# UCP-SD16

Router Switch Control Panel

Installation and Operations Guide

## *UCP-SD16 - Router Switch Control Panel*


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4750 Wiley Post Way, Suite 150
Salt Lake City, Utah 84116-2878 U.S.A.

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This section provides important safety guidelines for the Operator and Service Personnel. Specific warnings and cautions are found throughout the guide where they apply, but may not appear here. Please read and follow the important safety information, specifically those instructions related to risk of fire, electric shock, or injury to persons.

### Safety Symbols

- Hazardous Voltage symbol

- Caution symbol. The product is marked with this symbol when it is necessary to refer to the manual to prevent damage to the product.

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- Have qualified personnel perform safety checks after any service.

## Cautions

Please observe the following important cautions:

- When installing this equipment do not install power cords to building surfaces. To prevent damage when replacing fuses, locate and correct the problem that caused the fuse to blow, before reconnecting power.
- Use only specified replacement parts

## Notices

Please observe the following important notes:


- When the adjacent symbol is indicated on the chassis, please refer to the manual for additional information.
- For the HD-2020 Chassis and Master Control Panel, refer to “Connecting and Disconnecting Power” - Chapter 2 (Hardware Installation).

## *Company Information*

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- **After Hours Emergency**: +1 (800) 447-7204. Follow the menu instructions for Emergency Service.

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# Table of Contents

UCP-SD16 - Router Switch Control Panel ..... ii
Copyrights and Trademarks ..... ii
Notice ..... ii
FCC Compliance ..... ii
Declaration of Conformity ..... iii
Important Safeguards and Notices ..... iv
Safety Symbols ..... iv
Warnings ..... iv
Cautions ..... v
Notices ..... v
Company Information ..... vi
Warranty Policies ..... vii
Hardware Warranty ..... vii
Software Warranty ..... vii
Customer Remedies ..... vii

CHAPTER 1 Introduction

Product Description ..... 1-2
Product Overview ..... 1-3
Front Panel ..... 1-3
Back Panel ..... 1-4
Features and Capabilities ..... 1-5
UCP-SD16/Router Operation ..... 1-6
Where to Go Next ..... 1-7

CHAPTER 2 Installation

Site and Tool Requirements ..... 2-2
Site Requirements ..... 2-2
Required Hardware Tool ..... 2-2
Required Software Tool ..... 2-2
Shipment Contents and Unpacking ..... 2-2
Shipment Contents ..... 2-2

Unpacking .....2-4
Swapping Module Positions ..... 2-4
Installing the Unit ..... 2-6
U-NET Cable ..... 2-8
Where to Go Next ..... 2-9

## CHAPTER 3 Using the UCP-SD16

Overview of Front Panel Modules ..... 3-2
Panel Contrast Adjustment ..... 3-2
Status Module .....3-3
Data Entry Module .....3-5
Panel Operation ..... 3-7
Selecting a Destination .....3-8
Selecting Levels for Breakaway .....3-9
Selecting a Source .....3-10
Protecting the Destination .....3-11
Direct Takes ..... 3-11
Data Entry and Panel Menu Screens ..... 3-12
Main Menu Icons .....3-12
Menu Tree .....3-13
Menu Displays .....3-13
Basic Rules ..... 3-15
Panel Security ..... 3-18
Panel Security Level .....3-18
Operator Panel ..... 3-18
Supervisor Panel ..... 3-18
Panel Security Buttons .....3-18
PROTECT ..... 3-19
LOCK ..... 3-19
CLEAR ..... 3-19
Security Status .....3-20
Attribute Take ..... 3-22
UCP-SD16 Panel changes to support attributes. .....3-22
DST: .....3-23
ATTR: .....3-23
LVL: .....3-23
STAT: .....3-24

Here is an Example: ..... 3-24
Additional Panel Lock Detail ..... 3-25
How to use the panel lock feature: ..... 3-25

APPENDIX A Specifications

Product Specification ..... A-2

CHAPTER 1

# Introduction

This chapter provides an overview of the UCP-SD16 control panel and contains the following:


Product Description ..... 1-2
Product Overview ..... 1-3
Front Panel ..... 1-3
Back Panel ..... 1-4
Features and Capabilities ..... 1-5
UCP-SD16/Router Operation ..... 1-6
Where to Go Next ..... 1-7

## *Product Description*

The UCP-SD16 is a router switch control panel designed to operate with Utah Scientific's UTAH-300 router switch and SC-3 controller.

This universal control panel is modular in design and consists of a base chassis with positions for two modules—one module is used for data entry (numeric and mnemonic) while the other primarily displays the operating status of the unit. The modules can be swapped with each other, allowing right or left hand data entry.


**FIGURE 1-1. UCP-SD16**

The UCP-SD16 makes use of graphic displays and softkeys along with a relatively flat menu to provide a powerful and easy to use router control panel.

This 2 RU device operates using an external 12 VDC power supply and communicates with the router controller via U-NET communications. It is possible to daisy-chain multiple panels together onto one system via the U-NET ports located on the UCP-SD16 back panel. When connected to a SC-3 controller, the system can support a maximum of 250 panels, with distances of up to 1,000 feet per daisy-chain.

# Product Overview

## Front Panel

Shown below are the components that make up the front panel of a UCP-SD16.

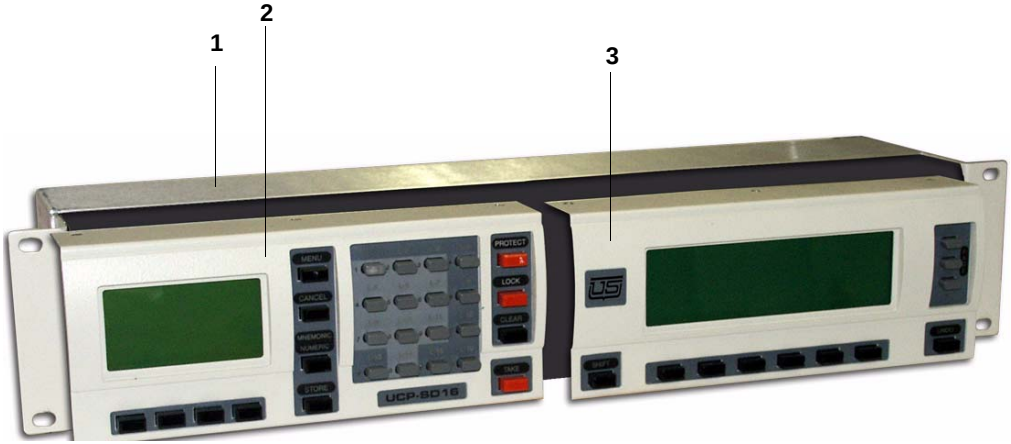



**FIGURE 1-2. UCP-SD16 Front Panel View**

Table 1-1 provides information on the major panel components called out in Figure 1-2.

**TABLE 1-1. Front Panel Components**

| | | |
|---|---|---|
| 1 | UCP-SD16 Chassis | Contains main PCB that status and data entry modules plug into |
| 2 | Status Module | One of two plug-in modules, this module displays current configuration of source-to-destination settings. |
| 3 | Data Entry Module | One of two plug-in modules, this module is used for panel setup and operations. |

For a detailed description of the components that make up each of the panels, refer to Chapter 3, “Using the UCP SD16”.

## Back Panel

Shown below are the components that make up the back panel of the UCP-SD16.

