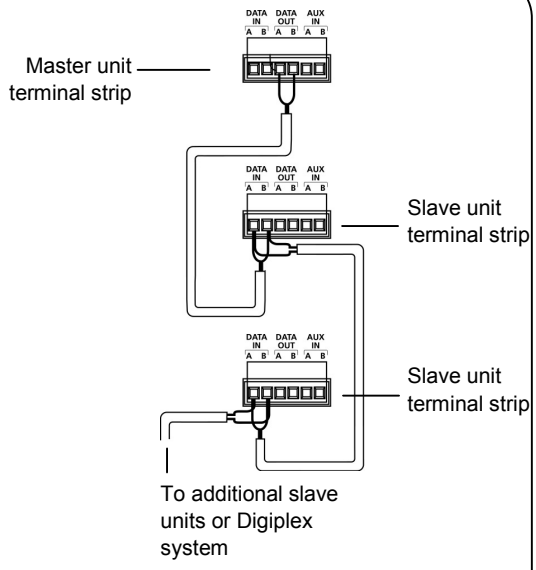


Figure 5. Daisy chain configuration for units incorporated into a system

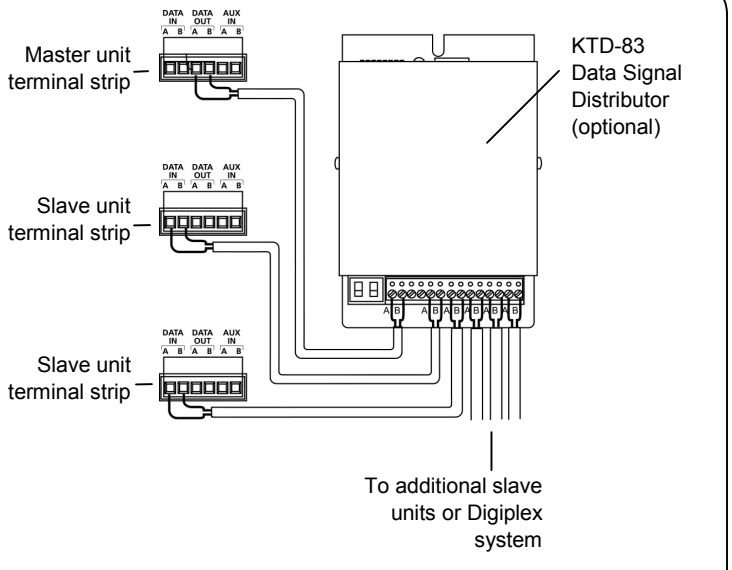
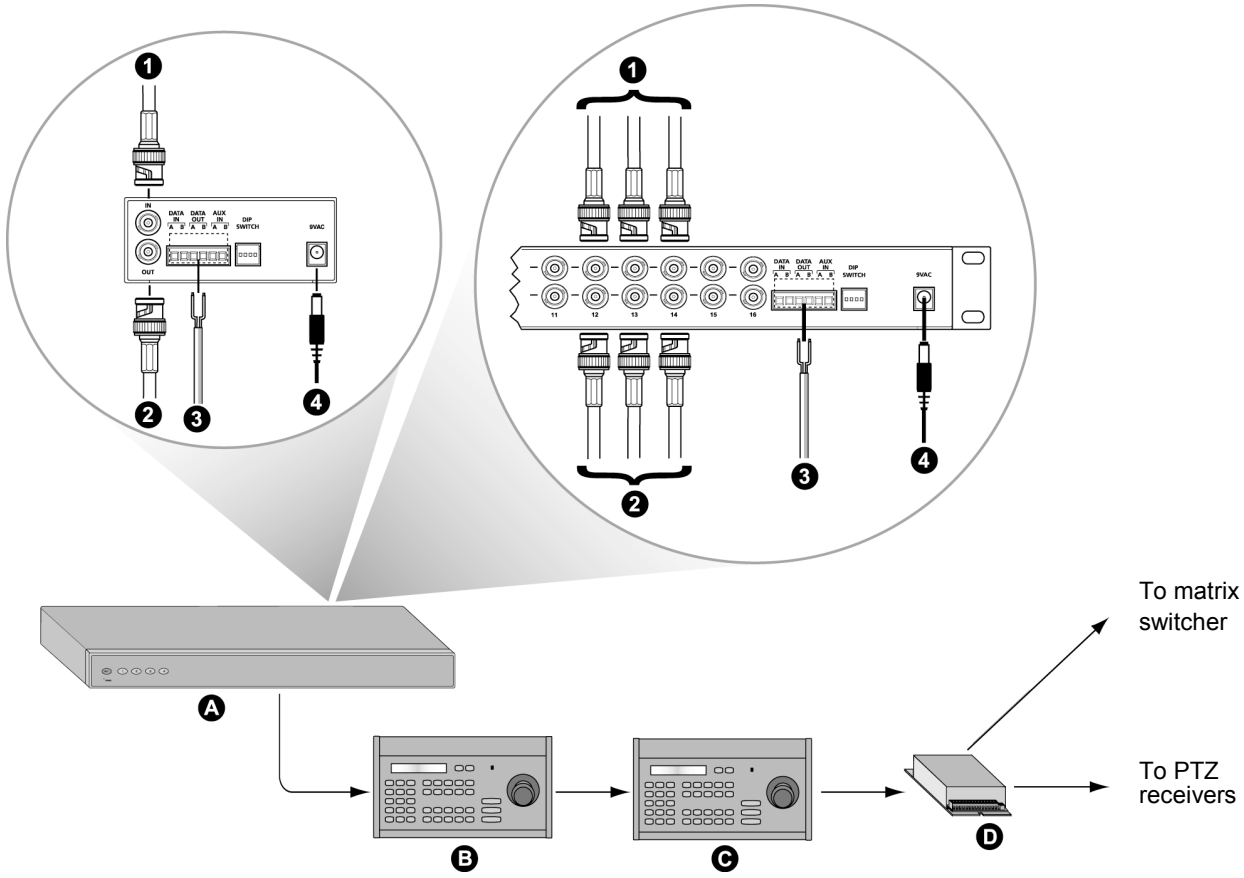


