Section 6 – Control Panel Operation

CP 300 24 x 1 Single Bus Control Panel

Each input button of the CP 300 is assigned to a specific source (and the entire panel assigned to a single destination) during the installation procedure described on page 2–46.

Audio–follow–video switching - When one of the 24 input buttons is pressed, a TAKE* command is issued to all levels of the switcher matrix. A status* signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed. See Figure 6–1.

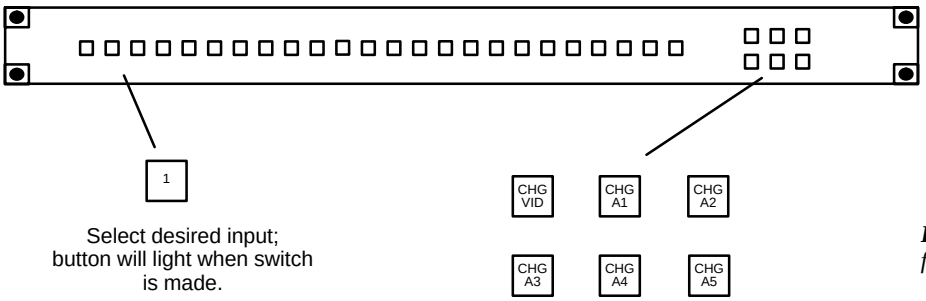


Figure 6–1. *CP 300 audio–follow video switching.*

Split switching – When the operator desires to take only specific switcher levels, those levels are defined by first pressing one or more of the six breakaway buttons. The TAKE command to the switcher will be executed when an input button is pressed. The switcher will confirm the action by lighting the selected input button. (See Figure 6–2.) If the panel has been configured for sticky levels (as described on page 5–109), the selected level buttons will remain lit after TAKE has been pressed.

Split statusing – To status a specific level of a previous breakaway level switch, select the level to be statused; one of the input buttons will illuminate to indicate the source for that level. If more than one level status button has been toggled on (like A1 and A2), only the lowest level (A1) will be statused.

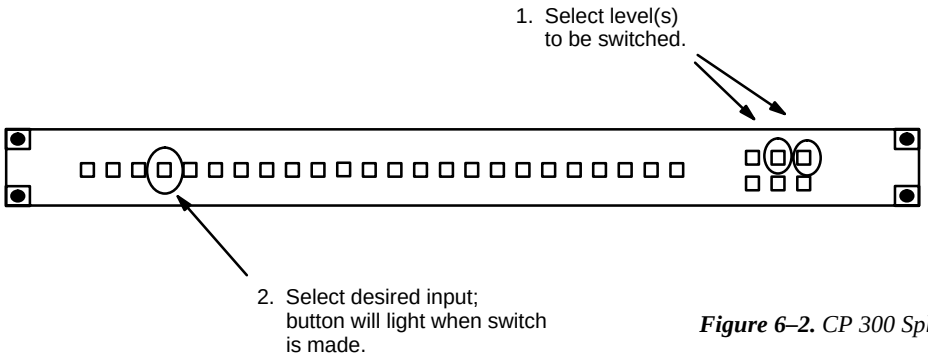


Figure 6–2. *CP 300 Split (breakaway) switching.*

* Defined in Glossary Section

"Protect/lock" output indicator (button flash) – If the output has been protected* or locked* the active input button will flash; this indicates that the input cannot be changed.

> Note: CP 300, CP 310, and CP 330–type panels *cannot* be used to turn off protect or lock mode—this can only be done with the same panel that was originally used to protect the output.

For additional protect/lock information – see page 6–12.

CP-310 24 x 8 Eight Bus Control Panel

Each input button of the CP 310 is assigned to a specific source (and the output buttons assigned to eight destinations) during the installation procedure described on page 2–46.

Audio–follow–video operation - Access to eight switcher outputs is provided by the buttons on the left side of the panel.

After output selection, the input is selected from the bank of 24 buttons in the center of the panel.

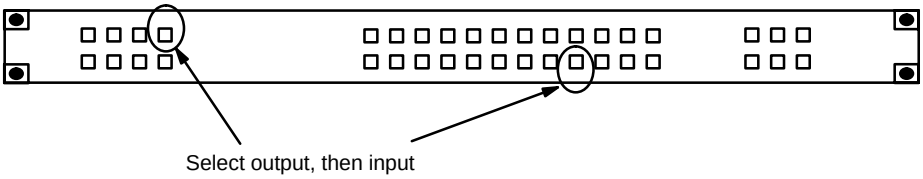


Figure 6–3. *CP 310 audio–follow video operation.*

Split switching - See *Split Switching* on page 6–1.

Split statusing – See *Split Statusing* on page 6–1.

"Protect/lock" output indicator (button flash) – If an output has been protected* or locked* the output button will flash; this indicates that the input cannot be changed.

> Note: CP 300, CP 310, and CP 330–type panels *cannot* be used to turn off protect or lock mode—this can only be done with the same panel that was originally used to protect the output.

For additional protect/lock information – see page 6–12.

CP 320 Push Button Control Panel

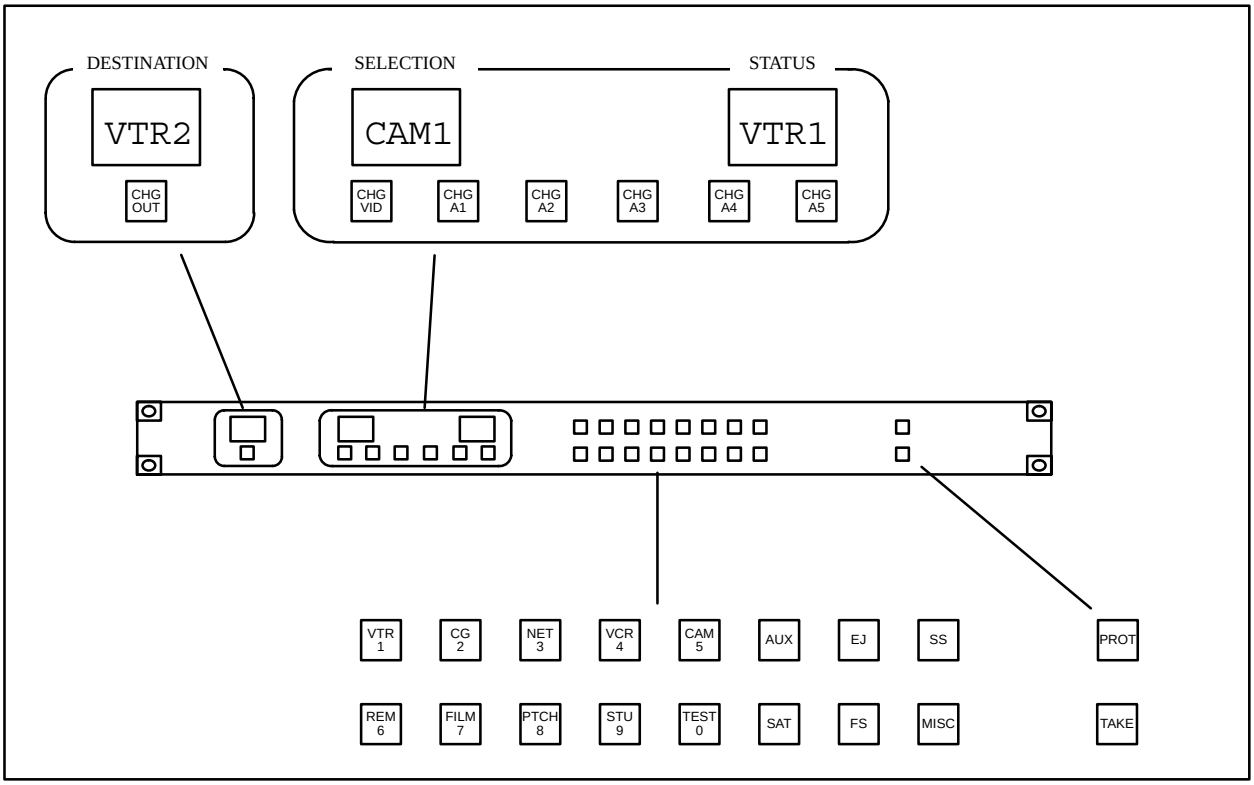


Figure 6–4. *CP 320 Push Button Control Panel (as supplied).*

Installation of this panel is shown on page 2–45. For a general description, see page 2–48.

The control panel uses a category/number method for both input and output selection. The operator presses the keypad to select the category, i.e., VTR, CAM, etc. The number selection then designates the individual entry within the category, i.e., VTR1, VTR2, CAM1, CAM2, etc. The Selection window displays the entry as each button is selected. Numbers may contain one or two digits.

To change the output selection, press CHG OUT, then press a category button for the desired category, and a number button for the output number within that category. The control panel output will be changed only when the TAKE button is pressed. A TAKE will not be made, but the switcher controller and output display will change and the new output will be displayed in the Destination window.

> Note: If the current selection is not a valid mnemonic, the selection window will display a number to show that a TAKE cannot be made.

Breakaway Level Switching - Inputs are selected as described above. The desired level push buttons are then pressed to initiate switching only on those levels. The TAKE button is then pressed. If the panel has been configured for sticky levels (as described on page 5–109), the selected levels will remain in effect after TAKE has been pressed; i.e., when the next input is entered the appropriate level buttons will come back on.

Video Splits - Combinations of the Breakaway Level buttons and the Category/Number buttons can be used to create a video split. The input and output selections are made as described above.

Before the TAKE push button is pressed, the desired Breakaway Level push buttons are pressed to designate the levels to be switched.

Another input selection is then made using the category/number push buttons. The desired Breakaway Level push buttons are again selected corresponding to the levels to be added to the switcher TAKE command.

The TAKE button is then pressed, causing the switcher to perform the split, using the two designated inputs from the desired levels.

Protecting the current switcher output - To protect the current output of the switcher, the PROTECT push button is pressed. The PROTECT lamp will remain on to indicate the protect mode.

The protected status will also be displayed by other control panels presently controlling the protected output; if the other panel is a CP 320 the PROTECT button will blink.

Only the control panel that originated the protected status can remove it (the originating panel can be recognized by the steady illumination of the PROTECT lamp). To remove the protected status, press the lighted PROTECT push button. The button light will go out to show the protected status has been removed.

For additional protect/lock information – see page 6–12.

CP 328 Push Button Control Panel

Operation of this panel is the same as the CP 320. The only difference between the panels is that the CP 328 has eight–character display windows while the CP 320 has four–character display windows.

CP 330 Control Panel

The CP 330 can be configured to operate as a 48 x 1 panel, or, as a 24 x 2 panel with the top row of buttons assigned to one output and the bottom row to another. Operation is much the same as a CP 300, as described on page 6–1.

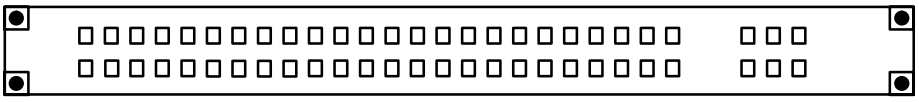


Figure 6–5. *CP 330.*

(For installation and configuration instructions, please see page 2−46.)

CP 330/6 48 x 6 Six Bus Control Panel

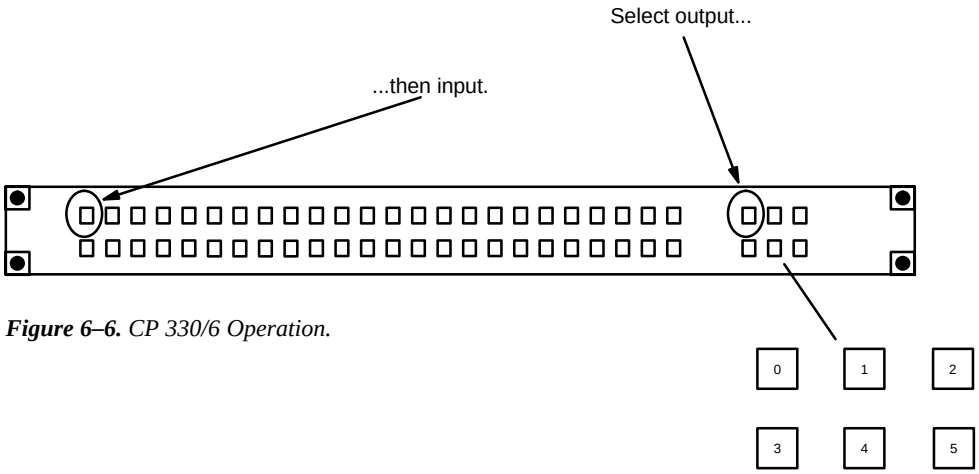


Figure 6–6. *CP 330/6 Operation.*

Each input button of the CP 330/6 is assigned to a specific source (and the output buttons assigned to six destinations) during the installation procedure described on page 2–49.

Audio–follow–video operation - Access to six switcher outputs is provided by the buttons on the right side of the panel.

After output selection, the input is selected from the bank of 48 buttons on the left side of the panel. This completes the switch.

CP 300 Series Diagnostics

Control panels can be tested without affecting switcher operations.

CP 300/310/330

To enter the diagnostic mode, press and hold CHG VID and then press CHG A5: the CHG VID and CHG A1 lights will come on; CHG VID will enable the **Button/Lamp Test** and CHG A1 will start the **Lamp Self–Test**.

Button/Lamp Test

This test is used to check the proper operation of control panel push buttons. Whenever a button is pressed, that button's lamp should come on. To exit, press any button twice.

Lamp Self–Test

Lamps should come on sequentially, remain on, and then go off. This mode will continue until a button is pressed.

CP 330/6

To enter the diagnostic mode, press and hold the output 0 button and then press output 5: the output 0 and output 1 lights will come on; output 0 will enable the **Button/Lamp Test** and output 1 will start the **Lamp Self–Test**.

CP 320/328

Press and hold CHG VID and then press CHG A5. This will cause the panel to display its device name as defined in the MPK Devices table. To exit, press PROT, or

— Press TAKE to display the panel ID. To exit, press PROT, or

— Press TAKE a second time to enter the diagnostic mode menu. Pressing the CHG OUT button will scroll through the different diagnostic tests:

Display (LED) test

To start, press TAKE. To exit, press any button.

Keyboard test

To start, press TAKE. Then press every button, checking for duplications. To exit, press any button twice.

Lamp test

To start, press TAKE. All lamps should light sequentially. To exit, press any button.

CP 3000 Switcher Control Panel

Note: For a general discussion of the CP 3000, please see page 2–50; for a short tutorial on basic operations only, see Appendix J.

The top row of the display shows output status for four levels. Using the CLEAR key, the bottom row can be toggled between the first page of input override selections and the name of the current output (see Figure 6–7). Input overrides permit single button input selection, eliminating the need to use the category and selection entry keypad for commonly used inputs.

To change the output is being controlled by the panel, please see *Display/change Output* on page 6–20.

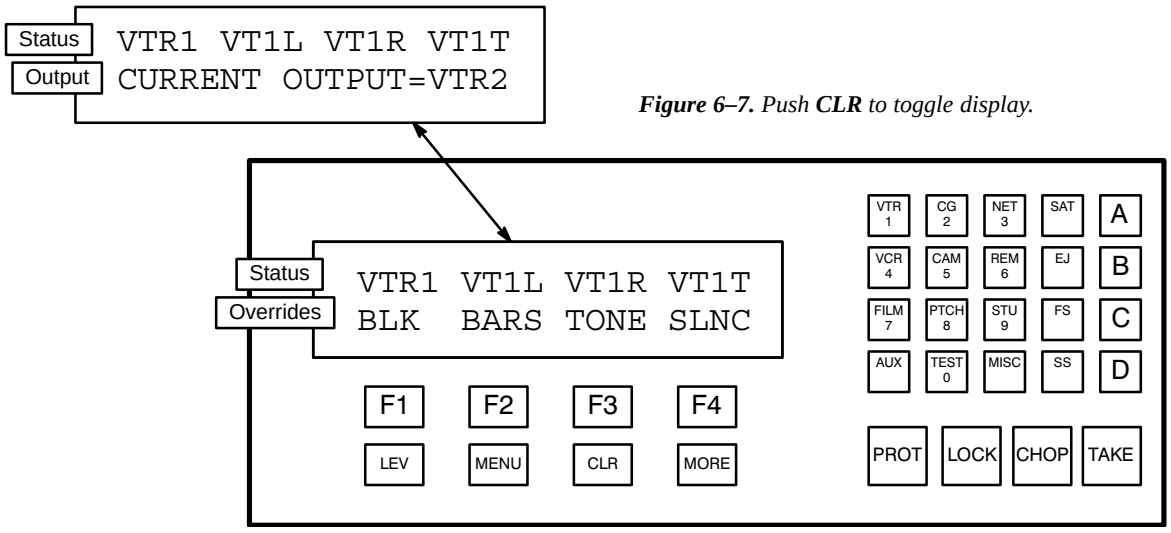


Figure 6–7. *Push* ***CLR*** *to toggle display.*

OVERRIDE INPUT SELECTION

Override input selections are made by pressing a Function button below the desired mnemonic. The operator can see other possible selections by pressing MORE. After the operator makes an override selection, the mnemonic and the levels defined for the selected input are displayed in the prompt window. The operator then presses TAKE to send the command to the switcher. The operator can exit the entry mode by pressing CLEAR and the panel returns to the mode it was in before the override was selected.

If entry of a password is requested, please see *Passwords* on page 6–22.

For information about programming overrides, see page 6–21.

CATEGORY AND NUMBER INPUT SELECTION

The user selects a switcher input by first pressing the desired input category keypad push button. The display menu line will be cleared and the category name will appear (see Figure 6–8).

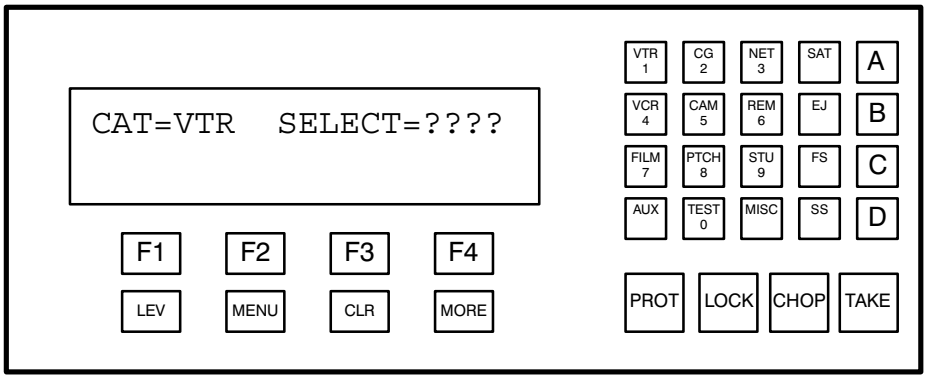


Figure 6–8. *Display after category has been selected.*

The operator then enters the selection number for the desired input; the display will show the primary mnemonic for the input after the word “Select.” Additional detail is given on the bottom row, which shows the input mnemonics for the sources selected on up to four levels. See Figure 6–9. (The appearance and position of each level’s status information is determined by the CP Level set assigned to the panel).

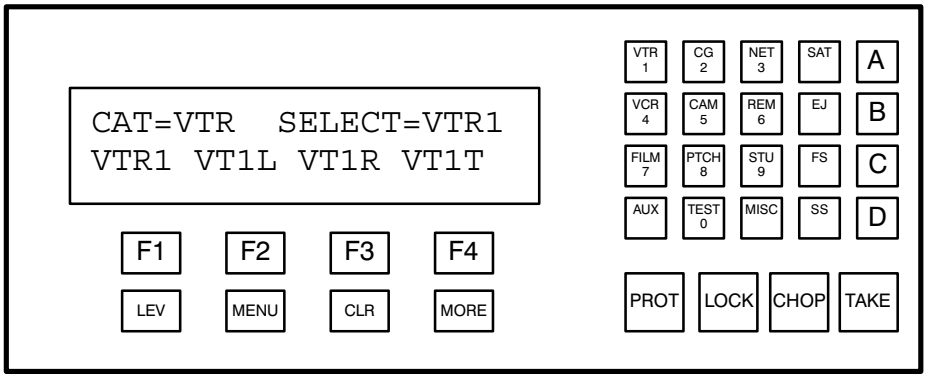


Figure 6–9. *Number has been selected. Ready for TAKE to be pressed.*

Note: If the category entry is ignored, or if the bottom display row stays blank after the selection number is entered, the category / selection number may not be defined in the CP Input Set (page 5–58) assigned to the panel on the MPK Devices table (page 5–108).

When TAKE is pressed the command is sent to the switcher matrix. If the TAKE command was successful, the top display row will be updated to reflect the new input status.

If entry of a password is requested, please see *Passwords* on page 6–22.

PROTECT OUTPUT

The protect function prevents an output from being switched by other system control panels. For example, if a VTR is recording a program or if the output is feeding a program line, care must be taken to insure that the signal is not switched or disrupted.

To Protect an Output

The operator presses PROTECT. The system will request verification. (See Figure 6–10.) Press TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

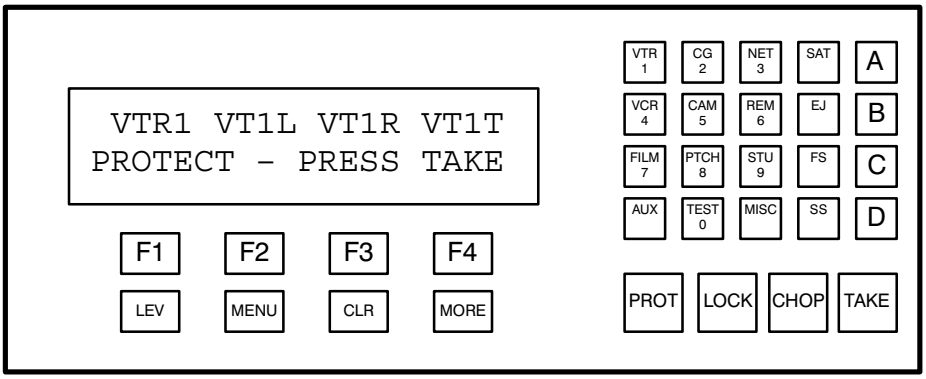


Figure 6–10.

A blinking “P” will appear in the first character position on the display status line to alert all operators that the output is protected. If another panel attempts to make a switch, the display will indicate the name of the panel that protected the output.

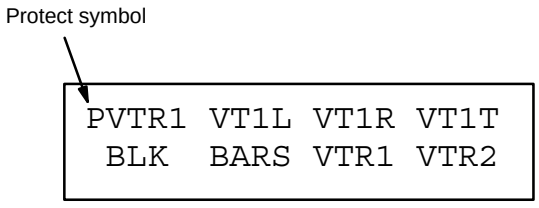


Figure 6–11.

To Unprotect an Output

The panel that protected an output is used to unprotect the output.

To unprotect the output, press PROTECT. The protect prompt will appear (See Figure 6–10.) Press TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

The P symbol in the display status line will be removed. The output is now available for control by any panel in the system.