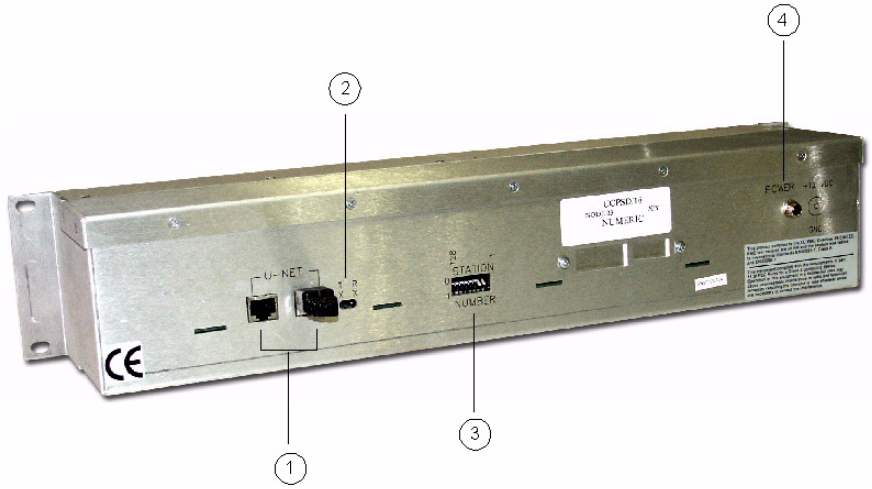



**FIGURE 1-3. UCP-SD16 Back Panel View**

Table 1-2 provides information on the components called out in Figure 1-3.

**TABLE 1-2. Back Panel Components**

| Item | Name | Description |
|---|---|---|
| 1 | U-NET Ports | Two U-NET cable ports for connecting to and communicating with the router controller. One port (either one) is used for this purpose, while the second port is either terminated or used for connecting the unit to another daisy-chained panel. |
| 2 | U-NET Indicators | Two LEDs provide visual indication of receive (RX) and transmit (TX) communication activity. |
| 3 | Station Number | DIP switch pack used to configure the U-NET address of the device. |
| 4 | Power Connector | Connector for the 12 VCD power supply. |

For a detailed description of the components that make up the back panel, refer to Chapter 2, “Installation”.

## *Features and Capabilities*

The UCP features the following:

- U-Net compliant (SC-3 compatible)
- Up to 250 panels per SC-3 controller
- Compact 2 RU rack mount packaging
- Dedicated multi-destination and level status display
- Dedicated preset data entry display with soft key menu system
- Direct take capability
- Salvo editing and execution
- Multi-destination operation
- 16 button keypad providing full matrix addressing capability
- 16 level breakaway capability
- Dedicated and expanded protect and lock functions
- Panels configured for supervisor or operator level
- Improved output monitoring capability
- Modular design allowing expanded number of available panel types
- Ability to undo a take
- Operating software stored in FLASH PROM, which allows software upgrades to be downloaded
- Self-diagnostics
- Source toggle functionality
- Level LEDs illuminate to quickly determine levels selected
- Ability to daisy-chain up to thirty two panels per controller UNET port
- Plug-in modules can be swapped for left or right hand data entry

## UCP-SD16/Router Operation

Understanding the operation of the UCP requires a basic knowledge of router operation. The router that is controlled by a UCP-SD16 contains one or more matrix boards. For example, a matrix could contain 16 signal input ports referred to as sources and 16 signal output ports referred to as destinations. A signal present at a source is made available at a destination by turning on the appropriate crosspoint connection between the two ports. Enabling a crosspoint is a function of the UCP-SD16 and is referred to as a take.

The example illustrated here depicts a matrix crosspoint (indicated by a x) being turned on that enables a signal at source #14 to be present at destination #12.

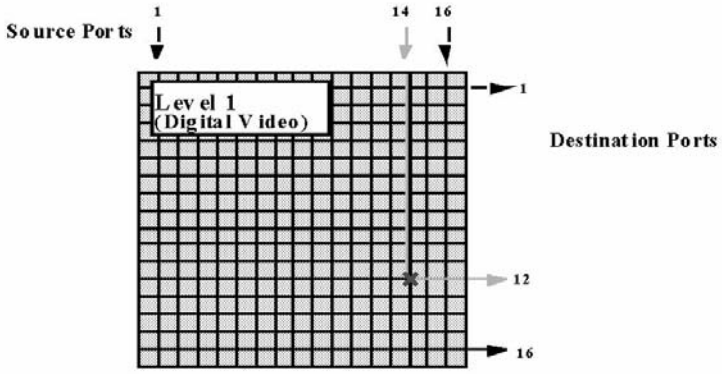



**FIGURE 1-4. Matrix Sample**

Each matrix is designed to handle a specific signal type, such as digital video or analog audio. Each signal type is referred to as a level and includes:

- Digital Video
- High Definition Video
- Asynchronous Digital Audio
- Synchronous Digital Audio
- Analog Video (composite or component)
- Analog Audio (left and right channels)

Depending on the application, a router can be configured with one or more levels.

Routing switchers can switch many signal levels simultaneously. A simple route connects one signal level from one source device, such as a VTR, to one destination device, such as a video monitor. A complex route connects multiple signal levels from one source device, such as a satellite feed, to multiple destinations, such as a group of VTRs and monitors.

Audio and video signals can be switched individually or in groups. Any source signal can be switched to any destination or group of destinations.

A switch can be performed in one of two ways. As an all-follow, the switch is performed simultaneously on all the levels within a router. An example of an all-follow take would be the switching of a source's audio and video together. The other way to perform a switch is called a breakaway, where only some of the levels perform the switch. You would execute a breakaway if you wanted the video from one source and the audio from a different source.

## Where to Go Next

Chapter 2, "Installation", provides information for the proper installation of the UCP-SD16 control panel.

CHAPTER 2

# Installation

This chapter provides information on installing the UCP-SD16 and contains the following:


Site and Tool Requirements ..... 2-2
Site Requirements ..... 2-2
Required Hardware Tool ..... 2-2
Required Software Tool ..... 2-2
Shipment Contents and Unpacking ..... 2-2
Shipment Contents ..... 2-2
Unpacking ..... 2-4
Swapping Module Positions ..... 2-4
Installing the Unit ..... 2-6
U-NET Cable ..... 2-8
Where to Go Next ..... 2-9

## *Site and Tool Requirements*

### Site Requirements

The UCP-SD16 panel is a 2 RU device designed to be rack-mounted in a standard 19” wide equipment rack. Refer to Specifications page A-1, for details concerning the environmental specifications of this device.

### Required Hardware Tool

The only tools required to install the panel is:

·a screwdriver for the four rack mounting screws (not provided)

·phillips head screwdriver for swapping modules (optional)

### Required Software Tool

At this time, no software is required for programming of the UCP-SD16 panel.

## *Shipment Contents and Unpacking*

### Shipment Contents

The UCP-SD16 control panel assembly is available in either an AC or DC version and consists of the following model numbers:

**TABLE 2-1. UCP-SD16 Models**

| Model | Input Power | Left Module | Right Module |
|---|---|---|---|
| 80366-1 | AC | Status | Data |
| 80366-2 | AC | Data | Status |
| 80366-3 | DC | Status | Data |
| 80366-4 | DC | Data | Status |

Each assembly consists of the following:

- UCP-SD16 Control Panel


**FIGURE 2-1. UCP-SD16 Control Panel**

- 10’ U-NET Cable (P/N 94005-0010)

**FIGURE 2-2. U-NET Cable**

- VDC Power Supply (AC input: P/N 94001-0101 / DC input: P/N 80319-1)

**FIGURE 2-3. 12 VDC Power Supply**

- *UCP-SD16 Installation and Operation Guide (P/N 82101-0057)*

### Unpacking

To unpack the unit:

1. Remove the unit from the shipping carton. You may want to save the packing material in case you need to repackage the unit later.
2. Check the contents of the shipment against the items listed on the packing slip. Report any discrepancies to Utah Scientific's Customer Service department (refer to Contacting Customer Service page xvi).