Figure 6. Star configuration for units incorporated into a system

1.3 DIGIPLEX® SYSTEM SETUP

Make the connections in Figure 7 if you are not using an alarm and Figure 8 if you are. The last slave unit in a configuration must be terminated; all other slave units in the configuration must have termination turned off (see Table 1).



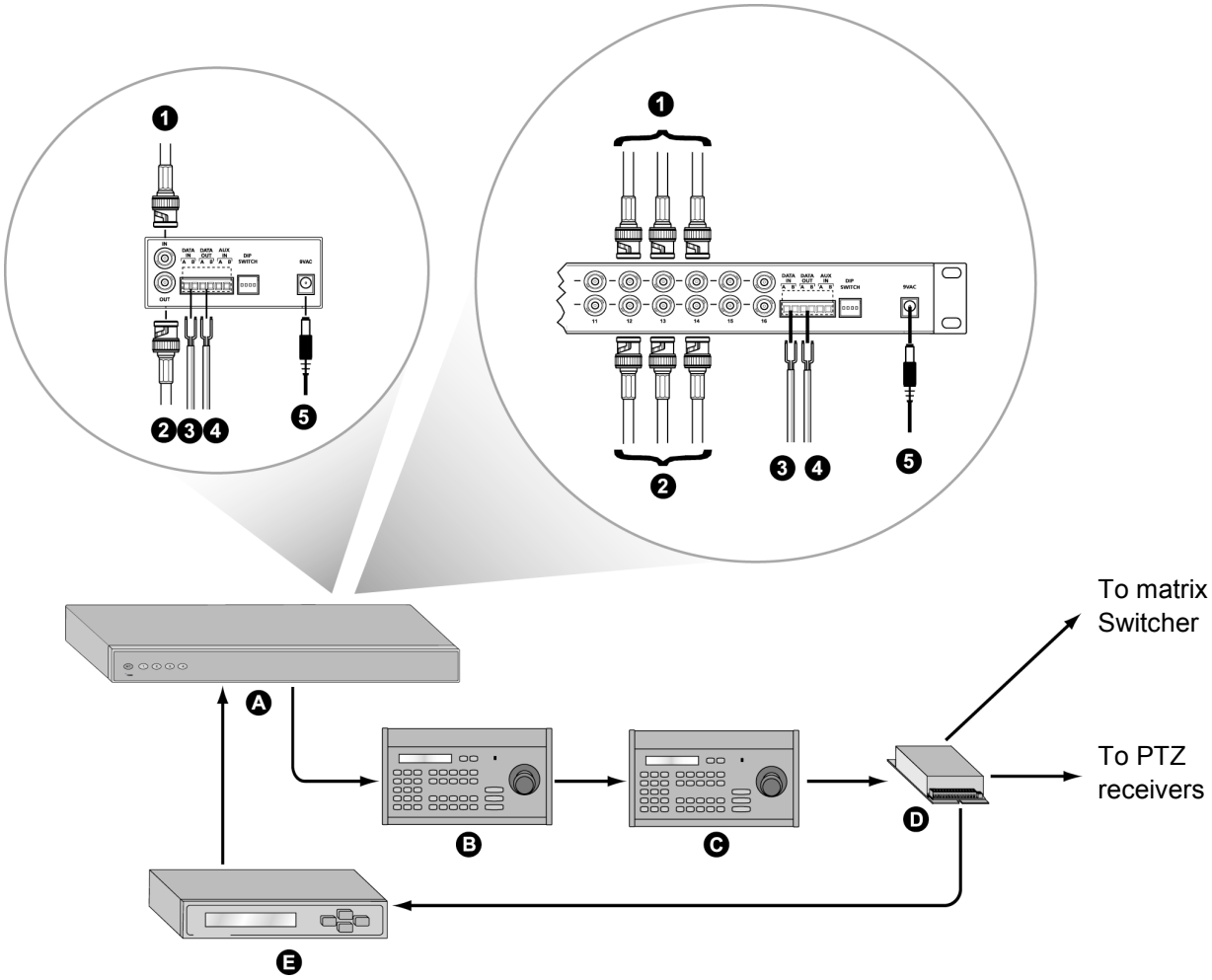
System Components

- A Time/Date/Title Generator
- B Keypad
- C Keypad
- D KTD-83

Connections

- 1 From cameras
- 2 To monitors
- 3 To keypad
- 4 To power

Figure 7. Digiplex setup without alarm



System Components

- A Time/Date/Title Generator
- B Keypad
- C Keypad
- D KTD-83
- E Alarm

Connections

- 1 From cameras
- 2 To monitors