For additional protect/lock information – see page 6–12.

LOCK OUTPUT

The Lock function prevents an output from being switched, including being switched by the panel which set the lock. The output is unlocked by the same panel before a switch can be made.

To Lock an Output

The operator presses the LOCK push button. The system will request verification (see Figure 6–12). Press TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

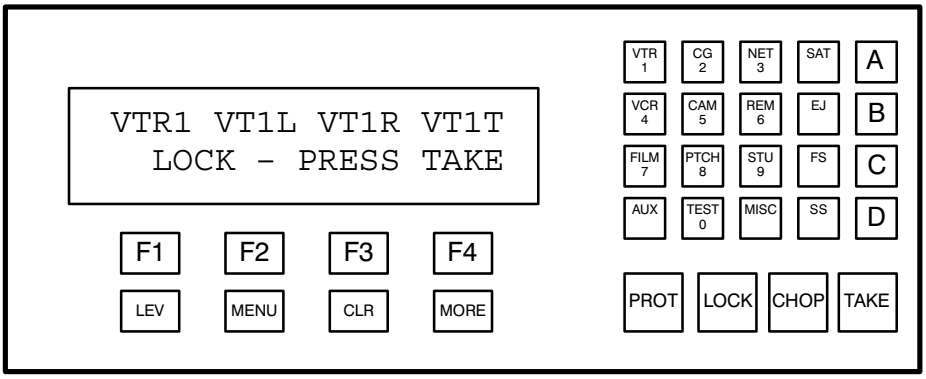


Figure 6–12.

A blinking “L” will appear in the first character position on the display status line to alert all operators that the output is locked. If another panel attempts to make a switch, the display will indicate the name of the panel that locked the output.

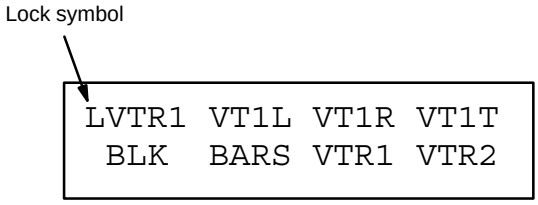


Figure 6–13.

To Unlock an Output

The panel that locked an output is used to unlock the output.

To unlock the output, press LOCK. The display menu line will be cleared and the LOCK prompt will appear (See Figure 6–12). Press TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

The L symbol in the display status line will be removed. The output is now available for control by any panel in the system.

Additional Protect/Lock Information

Protect – On Jupiter control panels with a PROTECT button: after a given source has been switched to a given destination, and PROTECT is pressed, the source for that destination can then be changed only at the panel which protected the output.

Lock – On Jupiter control panels equipped with a LOCK button (except MC 3020L): after a given source has been switched to a given destination, and LOCK is pressed, the source for that destination can then be changed only at the panel which set the lock; *and* only after LOCK is pressed again.

Note 1: If another panel was used to protect/lock the output, the name of the panel will be shown (on panels equipped with alphanumeric displays). The panel names and corresponding device addresses can be found on the MPK Devices table (Figure 5–89); to determine the device address (ID) of a particular panel, please see page 6–21. A panel name such as "Poll 1–075" refers to a party line control panel, in this example, a panel with a polling address of 075 (*hex*) connected to the first PL 3000 listed in the Network Devices table.

Note 2: An output can be **force unprotected/unlocked** from a panel equipped with LOCK/PROTECT buttons if the panel's password level is 90 or higher. This allows the panel to override the lock or protect status of another control panel, including Master Control. Care must be exercised when using this function.

— To permanently change a panel's password level using the file server, see *Setting Password Levels for Control Panels* on page 5–114. This procedure will require downloading a revised set to the controller board.

— To change a panel's password level to "99" at the panel itself, see *Raising Password Level To Maximum* on page 6–22.

Note 3: A "force unprotect/unlock" function is also available using (1) JNS Force Unlock application (page 11–1); (2) the Router Save/Restore utility (page 18–1); and (3) with the optional VG 3000 Video Display/Status Generator (page 6–143).

Note 4: A panel can only protect/lock levels that are assigned to the panel with the CP Level set (page 5–55).

Note 5: An unlock command will unprotect an output but an unprotect command will not unlock an output.

CHOP INPUTS

Chop is a special switching function which automatically alternates inputs to a switcher output. This mode is useful in system test modes and for comparison of switcher inputs.

The matrix chops between the currently selected input and the new chop input. This new input is selected via the normal input selection process, except CHOP is pressed instead of TAKE.

The matrix will then rapidly alternate between the two switcher inputs.

If entry of a password is requested, please see *Passwords* on page 6–22.

Chop will terminate automatically after approximately two minutes. To terminate the chop manually, select an input and press TAKE.

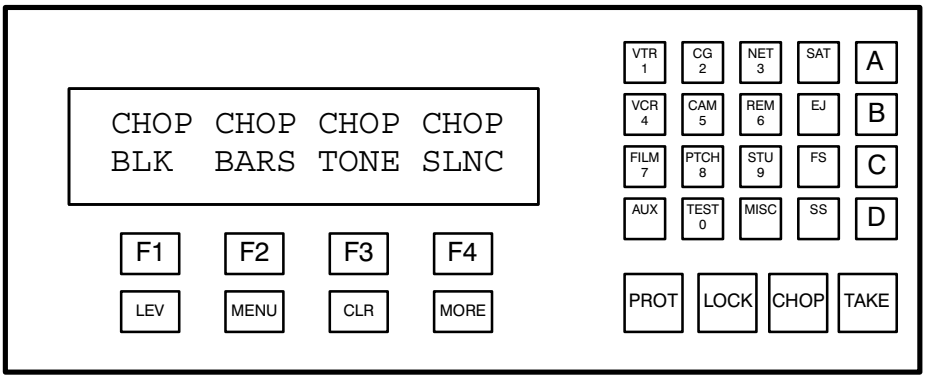


Figure 6–14.

Additional Chop Information

Pathfinding sources cannot be chopped.

Serially–controlled (”Remote switcher”) levels cannot be chopped.

On a single VM 3000 the total number of outputs/levels in chop mode cannot exceed 10 at one time.

LEVELS SELECTION (SPLIT SWITCHING)

Normally, a request for a given input will be issued to all levels defined for that input name in the Switcher Input table (page 5–44). However, in some cases it may be desirable to prevent certain levels from switching.

De–selecting Switcher Levels

After selecting category and number, the bottom row will display the input mnemonic for each level as *selected*, i.e., non–blanked. See Figure 6–15.

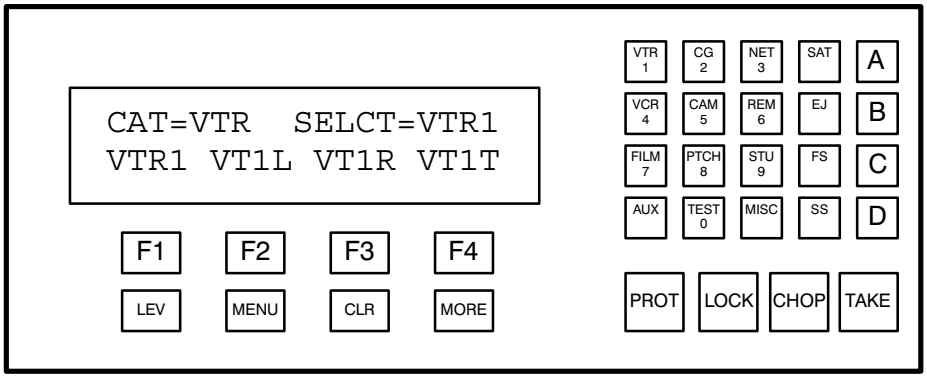


Figure 6–15. *Number has been selected. Ready for LEVEL to be pressed.*

If before pressing TAKE, the LEVEL button is pressed, the operator can toggle off the unwanted levels by pressing the corresponding Function key. Additional levels (if any) can be displayed by pressing MORE. See Figure 6–16.

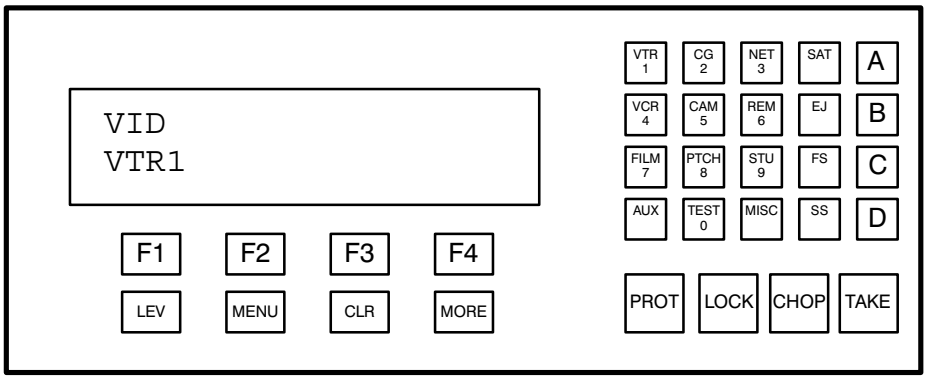


Figure 6–16. *LEVEL has been pressed, and all levels except video have been toggled off.*

After the appropriate levels have been de–selected, TAKE is pressed and the switcher command sent.

If entry of a password is requested, please see *Passwords* on page 6–22.

Switching Different Inputs with a Single TAKE Command

By using the procedure just described, a completely different input can be selected from one level to another before pressing TAKE.

1. Select an input *without* pressing TAKE.
2. Press LEVEL.
   a. If you want to de–select a level, press the appropriate function key now.
3. Select another input.
4. Press LEVEL, then press the Function key for the level(s) you want to receive this input.
5. Repeat as needed for other levels.
   a. If you de–selected a level (in Step 2a. above), you must press the appropriate function key again to blank the entry.
6. Press TAKE.

An Alternate Method of Split Switching

When only one level is to be switched, you may find it convenient to use the following method:

1. Press LEVEL.
2. Use the desired Function key to toggle the level ON.
3. Select an input.
4. Press TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

MENU SELECTIONS

The operator uses MENU and MORE to display the desired menu selection. (See Figure 6–17.) The corresponding Function key is used to select the desired operation.

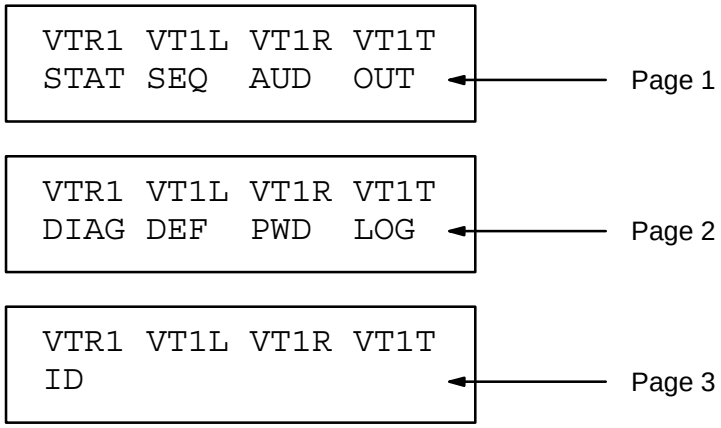


Figure 6–17. *Menu selections.*

STAT — DISPLAY OUTPUT STATUS

Selecting STATUS permits the operator to review the current status of all levels of the output controlled by the panel.

The operator presses MENU and then the STATUS soft–key. The display prompt line is cleared and the output status prompt appears. (See Figure 6–18.)

Normally the display status line will display the first four defined output levels. To view the status of other levels associated with the control panel output, press MORE.

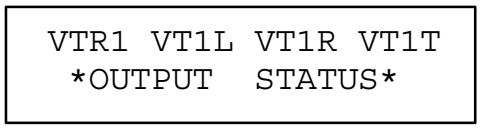


Figure 6–18.

The operator presses CLEAR or TAKE to exit the status display mode. The display status line returns to the first group of levels status and the display prompt line returns to the mode it was in when the output status mode was selected.

SEQ — SELECT INPUT SEQUENCES

Special input selection sequences or macros may be defined via the Sequence Set table (Figure 5–79). On the CP 3000 Switcher Control Panel, the SEQUENCE soft–key allows the operator to access these pre–defined sequences.

The operator presses MENU and then the SEQ soft–key to display the first page of sequence names. The operator then presses the soft–key corresponding to the desired sequence and TAKE.

If entry of a password is requested, please see *Passwords* on page 6–22.

AUD — AUDIO MODES

When the Jupiter system is used to control a Venus switcher, the CP 3000 panel can be used for special audio switching modes such as sending a mono signal to both channels of a stereo output, mixing stereo signals into a mono output, and reversing channels. This function requires proper entries to the “Audio” column of the Switcher Description table (see page 5–31).

1. Select an output (as described on page 6–20). Press TAKE.

2. Select an input (as described on page 6–8). Press TAKE.

3. Press MENU and then the AUD soft–key.

   The display will show the audio pairs in the system. A typical example, based on the table entries shown on page 5–55, is as follows:

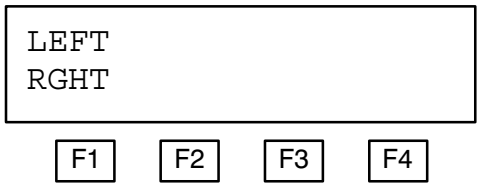


Figure 6–19.

4. Select the soft–key for the desired audio pair.

   In this example, “F1” would be pressed because there is only one audio pair (level 2 “LEFT” and level 3 “RGHT.”) The available audio modes will now appear on the bottom row of the display (Figure 6–20).

   If the system has more than four audio pairs, use the MORE button to scroll to the next group of pairs.

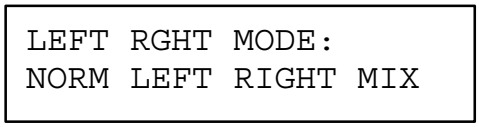


Figure 6–20.

5. Select the desired mode. Selections are as follows:

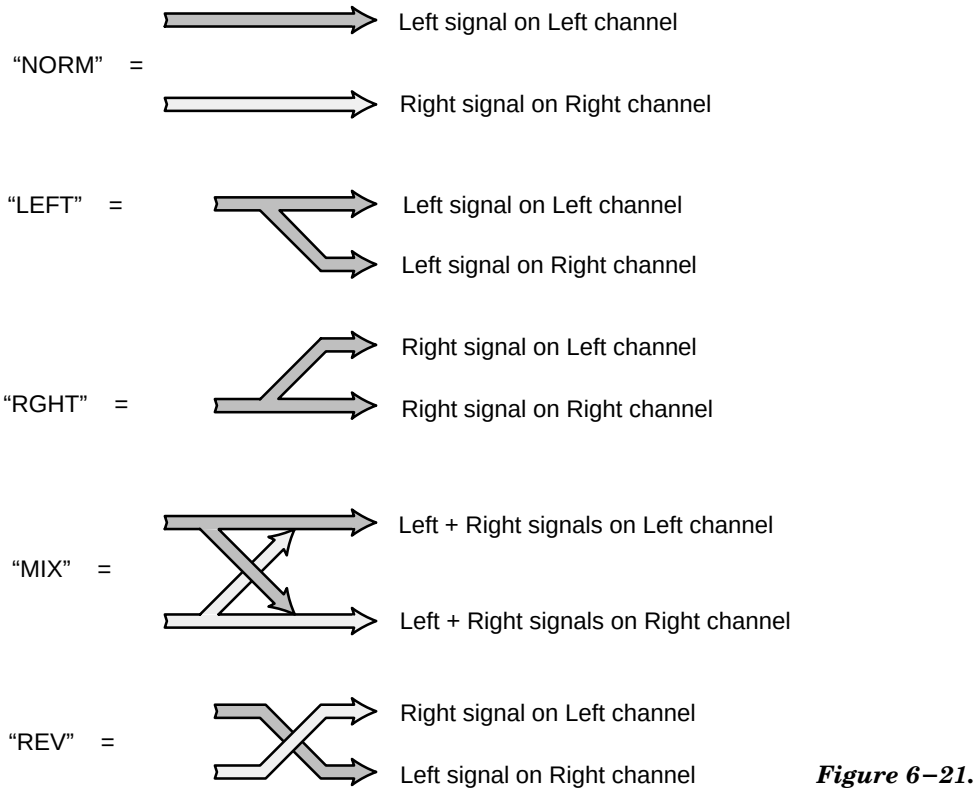


Figure 6–21.

The "REV" mode is on the second page (accessible using the MORE key).

6. Press **TAKE**. This will complete the special switching operation and exit the audio mode. A flashing letter "A" will appear on the normal status/override display:

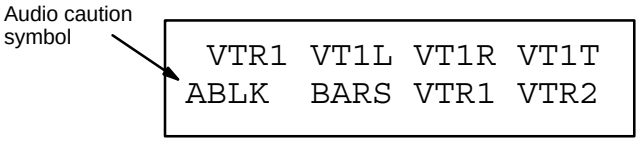


Figure 6–22.

This flashing symbol is a **caution that the top row of the display does not show true status.** In this example, "VT1R" is indicated as the source for the right audio channel, but in fact VT1L is the source. This can be determined by pressing MENU, AUD, and the soft–key for the desired level to bring up the following display:

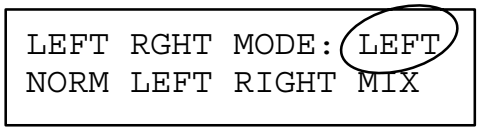


Figure 6–23.

This display shows true status. The left input channel is switched to both the left and right output channels.

OUT — DISPLAY/CHANGE OUTPUT

The OUTPUT menu selection displays the current logical matrix output to which the control panel is assigned.

The operator presses MENU and then the OUTPUT soft–key. The display prompt line is cleared and the current control panel logical output is displayed. (see Figure 6–24.) The display remains until the operator presses CLEAR or TAKE.

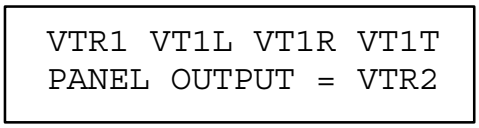


Figure 6–24.

By selecting a category and number before CLEAR or TAKE is pressed, a new output selection is entered in the output display. When TAKE is pressed, the control panel will be assigned to control the new output bus.

> Note: If the panel cannot be changed to the desired output, it may have been limited to certain outputs by the CP Output Set used on the MPK Devices table. See page 5–113.

DIAG — CONTROL PANEL DIAGNOSTICS

Special control diagnostics can be defined by the system controller and executed at the control panel. The operator interaction and panel displays will be determined by the actual diagnostic selected.

The operator presses the MENU mode selection push button, then the MORE key to display the control panel DIAGnostics selection. The operator presses the DIAGnostics soft–key and the first group of options is displayed. The operator presses the soft–key for the desired selection and then follows the instructions on the control panel display.

Upon completion of the selected diagnostic, the control panel returns to the DIAGnostic selection menu. The operator may then select another diagnostic or press the CLEAR key until the panel returns to the default control panel mode.

Display Self–Test

The display self–test mode is used to check the proper operation of the vacuum fluorescent (VF) character display. When the test mode is started, a pattern of all position display characters will be written to each character position.

The display self–test will continue until the operator presses the CLEAR or TAKE push buttons. The panel will then return to the DIAGnostic selection menu. Pressing the CLEAR push button again, will return the panel to mode it was in before the diagnostic menu was selected.

Keypad Self–Test

The keypad self–test mode is used to check the proper operation of control panel push buttons. When the test mode is started, the display will show the definition of each control panel push button as it is pressed. This display will show the button name/address and the currently defined panel function name.

The keypad self–test mode will continue until the operator presses the CLEAR or TAKE push buttons twice.

DEF — RE–DEFINE INPUT OVERRIDES

The control panel overrides permit a quick selection of switcher inputs and level selections. The overrides must first be defined on the Override Set table (Figure 5–77). For each definition, there is a choice of allowing or not allowing the override to be edited from the front panel.

> **Important:** Front–panel editing of overrides is temporary. Download or loss of power to the SC–3000 Serial Control Interface will cause the overrides to revert to the definitions in the Override Set table.

The operator edits the override by first selecting a switcher input via the category and selection keypad. If level selection is required, use the LEVEL menu selection mode. In other words, input selection must be complete but TAKE is not pressed.

The operator then presses MENU and MORE to display the DEFINE override soft–key. This displays the first page of existing override names. The operator then selects the override to be edited by pressing the corresponding function key. The MORE push button is pressed if the desired override name is on another page.

> Note: Only *existing* overrides can be edited. The override cannot be entered on an empty display position.

If entry of a password is requested, please see *Passwords* on page 6–22.

> **Important:** This procedure does not change the name of the override as established by the Override Set table. This could result in a situation where the operator selects CAM1 but gets VTR5. For overrides that will be allowed to be to be edited from the front panel, it is a good practice to use generic names such as “Usr1” or “Ovr1”on the Override Set table.

ID — DISPLAY CONTROL PANEL DEVICE ADDRESS

The panel ID menu selection displays the system address used to select and service this control panel. The ID is determined at time of panel manufacture and cannot be changed by the operator.

The operator presses MENU, MORE (twice), and then the ID soft–key. The display prompt line is cleared and the current control panel identification is displayed. (See Figure 6–25.) The display remains until the operator presses CLEAR or TAKE.

```
VTR1 VT1L VT1R VT1T
PANEL ID = 0000100A
```

Figure 6–25.

PASSWORDS

Note: For a general description of the Jupiter password system, including creation of passwords, please see page 5–17.

Single–Event Password Entry

If a password is requested during entry of a command, the output about to be affected has a password *level* higher than that of the panel. After entry of a higher–level six–digit password, the command can be completed by pressing TAKE; however, the panel will then revert to its previous password level.

Note: If entry of a password is requested, and a valid password is entered, but the system responds with "invalid" or "illegal password," it will probably be necessary to use the long–term password entry procedure described below to raise the password level of the panel.

Long–Term Password Entry (PWD — Login)

The PWD function permits the operator to log on to the control panel, thus raising the password level of the panel to the same level as the operator's password—and this level will remain in effect until the operator uses the Logout procedure described below.

Press MENU, MORE, and PWD. The display prompt line is cleared and the enter password prompt appears. (See Figure 6–26.) Enter your six–digit password (as entered on the Password Table) via the keypad and press TAKE. You have three tries to enter a valid password.

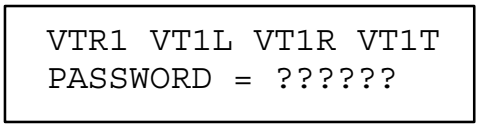


Figure 6–26.

Raising Password Level to Maximum (for Force Unprotect/Unlock)

The password level of a panel can be raised temporarily to *99* (the maximum possible) directly at the panel. This avoids using the file server and downloading a modified set to the controller board.

The operator presses MENU, MORE, and PWD. The display prompt line is cleared and the enter password prompt appears. (See Figure 6–26.) The operator then enters the six–digit Jupiter password and presses TAKE. (The Jupiter password, which is factory set at *999999*, is discussed in more detail on page 5–17.) With a password level of 90 or higher, the panel's PROTECT and LOCK keys can be used to force unprotect/unlock any output.