## *Swapping Module Positions*

The positions of the status and data entry modules within the chassis can be switched if you prefer to have the keyboard of the data entry module on the left side of the chassis. This optional installation step must be performed prior to rack-mounting the unit. Both modules are removed and installed in the same manner.

**Caution**

The UCP-SD16 contains static-sensitive CMOS circuitry. Proper handling and grounding measures are required during this procedure to control static discharges. Be sure you are properly grounded before removing modules from the chassis unit.

Required tool: phillips head screwdriver

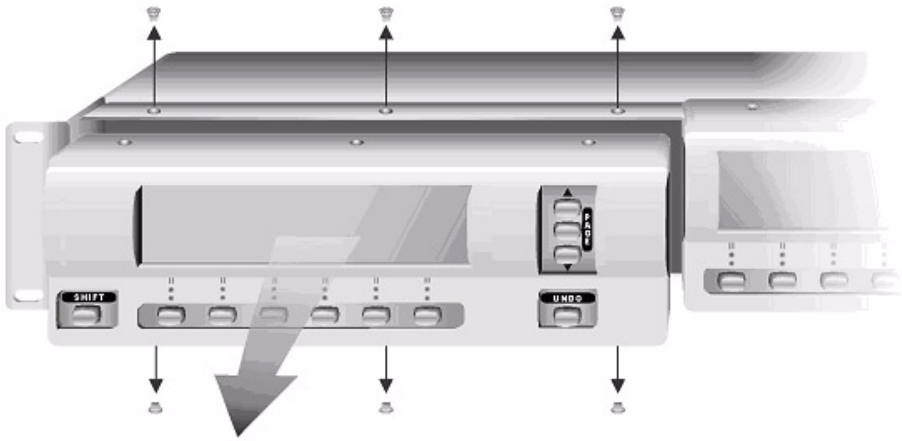



**FIGURE 2-4. Module Removal**

**To remove module from chassis:**

1.Remove 3 screws that secure module to bottom of chassis.

2.Remove 3 screws that secure module to top of chassis.

3.Pull module subassembly toward you and unplug 64 pin connector, freeing module from chassis.

4.Repeat steps 1, 2, and 3 for remaining module.

**To install module into chassis:**

1.Position module in front of chassis at desired location. Guide module into front of chassis, ensuring proper alignment and docking of 64 pin connector.

2.Install 3 screws that secure module to top of chassis.

3.Install 3 screws that secure module to bottom of chassis.

4.Repeat steps 1, 2, and 3 for remaining module.

## Installing the Unit

The UCP-SD16 is a 2 RU device designed to be rack-mounted in a standard 19” (48.26 cm) wide equipment cabinet. These devices can be installed as a single unit or they can be daisy-chained together via the U-NET connectors (1) and U-NET cable.

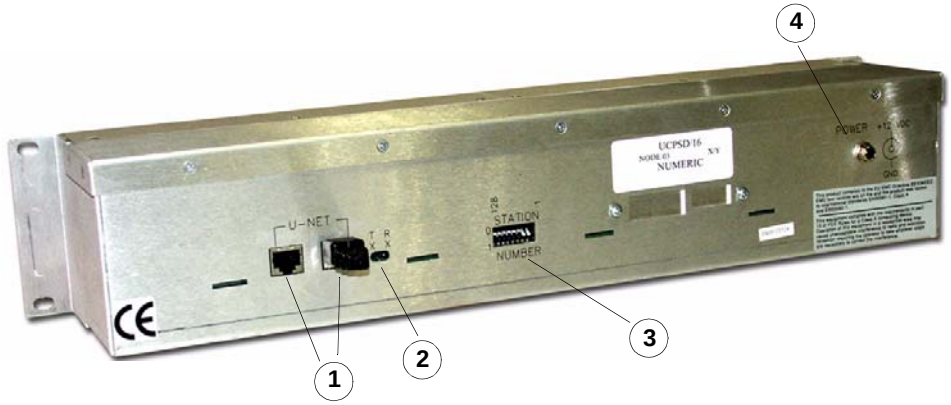



**FIGURE 2-5. UCP-SD16 Back Panel**

To install the unit:

1. ***Set the panel’s network address*** using the Station Number DIP switch (3) located on the back panel.

This is a binary setting and must be set to a unique address within the network of devices. Only 250 of the 256 possible binary addresses are available as some of the addresses are reserved. Those available for selection are 1 - 250. When configuring the DIP switch, a binary 0 (off) is set by placing the switch in the up position and a binary 1 (on) is selected by placing the switch in the down position.

The least significant bit (bit 0) is the switch at the far right hand side as indicated by Table 2-2.

**TABLE 2-2. DIP Switch Binary Table**

| Switch | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Binary | $2^7$ | $2^6$ | $2^5$ | $2^4$ | $2^3$ | $2^2$ | $2^1$ | $2^0$ |
| Represents | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |

As an example, to set the panel address to six (6), turn switches 6 and 7 on (down), all others off (up).

2. Place the unit in the equipment rack, align the holes of the mounting brackets with the holes in the rack and secure the unit with four mounting screws (not provided).
3. Connect the U-NET cable between either one of the U-NET ports on the back panel of the UCP-SD16 (refer to Figure 2-5 on page 2-6, callout #1) and the U-NET port on the back of the controller. In a daisy-chain configuration of panels, attach the cable to the device positioned before the panel on the network.
4. Place the U-NET terminator on the remaining UCP-SD16 U-NET port if the panel is the only (or last) unit on the daisy chain. If the panel is to be daisy-chained to another panel, use the remaining port to connect the U-NET cable going to the next panel.

**Note:** *The last device on the daisy chain must be terminated or improper or unreliable operation may occur.*

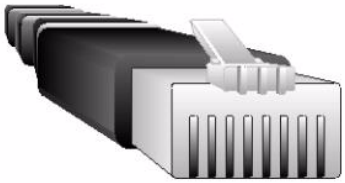


**FIGURE 2-6. U-NET Terminator**

**Note:** *The U-NET terminator is not supplied with the unit. Use the terminator that was plugged into the controller (or the UCP-SD16 panel located before the one being installed).*

5. ***Plug the 12 VDC power supply into a local 110 VAC power receptacle*** (AC version) or 36 - 72 VDC power source (DC version), then attach the DC output power cord to the power connector on the back panel of the UCP-SD16 (refer to Figure 2-5 on page 2-6, callout #4).

## *U-NET Cable*

Each UCP-SD16 panel is supplied with a 10 foot U-NET cable used for communications between the controller and the panel. This is a standard 10Base-T cable—any off-the-shelf cable conforming to the IEEE 802.3 standard can be used for this application.

Should you decide to build your own cable, this section contains the information necessary to construct a U-NET cable.