- 3 From alarm
- 4 To keypad
- 5 To power

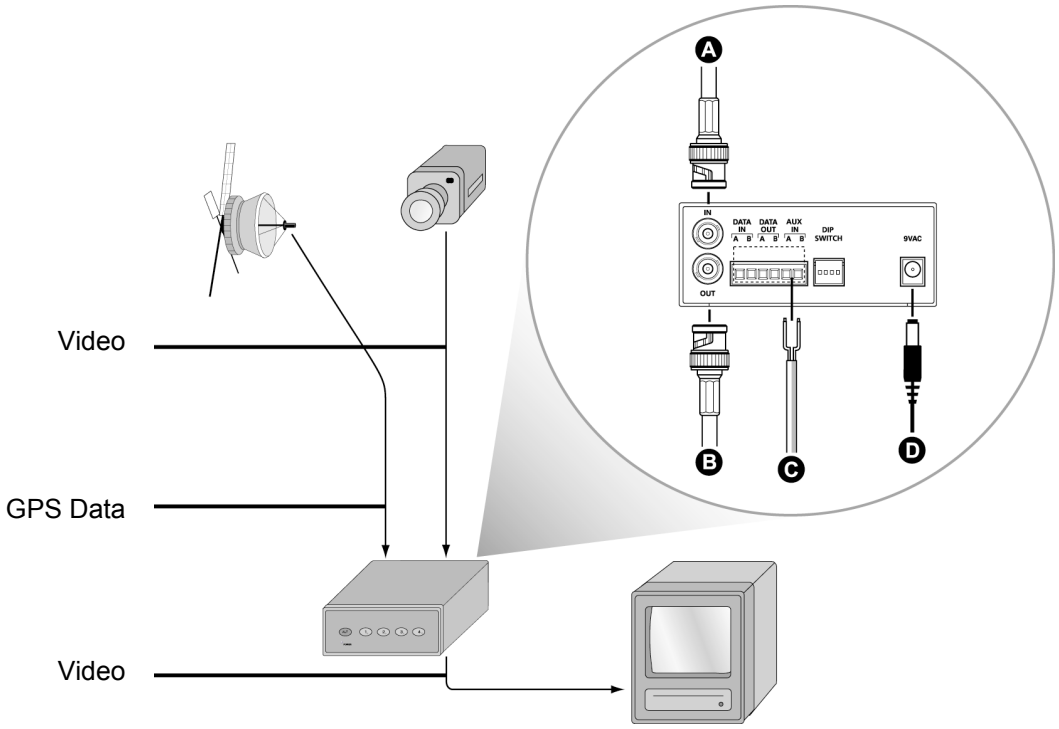
Figure 8. Digiplex setup with alarm

1.4 CONNECTING TO A GPS RECEIVER

The GPS is a worldwide satellite-based electronic navigation system provided by the U.S. government. It transmits accurate time and date information that can be decoded by many commercially available GPS receivers. Most receivers provide data output according to NMEA 0183B standard Version 1 or Version 2.0.1. This unit needs 4800 bps output, 8N1, ASCII. A KTD-87 can convert the GPS data signal from RS232 to RS422. See Figures 9 and 10.

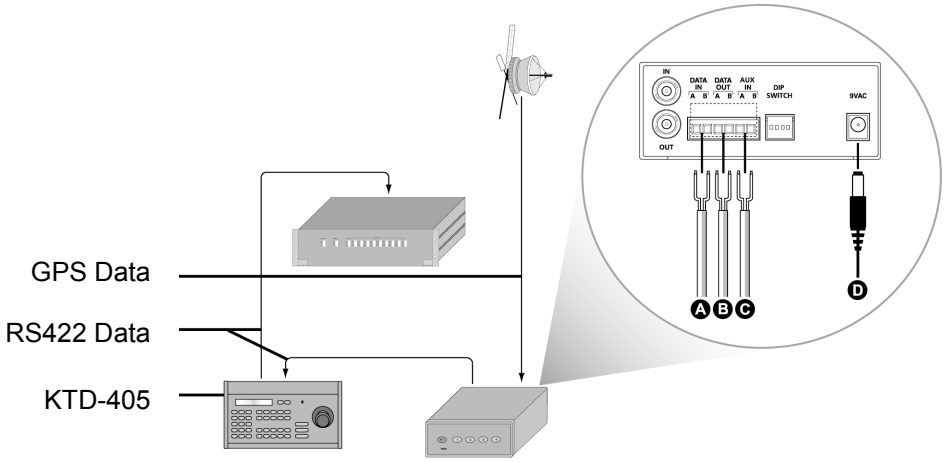
When connecting the units with a GPS receiver, the following requirements must be met:

- The GPS receiver must be installed according to its manufacturer's instructions.
- The GPS receiver must output the "$GPRMC" or "$GPZDA" NMEA sentence at RS422-compatible voltage levels. If the GPS outputs RS232 a KTD-87 can be used to convert the signal to RS422.
- The twisted pair that carries the RS422 signal is polarity sensitive. If the cable is connected in reverse, the GPS signal will not be decoded properly.
- The unit that is connected to the GPS receiver must have AUX IN as its time source and must be set as the MASTER (see the programming section).
- The NMEA style $GPRMC sentence is in the following format:
  $GPRMC,hhmmss,,,,,,,,ddmmyy,,*00
  (e.g., 7:08:19 p.m., December 19, 1995, is $GPRMC,190819,,,,,,,,191295,,*00)



A From camera
B To monitor
C From GPS
D To power

Figure 9. RS232 connection to a GPS receiver



Ⓐ From alarm (if used)
Ⓑ To Keypad
Ⓒ From GPS
Ⓓ To power

Figure 10. RS422 connection to a GPS receiver

1.5 DIP SWITCH SETTINGS

See Tables 1 and 2.

Table 1. DIP switch functions

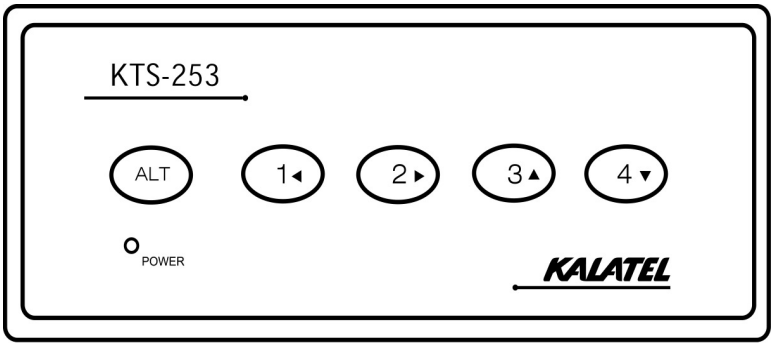
DIP Switch	ON	OFF
1 (unit)	KTS-253	KTS-253-16
2 (future use)	N/A	N/A
3 (data in)	RS422	RS485
4 (termination)	Terminated	Not terminated

Table 2. DIP switch defaults

DIP Switch	KTS-253	KTS-253-16
1	ON	OFF
2	OFF	OFF
3	ON	ON
4	ON	ON

2 PROGRAMMING

All programming is performed with the buttons on the front panel (see Figure 11).



ALT	Function key
1◄	Move left
2►	Move right
3▲	Move up
4▼	Move down

Figure 11. Front panel

To enter the programming mode, press and hold the ***ALT*** button until the Enter Access Code display (Figure 12) appears.

Note: For PAL mode blue screen simultaneously hold ***ALT*** and ***1***.

Within 5 seconds, enter the access code ***3***, ***1***, ***2***, ***4***; the Main Menu (Figure 13) appears.

Note: Every menu has a help menu that can be viewed by pressing and holding the ***ALT*** button.

```
ENTER ACCESS CODE:
      XXXX

CODE DATE 05-07-01

IN ALL MENUS PRESS AND
HOLD -ALT- FOR 3 SEC
TO ACCESS HELP.
```

Figure 12. Enter Access Code display

```
M1 MAIN MENU
_____________________
TIME / DATE          -1-
TITLES               -2-
COMMUNICATIONS       -3-
DISPLAY POSITIONS    -4-


                  ALT = EXIT
```

Figure 13. Main Menu

2.1 SETTING THE TIME/DATE

In the Main Menu (Figure 13), press ***1*** to advance to the Time/Date menu (Figure 14).

Note: In a master/slave setup, the time and date modes must be the same for the master and slave units.