To restore the panel to its normal password level, see *LOG* immediately below.

LOG — Logout (CP 3000 Panel Only)

If the Enter New Password or Raising Password Level functions just described have been used and you later wish to log out to prevent unauthorized operation, press MENU, MORE, and LOG. The panel will revert to the password level defined on the MPK Devices menu (page 5–108).

CP 3008 (FCS 3357) 8–Character Control Panel Operation

Installation and operation of this panel is described in a separate manual, part number 04-883357-002.§

§ A complete copy of this manual is also available on the Technical Publications Library CD–ROM supplied with the manual you are now reading.

CP 3010 Expansion Panel Operation

The CP 3010 can be used as a companion to the CP 3000 Switcher Control Panel (described immediately below) or to the MC 3000 Machine Control Panel (see page 6–131).

CP 3010 AS COMPANION TO CP 3000 SWITCHER CONTROL PANEL

For multi–bus control the desired source can be selected on the CP 3000; the CP 3010 would then display the names of up to eight destinations, beneath which are the corresponding TAKE keys; one of these would be pressed to complete the switch. 20 pages of eight destinations each can be scrolled to display up to 160 possible destinations. To return to page 1, press the UP and DOWN arrows at the same time.

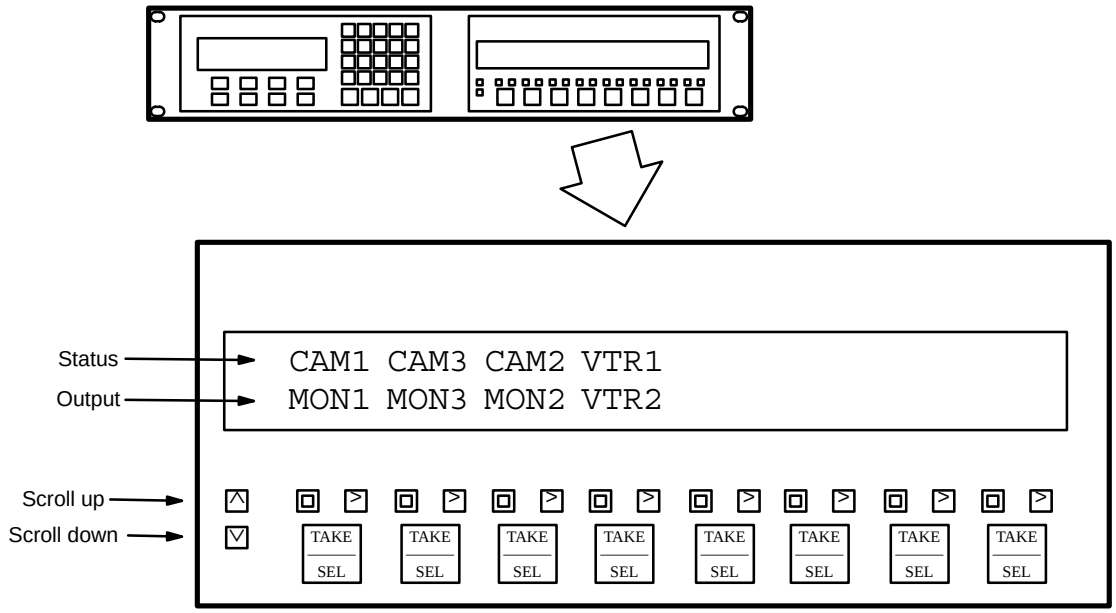


Figure 6–27. *CP 3010 Expansion panel.*

Dynamic Assignment of Outputs to the TAKE Keys

The process of assigning outputs to the expansion panel is the same as assigning the output to be controlled by the CP 3000, except that TAKE is pressed on the expansion panel rather than on the CP 3000:

1. On the CP 3000, press MENU, then OUT. Then select the category and number of an output.

2. On the expansion panel, scroll to the desired page and press the appropriate TAKE key.

Deleting an Output on TAKE Key

To delete an output that has been dynamically assigned to the expansion panel, use the CP 3000 to select an output that is not defined and press the appropriate TAKE key on the expansion panel.

Permanent Assignment of Outputs to the TAKE Keys

Outputs can also be assigned permanently, as described on page 5–77.

> Note: If an output is permanently assigned to a CP 3010 button, but that output is later removed from the CP Output table, and the new set downloaded, the CP 3010 will continue to display the name of the output until the output is manually deleted. To do this, select an output that is not defined and press the appropriate TAKE key on the expansion panel.

Machine Control

When the CP 3010 is used as an expansion panel for a *CP 3000* control panel, Start/Stop machine control can be provided by the ▣ and ▷ buttons.

Configuration for machine control applications and the method by which machines are assigned to the panel are discussed on page 5–158.

CP 3020 Push Button Control Panel operation

Installation of this panel is shown on page 2–45. See also page 2–51.

The CP 3020 is a single bus control panel that can select one of 20 inputs using the button–per–input technique. The number of inputs can be increased by means of the CP 3021 Expansion Panel.

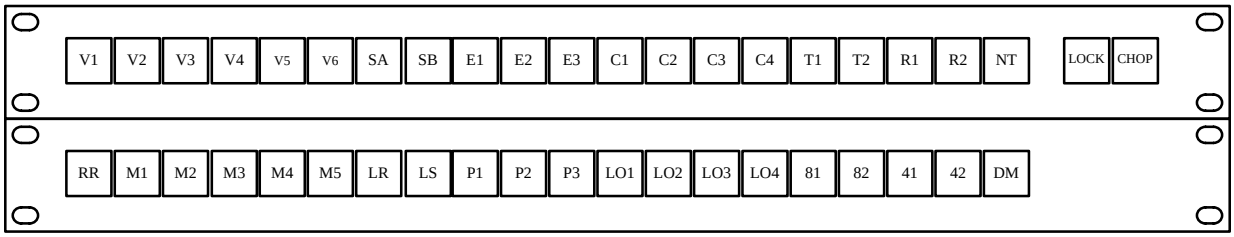


Figure 6–28. *CP 3020 Push Button Control panel (top) with CP 3021 Push Button Expansion panel.*

LOCK MODE

The LOCK button can be pressed at any time to lock* the output controlled by the panel; the button will illuminate to show that the lock is in effect. Press LOCK again to unlock.

If the LOCK button is flashing, the output has been locked by another panel. The panel used to lock the output must also be used to unlock the output. **For additional protect/lock information** – see page 6–12.

CHOP MODE

To chop* between two inputs, select the first input, then press CHOP, then the second input. The CHOP button will illuminate to show that the output is in chop mode. To terminate the chop, select another input. **For additional chop information** – see page 6–13.

BUTTON/LAMP TEST

See page 2–73.

CP 3030 Control Panel

Installation and operation of this panel is described in a separate manual, part number 04–046299–002.§

*see Glossary

§ A complete copy of this manual is also available on the Technical Publications Library CD–ROM supplied with the manual you are now reading.

CP 3800A Eight Character Control Panel

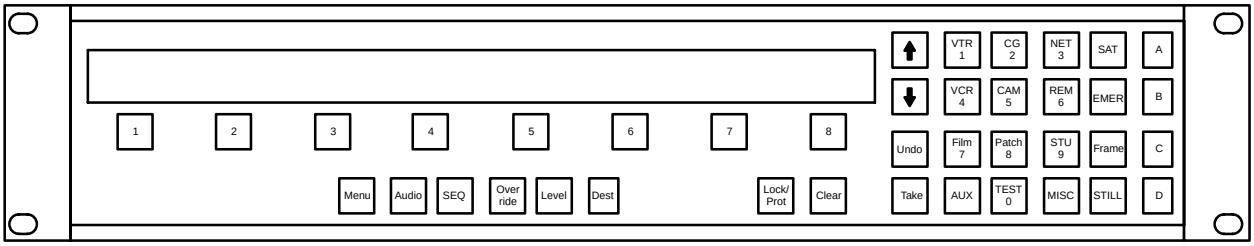


Figure 6–29.

OVERVIEW

The CP 3800A is a universal, eight–character mnemonic, switcher and machine control panel. Display and operating modes include:

- Preset Display
- Status Display
- Multilevel Status Display
- Multilevel Preset Display
- Destination Display
- Multiple destination Status Display
- Panel ID Display
- Password Level Display
- Lock Display
- Protect Display
- Audio Mode Display
- Category/Number Source Selection
- Category/Number Destination Selection
- Take Source
- FlipFlop Take
- Take Destination
- Chop Source
- Lock
- Protect
- Level Breakaway
- Sticky Level Breakaway
- Define/Assign Multiple Ganged Destinations (Dub Switching)
- Audio Modes all levels
- Audio Modes individual levels
- Sticky Audio Modes individual levels
- Override Source Selection
- Override Destination Selection
- Define/Assign Overrides
- Initiate Sequences
- Define Sequences
- Tie Line Display
- Play a source
- Stop a source

When operated in the “multiple destination mode,” the CP 3800A can be used to control from 1 to 80 destinations, with the names of eight of those destinations (and the status for each) on display simultaneously. In the “single destination mode,” one destination is selected for control, and the display window shows the status for each level of that destination (video, left audio, right audio, etc.).

The push buttons are capable of both green and red back lighting, with green generally used to show a selected function and red to indicate an operational mode in progress. Relegendable buttons are used to allow user–defined categories.

> Note: This control panel uses an eight–character “CP 3800” type CP Level set (page 5–55), CP Input set (page 5–58) and CP Output set (page 5–76). The panel is also defined in the MPK Devices table (page 5–108), and if used for machine control, the Machine Control Devices table (page 5–141). It can also use custom CP Category sets (page 5–103).

DISPLAY

In general, the top row of the display is used to show status or operational modes, error messages, page numbers and instructions. The bottom row shows selection items corresponding to the row of soft keys under the display (i.e. levels, destinations, etc.).

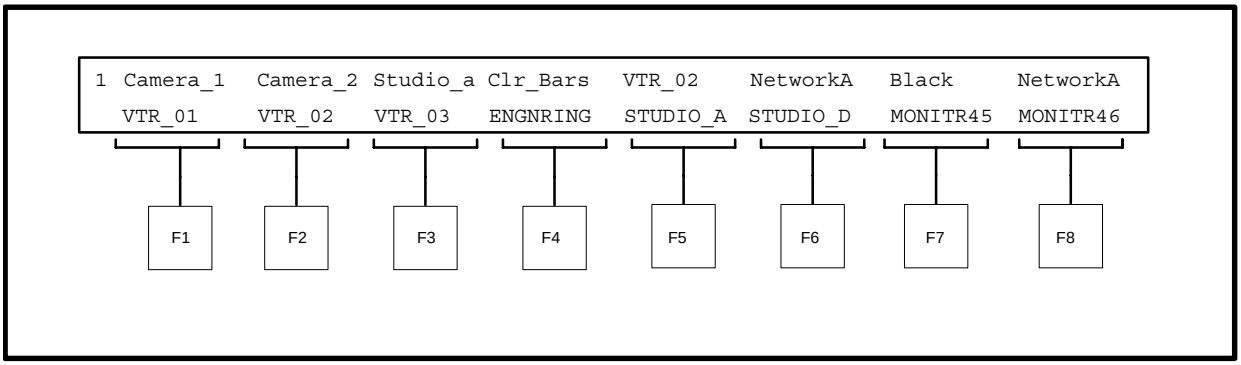


Figure 6–30.

SOFT KEY GROUP

Eight soft keys are arranged across the bottom of the display to correspond with the display space above each button. These buttons are dynamically reassigned depending upon the mode selected in the Menu Mode Group (Figure 6–32) and upon the defined CP sets for the panel. Destination selections and menu selections illuminate in green.† Pending level, audio, or configuration selections illuminate in red as described in the appropriate sections below.

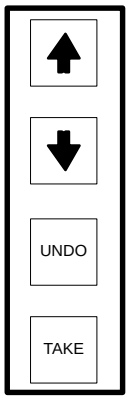


Figure 6–31.

MENU / CONTROL GROUP

The up/down buttons (Figure 6–31) provide scrolling control over all defined menu pages. They will not scroll to any undefined pages except in the case of adding destination assignments and defining overrides and sequences; in this case, they will allow access to one blank page beyond any page that currently has assignments. Up to 10 pages are allowed. A single digit in the upper left denotes the page number (1–9, 0 for page 10).

The UNDO button returns the panel and any affected outputs to the state it was in prior to the last TAKE. Successive selection of this button will allow toggling between two selections (allows undoing an undo). The undo function will also undo Overrides.

† In this discussion, “illuminate in green” refers to high (bright) green. “Low” green is always on.

Note: The “undo–undo” (toggle) function will *not* re–establish “special stereo switches” for Venus (mix, reverse, etc.)

The TAKE button executes any change(s) which has(have) been selected. When any action has been selected that requires a TAKE to be completed, this button will illuminate in red to indicate that it is “armed.”

Figure 6–32.

MENU MODE GROUP

The menu mode group determines the operational mode of the panel. If no buttons are illuminated, the panel is in “multiple destination” state, allowing source assignments to any of the destinations shown on the menu. The additional operational modes are:

- MENU mode – used to access less frequently needed functions, run diagnostics, and to configure the panel. For details, see page 6–45.
- AUDIO mode – used for Venus special stereo switching. For details, see page 6–43.
- SEQ – Displays available sequence names for selection and enable definition of new sequences. See page 6–57.
- OVERRIDES – Displays available override names for selection and enables definition of new overrides. See page 6–53.
- LEVEL – selects levels for a breakaway level Take. See page 6–41.
- DEST – function varies according to panel configuration. If panel has been configured for selectable multiple/ single destination mode, DEST is used to switch between modes and to change output soft key assignment. In single destination mode, DEST is used to select output for control. These modes are described below under “Operation.”

When any mode is selected, it will illuminate green to indicate that new mode. If a definition is in progress (i.e. defining a sequence) the mode will illuminate in red to indicate a process in progress.

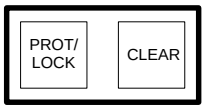


Figure 6–33.

PANEL CONTROL GROUP

The bottom two buttons below the Mode group select protection or locking (PROT/LOCK) and clear category/number selections and/or cancel ongoing definitions (CLEAR). Protect/lock mode is described on page 6–61.

The CLEAR button will clear any category/number selection if one is in progress. If none is in progress the CLEAR button will return the panel to either single or multiple destination operational mode in increments of embedded menus or operations – each button press will escape back one operational level.

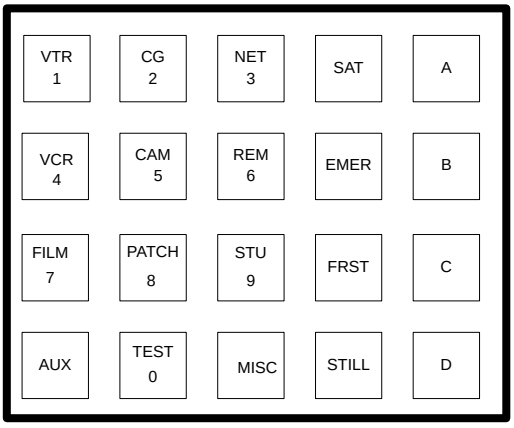


Figure 6–34.

CATEGORY AND NUMBER GROUP

Twenty buttons in a 4 high by 5 wide array form a traditional category and number group.

As an example, if the panel is configured to use category prompting, during source assignment all valid categories will illuminate in green. Once a category has been selected, all valid numbers will illuminate in red. Once a category and one digit have been selected, only remaining valid numbers will remain lit.

OPERATION

This panel can be system defined (at the file server) for:

— Multiple Destination Mode operation, front–panel selectable to Single Destination mode; or,

— Single Destination Mode only operation.

For front–panel selectable, Multiple or Single Destination Mode operation, a “Y” is placed in the Expansion column of the MPK devices table (see “Expansion” on page 5–110). For Single Destination Mode only operation, an “N” is entered.

MULTIPLE DESTINATION MODE

This mode, sometimes referred to as “multi–bus” or “full–matrix control” mode, is in effect when none of the “mode” buttons are illuminated. This mode displays the top level status for eight destinations.

> Note: If no destinations are defined for the panel, upon powering up the panel will go into the “adding destination assignment” mode as explained on page 6–34. Follow the steps outlined to define at least one destination to one button.

The first line contains the status of those eight destinations (defined name in the CP Input set for the selected source) plus a page number in the upper left hand corner. The second line of the display will show up to eight destinations.

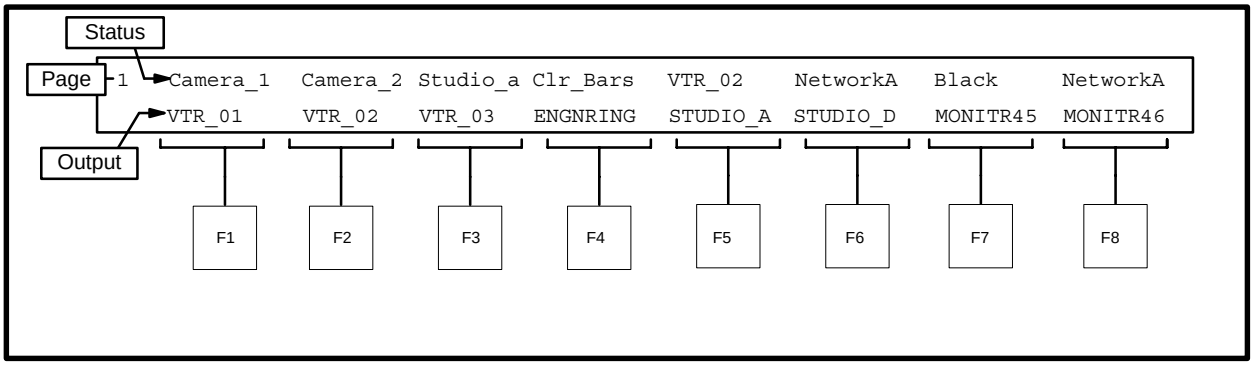


Figure 6–35. *Example Multiple Destination Display Page – Home*

From this page you can:

- Scroll to other pages
- Select destination(s) and make a source change
- Add or change a destination assignment
- Erase a destination assignment

You can also change Protect/Lock status, level selections, and audio modes once a destination(s) has been selected. Those operations are described in the appropriate separate sections in this document.

Scrolling to Other Pages

Scrolling to other pages is achieved with the Up/Down Arrows in the Menu Control Group. A maximum of 10 pages are accessible, each page numbered in the upper left.

MULTIPLE DESTINATION MODE (CONT'D)

Selecting Destination(s) and Making a Switch

1. Select the destination soft key(s).

   Select the soft key under the desired destination (first scrolling to a different page if required). That soft key will illuminate green, and if Category Prompting is enabled, valid categories in the Category/Number Group will also illuminate green.

   Category/number selections will be ignored until a soft key has been selected. Reselecting an illuminated soft key button will toggle it off and cancel the operation. Selecting another soft key will add destinations to be changed to the same source; up to all 80 destinations may be simultaneously selected. Selecting CLEAR will cancel all illuminated destination soft keys and return the panel to multiple destination home state. If the panel has not been configured for prompting (page 6–51), operation will be identical, except the category and number keys will not illuminate.

2. Select the source category/number.

   Initiate a source selection by selecting the desired category from the illuminated choices; selection of an invalid category will have no effect. If a destination has not yet been selected, you will have the opportunity to select one now. Upon selection of one of the illuminated Category buttons, all valid numbers will illuminate in red; the display will change to entry mode. Appropriate updates to the display will occur as in the CP 3000 entry process, with the additional display of the "Number =" selection as shown below. The selected destination soft key(s) will also change to red to indicate a selection in process.

```
                          Destination = PRODCTN4

      Category = Vid_Tape     Number = ???         New Source =  ????????
```

Figure 6–36. *Example Single Destination Assignment Display Page – Category Selected.*

   As valid numbers are entered, the display will update appropriately as defined in the sets. Selection of an invalid number (not illuminated) will have no effect. If the panel has not been configured for prompting, operation will be identical, except the category and number keys will not illuminate.

   Examples of numeric entries are shown below:

```
                          Destination = PRODCTN4

      Category = Vid_Tape     Number = 1           New Source =  VTR_0001
```

Figure 6–37. *Example Single Destination Assignment Display Page – Category & Digit Selected.*

   Once a category and one digit have been selected, only remaining valid numbers will remain lit.

MULTIPLE DESTINATION MODE (CONT'D)

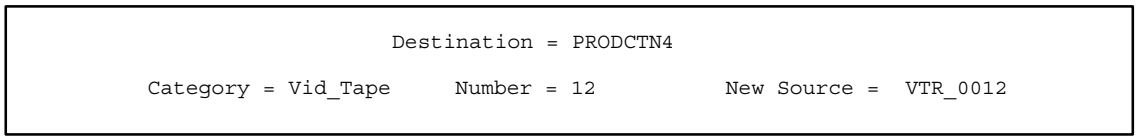


Figure 6–38. *Example Single Destination Assignment Display Page – Category & Two Digits Selected.*

If multiple destinations have been selected, the top line will display as many as possible (up to 6) and then indicate additional destinations with ellipses (...).

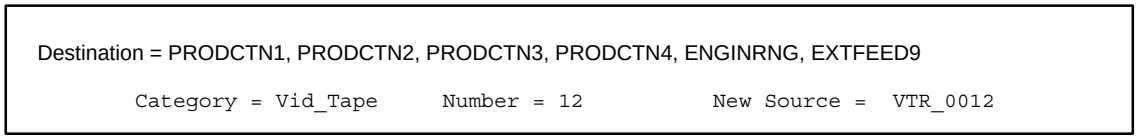


Figure 6–39. *Example 6 Multiple Destination Assignment Display Page – Category & Two Digits Selected.*

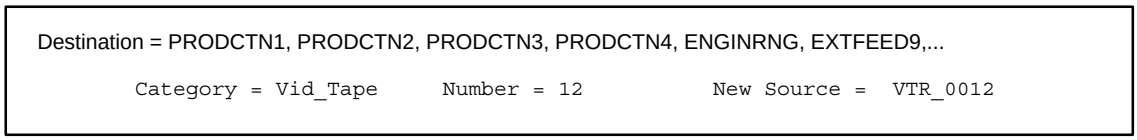


Figure 6–40. *Example Over 6 Multiple Destination Assignment Display Page – Category & Two Digits Selected.*

3. Press TAKE.

The source assignment operation may be completed using the TAKE button any time a valid selection has been made. This will be indicated by the presence of a source name in the display after the display of "New Source =" and the fact that the TAKE button will be illuminated.

Selection of the CLEAR button at any time during the category/number process will place the panel back in "ready for category" mode. A second selection of clear will cancel the operation and revert to home state.

At any time after destinations have been selected and prior to selecting TAKE, levels and audio modes may also be selected as described in the appropriate section below.

> Note: If Sticky Outputs (page 6–50) are selected, destination soft key selections will remain selected until changed or cleared. To clear these selections, press the CLEAR key before selecting a destination.