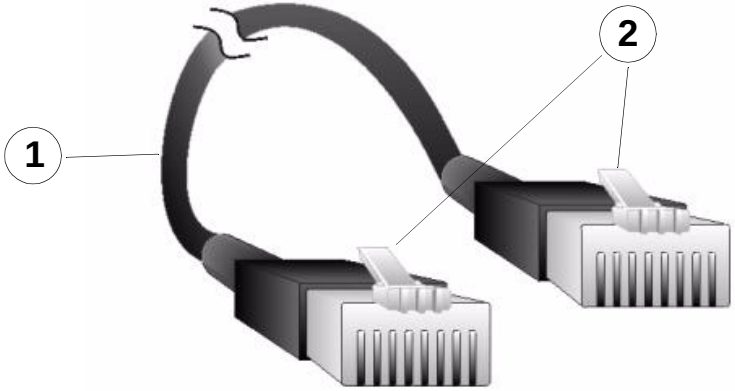



**FIGURE 2-7. U-NET Cable Construction**

Referring to Figure 2-7, the U-NET cable (1) utilizes a twisted pair configuration with category 5 UTP cable and RJ-45 jacks (2). Up to 32 control panels can be connected to a controller's UNET port in a daisy-chain topology with a maximum cable length for the entire chain of 1000 feet.

Figure 2-8 illustrates the U-NET cable configuration of a standard straight-through (pinouts:1-1, 2-2, etc.) Ethernet cable.

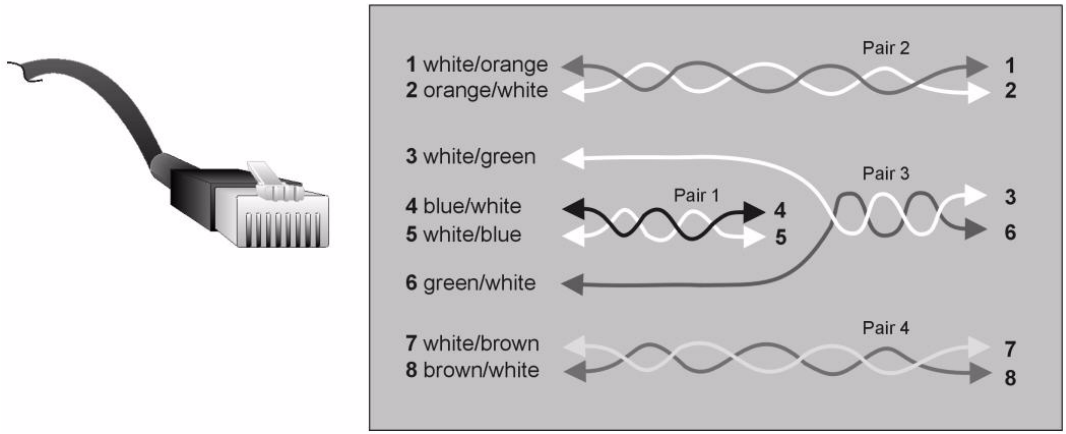



**FIGURE 2-8. Straight-Through Ethernet Cable Configuration**

While this type of cable configuration could be used for the controller-to-panel cable, the only pairs actually required by the devices are pairs 1 and 2. It is imperative that wires in each of the pairs remain in that pair in order to retain the balanced properties of the cable.

## *Where to Go Next*

For panel operation information, proceed to Chapter 3, “Using the UCP SD16”.

CHAPTER 3

# Using the UCP-SD16

This chapter covers the operation of the UCP-SD16 control panel and contains the following:


Overview of Front Panel Modules ..... 3-2
Panel Operation ..... 3-6
Direct Takes ..... 3-10
Data Entry and Panel Menu Screens ..... 3-11
Panel Security ..... 3-17
Attribute Take ..... 3-21
Additional Panel Lock Detail ..... 3-24

## *Overview of Front Panel Modules*

Once the unit is configured and installed, all router control operations are performed using the two front panel modules: the status (1) and data entry (2) modules. This chapter describes in detail the components that make up each module.


**FIGURE 3-1. UCP-SD16 Modules**

### *Panel Contrast Adjustment*

Contrast for both displays is adjusted by holding the two (illustrated) buttons down while using the corresponding buttons to adjust contrast up or down. Note the separate adjustments for right and left displays.

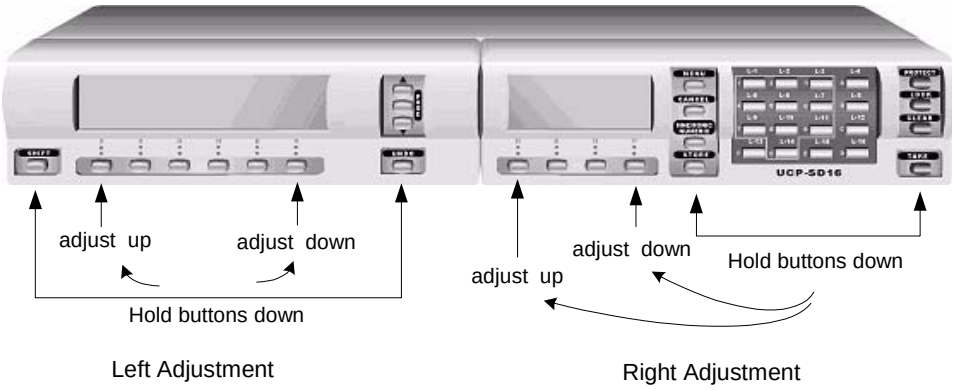



**FIGURE 3-2. Contrast Adjustment**

Also included in this chapter is an example of operating the panel by performing a breakaway take.

## Status Module

The primary function of this module is to display the status of the router matrix source-to-destination configurations.

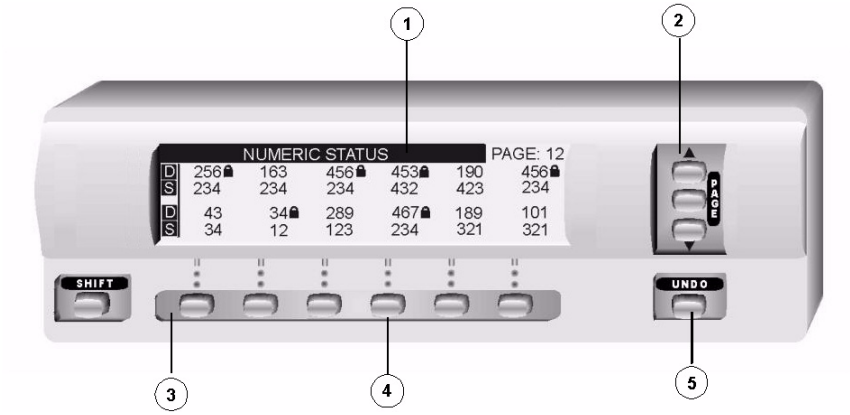



**FIGURE 3-3. Status Panel**

TABLE 3-1. **Status Panel Callouts (refer to Figure 3-2)**

| Item | Name | Description |
|---|---|---|
| 1 | Navigation Buttons | Three buttons used for paging through information displayed on Status Module LCD (1). |
| 2 | Navigation Buttons | • **Press top button to page up.**<br>• PAGE Button - Use this middle button in conjunction with data entry keypad to select specific page number (i.e., to select page 3 and display its content, press and release PAGE button then press keypad number 3).<br>• **Press bottom button to page down.**<br>Paging will not roll over at limits, making it easy to find beginning or end of list or pages. |
| 3 | Shift Button | Used in conjunction with softkeys to provide more functions. |
| 4 | Softkeys | SIX SOFTKEY BUTTONS used to select menu options displayed directly above each button on Status Module LCD (1). These buttons can also be programmed to represent specific sources (refer to Security Status Indicators,... Page 3-19).<br>When softkey is pressed, menu option selected will display in reverse print (black background/white letters). |
| 5 | Undo Button | Press this button to recover from accidental source selection. |

## Data Entry Module

The primary function of this module is to provide both set up and operational capabilities for the UCP-SD16.