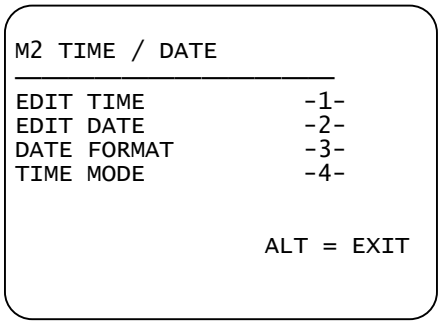


Figure 14. Time/Date menu

2.1.1 SET TIME

1) Press ***4*** to advance to the Time Mode menu (Figure 15).

2) Use buttons ***3*** and ***4*** (▲▼) to toggle between 12-hour format and 24-hour format (e.g., 9:00:00p or 21:00:00).

3) Press ***ALT*** to save your selection and return to the Time/ Date menu (Figure 14).

4) Press ***1*** to advance to the Edit Time menu (Figure 16).

5) Use buttons ***1*** and ***2*** (◀▶) to move among hours, minutes, and seconds. Use buttons ***3*** and ***4*** (▲▼) to set the hours, minutes, and seconds.

6) Press ***ALT*** to save the time and return to the Time/Date menu (Figure 14).

Note: You must reset the time to account for daylight-saving time.

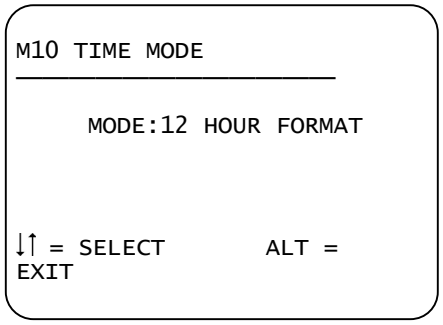


Figure 15. Time Mode menu

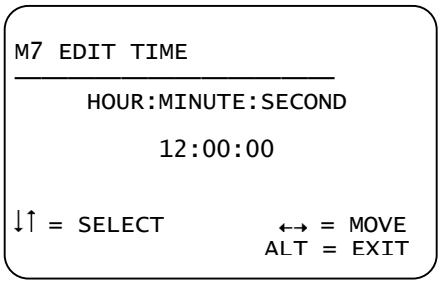


Figure 16. Edit Time menu

2.1.2 SET DATE

1) Press ***3*** to advance to the Format Date menu (Figure 17).

2) Use buttons ***3*** and ***4*** (▲▼) to select the date format you prefer:
- MM/DD/YY
- MM-DD-YY
- DD/MM/YY
- DD-MM-YY

```
M9 DATE FORMAT
──────────────────────

      FORMAT:→MM/DD/YY←


↓↑ = SELECT        ALT = EXIT
```

Figure 17. Format Date menu

3) Press ***ALT*** to save your selection and return to the Time/Date menu (Figure 14).

4) Press ***2*** to advance to the Edit Date menu (Figure 18).

5) Use buttons ***1*** and ***2*** (◀▶) to move among month, day, and year. Use buttons ***3*** and ***4*** (▲▼) to select the month, day, and year.

6) Press ***ALT*** to save your date and return to the Time/Date menu (Figure 14).

7) Press ***ALT*** to return to the Main Menu (Figure 13).

```
M8 EDIT DATE
──────────────────────

      MONTH/DAY/YEAR

          01/01/01

↓↑ = SELECT        ↔  = MOVE
                   ALT = EXIT
```

Figure 18. Edit Date menu

2.2 CREATING TITLES

In the Main Menu (Figure 13), press ***2*** to advance to the Camera Titles menu (Figure 19 for the KTS-253-16; Figure 20 for the KTS-253).

Note: A camera title can be up to 22 characters.

```
M3 CAMERA TITLES
──────────────────────
SELECT CAMERA NUMBER 1-16
THEN TITLE IT.

01----------------------------

↓↑ = SELECT        ↔  = MOVE
                   ALT = EXIT
```

Figure 19. Camera Titles menu for KTS-253-16

```
M3 CAMERA TITLES
──────────────────────

TITLE CAMERA.

01----------------------------

↓↑ = SELECT        ↔  = MOVE
                   ALT = EXIT
```

Figure 20. Camera Titles menu for KTS-253

1) If you are programming a KTS-253-16, use buttons ***3*** and ***4*** (▲▼) to select the camera you want to title. If you are programming a KTS-253, skip to step 3.