MULTIPLE DESTINATION MODE (CONT'D)

Adding or Changing a Destination Soft Key Assignment

A destination may be added to any unused location in the display. One additional page will be available when adding destination assignments.

Changing a destination that has already been defined on the panel is also possible.

Note: Destinations that have been defined in the panel's CP Output set (page 5–77) cannot be changed. If an illegal attempt to change a destination is made, the display will provide the following warning:

```
      Existing Destination STUDIO_A Is System Defined And Can Not Be Changed

    Category = Vid_Tape     Number = ???         New Source =  ????????
```

Figure 6–41. *Example Destination Assignment In Process – Defined Destination Warning.*

Adding or changing a destination is achieved by the following sequence:

1. Press the DEST button twice.

   The button will blink red. The displayed change menu will appear:

```
1   Changing Destination - Use Up/Down Buttons and Soft Key to Select Position

  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  ENGINRNG
```

Figure 6–42. *Example Destination Assignment – Change Menu.*

   All user defined locations will illuminate in green.

2. Select the soft key under the desired destination location.

3. Select the Category and Number for the destination.

   The selected soft key will change to red. The display will update to indicate that a destination assignment is in process, Category and number keypad entry, CLEAR, TAKE and display function as already described:

```
                              Assign Destination

        Category = STUDIO       Number = 3       New Destination =  STUDIO_C
```

Figure 6–43. *Example Destination Assignment In Process – Category & Two Digits Selected.*

4. Press TAKE.

MULTIPLE DESTINATION MODE (CONT'D)

When assigning a destination to a soft key position for the first time, selecting the TAKE button will complete the assignment and clear all illuminated buttons. The panel will remain on the current page, with the page number displayed in the upper left corner.

5. If changing an existing assignment, press TAKE again.

   To change an eligible destination, one additional TAKE after the following warning display will be required to complete the operation:

```
Overwrite Existing Destination: STUDIO_A? Select TAKE to Execute, CLEAR to Cancel
         Category = STUDIO       Number = 3       New Destination =  STUDIO_C
```

Figure 6–44. *Example Destination Assignment In Process – Confirming replacing a destination.*

Erasing a Destination

Destinations may be erased if no longer needed from the multiple destination home mode with the following sequence as in changing a destination.

1. Select the DEST button twice; it will blink red.

   The display will update to indicate that a destination assignment is in process.

2. Select the soft key under the desired destination location to be erased; all user defined destinations will illuminate in green. The selected soft key will change to red.

3. Select CLEAR.

   If CLEAR is selected before any keypad operation has been initiated, that soft key destination will be marked for erasure and the user will see the following display:

```
1 ERASE Existing Destination: STUDIO_A? Select TAKE to Execute, CLEAR to Cancel
  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  ENGINRNG
```

Figure 6–45. *Example Destination Erasure In Process – Selected destination blinking.*

4. Select TAKE.

   This will complete the clear for the selected destination, returning the panel to multiple destination home state. Selecting CLEAR a second time will cancel the operation, also returning the panel to multiple destination home state. Reselecting the blinking DEST button will cancel the operation and return the panel to the multiple destination home state.

MULTIPLE DESTINATION MODE (CONT'D)

Entering Single Destination Mode

This mode displays multi–level status for a single destination.

1. Press the DEST button.

   The DEST button will illuminate in green.

2. Select the destination to be controlled:

   — If the desired destination has already been assigned to a soft key, select the key.

   — If the desired destination has not been assigned to a soft key, press DEST again. Button should now be flashing red. Select a soft key that is lit high green (i.e., one that is front–panel assignable). Select a category and number; press TAKE. (If the button has already been assigned you will need to press TAKE again.) Then go back to Step 1.

   The DEST button will remain illuminated in green to indicate single destination mode.

3. For operating instructions while in the single destination mode, refer to page 6–37.

4. To return to Multiple Destination mode, press the green DEST button a second time.

DEST

SINGLE DESTINATION MODE (“SINGLE–BUS CONTROL”)

This mode displays multi–level status for a single destination. The DEST button remains illuminated in high green.

As explained previously, this panel can be system defined at the file server for Multiple/Single Destination Mode operation, or Single Destination Mode only operation. For front–panel selectable, Multiple or Single Destination Mode operation, a “Y” is placed in the Expansion column of the MPK devices table. For Single Destination Mode only operation, an “N” is entered.

— If the panel is system–defined for Single Destination Mode only operation, the “DEST” button is always illuminated in high green (cannot be turned off by the operator).

— If the panel is system–defined for Multiple/Single Destination Mode, selection of Single Destination Mode is described on page 6–36.

```
1               Destination = PRODCTN4      Source = VTR_0001

  VTR01VID  VTR01AL   VTR01AR   VTR01A3   VTR01A4   VTR01TC   VTR01CTL  VTR01DIG
```

Figure 6–46. *Example Single Destination Mode Display Page – Home State.*

As shown in the above example, the first line of Single Destination home state shows the destination mnemonic, the source mnemonic, and the page number. The second line shows status for that destination.

Page numbers here are only provided if more than eight levels exist. Levels are shown on the second line as defined for the destination.

When in this mode, source assignments can be made at any time, so if the panel supports prompting (page 6–51), valid categories are also illuminated in green.

From this page you can:

- Scroll to other pages to view additional levels (if applicable)
- Select a new destination
- Make a source change

A user can also change a Protect/Lock status, level selections and audio modes. Those operations are described in the appropriate separate sections in this document.

DEST

SINGLE DESTINATION MODE (CONT'D)

Scrolling to Other Pages

Scrolling to other pages is achieved with the Up/Down Arrows in the Menu Control Group. Only pages containing levels will be accessible. The presence of page numbers in the upper left corner indicate that more than eight levels have been defined for the selected destination.

Selecting a Destination

Note: This procedure varies according to system definition.

1. Press DEST.

— If the button changes to red, the panel is system–defined for Single Destination mode. The available destination category buttons will illuminate in green. Go to Step 2.

— If the button lamp goes to low green, the panel is system–defined for selectable Multiple/Single Destination mode. Go to Step 1a.

a. Press DEST again.

— If the desired destination has already been assigned to a soft key, select the key. This completes the procedure.

— If the desired destination has *not* been assigned to a soft key, press DEST again (3rd time). Button should now be flashing red. Select a soft key position (front–panel assignable positions are indicated by high green). Go to Step 2.

```
                    Current Destination = PRODCTN4

     Category = ?????        Number = ???      New Destination = ????????
```

Figure 6–47. *Example Destination Assignment Display Page – No Selections made.*

DEST

SINGLE DESTINATION MODE (CONT'D)

2. Select a category.

   After a valid category has been selected, the display will reflect the choice and if prompting is enabled, the valid number buttons will illuminate in red in the category/number group.

```
                    Current Destination = PRODCTN4

Category = Vid_Tape     Number = ???      New Destination = ????????
```

Figure 6–48. *Example Destination Assignment Display Page – Category Selected.*

3. Select a number.

   Numbers may be selected as indicated by valid red illumination.

```
                    Current Destination = PRODCTN4

Category = Vid_Tape     Number = 1        New Destination = VTR_0001
```

Figure 6–49. *Example Destination Assignment Display Page – Category & One Digits Selected.*

```
                    Current Destination = PRODCTN4

Category = Vid_Tape     Number = 12       New Destination = VTR_0012
```

Figure 6–50. *Example Destination Assignment Display Page – Category & Two Digits Selected.*

4. Press TAKE. (A second TAKE will be needed to overwrite an old assignment.)

   The destination selection operation may be completed using the TAKE button any time a valid selection has been made. This will be indicated by the presence of a source name in the display after the display of "New Destination =" and the fact that the TAKE button will be illuminated.

   If the panel leaves the Single Destination mode (DEST button goes off), re–enter the mode by pressing DEST again and selecting a destination to be controlled.

   Pressing CLEAR at any time during the entry process will return the panel to the Destination Assignment No Selections Made Mode. Selection of CLEAR at that state or reselecting the red DEST button at any time will cancel the operation and return the panel to Single Destination Mode Home State.

DEST

SINGLE DESTINATION MODE (CONT'D)

Making a Switch

1. Select a category.

   To select a new source, the user enters Source Assignment Mode by selecting any of the green illuminated Category buttons. The display will update as shown below and if prompting is enabled (page 6–51), the available source number buttons will illuminate in red.

```
            Destination = PRODCTN4     Current Source = VTR_0001

       Category = Vid_Tape     Number = ???         New Source =  ????????
```

Figure 6–51. *Example Single Destination Source Assignment Display Page – Category Selected.*

2. Select a number.

   Numbers may be selected as indicated by valid red illumination

```
            Destination = PRODCTN4     Current Source = VTR_0001

       Category = Vid_Tape     Number = 1           New Source =  VTR_0001
```

Figure 6–52. *Example Single Destination Source Assignment Display Page – Category & One Digit Selected.*

```
            Destination = PRODCTN4     Current Source = VTR_0001

       Category = Vid_Tape     Number = 12          New Source =  VTR_0012
```

Figure 6–53. *Example Single Destination Source Assignment Display Page – Category & Two Digits Selected.*

3. Press TAKE.

   The source assignment operation may be completed using the TAKE button any time a valid selection has been made. This will be indicated by the presence of a source name in the display after the display of "New Source =" and the fact that the TAKE button will be illuminated.

   Pressing CLEAR at any time during the entry process will return the panel to the Destination Assignment No Selections Made Mode. Selection of CLEAR at that state or reselecting the red DEST button at any time will cancel the operation and return the panel to Single Destination Mode Home State.

   At any time prior to selecting TAKE, levels and audio modes may also be selected as described in the appropriate section below.

LEVEL

LEVEL SELECTION MODE (“SPLIT” OR “BREAKAWAY” SWITCHING)

This mode is in effect when the “LEVEL” button is illuminated.

Level selection mode can be entered at any time. This mode is accessed either by directly selecting the LEVEL button or by selecting any level soft key when in single destination mode. This mode is indicated by the illumination of the LEVEL button: green if all levels are selected, red if any subset of levels are selected. The display will also reflect this mode as shown below:

```
1  VIDEO     LEFT     RIGHT     TIMECODE  DATATX    DATARX    AES_LEFT  AESRIGHT
   VTR01VID  VTR01AL  VTR01AR   VTR01A3   VTR01A4   VTR01TC   VTR01CTL  VTR01DIG
```

Figure 6–54. *Example Level Selection Mode Display Page.*

From single destination mode, pressing any soft key will present this display. The behavior of the button (turning “on” or “off”) will depend upon the panel type. If defined with Sticky Levels in the panel Configuration menu (page 6–50), the button will change from its previous state while other buttons remain as they had been selected. Otherwise, the button will light in red and all other levels will be deselected. Additional levels can also be selected from this state. Pages can be scrolled if need be to access additional levels.

Entering Level Selection mode from multiple destination mode or when LEVEL is selected starts with all soft keys “off” unless the panel was defined with sticky levels. In that case, entering Level Selection mode displays last selected levels by illuminating the appropriate soft keys.

As many levels may exist (up to 64), it may be desirable for the operator to start this selection from all levels “on” rather than all levels “off.” Double punching the LEVEL button will place the panel in that state (i.e. level selection mode with all levels turned on). Note that all levels will switch when level soft keys are either all on or all off.

If accessed from single destination mode, the levels display line (line 2) does not change. If accessed from multiple destination mode, all valid levels for all destinations selected will be displayed. The operator may select levels which have no impact for some selected destinations; the level soft key will blink red when this condition occurs. When a take will only impact that selected level where it is valid, in addition to blinking the soft key, the display will temporarily show the following message until the next selection or time–out:

```
1     Level Selection Mode - LEVEL SELECTED NOT VALID FOR ALL DESTINATIONS
  VTR01VID  VTR01AL   VTR01AR   VTR01A3   VTR01A4   VTR01TC   VTR01CTL  VTR01DIG
```

Figure 6–55. *Example Level Selection Mode Display Page – Valid Level Warning Display.*

Note that this can even occur in the middle of a category/number operation. If no additional operations are needed, TAKE can also be selected at this time (if illuminated) to complete any pending operation.

Any selected level soft keys remain illuminated in red when returning to single destination mode.

LEVEL SELECTION MODE (CONT'D)

The soft keys return to their selected destination states illuminated in green when returning to the multiple destination mode. The LEVEL button blinks in red to indicate that breakaway levels have been selected. It can be reselected at any time to examine the state of the level soft keys.

Making a Split Switch—Multiple Destination Mode ("DEST" Button OFF)

1. Use a soft key to select a destination.
2. —Press LEVEL and select level(s) to be switched. (Lamp ON = selected).

   –or–

   — Press LEVEL **twice** and **de**–select level(s).
3. Select the source category/number.

(4. Optional: Repeat Steps (2) and (3) above if another level and source need to be switched with a single TAKE.)

5. Press TAKE.
6. To confirm the split, press DEST and select the destination. This will display status for all levels.

Making a Split Switch—Single Destination Mode ("DEST" Button ON)

1. —Select level(s) to be switched. (Lamp ON = selected).

   –or–

   — Press LEVEL **twice** and **de**–select level(s).
2. Select the source category/number.

(3. Optional: Repeat the above steps if another level and source need to be switched with a single TAKE.)

4. Press TAKE.

AUDIO

AUDIO CONTROL MODE (VENUS SPECIAL STEREO SWITCHING)

This mode is in effect when the “AUDIO” button is illuminated.

> Note: Audio Control mode can only be used if an appropriately configured Venus switcher is connected. (For more information see “Audio” on page 5–40.)

This mode is accessed by directly selecting the AUDIO button. If no such levels have been defined, the button will have no effect. This mode is indicated by the illumination of the AUDIO button: green if only normal audio mode(s) selected, red if any audio level(s) is set to other than normal. The display will also reflect this mode as shown below:

```
1            Left      Right     X-left    X-right
             Norm-L    Norm-R    Norm-L    Norm-R
```

Figure 6–56. *Example Audio Selection Mode Display Page – Normal Modes Only.*

In this mode, any appropriately defined stereo levels appear in the top line in the same position they appear in Level display. The panel will automatically display the first page with defined audio levels. The bottom line shows what audio mode is selected.

Selecting the soft key under any level will consecutively cycle through valid audio modes. For a left channel these would be: Revrs–R, Mix, and back to Norm–L. For a right channel these would be Revrs–L, Mix, and back to Norm–R. In the following example, three of the four levels have been changed from normal and those respective soft keys will be illuminated in red:

```
1            Left      Right     X-left    X-right
             Revrs-R   Norm-R    Mix       Revrs-L
```

Figure 6–57. E*xample Audio Selection Mode Display Page – Various Modes Selected.*

Deselecting the AUDIO button returns the panel to exactly whatever state it was in prior to entry into this mode. Note that this can even occur in the middle of a category/number operation. If no additional operations are needed, TAKE can also be selected at this time (if illuminated) to complete any pending operation.

The soft keys return to their previous states when returning to the previous mode. The AUDIO button blinks in red to indicate that special audio mode will be in effect for the next take. In multiple destination mode, special Audio Mode status will also be shown for each destination displayed in the 1st character position with a blinking “A.” When in single destination mode or Levels mode of multi–destination mode, the 1st character position of each level will also reflect special audio status of that level with the blinking “M” for Mix, or “R” for Reverse. The AUDIO button can be reselected at any time to examine the state of the audio levels.

The state of the Audio modes depend upon the panel type. If defined in the panel configuration menu with sticky audio, the audio mode selections will remain in effect across any number of takes, if not, audio modes reset after each take.

AUDIO

AUDIO CONTROL MODE (CONT'D)

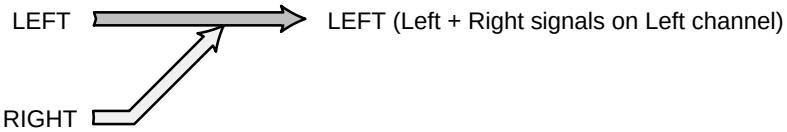
To Perform a Special Stereo Switch:

1. Select a destination and a source.
2. Press AUDIO.

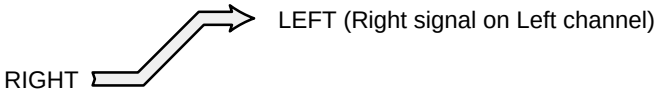
3(a). Toggle the Left channel soft key to the desired mode:

- NORM L – Use left audio for this channel

- MIX – Mix left and right on left channel



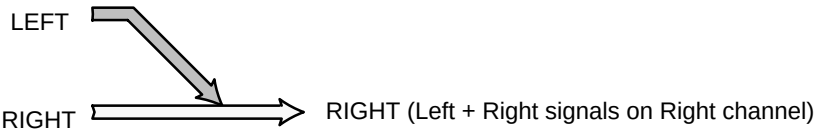
- REVERSE R – Cross right channel signal over to left channel



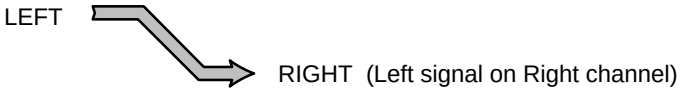
3(b). Toggle the Right channel soft key to the desired mode:

- NORM R – Use right audio for this channel

- MIX – Mix left and right on left channel



- REVERSE L – Cross left channel signal over to right channel



4. Press TAKE.

MENU

MENU MODE

This mode is in effect when the “MENU” button is illuminated.

Menu mode is used to access less frequently needed functions, run diagnostics, and to configure the panel. Select the MENU button to enter this mode. That button will illuminate in green and the panel will present the following display:

```
                    Menu Page – Select Desired Soft Key

VTR CNTL          DIAGNOSTIC          CHOP            CONFIG        PASSWORD
```

Figure 6–58. *Top Level Menu Page.*

From this menu any of the five choices presented may be selected on the appropriate green illuminated soft keys.

VTR Control

When this soft key is selected, the panel goes into one of two modes, depending upon whether it was in single or multi destination mode prior to the selection of the menu button. The MENU button will change to red and remain illuminated.

If no machine control has been defined for the panel, “VTR CNTL” will not be selectable and the following will be displayed:

```
                  Machine Control NOT Defined For This Panel

VTR CNTL          DIAGNOSTIC          CHOP            CONFIG        PASSWORD
```

Figure 6–59.

Single Destination VTR Control

When the CP 3800A has been configured for machine control (using the Machine Control table, page 5–148) and if a valid controlled VTR source has been switched to the destination, the panel will present the following menu display:

```
            Destination = VTR_0001        Source = VTR_0002

 PLAY      STOP      READY     CUE       MARK      REWIND    F FWD     RECORD
```

Figure 6–60. *Example Single Destination Machine Control Page.*

From this page, any of the displayed machine control functions can be selected. “Record” is selected by pressing both the PLAY and RECORD soft keys. All other commands are accessed by single button selections.

MENU

MENU MODE (CONT'D)

If a source is selected which does not support machine control the display will indicate as follows:

```
Destination = PRODCTN4              NO MACHINE CONTROL DEFINED for <Bars    >

PLAY      STOP      READY     CUE       MARK      REWIND    F FWD     RECORD
```

Figure 6–61. *Example Single Destination Machine Control Page – No Machine defined warning.*

If the destination supports machine control but the machine does not respond, the display will indicate that with the following display:

```
Destination = PRODCTN4     Source = VTR_0002     MACHINE IS OFF LINE

PLAY      STOP      READY     CUE       MARK      REWIND    F FWD     RECORD
```

Figure 6–62. *Example Single Destination Machine Control Page – Not on Line Warning.*

To leave this mode, the user selects the red illuminated MENU button and will return to normal single destination operation mode.

Multiple destination VTR Control

If VTR control is selected from the menu page, and menus entered from multi–destination mode, the Menu button will illuminate in red and the panel will display as follows:

```
1 VTR_0123  VTR_0124  VTR_0125  VTR_0126  Test1    Bars       VTR_0333  VTR_0456
  STOPPLAY  PLAYSTOP  OFF LINE  SHUTTLE                       NO TAPE   STOPPLAY
```

Figure 6–63. *Example Multiple Destination Machine Control Page.*

Machines which are stopped will report "**STOP**PLAY" with "**STOP**" blinking. Machines which are playing will report "**PLAY**STOP" with "**PLAY**" blinking. Sources that are not responding will show the words OFF LINE and sources that are not interfaced will show no status. If the device is in some other mode such as shuttling, the display will so indicate but no control is offered. Wherever PLAY / STOP appears, the associated soft key will illuminate in green. Each successive selection of this button will toggle the play/stop condition of the device.

To leave this mode, select the red illuminated MENU button and the panel will return to normal multiple destination operation mode.

Scrolling to Other Pages

Scrolling to other pages is achieved with the Up/Down Arrows in the Menu Control Group. Presence of page numbers indicate that more than eight outputs have been defined for the panel.

MENU

MENU MODE (CONT'D)

Diagnostics

Upon selection of the Diagnostics soft key of the menu page, the panel will enter the firmware diagnostics mode and the following display will be shown:

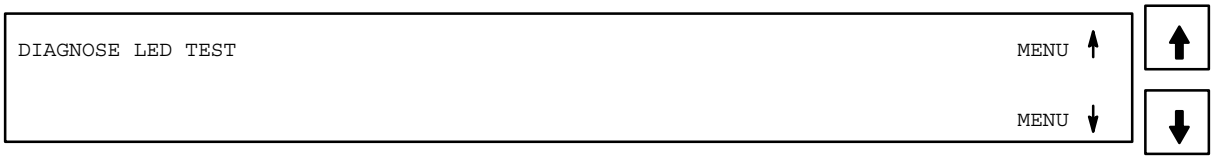


Figure 6–64. *Menu Diagnostics Select Page.*

Press the up and down arrows to scroll to the desired selection. Press TAKE to execute the desired selection.

To exit the diagnostics mode press CLEAR at any time. (It may be necessary to press CLEAR twice.)

Info

Info displays the panel's Application (PROM) version. Pressing UP will advance to the Xilinx FPGA* version, the security flag setting, the Variant version, and the PCB (hardware) version. Press CLEAR to exit.

Baud Rate

When selected, this option displays the current baud rate for the panel. Press DOWN to decrease the baud rate, UP to increase. Available baud rates are: 38400, 19200, 9600, 4800, 2400, and 1200. Pressing TAKE will program the changed setting; CLEAR will cancel.

If the message "Remove MPK conn" appears, the MPK cable must be disconnected before the change can be made.

The baud rate must agree with the setting for the VM/SI 3000 port used by the panel (see *Serial Protocol* on page 5–25).

Panel ID

When selected, this option displays the current MPK hexadecimal address for this panel and permits entry of a new address (the MPK cable must be disconnected before making a change). Use the UP and DOWN arrows to select the desired number (0–9) or letter (A–F) and press TAKE to advance to the next position. (You can also use the numeric key pad and the ABCD keys to enter numbers 0 through D.)

The address must agree with the setting for the panel on the MPK Devices table (see page 5–108).

Pressing TAKE will program the newly entered address; CLEAR will cancel.