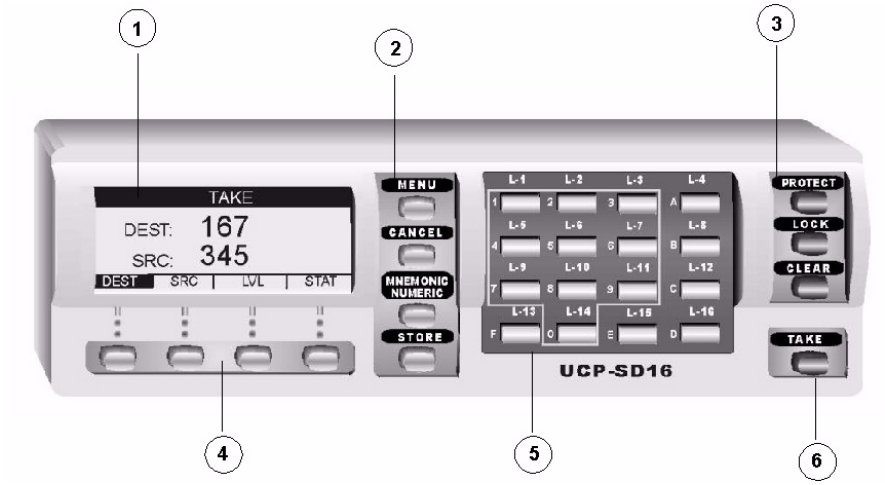



**FIGURE 3-4. Data Entry Panel**

**TABLE 3-2. Data Entry Panel Callouts**

| Item | Name | Description |
|---|---|---|
| 1 | LCD | Data entry graphics display |
| 2 | Operation Buttons | Operation buttons include:<br>**MENU** - Press this button to step through various data entry menu options (if more are available than what is currently displayed).<br>**CANCEL** - If take is pending (TAKE button indicator (6) blinking), press this button to cancel changes made and reset display to last destination selected and source assigned to it.<br>**MNEMONIC/NUMERIC** - Press this button to toggle between mnemonic and numeric style of operation.<br>**STORE** - Press this button instead of TAKE button to store take information entered. |

TABLE 3-2. **Data Entry Panel Callouts**

| Item | Name | Description |
|---|---|---|
| 3 | Security Buttons | **THREE BUTTONS** associated with protecting a destination and its assigned source from accidental changes:<br>**PROTECT** - Depending on security level of other network panels, prevents other panels from making source selection changes to a destination.<br>**LOCK** - Depending on security level of other network panels, prevents all panels -- including the panel that initiated the lock -- from making source selection changes to a destination.<br>**CLEAR** - Clears a protect or lock function on the destination currently displayed.<br>For more information regarding panel security and security levels, refer to Panel Security. (page 3-16) |
| 4 | Soft Keys | **FOUR SOFTKEY BUTTONS** used to select options listed on the LCD menu bar directly above each of the buttons. The options available from the menu bar will vary depending on the menu displayed using the menu button.<br>When a softkey is pressed, the menu option selected will display in reverse print (black background/white letters). |
| 5 | Keypad | **KEYPAD** with dual functionality:<br>**Numeric and mnemonic** source, destination, and level selection: 0 - 9, A - F (16 possible selection choices).<br>**Level selection**: L-1 to L-16. To display level information on both modules, press softkey directly under level menu option (**LVL**). Level indicators on keypad that represent valid levels will illuminated when LVL selected. |
| 6 | Take Buttons | Press this button to make the take after source and destination have been selected. When information has been properly selected, take button indicator will blink, signifying take is ready to be executed. |

## *Panel Operation*

The UCP-SD16 operates in a numeric style of source, destination, and level selection. With numeric style, all sources, destinations, and levels are referred to by unique numbers assigned to each. The keypad located on the data entry module is used to directly select and enter the destination and source numbers for each level of destination.

Performing a take consists of the following 3 steps, with step 2 only required for breakaway takes:

1. Select destination
2. Select level(s) if creating a breakaway take
3. Select source

The data entry module's LCD provides a preset location where the destination, level, and source information for the take is gathered before being executed. This module also provides a CANCEL button should it be necessary to terminate the selection process before completion of the take.

The following example demonstrates how to perform a breakaway take in which source 189 is assigned to destination 167 for levels 1, 2, 3 only. The destination will then be protected by locking it.

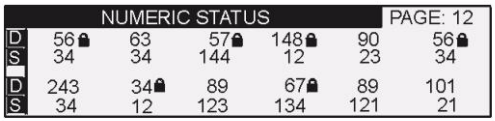
## Selecting a Destination

To select destination 167:

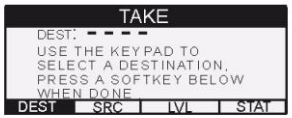
1. **Select <DEST> using corresponding softkey on data entry module.**

Data entry LCD indicates destination softkey has been selected (reverse print DEST). Destination field displayed with dash line indicating new destination selection should be made.

Status module LCD displays multi-destination status.



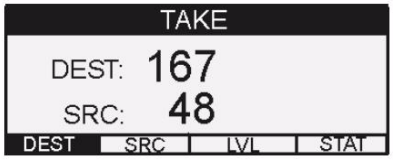

**Status Module LCD**




**Data Entry Module LCD**

2. **Enter destination 167 using keypad on data entry module.**
3. **Press any softkey on data entry module to enter destination number.**

In example, <STAT> softkey pressed. LCD displays source currently assigned to destination 167.



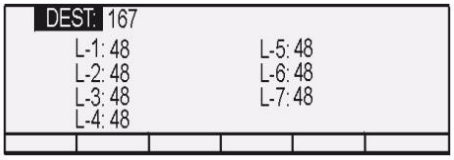
## Selecting Levels for Breakaway

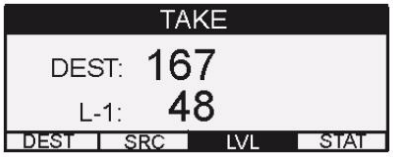
To select levels 1, 2, and 3:

4. **Select <LVL> using corresponding softkey of data entry module.**

Data entry module LCD indicates level softkey has been selected (reverse print LVL). Display shows current level 1 source (48) assigned to destination (167).

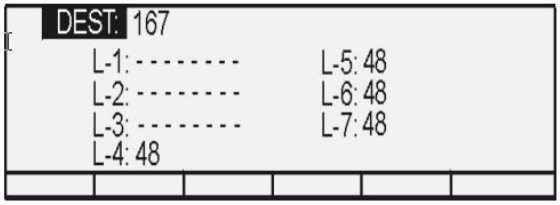
Status module LCD displays current level map.




5. **Select required levels (L-1, L-2, L-3) for breakaway using corresponding level-selection keys on data entry module keypad.**

As levels are selected, dash line appears after level number indicating level is ready for source selection.

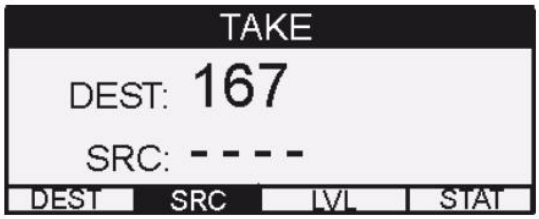


## Selecting a Source

To select source 189:

6. **Select <SRC> using corresponding softkey on data entry module.**

LCD indicates source softkey has been selected (reverse print SRC). Source field displayed with dash line indicating new source selection should be made.




7. **Enter source 189 using keypad on data entry module.**

New source selected for levels 1, 2, and 3. Take button indicator blinks indicating take ready to be executed.