2) Use button ***2*** (▶) to move the cursor to the right, into the first text position.

3) Use buttons ***3*** and ***4*** (▲▼) to select an alphanumeric character (0-9 and A-Z).

4) Use buttons ***1*** and ***2*** (◀▶) to move among the text positions and buttons ***3*** and ***4*** (▲▼) to select characters.

5) When you have finished titling a camera, either move back to the camera selection and select another camera, or press ***ALT*** to save your title and return to the Main Menu (Figure 13).

2.3 COMMUNICATIONS

In the Main Menu (Figure 13), press ***3*** to advance to the Communications menu (Figure 21).

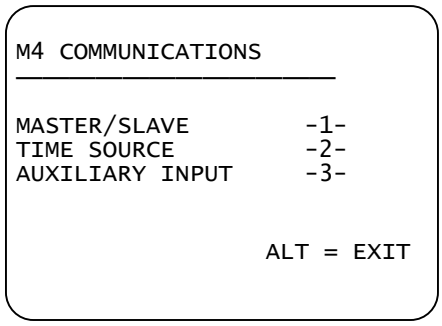


Figure 21. Communication menu

2.3.1 MASTER/SLAVE

To set a unit as a master or as a slave, perform the following:

1) Press ***1*** to advance to the Master/Slave menu (Figure 22.)

- A master unit is part of the digital protocol; its time and date data is displayed by all slave units in the system.
- A slave unit synchronizes its time and date data to that of the master unit.

2) Use buttons ***3*** and ***4*** (▲▼) to toggle between MASTER and SLAVE.

Note: To synchronize the time and date, if you have only one unit in a system, set it as the master. If you have more than one unit, set only one as master and the others as slave.

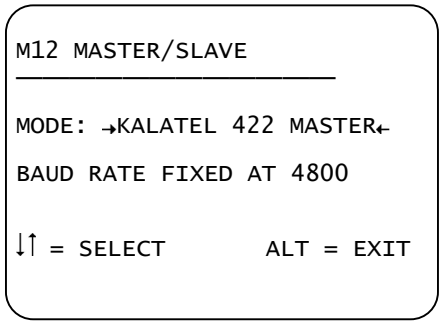


Figure 22. Edit Time menu

3) Press ***ALT*** to save your selection and return to the Communications menu (Figure 21).

2.3.2 TIME SOURCE

1) Press ***2*** to advance to the Time Source menu (Figure 23).

2) Use buttons ***3*** and ***4*** (▲▼) to select a time source:
- INTERNAL—An internal real-time clock (RTC)
- 60HZ LINE—For use with electricity sent in 60 Hz power grid
- 50HZ LINE—For use with electricity sent in 50 Hz power grid
- AUX IN—For use with external GPS

```
M13 TIME SOURCE
──────────────────────

TIME SOURCE: →INTERNAL←



↓↑ = SELECT        ALT = EXIT
```

Figure 23. Time Source menu

Note: A slave unit's time source should be Internal.

3) Press ***ALT*** to save your time source and return to the Communications menu (Figure 21).

2.3.3 AUXILIARY INPUT

Auxiliary Input synchronizes the time and date to a GPS receiver, which is set to Coordinated Universal Time (UTC), or Greenwich Mean Time (GMT). To get the correct time for your location, set the HOUR OFFSET FROM UTC/GMT in the AUX IN menu:

Note: See section 1.4, Connecting to a GPS Receiver.

1) Press ***3*** to advance to the Auxiliary In menu (Figure 24).

2) Use buttons ***3*** and ***4*** (▲▼) to set the offset hours appropriate for your location.