* Defined in Glossary section

MENU

MENU MODE (CONT'D)

MPK Test

This diagnostic, which requires the panel to be disconnected from the MPK data cable, is used for factory testing of the MPK port.

Pressing any key will exit the test and return the panel to the Diagnostics menu.

Illumination adjustment

This option allows the user to change the "Low" and "Medium" levels of green button illumination, the "Low" and "Medium" levels of red button illumination, and the level of LED (display character) illumination. The "High" button levels are not adjustable.

The "Low" green level is used for normal button lighting. "High" green and "high" red are also used, but these are not adjustable.

The brightness of the LED display characters can also be adjusted.

For each setting, use the UP and DOWN buttons to change to the desired brightness and press TAKE. Press CLEAR to exit.

Burn In

This test rotates through the button lamp and Display tests continually. Press CLEAR to cancel.

Keyboard test

This diagnostic displays the number of each button as it is pressed. Pressing the TAKE key will change the lamp color. Pressing CLEAR twice exits.

Display test

This test cycles through and displays all legal characters. The test will stop after one cycle. Pressing CLEAR exits.

LED test

This test cycles through the button lamps (LEDs) and illuminates them in green and then red. The test will stop after one cycle. Pressing CLEAR during this test will cancel this test and return the panel to the beginning of the current diagnostic. Pressing CLEAR again will return the panel to the Home mode.

MENU

MENU MODE (CONT'D)

Chop

This menu selection allows chopping alternatively between the previously selected source and a new source. Upon selection of the CHOP soft key, the MENU button will illuminate in red and the following display will be shown:

```
              Enter Input to CHOP and Press TAKE to Complete

      Category = Vid_Tape     Number = ??          New Source =  ????????
```

Figure 6–65. *Menu Diagnostics Select Page.*

The user may then set up any kind of basic or complex source selection per normal operation, with the exception of audio modes. Irrelevant keys will be ignored at this time; i.e. MENU, DEST, SEQ, OVERRIDES, AUDIO, PROT/LOCK.

When the desired source selection is complete, press the TAKE button and the CHOP will begin. The panel will return to home mode and the MENU lamp will extinguish.

Chop mode is indicated by a flashing letter "c" in the status display. In single destination mode, the "c" will appear on each level that is in chop mode.

For additional chop information – see page 6–13.

MENU

MENU MODE (CONT'D)

Config

Upon selection of the Configuration soft key of the Menu page, the MENU button will illuminate in red and the following display will be shown:

```
                Menu Configuration Page - Select Desired Soft Key

  Output                    Level                 Audio                 Prompting
```

Figure 6–66. *Menu Configuration Select Page.*

Pressing the red MENU button again, or CLEAR, will exit the configuration mode.

Sticky Outputs

On selection of the Output soft key in the configuration menu, the following display will appear:

```
                     Sticky Output Mode:              ON

        Press TAKE to turn Sticky Outputs    OFF  - Clear to Exit
```

Figure 6–67. *Menu Configuration – Sticky Outputs Page.*

Pressing TAKE will cause the sticky output mode to toggle. CLEAR will return the panel to the previous page.

Sticky Levels

On selection of the Level soft key in the configuration menu, the following display will appear:

```
                    Sticky Level Mode:               OFF

       Press TAKE to turn Sticky Levels    ON    - Clear to Exit
```

Figure 6–68. *Menu Configuration – Sticky Levels Page.*

Pressing TAKE will cause the sticky level mode to toggle. CLEAR will return to the previous page.

Sticky Audio

On selection of the Audio soft key in the configuration menu, the following display will appear:

MENU

MENU MODE (CONT'D)

```
                    Sticky Audio Mode:              OFF

      Press TAKE to turn Sticky Audio   ON  - Clear to Exit
```

Figure 6–69. *Menu Configuration – Sticky Audio Page.*

Pressing TAKE will cause the sticky audio mode to toggle. CLEAR will return to the previous page.

Category Prompting

On selection of the Prompting soft key in the configuration menu, the following display will appear:

```
                  Category Prompting Mode:        ON

     Press TAKE to turn Category Prompting   OFF  - Clear to Exit
```

Figure 6–70. *Menu Configuration – Category Prompting Page.*

Pressing TAKE will cause the category prompting mode to toggle. CLEAR will return to the previous page.

Password Levels

Upon selection of the Password soft key of the menu page, the MENU button will illuminate in red and the following display will be shown:

```
     Panel Security Level = 66  Enter New Password Then Select Take

                PASSWORD = ??????              LOG OUT
```

Figure 6–71. *Panel Password Security Page.*

If category prompting is enabled, the number pad will illuminate in green. Enter a six–digit password. When six digits have been typed, the TAKE button will illuminate in red to indicate that TAKE should be pressed. If an invalid password is entered and Taken the display will briefly show "INVALID PASSWORD" and clear to accept another number.

The words LOG OUT will be displayed only if the panel is currently set to higher than its defined level. Selecting the soft key under the LOG OUT legend will prompt the user to confirm with the TAKE button:

```
            Panel Security Level = 98  Confirm LOG OUT To

            Panel Security Level = 66  By Pressing TAKE
```

Figure 6–72. *Panel Password Security Page – Password typed in.*

Completion of a "raise password level" operation, or log out, or selecting the red illuminated MENU button will return the panel to whichever operation mode it was in prior to selection of MENU.

MENU

MENU MODE (CONT'D)

Password Level Request During TAKE

If the user requests a TAKE that requires a higher level password than the panel is currently set to, the user will also be presented with the password security page below. Entry of a valid password and TAKE will execute the take that one time only:

```
Panel Security Level = 66   Enter New Password Then Select TAKE

                          PASSWORD = ??????      (FOR THIS TAKE ONLY)
```

Figure 6–73. *One Time Only Password Security Page.*

OVER RIDES

OVERRIDE MODE

This mode is in effect when the “OVERRIDES” button is illuminated.

Up to 10 pages of Overrides (80 total) may be defined. The up/down arrow keys may be used to access all pages containing defined overrides. Overrides may be defined using the file server in the CP Override set assigned to the panel (page 5–98), or, interactively by the user as described below.

Override mode may be selected from either the single or multiple destination home state by pressing the OVERRIDE button, which will then illuminate in green. No keypad operations may be in progress. Any selected levels or audio modes are suspended as overrides contain their own level and audio definitions. Selected audio and levels are restored when the user leaves this mode by turning off the OVERRIDE button. The following display will indicate override select mode and show all defined override buttons:

```
1                          Destination = PRODCTN4

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B  OVERRD05  OVERRD06  OVERRD07  OVERRD08
```

Figure 6–74. *Example Override Selection Mode Menu.*

User defined overrides using special audio modes will indicate this with a blinking ‘A’ to the left of the override name.

If no system (file server) or user overrides are defined for the panel, the following message will be displayed:

```
1        No Overrides Defined, Select OVERRIDE key to define, CLEAR to exit
```

Figure 6–75.

Executing Overrides

All defined soft keys will illuminate in red to indicate that they are armed and ready to take an override. Selection of any so illuminated soft key will cause the override to be immediately selected at the previously selected destination(s). No subsequent TAKE operation is required. In multiple destination mode, the output may be selected before or after pressing the OVERRIDE button.

The top destination line functions in the same manner as defined in the multi destination mode section; it can show up to six destinations; for over 6, the display indicates multiple destinations with ellipses (...).

An override may be applied to a destination that does not match the levels defined for that override. When this situation occurs, the user will be warned with either of the two messages shown on the top line (as appropriate):

OVER RIDES

OVERRIDE MODE (CONT'D)

```
1    Some Override Levels Not Valid For Destination - Partial Take Occurred

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B  OVERRD05  OVERRD06  OVERRD07  OVERRD08
```

Figure 6–76. *Example Override Mode Warning Display.*

```
1       All Override Levels Not Valid For Destination - No Take Occurred

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B  OVERRD05  OVERRD06  OVERRD07  OVERRD08
```

Figure 6–77. *Example Override Mode Warning Display.*

Defining Overrides

Users may define overrides to any unused accessible location. Overrides defined from the Jupiter file server CANNOT be changed as they do not contain audio modes. User defined overrides do contain audio modes.

Overrides are automatically named by their position. For example, creating an override for the 2nd button of the third page will create an override named "OVERRD18." User defined overrides may also be erased if no longer needed or to make room for new definitions.

Entering Define Mode

The panel is placed in Define Override mode by selecting a destination and double punching the OVERRIDE button. It will illuminate in red to indicate this mode. The display will indicate this mode and prompt for a button assignment (valid soft key locations will illuminate in green). A blank page will be provided after the last page of overrides.

```
1    Defining Override - Use Up/Down Buttons And Soft Key To Select Position

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B  OVERRD05  OVERRD06  OVERRD07  OVERRD08
```

Figure 6–78. *Example Home Defining Override Menu.*

Creating the override definition

When the user has selected an appropriate location, that soft key will illuminate in red and the display will indicate the selection and that it is ready to record the override:

```
3   Defining Override <OVERRD21> - Select TAKE to Define - 2ND TAKE to Finish

  TST_OR17  TST_OR18          OVERRD20  -DEFINE-
```

Figure 6–79. *Example Override Definition Menu – Page 3, Fifth Button Position Selected.*

When this menu appears the user may deselect the red soft key or select CLEAR to return to the Home Defining Override menu or may deselect the red OVERRIDE button to exit Defining mode.

OVER RIDES

OVERRIDE MODE (CONT'D)

To create the definition, the operator selects TAKE. The panel displays it is ready to define an override and the OVERRIDE button blinks in red to indicate that a definition is in progress.

```
              Defining Override <OVERRD21> - Press TAKE to Complete

      Category = Vid_Tape     Number = 12          New Source =  VTR_0012
```

Figure 6–80. *Example Override Definition Menu – Source Selection.*

The user may then execute any kind of basic or complex source selection per normal operation. Destination changes/selections cannot be made as part of the Override definition. All irrelevant keys are ignored during definition; i.e. MENU, PROT/LOCK, SEQ, DEST. When the selection is completed with the TAKE button, the menu will return to Define Override Mode as shown (OVERRIDE button stops blinking, remains red):

```
3    Defining Override - Completed - Select TAKE To Confirm Or CLEAR To Cancel

  TST_OR17  TST_OR18          OVERRD20  OVERRD21
```

Figure 6–81. *Example Override Definition Menu – Page 3, Fifth Button Position Defined.*

From this menu the operator can confirm the definition by pressing TAKE or can select CLEAR to return to the Home Defining Override menu to try again. Pressing TAKE will also return the panel to Override Selection mode; an additional press of the OVERRIDE button is required for each completed definition.

Note that the switch is not performed during definition. To execute the defined switch, the operator must select the override from the menu.

> **Important:** Because user defined overrides have a large memory requirement, overrides should be defined from the file server whenever possible. This applies especially to overrides with eight–character names.

Override Definitions may also be aborted at any time by selecting the OVERRIDE button when it is blinking red. A brief message will appear on the top line stating "OVERRIDE DEFINITION ABORTED" and the panel will return to the Override selection menu and the OVERRIDE button will illuminate in green.

Viewing Override Definitions

The user can view override definitions by placing the panel in the Define Override mode as defined above. The user then selects an existing override. The following display will be shown:

```
1    Definition of Override <OVERRD05>

  VidTape1  VidTape1  VidTape1 MCart-01  MCart-01    Silence   Silence   Silence
```

Figure 6–82. *Example Viewing Override Definition.*

Page numbers are included if more than eight levels are defined for an override. Special audio modes are indicated with a blinking 'R' for Reverse and 'M' for Mix. To exit this mode, the user will press either the red OVERRIDE or red CLEAR buttons. This will return the operator to the Define Override Mode.

OVER RIDES

OVERRIDE MODE (CONT'D)

Erasing An Override

Overrides may be erased if no longer needed or to make room for new definitions from the Define Overrides Home mode. Enter define mode by double punching the OVERRIDE button (see above for menu display). Selecting CLEAR at this point allows erasing user defined overrides. The display will indicate this mode and prompt for a button assignment (valid soft key locations will illuminate in green):

```
1    Erasing Override - Use Up/Down Buttons And Soft Key To Select Position

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B  OVERRD05  OVERRD06  OVERRD07  OVERRD08
```

Figure 6–83. *Example Erasing Override Menu.*

The user may scroll pages as appropriate and select the desired button position to be erased. Upon selection of a valid position the user will be prompted for confirmation while the selected override name blinks.

```
1    Erasing Override - Select TAKE To Confirm Or CLEAR To Cancel

  ALLBLACK  ALL_BARS  SET_UP_A  SET_UP_B OVERRD05   OVERRD06  OVERRD07  OVERRD08
```

Figure 6–84. *Example Erasing Override Menu – Seventh Button Position Clear Confirmation.*

From this menu the operator can confirm the desired clear operation by pressing TAKE or can select CLEAR to return to the Home Defining Override menu to try again. Pressing TAKE will also return the panel to Override Selection mode; additional presses of the OVERRIDE and CLEAR buttons are required for each completed clear.

As with Override Definitions, clears may also be aborted at any time by selecting the OVERRIDE button when it is red or blinking red. A brief message will appear on the top line stating "OVERRIDE CLEAR ABORTED" and the panel will return to the Override selection menu and the OVERRIDE button will illuminate in green.

SEQ

SEQUENCE MODE

This mode is in effect when the “SEQ” button is illuminated.

Sequence mode may be selected from either single or multiple destination home state by selecting the SEQ button, which will then illuminate in green. No keypad operations may be in progress. Any selected levels or audio modes are suspended while in sequence mode as sequences contain their own level and audio definitions. Selected audio and levels are restored when the user leaves this mode by turning off the SEQ button. The following display will indicate sequence select mode and show all defined sequence buttons:

```
1               Select Sequence to Execute - CLEAR to Cancel

  BLACKSEQ  BARS_SEQ    SEQ_A    SEQ_B    USRSEQ05  USRSEQ06  USRSEQ07  USRSEQ08
```

Figure 6–85. *Example Sequence Selection Mode Menu.*

User defined sequences using special audio modes will indicate this with a blinking ‘A’ to the left of the sequence name.

If no system (file server) or user sequences are defined for the panel, the following message will be displayed:

```
1        No Sequences Defined, Select SEQ key to define, CLEAR to exit
```

Figure 6–86.

Executing Sequences

All defined soft keys will illuminate in red to indicate that they are armed and ready to take a sequence. Selection of any so illuminated soft key will cause the sequence to be immediately executed to the defined destinations. No subsequent TAKE operation is required.

Up to 10 pages of Sequences (80 total) may be defined. The up/down arrow keys may be used to access all pages containing defined sequences. Sequences may be defined in the sequence set for the panel or interactively by the user as described below.

Defining Sequences

Users may define sequences to any unused accessible location.

> Note: Sequences defined from the Jupiter file server CANNOT be changed as they do not contain audio modes. User defined sequences do contain audio modes.

One additional page will be available when defining sequences. Sequences are automatically named by their position. For example, creating an sequence for the 2nd button of the third page will create an sequence named “USRSEQ18.” User defined sequences may also be erased if no longer needed or to make room for new definitions.

SEQ

SEQUENCE MODE (CONT'D)

Entering Define Mode

The panel is placed in Define Sequence mode by double punching the SEQUENCE button, which will then illuminate in red to indicate this mode. The display will indicate this mode and prompt for a button assignment (valid soft key locations will illuminate in green):

```
1    Defining Sequence - Use Up/Down Buttons and Soft Key to Select Position
  BLACKSEQ  BARS_SEQ    SEQ_A    SEQ_B    USRSEQ05  USRSEQ06  USRSEQ07  USRSEQ08
```

Figure 6–87. *Example Home Defining Sequence Menu.*

Creating the Sequence Definition

When the user has selected an appropriate location, that soft key will illuminate in red and the display will indicate the selection and that it is ready to record the sequence:

```
3  Defining Sequence <USRSEQ21> - Select TAKE to Define - Press SEQ to Finish
  TST_SQ17  TST_SQ18        USRSEQ20  -DEFINE-
```

Figure 6–88. *Example Sequence Definition Menu – Page 3, Fifth Button Position Selected.*

When this menu appears the user may deselect the red soft key or select CLEAR to return to the Home Defining Sequence menu or may deselect the red SEQUENCE button to exit Defining mode.

To create the definition, the operator selects TAKE. The panel returns to single or multiple destination home mode (wherever it was) and the Sequence button blinks in red to indicate that a definition is in progress.

In multiple destination mode the user is then prompted to select a sequence output and a source:

```
3                 Select Sequence Outputs, Then Select Source
  VTR_01   VTR_02   VTR_03   ENGNRING   STUDIO_A   STUDIO_D   MONITR45   MONITR46
```

Figure 6–89.

SEQ

SEQUENCE MODE (CONT'D)

In single destination mode the user is prompted to select a source:

```
3                  Destination = Studio A, Select Source

  VTR_01   VTR_02   VTR_03   ENGNRING   STUDIO_A   STUDIO_D   MONITR45   MONITR46
```

Figure 6–90.

The user may then set up any kind of basic or complex source selection per normal operation. Destination changes/selections are also recorded as part of the Sequence definition. Audio mode selections are relevant to the specific switch being defined. All irrelevant keys are ignored during definition; i.e. MENU, PROT/LOCK, OVERRIDE. When the operator has completed all desired switches, the blinking SEQ button is selected to complete the definition; the menu will return to Define Sequence Mode as shown (SEQ button stops blinking, remains red):

```
3    Defining Sequence - Completed - Select TAKE To Confirm Or CLEAR To Cancel

 TST_SQ17  TST_SQ18          USRSEQ20  USRSEQ21
```

Figure 6–91. *Example Sequence Definition Menu – Page 3, Fifth Button Position Defined.*

From this menu the definition can be confirmed by pressing TAKE, or CLEAR can be selected to return to the Home Defining Sequence menu to try again. Pressing TAKE will also return the panel to Sequence Selection mode, an additional press of the SEQ button is required for each completed definition.

Note that the switches are not performed during sequence definition. To execute the defined sequence, the operator must select it from the menu.

> **Important:** Since user defined sequences have a large memory requirement, they should be defined from the file server whenever possible. This applies especially to sequences with eight–character names.

Sequence Definitions may also be aborted at any time by selecting the SEQ button when it is blinking red. A brief message will appear on the top line stating "SEQUENCE DEFINITION ABORTED" and the panel will return to the Sequence selection menu and the SEQ button will illuminate in green.

If the user enters too many switches and fills the sequence, the following prompt will appear:

```
1    Sequence <USRSEQ21> Full.  Press TAKE to Finish or CLEAR to Cancel

 TST_SQ17  TST_SQ18          USRSEQ20  -DEFINE-
```

Figure 6–92. *Example Sequence Definition Menu – Too many entries.*

Pressing the TAKE button completes the sequence at the current switch. Pressing CLEAR cancels the sequence entry.

SEQ

SEQUENCE MODE (CONT'D)

Viewing Sequence Definitions

To view sequence definitions, place the panel in the Define Sequence mode as defined above. Then select an existing sequence. The following display will be shown:

```
1    Definition of <TST_SQ17>, Entry:01,  Destination=PROCTN1,  Source=Test-17
  TST_SQ17  TST_SQ17  TST_SQ17  TST_SQ17  TST_SQ17  TST_SQ17  TST_SQ17  TST_SQ17
```

Figure 6–93. *Example Viewing Sequence Definition – Sequence Entry 1.*

Page numbers are included if more than eight levels are defined for a sequence. Special audio modes are indicated with a blinking 'R' for Reverse and 'M' for Mix. If more than one entry exists, the TAKE button will turn red, allowing the user to display the next entry. To exit this mode, the user will press either the red SEQUENCE or CLEAR buttons. This will return the operator to the Define Sequence Mode. The CLEAR button turns red when the last sequence entry is reached.

Erasing a Sequence

Sequences may be erased if no longer needed or to make room for new definitions from the Define Sequences Home mode. Enter define mode by pressing the SEQ button (see above for menu display). Selecting CLEAR at this point allows erasing user defined sequences. The display will indicate this mode and prompt for a button assignment (valid soft key locations will illuminate in green):

```
1    Erasing Sequence - Use Up/Down Buttons And Soft Key To Select Position
  BLACKSEQ   BARSSEQ   SEQ_A     SEQ_B    USRSEQ05  USRSEQ06  USRSEQ07  USRSEQ08
```

Figure 6–94. *Example Erasing Sequence Menu.*

The user may scroll pages as appropriate and select the desired button position to be erased. Upon selection of a valid position the user will be prompted for confirmation while the selected sequence name blinks on the display.

```
1     Erasing Sequence - Select TAKE To Confirm Or CLEAR To Cancel
  BLACKSEQ   BARSSEQ   SEQ_A     SEQ_B    USRSEQ05  USRSEQ06  USRSEQ07  USRSEQ08
```

Figure 6–95. *Example Erasing Sequence Menu – Seventh Button Position Clear Confirmation.*

From this menu the operator can confirm the desired clear operation by pressing TAKE or select CLEAR to return to the Home Defining Sequence menu to try again. Pressing TAKE will also return the panel to Sequence Selection mode; an additional press of the SEQ and CLEAR buttons are required for each completed clear.

As with Sequence Definitions, clears may also be aborted at any time by selecting the SEQ button when it is red or blinking red. A brief message will appear on the top line stating "SEQUENCE CLEAR ABORTED" and the panel will return to the Sequence selection menu and the SEQ button will illuminate in green.

PROT/
LOCK

PROTECT/LOCK MODE

The bottom two buttons below the Mode group select protection or locking (PROT/LOCK) and clear category/number selections and/or cancel ongoing definitions (CLEAR).

Protection is accessed by selecting the PROT/LOCK button once, illuminating green to indicate this condition. Locking is accessed by selection twice (double punch). The PROT/LOCK button will illuminate red. If the panel is in single destination mode, protection/locking is applied to the current destination. If in multiple destination mode, the user may select a destination(s) beforehand or afterwards from the soft keys; the lamp in the PROT/LOCK button will blink if a destination is still needed. A third press will cancel the mode. Protect/Lock status will also be shown on the destination status display in the 1st character position with a blinking “P” or “L” as appropriate. As soon as a valid destination and Protect/Lock mode is selected, the TAKE button will illuminate in red. Protect/Lock functions take effect upon selection of the TAKE button and may be incorporated into more complex takes as described below.

If the panel’s password level is 90 or above, the unlock or unprotect operation will be “Force Unlock.” The control panel will override locks or protects from other panels. If the PROT/LOCK operation cannot be completed, an error message will be displayed, including the name of the panel that locked or protected the output, if applicable. Switches that cannot be completed due to locks and protects will also display an appropriate error message.