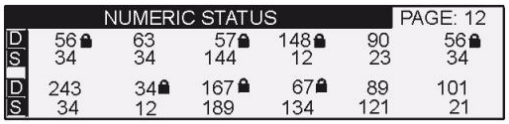
8. **Do one of the following:**

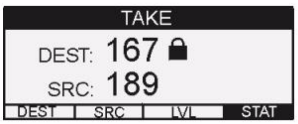
Press <TAKE> button on data entry module to execute take,

or,

Press <CANCEL> to terminate source select operation.

Status module LCD updated with new source (189) for destination 167.



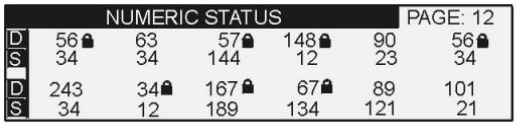



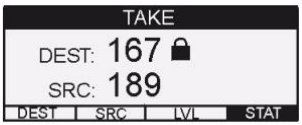
### Protecting the Destination

To protect destination 167:

9. Press PROTECT button on data entry module.

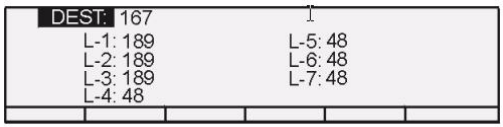
Destination 167 now protected as indicated by padlock symbol. Refer to Panel Security, page 3-9 for more information regarding this security function.

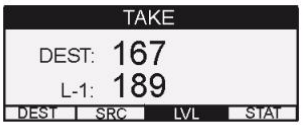



10. Optional: Select <LVL> using corresponding softkey on data entry module to verify new level map.

Status module LCD displays level map showing new source selected for levels 1, 2, and 3 of destination 167.




## *Direct Takes*

A button-per-source style of operation can also be supported using the UCP-SD16's status module. Each of the 6 softkeys located below the status module's LCD can be programmed to function as a dedicated source selection button.

**To assign a source to a status module's softkey:**

1. Select a **Destination** (refer to Selecting a Destination, page 3-6).
2. Select a **Source** (refer to Selecting a Source, page 3-7). The TAKE button indicator starts blinking.

3. **Press a softkey** on the status module (instead of pressing the TAKE button). The softkey you press will be the one to which the source is assigned.

## *Data Entry and Panel Menu Screens*

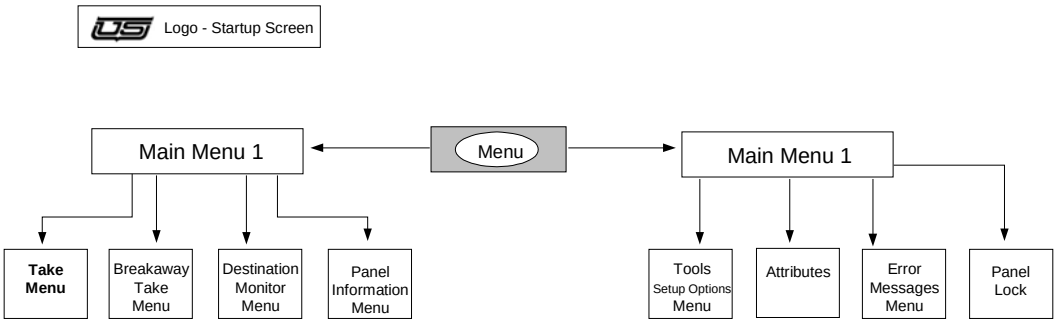
### Main Menu Icons

The table below illustrates the Main Menu Icons used in the SC16 panel. When the **Menu** button is pressed *once*, the display will show the *All Follow Take*, *Breakaway Take*, *Monitor*, and *Error* Icons. Pressing the Menu button again will display the *Tools* and *Information* Icons.

| Icon | Icon Name | Help Message |
|---|---|---|
| | Take | All Follow Take Menu |
| | Breakaway | Breakaway Take Menu |
| | Direct | Direct Take Menu |
| | Monitor | Destination Monitor |
| | Lock | Lock-Protect Menu |
| | Options | Setup Options Menu |
| | Info | Panel Information |
| | Messages | Panel Error Messages |
| | Attribute | Level Attribute Desig. |
| | Panel Lock | Software Panel Lock |

## Menu Tree

The illustration below contains a simple menu tree designed to assist in UCP-SD16 menu navigation.




## Menu Displays

The illustrations below contain the second level of each display along with some of the scroll screens. This provides a general overview and reference for the user.

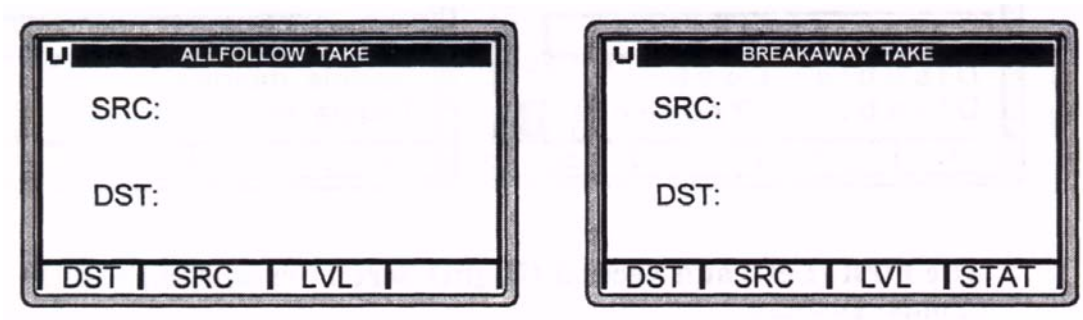



**FIGURE 3-5. All-Follow Take, and Breakaway Take Display**

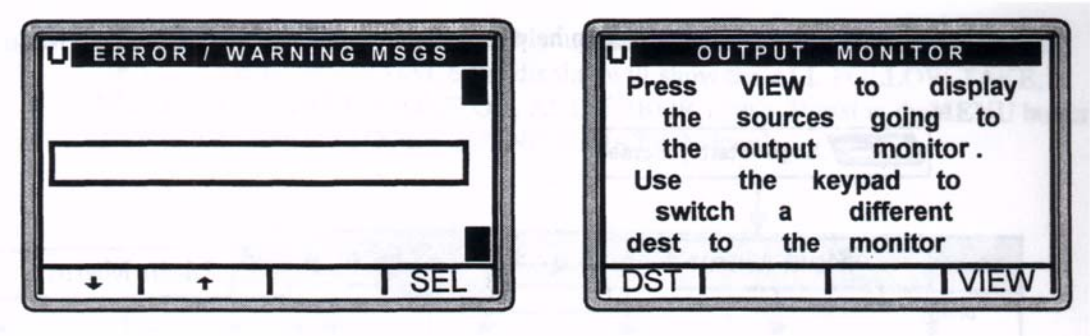



**FIGURE 3-6. The Error/Warning and Output Monitor Displays**

This illustration contains the first (left) and second (right) scroll screens within the Options Display.