Note: You must reset the offset hours to account for daylight-saving time.

3) Press ***ALT*** to save your offset hours and return to the Communications menu (Figure 21).

```
M15 AUX IN
──────────────────────
HOURS OFFSET FORM UTC/GMT:00

THE GPS SYSTEM USES A WORLD-
WIDE STANDARD FOR TIME AND
DATE KNOWN AS COORDINATED
UNIVERSAL TIME OR GREENWICH
MEAN TIME. AN HOUR OFFSET IS
NEEDED TO CREATE LOCAL TIME.
↓↑ = SELECT        ALT = EXIT
```

Figure 24. Auxiliary In menu

2.3.4 DISPLAY POSITIONS

Note: The time/date/title generators offer 11 rows and right, left, or center justification for your time, date, and title displays.

1) In the Main Menu (Figure 13), press ***4***. If you are programming a KTS-253-16, the Display Positions menu (Figure 25) appears. If you are programming a KTS-253, skip to step 4; the Set display positions menu (Figure 26) appears.

2) Use buttons ***3*** and ***4*** (▲▼) to select the number of the camera you wish to affect or to select ALL.

```
M5 DISPLAY POSITIONS
──────────────────────
ENTER CAMERA NUMBER TO
SET DISPLAY POSITION

1-16 OR ALL: ALL


↓↑ = SELECT        ALT = EXIT
```

Figure 25. Display Positions menu

3) Press ***ALT*** to advance to the next menu. If you selected a camera number, the Set display positions menu Figure 26) appears. If you selected ALL, the Confirm Change menu (Figure 27) appears, and pressing ***3*** will take you to the Set display positions menu (Figure 26).

CAUTION:
If you selected ALL, the Confirm Change menu (Figure 27) appears, offering a safety check. Pressing ***3*** will override the display position programming of all camera displays. Pressing ***1*** or ***ALT*** will return you to the Main Menu (Figure 13).

4) In the Set display positions menu (Figure 26), use buttons ***1*** and ***2*** (◀ ▶) to move the time display left or right and use buttons **3** and **4** (▲▼) to move the display up and down.

```
HH:MM:SS
DD/MM/YY




CAMERA 01 DESCRIPTION
```

Figure 26. Set display positions menu

```
M14 CONFIRM CHANGE
──────────────────────
ARE YOU SURE?
NO                  -1-
YES                 -3-

CAUTION: CHANGES DISPLAY
POSITIONS FOR ALL VIDEO
CHANNELS
                 ALT = EXIT
```

Figure 27. Confirm Change menu

5) Press ***ALT***.

6) Use buttons ***1*** and ***2*** (◀ ▶) to move the date display left or right and use buttons ***3*** and ***4*** (▲▼) to move the display up and down.

7) Press ***ALT***.

8) Use buttons ***1*** and ***2*** (◀ ▶) to move the title display left or right and use buttons ***3*** and ***4*** (▼▲) to move the display up and down.

Note: If the camera title is on the same row as either the time or the date, the first 18 title characters will be displayed. If the camera title is on the same row as both the time and the date, the first eight title characters will be displayed.

9) Press ***ALT*** to save your settings and return to the Main Menu (Figure 13).

2.4 ERROR DETECTION

The units feature an “e” at the end of the time display in the “a” (a.m.) or “p” (p.m.) position that warns the user if an abnormal event, such as a power failure, has occurred. The following is a list of the messages that will be generated:

- POWER FAILURE
- LOST LINE FREQUENCY
- NO SLAVE INPUT
- NO GPS INPUT

To display the error message, press ***1***, ***2***, ***3***, or ***4***. To erase the message, press ***1***, ***2***, ***3***, or ***4*** or wait until the message is erased by the periodic screen-refresh cycle. If the error has been corrected, such as a power failure, the “e” will disappear. If the error has not been corrected, such as no slave input, the “e” will remain until the error has been corrected.