Locking or protecting a single destination in either multiple destination or single destination mode will result in the prompts below. In multiple destination mode, the bottom line will display the current page of destination names and the selected destination buttons will be illuminated. In single destination mode, the bottom line will display the status of the output.

```
 1     LOCK Destination PRDCTN4 ?   Select TAKE to Execute, CLEAR to Cancel
   VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  PRDCTN4
```

Figure 6–96. *Example Lock Single Destination Prompt.*

```
1    PROTECT Destination PRDCTN4 ?   Select TAKE to Execute, CLEAR to Cancel
  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  PRDCTN4
```

Figure 6–97. *Example Protect Single Destination Prompt.*

Locking or protecting multiple destinations will result in the following prompts:

```
1      LOCK Destinations?   Select TAKE to Execute, CLEAR to Cancel
  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  PRDCTN4
```

Figure 6–98. *Example Lock Multiple Destinations Prompt.*

PROT/
LOCK

PROTECT/LOCK MODE, CONT'D

```
1       PROTECT Destinations?   Select TAKE to Execute, CLEAR to Cancel

  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  STUDIO_C  PRDCTN4
```

Figure 6–99. *Example Protect Multiple Destinations Prompt.*

The bottom line will display the current page of destination names and the selected destination buttons will be illuminated.

If the output is already locked or protected, the displays will have an "un" added to the messages for unlock and unprotect. Pressing the TAKE button will unlock or unprotect the output.

For additional protect/lock information – see page 6–12.

TIE LINE STATUS AND OPERATION

All destinations employing tie lines will be so indicated with a blinking “T” in the destination status display in the 1st character position. When in single destination mode, the 1st character position of each level will also reflect tie line status with the blinking “T.”

Tie Lines Used Up Warning

Any time a Take is attempted that requires a tie line connection but none are available, the following display will appear showing the name of the destination, its current source, and the attempted source:

```
1               NO TIE LINES LEFT TO SWITCH PRODCTN4 to OuterSpc

  VTR_0123  VTR_0124  VTR_0125  VTR_0126  STUDIO_A  STUDIO_B  ENGINRNG  PRDCTN4
```

Figure 6–100. *Example Tie Lines Used Up Warning Message – Multi Destination Mode.*

This display will remain for an undetermined timeout or until the CLEAR button is selected, which ever comes first. If the take is to multiple destinations via multiple destination mode or a sequence, as much of the operation requested as is possible will be performed. If multiple tie line requests were not fulfilled, multiple warnings will stack up and be displayed consecutively.

As required, this tie line warning will appear during normal takes, overrides and sequences. When this condition occurs, all levels of switching for the particular take will occur for those levels which can (those that do not require tie lines or still have tie lines available). Sequences will execute all other takes that can be completed.

ERROR MESSAGES

For an explanation of CP 3800A series error messages (such as “10xx” or “3200” or “80xx”) please refer to Appendix S.

CP 3808 Control Panel

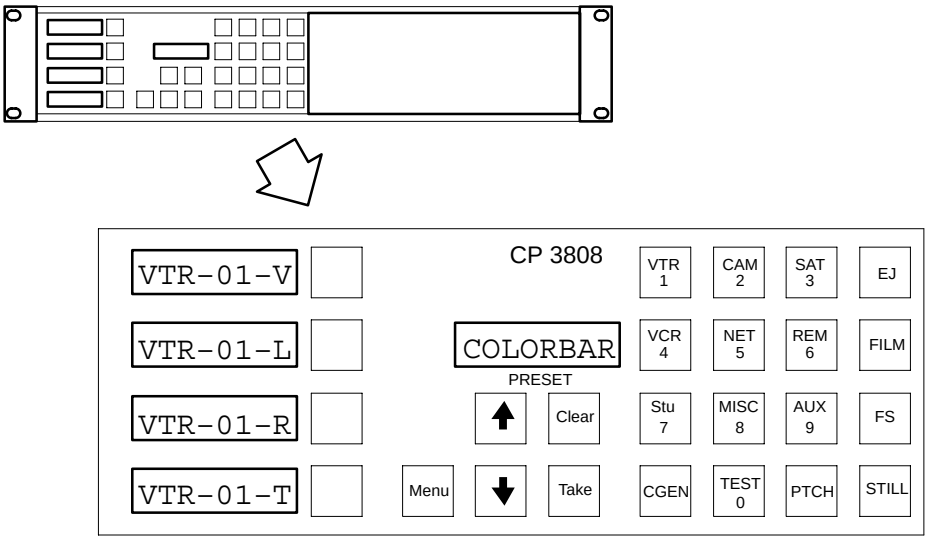


Figure 6–101.

(For installation and configuration instructions, please see page 2–53.)

The CP 3808 control panel is a 16–category,* full–matrix,* multi level breakaway* panel capable of locking* and protecting* outputs. The panel features eight–character display capability and relegendable, lighted push buttons. The panel includes four dedicated level* display windows and breakaway buttons.

All push buttons are capable of both green and red back lighting, with green generally used to show a selected function and red to indicate an operational mode in progress.

As an option, the CP 3808 can be operated in connection with an adjacent CP 3809 Expansion Panel (see page 6–124) or a CP 3810 Expansion Panel (see page 6–126).

The panel has two basic modes of operation: Home mode, and Source Entry mode.

Home Mode

In Home mode, the level displays (the four displays on the left side of the panel) indicate status* of the first four levels of the switcher (i.e., the first four levels listed on the CP Level set table assigned to this panel). To provide “flip–flop” switching, the Preset window shows the *previously selected* source switched to the panel’s controlled output.

Source Entry Mode

Whenever the operator starts to enter a new source on the category/number keypad, the Preset window switches to a prompting mode. The level displays show the *names* of the first four levels; the four level buttons can now be used for breakaway switching.

Detailed operating instructions follow.

---

* Defined in Glossary Section

DESTINATION (OUTPUT) SELECTION

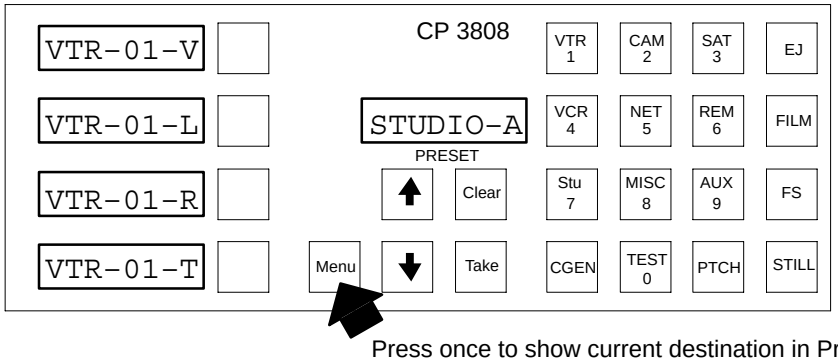


Figure 6–102.

To select a destination:

1. Press the MENU button *once.*

   The Preset window will display the present destination.

   Note: If the MENU button does *not* blink, the destination cannot be changed—probably because the panel has been limited to a certain output by the CP Output set used on the MPK Devices table. See page 5–113.

2. Select a new destination by

   — pressing a category (e.g., “VTR”) and unit number combination, or by

   — using the UP and DOWN arrows to scroll through all available destinations, or by

   — pressing a category key and using UP/DOWN to scroll through the available units in that category; or by

   — selecting a destination on the CP 3809 Expansion Panel (if so equipped—see Figure 6–104).

   If the output has been locked* by another panel, the TAKE button will blink red. To continue, the output must be unlocked (by the panel used to set the lock).

   For additional protect/lock information – see page 6–12.

3. When the desired destination is displayed in the Preset window, press the TAKE button to select it.

   To verify the new output, press MENU again. To return to Home mode, press CLEAR.

SOURCE SELECTION

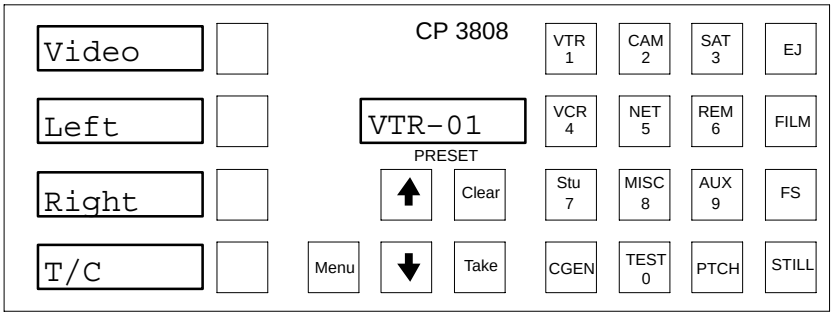


Figure 6–103.

To select a source (input):

— press a category (e.g., “VTR”) and unit number combination, or

— use the UP and DOWN arrows to scroll through all sources, or

— press a category key and use UP/DOWN to scroll through the possible units in that category...

...then press TAKE.

On a valid entry, the defined eight character mnemonic will be displayed in the Preset window and all applicable level lamps will light in green. The level displays (the four left windows) will show the status for each of the first four levels defined in the CP Level set assigned to the panel.

Note: The ***Preset*** window will return to the ***previously selected*** source. This permits flip–flop switching.

If entry of a **password** is requested, please see *Passwords* on page 6–75.

Operation with Expansion Panels

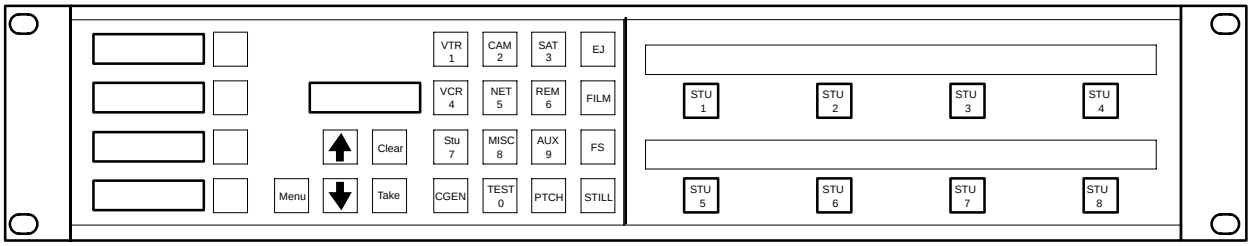


Figure 6–104. *CP 3808 with CP 3809 Expansion Panel.*

Before pressing TAKE, use the expansion panel to select the destination(s). The selected output button will illuminate in “high” green to show it will be affected by the switch. These buttons can be toggled on/off before pressing TAKE.

Note: The output currently being controlled by the CP 3808 will not be affected.

(To assign Expansion Panel buttons to outputs, see pages 5–77 and 6–124 (CP 3809) or 5–77 and 6–126 (CP 3810).

LEVEL BREAKAWAYS (SPLIT SWITCHING)

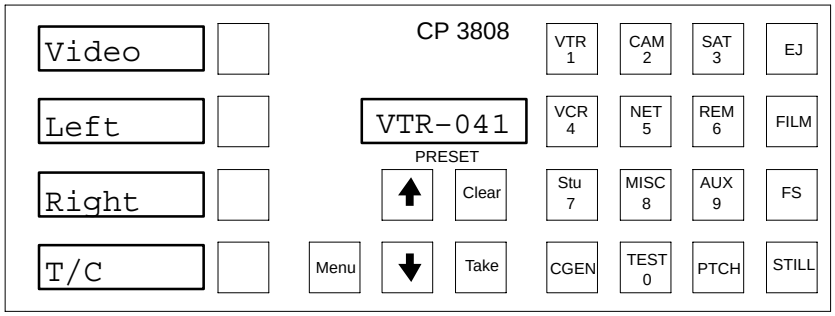


Figure 6–105.

Breakaways can be accomplished either by selecting the levels to switch, and then selecting a source; or by selecting a source and then deselecting unwanted levels.

Breakaways can be disabled on the CP Level Set table by setting the Break Flag for each level to ‘N.’ (See page 5–55.)

Level Preset Method

1. Press the button corresponding to the desired level.

   The level mnemonic appears in the level window and the button will illuminate in “high” green. (To adjust button brightness, see page 6–71.) The level may be toggled off by selecting it again. To move beyond the first four levels, use the UP and DOWN arrow keys.

   Pressing CLEAR will cancel the operation.

2. Select a source.

   Note: If the level window goes blank, the source may not exist on that level (e.g., audio from a camera).

3. Press TAKE.

   The source will switch only on the preset levels, while the non–selected levels will remain at the previously selected source.

   The level windows will indicate status of the first four levels of the switcher; the ***Preset*** window will return to the ***previously selected*** source. This permits flip–flop switching.

Level Deselect Method

1. Select a source.

   The available level mnemonics appear in the Level windows; applicable level buttons will illuminate in “high” green.

2. *Deselect* levels by pressing the appropriate level button.

   The button lamp will change to “low” green, and the corresponding level window will be blanked. To move beyond the first four levels, use the UP and DOWN arrow keys. Pressing CLEAR will cancel the operation.

3. Press TAKE.

   The selected levels will switch to the new source. The deselected levels will remain at the previously selected source.

   The level displays will indicate status of the first four levels of the switcher; the Preset window will return to the previously selected source. This permits flip–flop switching.

Multi–Source, One–Take Splits

The CP 3808 will allow operators to perform complex split switches using multiple sources on levels not defined for all sources, similar to a salvo switch to a single destination. For example, assume the user has defined Camera–1 with Video and TimeCode only levels. However, he or she desires CD–1 for audio. To perform this switch in one take:

1. Select *all* levels to be switched.

   In this example, the operator would press the buttons corresponding to Video, Left, Right, and TimeCode. The buttons will light in “high” green, indicating they are selected.

2. Select the first source.

   In this example, Camera–1 would be selected.

3. *Deselect* the levels that apply to the second source.

   In this example, Left and Right.

4. Select the second source.

   In this example, CD–1 This source will automatically be assigned to the remaining levels, Left and Right audio.

5. Press TAKE.

MENU FUNCTIONS

Destination Mode — Press MENU Once

In this mode (already described on page 6–65) the destination is shown in the Preset window. If the panel is equipped with a CP 3809 Expansion, the outputs controlled by that panel will be indicated.

To return to Home mode, press CLEAR.

Status Mode — Press MENU Twice

This mode allows the UP and DOWN buttons to select and status levels beyond the first four. The mode is indicated by the message “1 STATUS” in the Preset window. The “1” refers to “page 1,” that is, the first page of four levels being displayed.

To return to Home mode (in which UP and DOWN are used for source selection) press CLEAR.

Audio Status Mode— Press MENU Three Times

Note 1: Audio status mode can only be used if an appropriately configured Venus switcher is connected.

This mode is accessed by pressing MENU three times; the MENU button will light in red and the Preset window will display the message “1 AUDIO.” The level windows show the audio mode for each audio channel. In Figure 6–106, both audio channels are set to “Normal.”

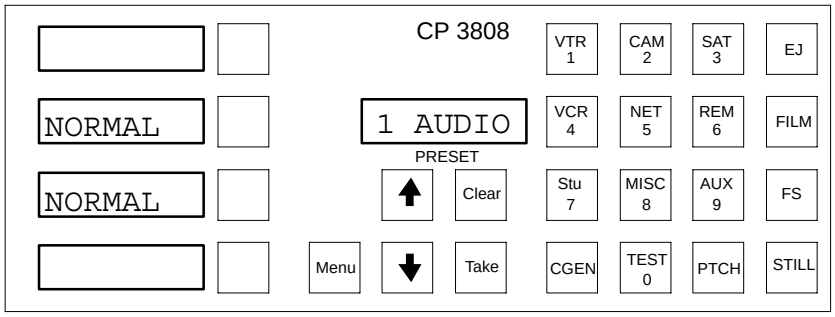


Figure 6–106.

Other possibilities are:

- MIX – Left and right channels are mixed on this channel.
- REVERSE – Signal is from opposite channel.

To move beyond the first four levels, use the UP and DOWN arrow keys.

Note 2: You cannot *change* settings in Audio Status mode; this must be done using Audio Switching mode. See page 6–74.

Locking or Unlocking an Output—Press MENU Four Times

Locking an output prevents that output from being switched by any panel in the system, including the initiating panel.

To lock an output:

1. Press and release MENU until “LOCK?” appears.

2. Press LOCK.

   This has the effect of locking only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The TAKE button will illuminate steady red, indicating the output has been locked by this panel.

   If another panel selects this output for control, that panel's LOCK button will blink. If the other panel attempts to switch this output, a "LOCKED" message will appear, along with the name of the locking panel.

   If the other panel has no LOCK button, that panel's TAKE button will blink.

To unlock the output:

1. Press and release MENU until "UNLOCK?" appears.

2. Press UNLOCK.

   The TAKE button lamp will return to green.

   If the output will not unlock, it has been locked by another panel. The display will indicate "Locked" and show the name of locking panel.

An output may be forced unlocked, no matter which panel locked it, if the password level of the unlocking panel is level 90 or greater. The password level is defined in the MPK Devices table entry (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

Protecting or Unprotecting an Output—Press MENU Four Times

Protecting an output prevents that output from being switched by other panels in the system. The protecting panel may still change the outputs.

To protect an output:

1. Press and release MENU until "PROTECT?" appears.

2. Press PROTECT.

   This has the effect of protecting only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The TAKE button will flash green, indicating the output has been protected by this panel.

   If another panel selects this output for control, that panel's PROT button will blink. If the other panel attempts to switch this output, a "PROTECT" message will appear, along with the name of the protecting panel.

   If the other panel has no LOCK button, that panel's TAKE button will blink.

To unprotect the output:

1. Press and release MENU until “UNPROT?” appears.

2. Press UNPROT.

   The TAKE button will return to green.

   If the output cannot be unprotected, it has been protected by another panel. The display will indicate “Protect” and show the name of protecting panel.

An output may be force unprotected, no matter which panel protected it, if the password level of the unprotecting panel is level 90 or greater. The password level is defined on the MPK Device table (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unprotect the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

Panel ID (Address) Mode—Press MENU Five Times

This option displays the current MPK address for this panel.

Diagnostics Mode — Press MENU Six Times

Note: CP 3808/3809/3824/3830 diagnostics are internal to the control panel and will operate with or without the panel connected to a controller board via the MPK cable.

1. Press and release MENU until “DIAGNOSE” appears.

2. Use the UP and DOWN buttons to select the desired diagnostic.

3. Press TAKE. Instructions for each diagnostic are given below.

   To exit the diagnostics mode press CLEAR at any time. (It may be necessary to press CLEAR twice.)

LED Test

This test cycles through the button lamps (LEDs) and illuminates them in green and then red. The test will stop after one cycle. Pressing CLEAR during this test will cancel this test and return the panel to the beginning of the current diagnostic. Pressing CLEAR again will return the panel to the Home mode.

Info

Info displays the panel’s Application (PROM) version, Xilinx FPGA* version. Variant version (not implemented), and PCB (hardware) version. Press CLEAR to exit.

Baud Rate

When selected, this option displays the current baud rate for the panel. Press DOWN to decrease the baud rate, UP to increase. Available baud rates are: 38400, 19200, 9600, 4800, 2400, and 1200. Pressing TAKE will program the changed setting; CLEAR will cancel.

The baud rate must agree with the setting for the VM/SI 3000 port used by the panel (see *Serial Protocol* on page 5–25).

Panel ID

When selected, this option displays the current MPK address for this panel and permits entry of a new address. Since the address is hexadecimal, the numeric key pad is used for numbers 0 through 9; on the CP 3808 the six remaining category keys are used for numbers A through F (see Figure 6–107).

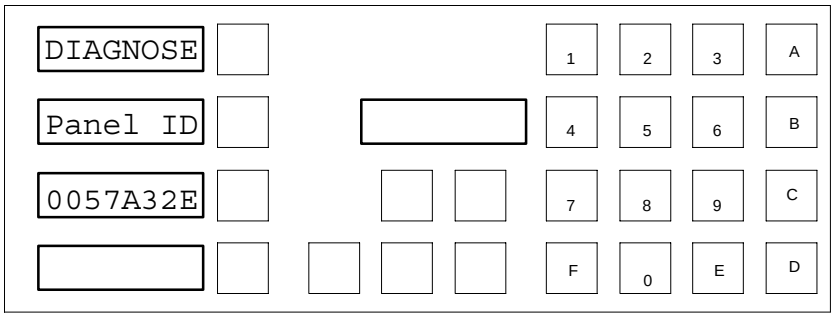


Figure 6–107. *Buttons used for hex address entry.*

On the CP 3830, the six level keys are used for numbers A through F.

On the CP 3809, the top window shows the current address and the bottom window shows the new address as it is entered. Starting with the first digit of the new address, use the UP and DOWN buttons to change the value, press TAKE, change the next value, etc.

Pressing TAKE will program the newly entered address; CLEAR will cancel.

The address must agree with the setting for the panel on the MPK Devices table (see page 5–108).

MPK Test

This diagnostic requires the panel be disconnected from the MPK data cable.

This test allows the factory to test the MPK connection on the control panel.

Illumination Adjustment

This option allows the user to change the “low” and “medium” levels of green button illumination, the “low” and “medium” levels of red button illumination, and the level of LED (display character) illumination. The “high” button levels are not adjustable.

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* Defined in Glossary section

The “low” green level is used for normal button lighting. “High” green and “high” red are also used, but these are not adjustable.

> Note: The amber color, which is presently used only for a CP 3830 dedicated output panel, is created by combining low green and low red.

For each setting, use the UP and DOWN buttons to change to the desired brightness and press TAKE. Press CLEAR to exit.

Burn In

This test rotates through the button lamp and Display tests continually. Press CLEAR to cancel.

Key test

This diagnostic displays the number of each button as it is pressed. Pressing the CHOP key will change the lamp color. Pressing CLEAR twice exits.

Display test

This test cycles through and displays all legal characters. The test will stop after one cycle. Pressing CLEAR exits. (On the CP 3809, press the lower right button to exit.)

AUDIO SWITCHING MODE (VENUS SPECIAL STEREO SWITCHING)

The CP 3808 has the capability of controlling Venus Audio Modes, which are Normal, Mix, and Reverse. These changes are made to individual levels prior to completing a switch by pressing the TAKE button.

Note: Audio switching mode can only be used if an appropriately configured Venus switcher is connected.

To perform a special stereo switch:

1. Select a source.

2. Press MENU.

   The MENU button will light in red and the Preset window will display the message “1 AUDIO.” The level windows show the audio mode for each audio channel. In Figure 6–108, both audio channels are set to “Normal.”

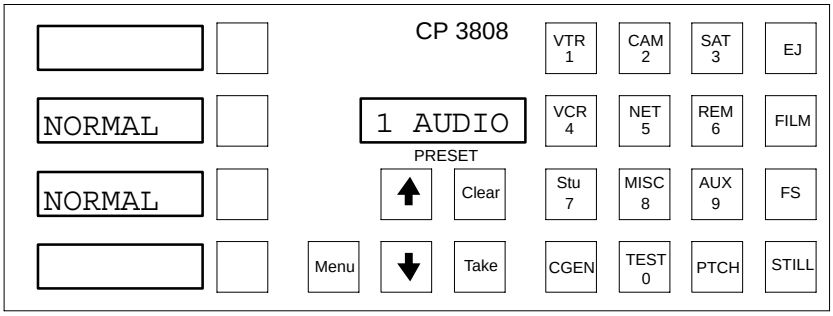


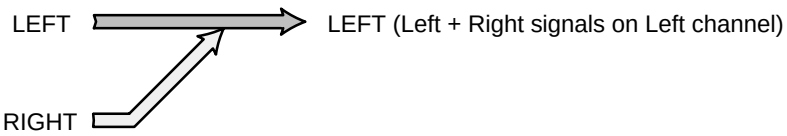
Figure 6–108.