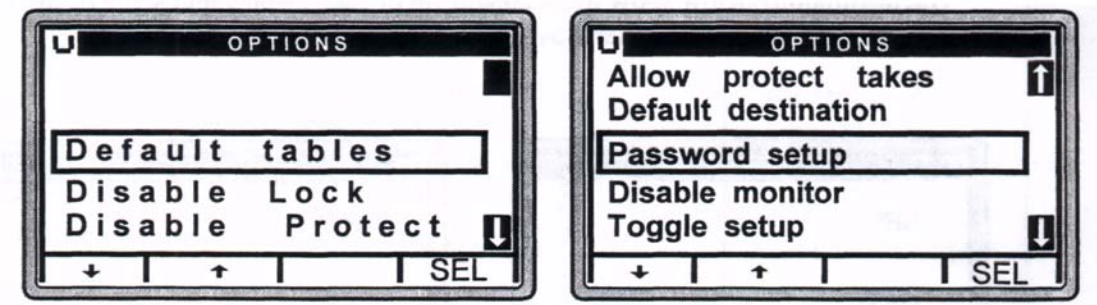



**FIGURE 3-7. Options Displays**

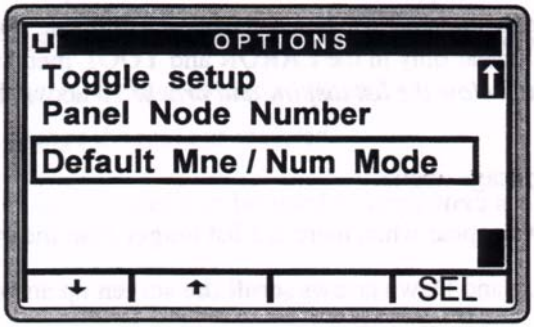



**FIGURE 3-8. Final Scroll Screen - Options Display**

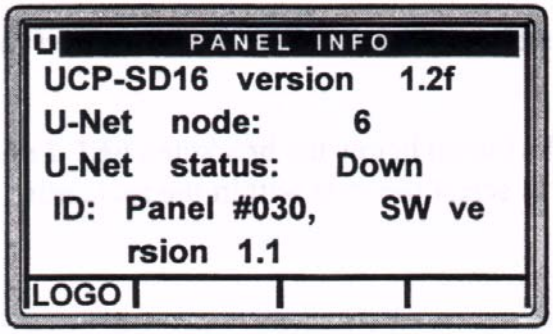



**FIGURE 3-9. The Info Display Screen**

## *Basic Rules*

The following basic rules are covered in this section:

- Arrows and Lists
- Locks and Protects

### Arrows and Lists

**Up and Down Arrows** are used on the display to indicate specific information about lists. These arrows appear only in the **Error** and **Tool** menus on the SD16 Data Entry Panel. They are below the list display and bracketed above their respective control buttons.

The following usage applies:

- Arrows appear when there is a list *longer* than the available lines on the display.
- The Up and Down arrows *scroll the screen* up and down.
- If there is more information available above or below the visible screen a **Black Box** will be displayed with a down or up arrow.
- If you are *at the top of bottom of the scrollable list*, the black box will be Solid Black.
- The Tools Icon displays the Options Screen.
  - Selectable items appear within the Blocked In rectangle in the Center of the Screen.
  - Pressing the button below the bracketed **SEL** label (located on the far right of the screen) will select the item within the rectangle.

### Locks and Protects

The following usage applies:

- If the **Lock** Icon  appears *after* a Destination name, it indicates the destination is locked or protected - on one or more signal levels.
  - To obtain *more details* regarding Lock or Protect, go to the Lock-Protect menu.
- With the **Lock** in effect, the lock has to be unlocked before the locked route can be changed.
  - Any panel is capable of *unlocking* the destination.
  - Use the **Disable Lock** option in the Tools menu.

- With the **Protect** in effect, the route can only be changed by the panel which initiated the protect.
  - Another user may unprotect the route by using another panel to:

    *unprotect* the protected route

    *and*

    *change* the route as required.

**Note***: Any available panel can be used to 'unprotect' a protected route.*

## *Panel Security*

The UCP-SD16 is designed with security features to help prevent accidental source selections being made to a destination already in use. These features consist of the data entry module's security buttons and the panel's programmed security level.

**A control panel's ability to restrict other panels from changing a destination's currently assigned source will depend on:**

- The security level of the panel
- The security level of the panels attached to the same network
- The use of the panel's security buttons

### Panel Security Level

Each panel is programmed to operate in one of two security levels: operator panel level or supervisor panel level.

#### *Operator Panel*

An **Operator Panel** can set a protect or lock—or switch between the two—but cannot clear a protect or lock set by another panel.

#### *Supervisor Panel*

In addition to the functionality of an operator panel, ***a supervisor panel can also clear a protect or lock set by another panel*** (operator or supervisor level panel).

> **Note**: **To change the security status set by another panel**, the current status must be cleared first before it can be switched from lock to protect or vise versa.

A network of UCP-SD16's can consist of a mix of operator and supervisor panels or it can contain panels that are all programmed with the same security level. The needs of the system would dictate how each panel is programmed.

### Panel Security Buttons

The **Data Entry Module** contains 3 buttons related to the security function (refer to Figure 3-3, callout #3):

### *PROTECT*

The protect button restricts source selection to either 1) the panel initiating the protect function or 2) another panel that has supervisor level security. Other panels that are programmed for operator level cannot make a source selection to a destination protected by the panel.

**To protect a destination**:

1. Select required **Destination** from data entry module
2. Press **<PROTECT>** button. **Protect** indicator illuminates according to Table 3-3 on page 3-12, indicating **Destination** is protected.

### *LOCK*

The lock button restricts source selection to either 1) the panel initiating the lock function or 2) another panel that has supervisor level security. Other panels that are programmed for operator level cannot make a source selection to a destination locked by the panel.

**To lock a destination**:

1. Select destination from data entry module
2. Press **<LOCK>** button. Lock indicator illuminates according to Table 3-3 on page 3-12, indicating destination is locked. A padlock icon also appears after the destination number.

### *CLEAR*

The clear button is selected to remove a lock or protect function assigned to a destination and can be accomplished by either 1) the panel initiating the protect or lock function or 2) another panel that has supervisor level security.

To clear a protect or lock function:

1. Select protected or locked destination from data entry module
2. Press **<CLEAR>** button. Lock or Protect indicator is no longer illuminated—indicating destination is no longer locked or protected—and the padlock icon is removed.

## Security Status

The security status for a currently selected destination and the panel can be determined by looking at the indicators

(1) located above each of the **Protect**, **Lock**, and **Clear** security buttons.


**FIGURE 3-10. Security Buttons**

Each indicator contains a dual color LED. The indicator's state of illumination and color will determine if a selected destination is,

1) Protected or locked

*and*

2) Whether or not the panel has the ability to clear or reset the security status.

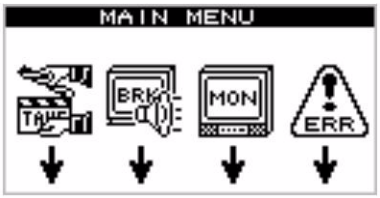
**TABLE 3-3. Security Status Indicators**

| Indicator State of Illumination | Color | Description |
|---|---|---|
| Protect and Lock Indicators OFF | N/A | Destination is not protected or locked. |
| Protect or Lock Indicator ON | **Red** | Destination is either protected or locked depending on the indicator that is lit. ***Panel cannot clear or reset security status.***<br>To clear or reset the security status requires use of the panel that initiated the protect or lock or a supervisor panel. |
| | **Amber** | Destination is either protected or locked depending on the indicator that is lit. ***Panel can clear or reset security status.*** |

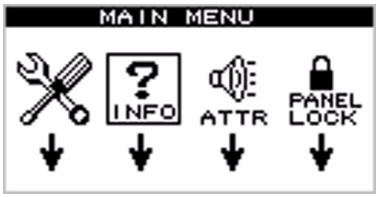
## *Attribute Take*

### UCP-SD16 Panel changes to support attributes.

Press the MENU button to display the following menu.




Press the MENU button again to display the second menu.




Select the attribute option by selecting the button below the ATTR icon.