3. Toggle the Left channel soft key to the desired mode:

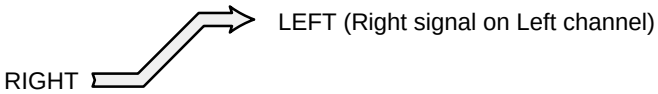
   - NORMAL – Use left audio for this channel

   - MIX – Mix left and right on this channel

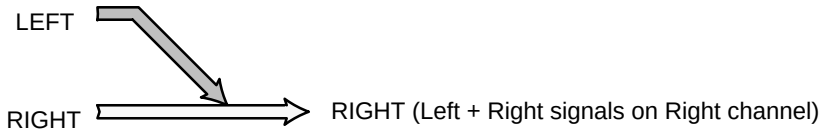
   - REVERSE – Cross opposite channel signal over to this channel

4. Toggle the Right channel soft key to the desired mode:

- NORMAL – Use right audio for this channel

- MIX – Mix left and right on this channel



- REVERSE – Cross opposite channel signal over to this channel

5. Press TAKE.

PASSWORDS

Note: For a general description of the Jupiter password system, please see page 5–17.

If entry of a password (“PASS = ”) is requested, the output about to be affected has a password *level* higher than that of the panel. (Some panels may display their password level as entered on the MPK Devices table, e.g., “PASS = 48”.)

After entry of an appropriate–level six–digit password, the command can be completed by pressing TAKE; however, the panel will then revert to its previous password level.

CP 3810 Expansion Panel Operation

See page 6–126.

CP 3824 Control Panel

(For installation and configuration instructions, please see page 2–54.)

The CP 3824 control panel is a locally–programmable, full–matrix,* multiple level breakaway panel capable of locking* and protecting* outputs. The panel features eight–character display capability and relegendable, lighted push buttons. The 24 button–per–source keys on the left side of the panel are initially assigned to inputs from the file server but some or all can be re–assigned to new inputs at any time using only the panel itself. Sources can also be selected by scrolling up/down an LED display of “Preset” mnemonics or by using the Category/Number keypad. The Current display window shows the source switched to the panel’s controlled output. The Preset window shows the new source as it is being entered from the category and keypad push buttons; after TAKE is pressed, the **previous** source is shown in the Preset window. This allows “flip–flopping” the sources, or switching between the current and preset sources by simply pressing the TAKE button (see page 6–78).

DESTINATION SELECTION

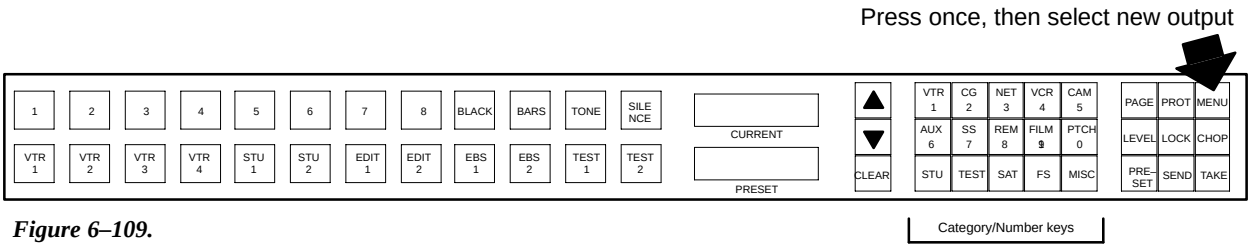


Figure 6–109.

To select a destination:

1. Press the MENU button *once.*

   The Preset window will display the present destination.

2. Select a new destination by

   — pressing a category (e.g., “VTR”) and unit number combination, or by

   — using the UP and DOWN arrows to scroll through all destinations, or by

   — pressing a category key and using UP/DOWN to scroll through the available units in that category.

3. When the desired destination is displayed in the Preset window, press the TAKE button to select it.

   The Current window will return to the *input* mnemonic; the Preset window will go blank.

   Note: if the panel cannot be changed to the desired output, it may have been limited to certain outputs by the CP Output set used on the MPK Devices table. See page 5–113.

* Defined in Glossary Section

SOURCE SELECTION

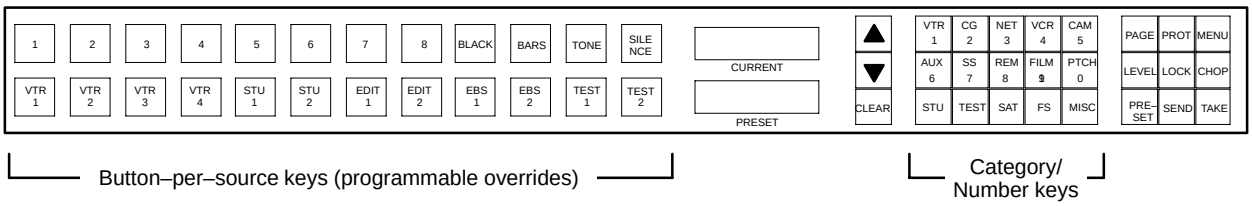


Figure 6–110.

To select an input:

— press one of the 24 button–per–source (Override) keys on the left side of the panel, or

— press a category (e.g., “VTR”) and unit number combination, then press TAKE, or

— use the UP and DOWN arrows to scroll through all sources, then press TAKE, or

— press a category key and use UP/DOWN to scroll through the possible category entries, then press TAKE.

On a valid entry, the defined eight character mnemonic will be displayed in the Preset window.

When using the UP/DOWN arrows, scrolling past the end of the list will wrap around to the other end.

The newly selected source will be shown in the Current window. If an Override button was used to select the source (or if an Override button corresponds to the selected source) the button will illuminate “high” green. However, the button will not illuminate if the first level assigned to the panel on the Override set table has been set to “No” switching. Nor will it illuminate unless all levels assigned to the button are switched.

If entry of a **password** is requested, please see *Passwords* on page 6–75.

Selecting a Source with PRESET On

With PRESET on, you can select an Override key(s) and check the source name(s) before pressing TAKE. The name of the selected input will be previewed in the Preset window.

Scrolling Through Override Pages

Although the CP 3824 has only 24 Override keys, up to 360 inputs can be assigned, i.e., 15 groups (“pages”) of 24 inputs each. To scroll to other pages, press PAGE, then UP or DOWN, TAKE. Pressing both UP and DOWN simultaneously will reset to page 1.

The Override keys can be programmed using the panel itself (see page 6–85) or from the file server (see page 5–98).

Flip–flop Operation

The present source is shown in the Current window, while the previous source is shown in the Preset window. This allows “flip–flopping” the sources, or switching between the current and preset sources by simply pressing the TAKE button.

As an example, if you wish to change the source from BARS to VTR−002, first select the VTR category. The Preset display updates as follows, prompting with the first unit in the VTR category:

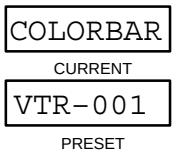


Figure 6–111.

The user will then press the “2” key. The Preset display will update:

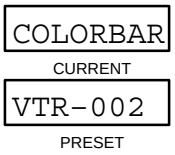


Figure 6–112.

To complete the selection, press the red TAKE button to switch source VTR−002 to the panel’s defined output. The Preset window and the Current window will be swapped as shown, indicating that the previous source can be reselected.

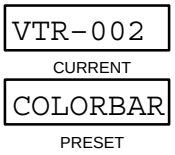


Figure 6–113.

LOCKING OR UNLOCKING AN OUTPUT

Locking an output prevents that output from being switched by any panel in the system, including the initiating panel.

To lock an output:

1. Press the LOCK button.

   This has the effect of locking only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will blink, indicating the output has been locked by this panel.

   If another panel selects this output for control, that panel's LOCK button will blink. If the other panel attempts to switch this output, a "LOCKED" message will appear, along with the name of the locking panel.

   If the other panel has no LOCK button, that panel's TAKE button will blink.

To unlock the output:

1. Press the LOCK button again.

   The LOCK button lamp will stop blinking.

   If the output will not unlock, it has been locked by another panel. The display will indicate "Locked" and show the name of locking panel.

An output may be forced unlocked, no matter which panel locked it, if the password level of the unlocking panel is level 90 or greater. The password level is defined in the MPK Devices table entry (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

PROTECTING OR UNPROTECTING AN OUTPUT

Protecting an output prevents that output from being switched by other panels in the system. The protecting panel may still change the outputs.

To protect an output:

1. Press the PROT button.

   This has the effect of protecting only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will blink, indicating the output has been protected by this panel.

   If another panel selects this output for control, that panel's PROT button will blink. If the other panel attempts to switch this output, a "PROTECT" message will appear, along with the name of the protecting panel.

If the other panel has no LOCK button, that panel's TAKE button will blink.

To unprotect the output:

1. Press the PROT button again.

   The PROT button will stop blinking.

   If the output cannot be unprotected, it has been protected by another panel. The display will indicate "Protect" and show the name of protecting panel.

An output may be force unprotected, no matter which panel protected it, if the password level of the unprotecting panel is level 90 or greater. The password level is defined on the MPK Device table (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unprotect the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

CHOP OUTPUTS

To chop* an output, you must use the Category/number keypad. Select the first source and press TAKE. Then select the second source and press CHOP. The CHOP button will blink, with the message "IN CHOP" displayed in the Current window.

The chop operation will automatically stop after approximately two minutes. The chop will finish with the source in the Preset window being switched to the destination. The chop may be manually terminated by performing another source selection and pressing TAKE.

For additional chop information – see page 6–13.

LEVEL BREAKAWAYS (SPLIT SWITCHING)

Breakaway Using Override Keys (PRESET Off)

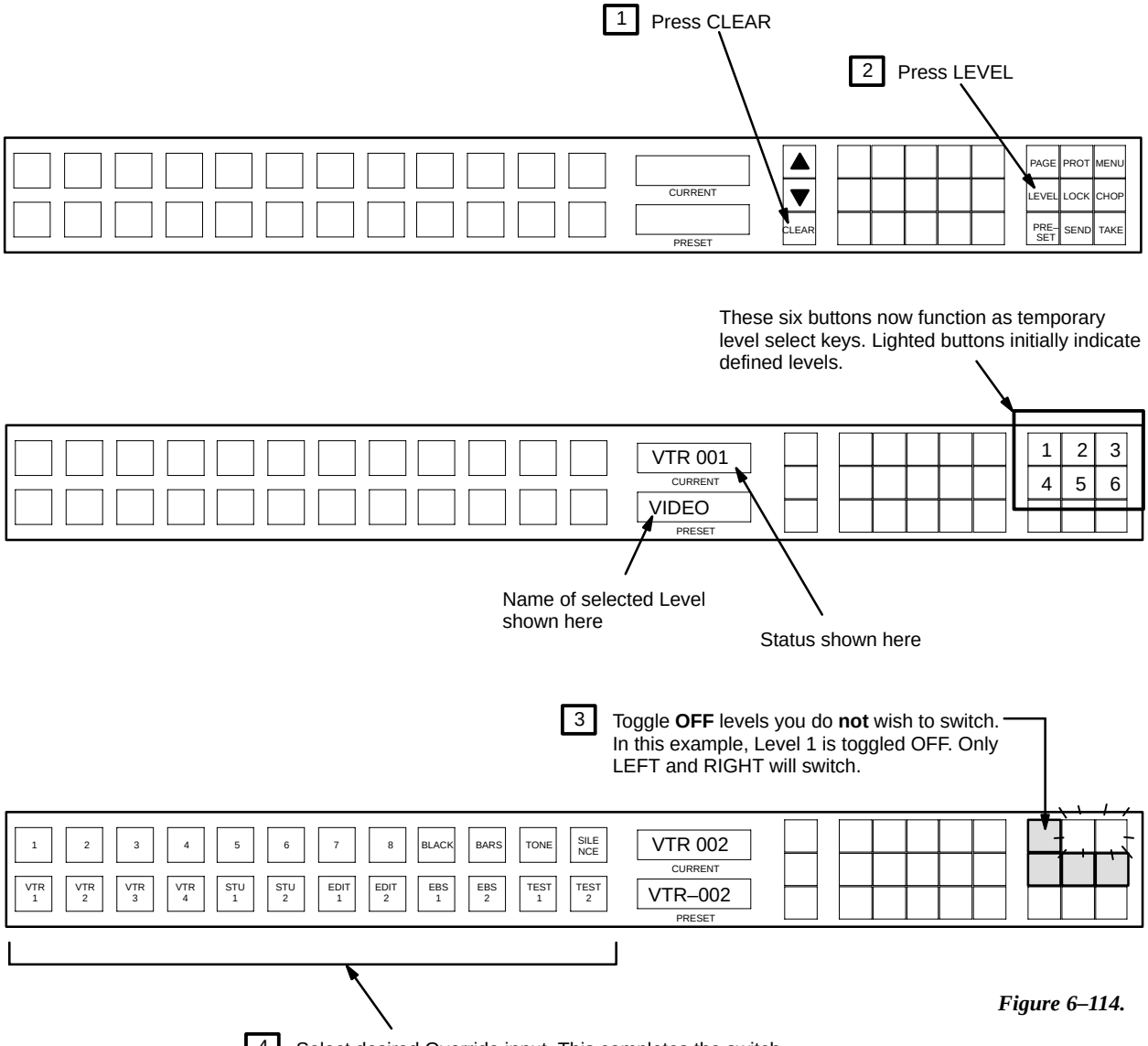


Figure 6–114.

To check the switch, press LEVEL. Then press one of the six temporary level keys; status will be shown in the Current window. Then press CLEAR.

If there are more than six levels, use the UP/DOWN keys to access the second set of six levels, etc.

Breakaway Using Category/Number Keys (PRESET Off)

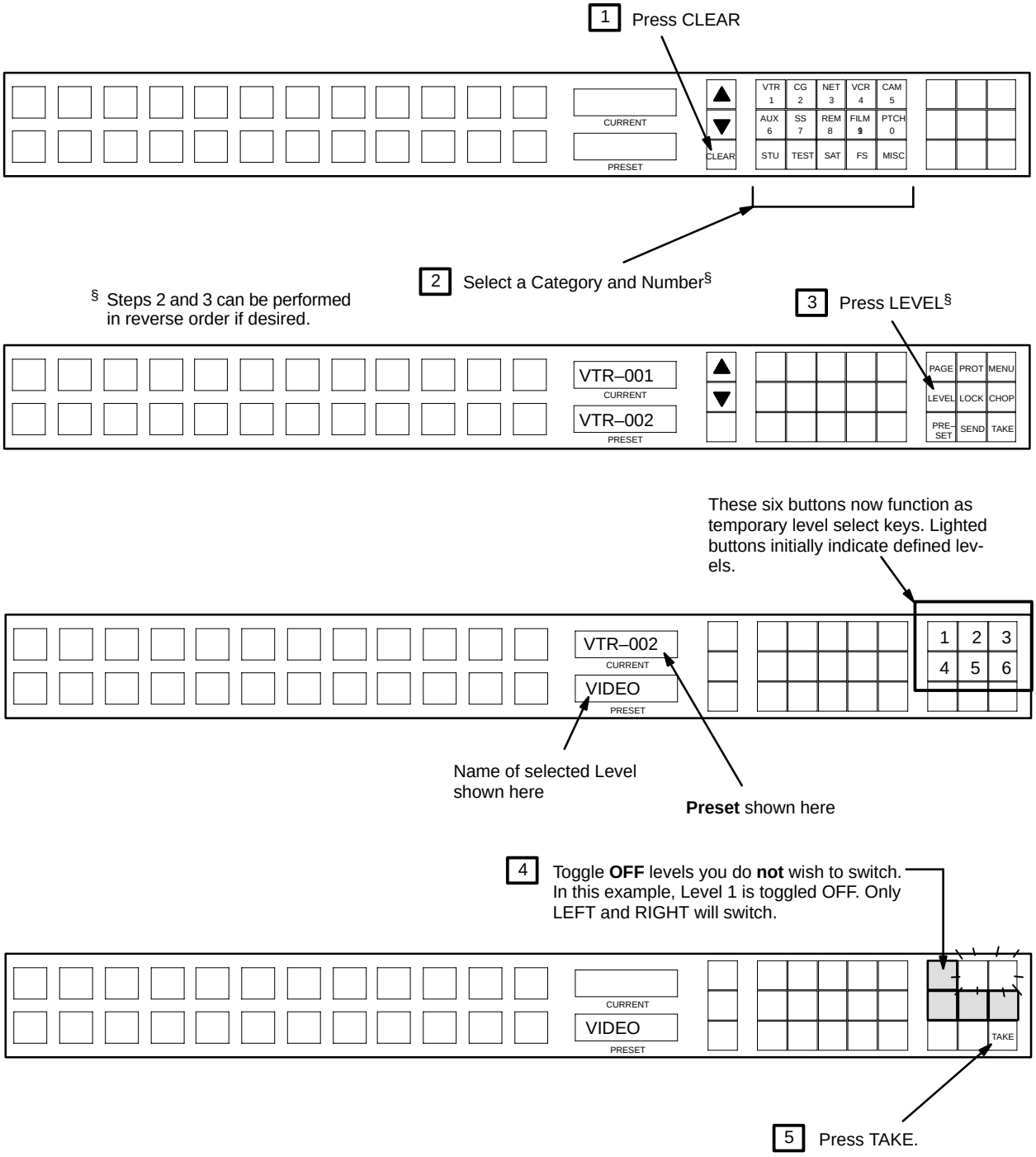


Figure 6–115.

Breakaway Switching – Multi–Level Take

This function allows setup of different sources on different levels with all levels switched using a single TAKE. For example, you can select video from VTR1 and audio from VTR2 to switch to VTR3 with a single TAKE.

1. Select the first source using the Category/Number keys.

   The Override keys cannot be used for this function.

2. Press LEVEL.

   This activates the six “temporary level” buttons (the outlined buttons in Figure 6–116). Lighted buttons initially indicate defined levels.

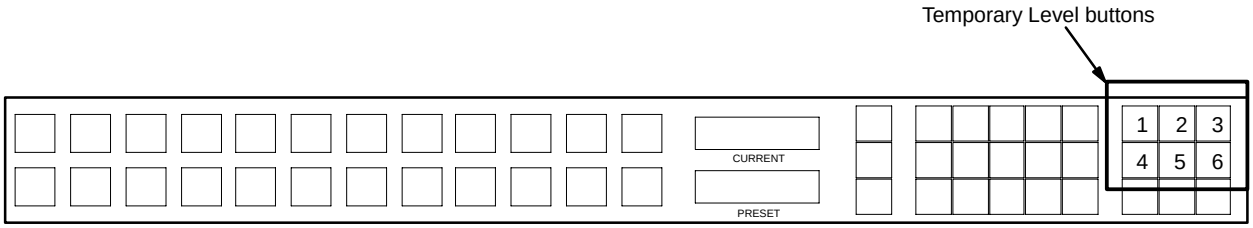


Figure 6–116.

3. Toggle OFF the level(s) you DON’T want to receive the source just selected.

4. Select the next source using the Category/Number keys.

   This will automatically select the levels **not** selected for the first source.

5. Repeat Steps 3 and 4 to setup additional sources (if any).

6. When all sources have been selected and assigned to the desired levels, press TAKE.

Checking Status of Multiple Levels

There are two ways to check status on more than one level:

— Press LEVEL, then press one of the six “temporary level” keys. The name of the selected level will appear in the Preset window; the status of the selected level with be shown in the Current window.

— Press PRESET, then press LEVEL repeatedly to step through the levels. The name of the selected level will appear in the Preset window; the status of the selected level will be shown in the Current window. You can also use UP/DOWN to step through the levels.

Breakaway Switching – Sticky Level(s)

This function allows breakaway operation during which the selected Levels remain selected after a TAKE. For example, you may want to keep switching different video test signals to a destination but not switch audio tone. To turn on sticky mode:

1. Press MENU three times.

   The word “STICKY” appears in the Current window.

2. Use UP/DOWN to toggle the display to “ON?”

3. Press TAKE.

   If more than six levels have been defined, UP/DOWN will increment through additional pages of levels. When multiple pages of levels exist, the Preset display will prompt PG 1 (2, 3, etc.) next to the “ON,” and allow the user to select additional pages for toggling on or off the level.

   This activates the six “temporary level” buttons (the outlined buttons in Figure 6–117). Lighted buttons initially indicate defined levels.

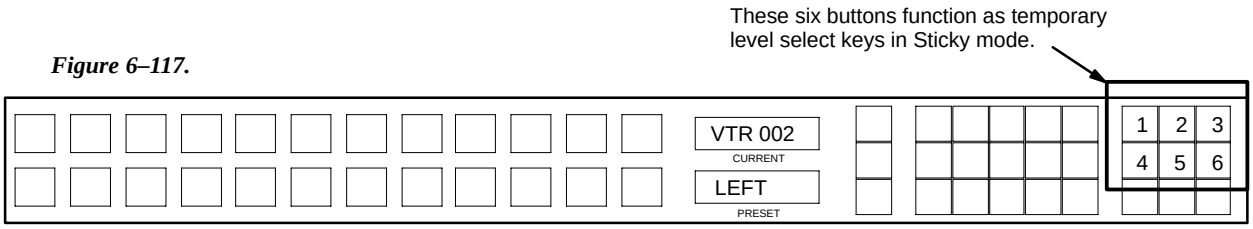


Figure 6–117.

4. Toggle OFF the level(s) you **don’t** want to switch.

5. Press TAKE.

   Sticky mode is now active, as indicated by the **blinking LEVEL button**.

To make a switch when sticky levels are in effect, select the desired input. Only the sticky levels will switch.

To find out which levels are sticky, press MENU three times; then press TAKE. The appropriate temporary level keys will illuminate.

To **cancel sticky levels**, press MENU three times, then use UP/DOWN to toggle the display to “STICKY NOW OFF.” Then press CLEAR or TAKE.

DEFINING OVERRIDES

The 24 Override keys on left side of the panel can be programmed from the front panel using the SEND key.

1. Press CLEAR.

   This returns the panel to the “home state.”

2. Locate the desired override page and key position for the new input:

   a. Press PAGE, then UP/DOWN to access additional pages.

      The page number is shown in the Current window. Pressing UP and DOWN together returns to page 1.

      The number of possible pages and positions depends on the CP Override set that has been assigned to this panel. For example, if the CP Override set contains 25 entries, then one page of 24 buttons has been defined, and there is one button defined for page 2. In this case, 2 pages of 24 positions each are available for definition from the front panel.

   b. Press TAKE.

      This locks the panel to the selected page number.

   c. Press PRESET.

   d. Press the Override key you would like to use. Check the Preset window for the current assignment.

   e. Repeat Steps a. through d. until you find a suitable location.

3. Press CLEAR.

4. Use the Category/Number keypad to select the new input.

   The name of the new input is shown in the Preset window.

5. Press SEND.

   The display will read “SEND TO BUTTON.”