This display shows the current destination and the attribute that is assigned to the first defined level of that output.

There are 4 buttons on the Attribute Take screen that can be selected:

**DST, ATTR, LVL, STAT**

### DST:

Pressing this button will allow you to change the current destination. After pressing the DST button, the large screen displays all the destination group names. Select a group name by selecting a number on the keypad that corresponds to the group name that is desired. Then select the 3 digit extension. After the group name and extension are entered press the DST button again to finish the destination selection.

### ATTR:

Pressing the ATTR button will allow you to enter the attribute for the level. To assign the same attribute to all levels do not select any levels. Pressing the ATTR button again will display the attributes assigned to the keypad on the large screen.

1 – SWAP

2 – MIX

3 – Mono Left

4 – Mono Right

5 – Invert Left

6 – Invert Right

7 – Mute left

8 – Mute Right

9 – Mute All

0 – Normal

A – DV143

B – DV177

C – DV270

D – DV360

### LVL:

Pressing the LVL button will allow you to select specific levels to assign the attribute to.

## STAT:

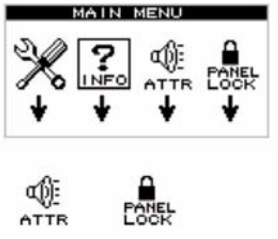
The STAT button is used to allow you to view the sources and destinations without going back to the AllFollow Take screen.

### *Here is an Example:*

In this example we will switch MIX on all levels in Numeric Mode.

| Key Press | Description |
|---|---|
| MENU | From any screen press the MENU button to get the main menu. |
| MENU | Press the MENU button again to get to the second main menu. |
| ATTR | Select the button under the ATTR icon. |
| NUMERIC | Select the Mnemonic/Numeric button to make sure it is NUMERIC. |
| DST | Press the DST button and then from the keypad select the desired destination. |
| DST/ATTR | Press the DST or ATTR button to end the destination select. |
| ATTR | Select the ATTR (Only if it is not selected already). |
| ATTR | Press the ATTR button again, this will show the Attributes on the large screen and how they are assigned to the keypad. |
| KEYPAD | Press a button on the keypad 0-9 or A-D corresponding to the attribute that you want to select. (In this case we press 2 for MIX) |
| TAKE | Then press TAKE to make the connection. |

## *Additional Panel Lock Detail*




The panel lock feature gives the user the ability to lock the panel through the software. When the panel is locked it can be power cycled and the panel will remain locked. The only way to unlock the panel is to enter the password that was configured in the options menu.

### How to use the panel lock feature:

From the main menu press the MENU button to get to the sub menu. This menu has the Options, Info, Attributes, and Panel Lock. Select the Panel Lock icon by pressing the button beneath the icon. The following screen appears.

To lock the panel the user must enter the password that was configured in the options menu. After the user has typed in the password press the DONE button. If the password has been entered correctly the following screen will appear.


This panel will remain locked until the user enters the password again to unlock the panel. Even if the panel is powered off and back on the panel will remain locked until the user has entered the password.

APPENDIX A

# *Specifications*

This section contains UCP-SD16 control panel specification information.

## *Product Specification*

Listed below are the specifications for the UCP-SD16 control panel.

**TABLE A-1. UCP-SD16 Specifications**

| | |
|---|---|
| Dimensions | 3.75”H x 19” W x  6” D |
| Weight | <7.0 lbs. |
| Ambient Temperature | 10° - 40° Celsius |
| Relative Humidity | 0 - 90%, non-condensing |
| Power Requirements (for external 12 VDC,.35 A power supply) | AC version: 117/220 VAC, 50/60 Hz |
| Power Consumption | <20 W |
| Panel Connections | • 12 VDC Power Input<br>• RJ-45 Looping Control LAN (2)<br>  • U-NET 1.5 Mbps self-configuring Token Bus network<br>  • CAT 5 cable |

# Index


**Numerics**
10Base-T cable 2-8
12 VDC 1-2

**A**
Additional Panel Lock Detail 3-25
Ambient Temperature A-2
Analog Audio 1-6
Analog Video 1-6
Arrows and Lists 3-16
Asynchronous Digital Audio 1-6
ATTR 3-23
Attribute Take 3-22

**B**
back Panel 1-4
back panel 1-2
Black Box
  display 3-16
Breakaway
  selecting levels 3-9
breakaway 1-7

**C**
Chassis
  UCP-SD16 1-3
Clear 3-6, 3-19
CMOS circuitry 2-4
Components
  back panel 1-4
Contrast Adjustment 3-2
Control Panel 2-3
crosspoint 1-6

**D**
daisy-chain 1-2
Data Entry
  screens 3-12
data entry 1-2, 3-2
Data Entry Module 1-3, 3-5, 3-18
Data Entry Panel
  callout table 3-5
Destination
  protecting 3-11
  selecting 3-8
destinations 1-6
Digital Vide 1-6
Dimensions A-2
DIP Switch Binary Table 2-6
Direct Takes 3-11
Disable Lock 3-16
DST 3-23

**E**
Error/Warning
  display 3-14

**F**
Features and Capabilities 1-5
Final Scroll Screen 3-15
Front Panel 1-3
Front Panel Modules 3-2

**G**
graphic displays 1-2

**H**
High Definition Video 1-6

**I**
Icons
  Main menu 3-12
IEEE 802.3 2-8
Indicators
  U-NET 1-4
Info Display Screen 3-15
Installation 2-1
  module 2-5
  unit 2-6

**K**
Keypad 3-6

**L**
Lock 3-6, 3-19
Locks and Protects 3-16
LVL 3-23

**M**
matrix boards 1-6
Matrix Sample 1-6
Menu Displays 3-13
Menu Tree 3-13
mnemonic 1-2

Module Positions
swapping 2-4
Module Removal 2-5

**N**
Navigation Buttons 3-4
numeric 1-2

**O**
Operator Panel 3-18
Options Display 3-14, 3-15
Output Monitor
display 3-14

**P**
PAGE Button 3-4
Panel Components 1-3
Panel Connections A-2
Panel Menu
screens 3-12
Panel Operation 3-7
Panel Security 3-18
Panel Security Buttons 3-18
Power Connector 1-4
Power Consumption A-2
Power Requirements A-2
power supply 1-2
Product Description 1-2
Product Overview 1-3
Product Specification A-2
Protect 3-6, 3-19

**R**
Relative Humidity A-2
Requirements
site and tool 2-2
Router Operation 1-6

**S**
SC-3 1-2
Screens
Data Entry and Panel Menu 3-12
Security Buttons 3-6
Security Status 3-20
indicators 3-21
Shift Button 3-4
Shipment Contents 2-2
signal input ports 1-6
Site Requirements 2-2
Soft Keys 3-6
SOFTKEY buttons 3-4
softkeys 1-2
Source
selecting 3-10
Specifications A-1
STAT 3-24
Station Number 1-4
status 3-2
Status Module 1-3
Status Panel 3-3
Status Panel Callouts 3-4
Supervisor Panel 3-18
Synchronous Digital Audio 1-6

**T**
Take Buttons 3-6
Take Display
All-Follow and Breakaway 3-13

**U**
UCP-SD16 Back Panel 2-6
UCP-SD16 Modules 3-2
Undo Butto 3-4
U-NET 1-2
U-NET Cable 2-3, 2-7, 2-8
U-NET Cable Construction 2-8
U-NET Terminator 2-7
Unpacking 2-2
Up and Down Arrows
usage 3-16
UTAH-300 1-2

**V**
VDC Power Supply 2-3
VTR 1-7

**W**
Weight A-2