6. Press the desired override button.

   The input is now assigned to the button.

Restoring Override Keys to Default Assignments (Default Select Mode)

Preset sources assigned to the 24 programmable buttons and their various pages are initially assigned in the Jupiter Configuration Sets and downloaded to the VM 3000. These initial assignments are considered the “DEFAULT” assignments. Other preset sources and combinations of levels can be assigned dynamically at the CP 3824 without downloading new configuration sets.

To restore any or all of the “DEFAULT” source assignments:

1. Press the MENU button twice.

   The panel displays “DEFAULT SELECT?”

2. Press the UP/DOWN buttons to toggle between “SELECT?” or “ALL?”.

   The 15 category/number buttons are now used as “temporary page” keys. Each illuminated category/number button represents a page of 24 inputs. For example, if 25 inputs have been defined, then the first two buttons will illuminate. See Figure 6–118.

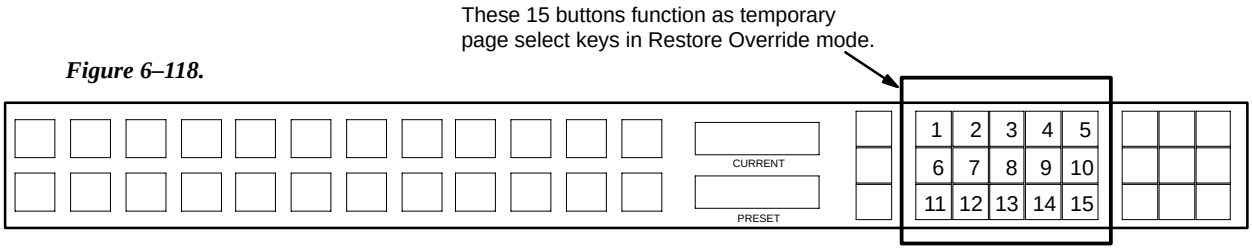


Figure 6–118.

The SELECT CHOICE – With “SELECT” displayed in the lower display, pages with the original default assignments still in effect are illuminated. Pages with reprogrammed buttons can be selected as desired (toggled on). Pressing TAKE restores the selected pages to the default settings. The word DONE appears in the lower display after TAKE is pressed.

The ALL CHOICE – With “ALL” displayed in the lower display, all the temporary page buttons with defined inputs illuminate. Pressing TAKE returns all the programmable buttons on all pages of 24 buttons to their “DEFAULT” source assignments. The word “DONE” appears in the lower display after TAKE is pressed.

MENU FUNCTIONS

Destination Mode — Press MENU Once

In this mode (already described on page 6–76) the destination is shown in the Preset window.

To return to Home mode, press CLEAR.

Default Select Mode — Press MENU Twice

This mode is used to return Override buttons to the inputs assigned by the file server. See page 6–86.

Sticky Mode — Press MENU Three Times

Allows breakaway operation during which the selected Levels remain selected after a TAKE. See page 6–83.

Panel Name — Press MENU Four Times

Panel ID (Address) Mode — Press MENU Five Times

This option displays the current MPK address for this panel in the Preset window.

Diagnostics Mode — Press MENU Six Times

For a description of the diagnostics and adjustments, please see the *CP 3808 Diagnostic Mode* on page 6–71, starting with Step 2. Except as noted, this description applies to the CP 3824.

CP 3830 Control Panel

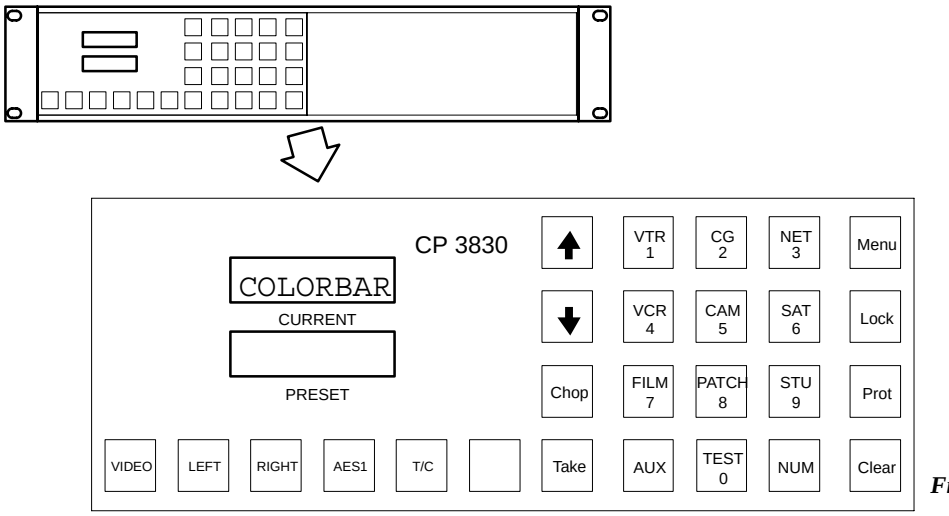


Figure 6–119.

(For installation and configuration instructions, please see page 2−55.)

The CP 3830 Control Panel is a 12–category,* full–matrix,* multi–level* breakaway* panel, capable of locking,* protecting,* and chopping* outputs. The panel features eight–character display capability and relegendable, lighted push buttons.

The Current display window shows the source switched to the panel's controlled output. The Preset window shows the new source as it is being entered from the category and keypad push buttons; after TAKE is pressed, the **previous** source is shown in the Preset window. This allows "flip–flopping" the sources, or switching between the current and preset sources by simply pressing the TAKE button (see page 6–78).

The push buttons are capable of green, red, and amber back lighting, with green generally used to show a selected function and red to indicate an operational mode in progress. The amber color is presently used only for a CP 3830 dedicated output panel (see page 5–132).

As an option, the CP 3830 can be operated in connection with an adjacent CP 3809 Expansion Panel (see page 6–124) or a CP 3810 Expansion Panel (see page 6–126).

Dual CP 3830 panels can be configured so that one of the panels is used as a dedicated output panel (see page 5–132). Dual output mode is also possible with two panels side by side.

CP 3830P (CP 3830 with Automatic Preview)

The CP 3830 can also be configured to control two outputs, with the second output used for preview. In this mode, the panel is referred to as a "CP 3830P." Note: The CP 3830P cannot be operated with an expansion panel.

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* Defined in Glossary Section

DESTINATION SELECTION

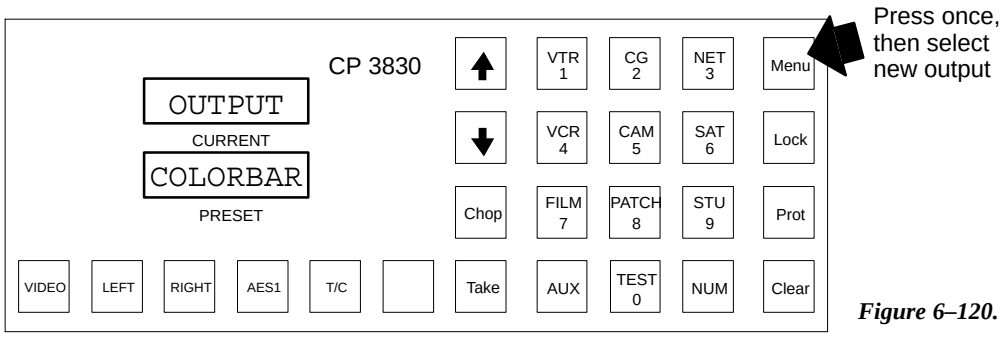


Figure 6–120.

To select a destination:

1. Press the MENU button *once.* The Preset window will display the present destination.

   On a **CP 3830P** auto preview panel, the Preset window will display the *Preset* (preview) destination, and the Current window will display the *Current* (program) destination.

2. Select a new destination by

   — pressing a category (e.g., “VTR”) and unit number combination, or by

   — using the UP and DOWN arrows to scroll through all destinations, or by

   — pressing a category key and using UP/DOWN to scroll through available units in that category; or by

   — selecting a destination on the CP 3809 Expansion Panel (if so equipped—see Figure 6–122), or by

   — selecting a destination on the adjacent CP 3830 dual panel (if so equipped—see below).

3. When the desired destination is displayed in the Preset window, press the TAKE button to select it. The Current window will return to the *input* mnemonic; the Preset window will go blank.

   On a **CP 3830P** auto preview panel, press TAKE to change the *Current* (program) output; or press PRESET TAKE (CHOP button) to change the *Preset* (preview) output. The Current window will then show the source feeding the program output. The Preset window will show the source feeding the preview output.

   Note: if the panel cannot be changed to the desired output, it may have been limited to certain outputs by the CP Output set used on the MPK Devices table. See page 5–113.

CP 3830 Dual Configuration—Dedicated Output Panel

Dual CP 3830 panels can be configured so that the second panel is used for output selection. The output panel’s buttons will glow amber. For configuration instructions, see page 5–132.

SOURCE SELECTION

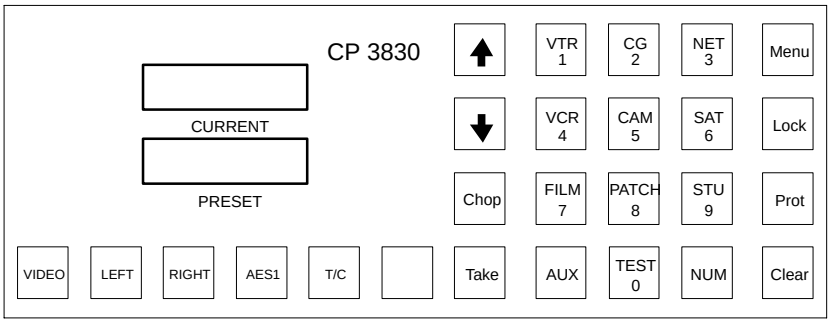


Figure 6–121.

To select an input:

— press a category (e.g., “VTR”) and unit number combination, or

— use the UP and DOWN arrows to scroll through all sources, or

— press a category key and use UP/DOWN to scroll through the possible category entries.

...then press TAKE.

On a valid entry, the defined eight character mnemonic will be displayed in the Preset window and all applicable level lamps will light in green.

When using the UP/DOWN arrows, scrolling past the end of the list will wrap around to the other end.

The newly selected source will be shown in the Current window.

If entry of a **password** is requested, please see *Passwords* on page 6–75.

On a **CP 3830P** auto preview panel, you can send the selected input to the Preset (preview) output by pressing the PRESET TAKE (CHOP) button instead of the TAKE button. After previewing the source, press TAKE to switch the source to the Current (program) output.

Operation with Expansion Panels

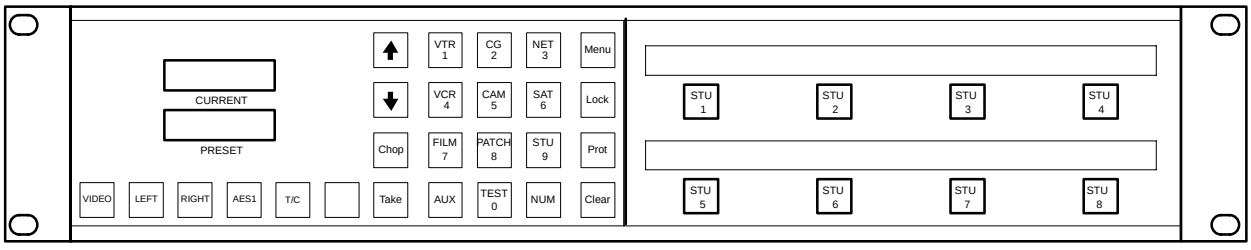


Figure 6–122. *CP 3830 with CP 3809 Expansion Panel.*

Before pressing TAKE, use the expansion panel to select the destination(s). The selected output button will illuminate in “High” green to show it will be affected by the switch. These buttons can be toggled on/off before pressing TAKE.

Note: The output currently being controlled by the CP 3830 will not be affected.

(To assign Expansion Panel buttons to outputs, see pages 5–77 and 6–124 (CP 3809) or 5–77 and 6–126 (CP 3810).

Flip–flop Operation

The present source is shown in the Current window, while the previous source is shown in the Preset window. This allows "flip–flopping" the sources, or switching between the current and preset sources by simply pressing the TAKE button.

As an example, if you wish to change the source from BARS to VTR−041, first select the VTR category. The Preset display updates as follows, prompting you to enter up to four digits:

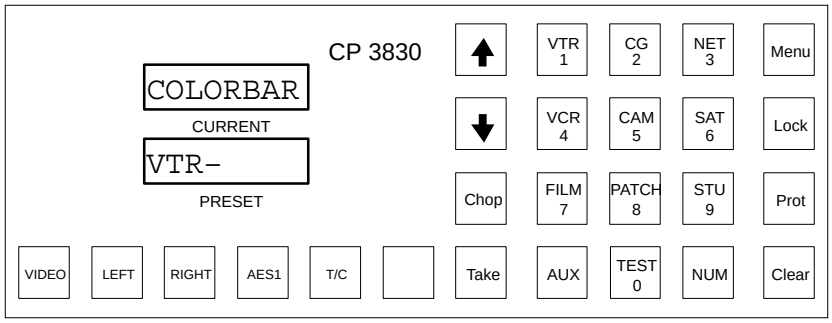


Figure 6–123.

Then press "4" and "1." The Preset display will update:

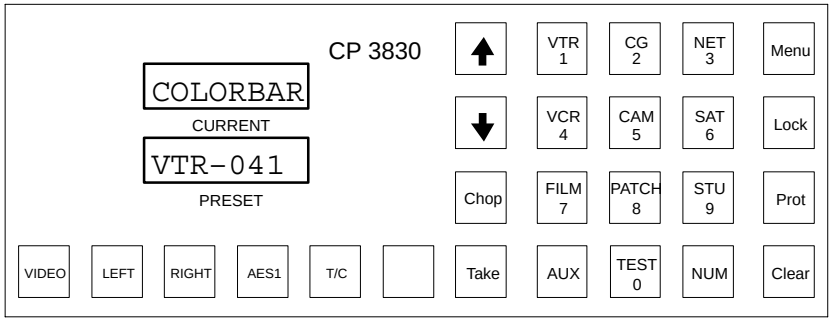


Figure 6–124.

To complete the selection, press the red TAKE button to switch source VTR−041 to the panel's defined output. (On a CP 3830P, press PRESET TAKE. then TAKE.) The Preset window and the Current window will be swapped as shown, indicating to the operator the previous source can be reselected.

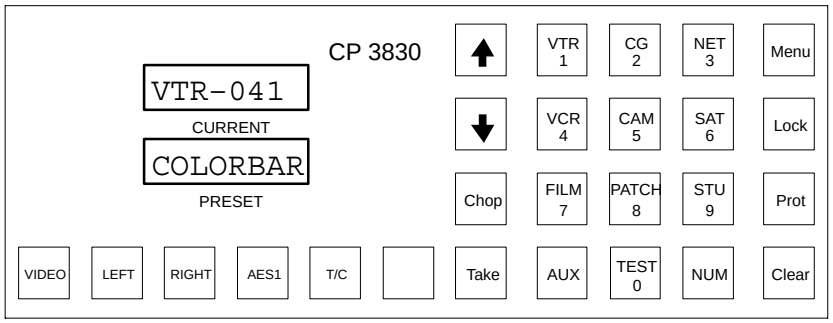


Figure 6–125.

LOCKING OR UNLOCKING AN OUTPUT

Locking an output prevents that output from being switched by any panel in the system, including the initiating panel. In a single destination panel, it essentially locks the panel from further operator action until unlocked.

Note: The CP 3830P Preset (preview) output cannot be locked or protected.

To lock an output:

1. Press the LOCK button.

   This has the effect of locking only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will illuminate in “high” red, indicating the output has been locked by this panel.

   If another CP 3830 panel selects this output for control, that panel’s LOCK button will blink red. If the other panel attempts to switch this output, a “LOCKED” message will appear, along with the name of the locking panel.

   If a CP 3808 panel selects this output for control, that panel’s TAKE button will blink red (the CP 3808 has no LOCK button).

To unlock the output:

1. Press the LOCK button again.

   The LOCK button lamp will switch to “low” green. If the output has been locked by another panel, the button will show lock status by blinking red.

An output may be forced unlocked, no matter which panel locked it, if the password level of the unlocking panel is level 90 or greater. The password level is defined in the MPK Devices table entry (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

PROTECTING OR UNPROTECTING AN OUTPUT

Protecting an output prevents that output from being switched by other panels in the system. The protecting panel may still change the outputs.

To protect an output:

1. Press the PROT button.

   This has the effect of protecting only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will blink “high” green, indicating the output has been protected by this panel.

If another CP 3830 panel selects this output for control, that panel's PROT button will blink red. If the other panel attempts to switch this output, a "PROTECT" message will appear, along with the name of the protecting panel.

If a CP 3808 panel selects this output for control, that panel's TAKE button will blink red (the CP 3808 has no Protect button).

To unprotect the output:

1. Press the PROT button again.

   The PROT button switch to "low" green. If the output has been protected by another panel, the PROT button will show protect status by blinking red.

An output may be force unprotected, no matter which panel protected it, if the password level of the unprotecting panel is level 90 or greater. The password level is defined on the MPK Device table (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

CHOP OUTPUTS

To chop* an output, select the first source and press TAKE. Then select the second source and press CHOP. The CHOP button will blink red, with the first source displayed in the Current window, and the second source displayed in the Preset window.

The chop operation will automatically stop after approximately three minutes. The chop will finish with the source in the Preset window being switched to the destination. The chop may be manually terminated by performing another source selection and pressing TAKE.

For additional chop information – see page 6–13.

LEVEL BREAKAWAYS (SPLIT SWITCHING)

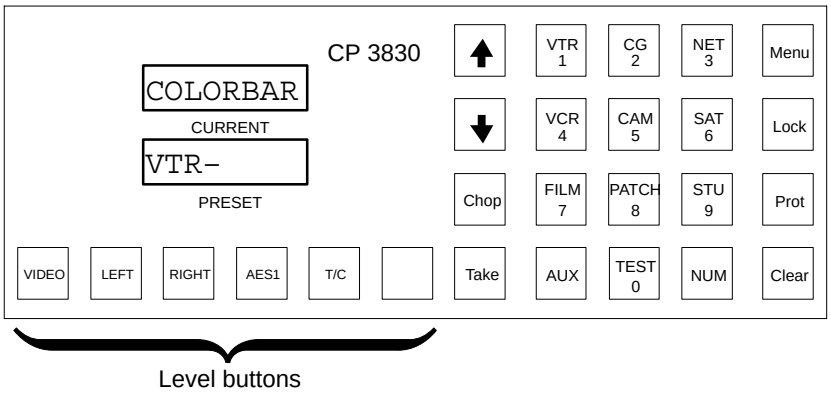


Figure 6–126.

Breakaways can be accomplished either by presetting the levels to switch, and then selecting a source, or by selecting a source and then deselecting unwanted levels.

Breakaways can be disabled on the CP Level Set table by setting the Break Flag for each level to ‘N.’ (See page 5–55.)

Level Preset Method

1. Press the Level button corresponding to the desired level.

   The level mnemonic appears in the Preset window and the button will illuminate in “high” green with the current status of that level in the current window. The level may be toggled off by selecting it again. The current window will be blank if there is no status for that level.

   Pressing CLEAR will cancel the operation.

2. Select a source.

   Note: If the level window goes blank, the source may not exist on that level (e.g., audio from a camera).

3. Press TAKE (or, on a CP 3830P, PRESET TAKE, TAKE).

   The source will switch only on the preset levels, while the non–selected levels will remain at the previously selected source.

   The Current window will display the defined mnemonic for the first level.

   To check the status of individual levels, see *Status Mode* on page 6–96.

Level Deselect Method

1. Select a source.

   The source mnemonic appears in the Preset window; applicable level buttons will illuminate in “high” green.

2. *Deselect* levels by pressing the appropriate level button.

   The button will switch to “low” green, and the Preset window will display the level name. Pressing CLEAR will cancel the operation.

3. Press TAKE (or, on a CP 3830P, PRESET TAKE, TAKE).

   The deselected levels will remain at the previously selected source, while the selected levels will switch to the newly selected sources.

   The Current window will display the defined mnemonic for the first level.

Multi–Source, One–take Splits

The CP 3830 will allow operators to perform complex split switches using multiple sources on levels not defined for all sources, similar to a salvo switch to a single destination. For example, assume the user has defined Camera–1 with Video and TimeCode only levels. However, he or she desires CD–1 for audio. To perform this switch in one take:

1. Select *all* levels to be switched.

   In this example, the operator would press the buttons corresponding to Video, Left, Right, and TimeCode. The buttons will light in “high” green, indicating they are selected.

2. Select the first source.

   In this example, Camera–1 would be selected.

3. *Deselect* the levels that apply to the second source.

   In this example, Left and Right.

4. Select the second source.

   In this example, CD–1 This source will automatically be assigned to the remaining levels, Left and Right audio.

5. Press TAKE.

MENU FUNCTIONS

Destination Mode — Press MENU Once

In this mode (already described on page 6–89) the destination is shown in the Preset window. (The CP 3830P will show two destinations.) If the panel is equipped with a CP 3809 Expansion, the outputs controlled by that panel will be indicated.

To return to Home mode, press CLEAR.

Status Mode — Press MENU Twice

This mode allows the six level buttons to select and status each level.

To return to Home mode press CLEAR. (In Home mode, the six level buttons are used for splits and the UP and DOWN buttons are used for source selection)

Audio Mode — Press MENU Three Times

Note 1: Audio status mode can only be used if an appropriately configured Venus switcher is connected.

This mode is accessed by pressing MENU three times; the MENU button will light in red. The Current window will show the audio mode for the audio channel shown in the Preset window. In Figure 6–127, the Left audio channel is set to “Normal.”

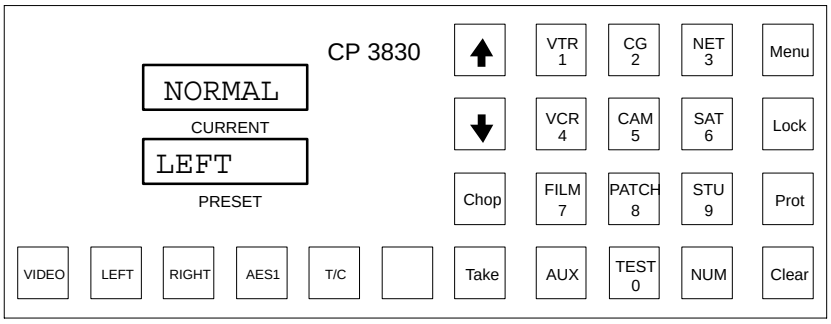


Figure 6–127.

Other possibilities are:

- MIX – Left and right are mixed on this channel.
- REVERSE – Signal is from the opposite channel.

The six level keys can be used to check other levels.

Note 2: You cannot *change* settings in Audio Status mode; this must be done using Audio Switching mode. See page 6–98.

Panel ID (Address) Mode—Press MENU Four Times

This option displays the current MPK address for this panel in the Preset window.

Diagnostics Mode — Press MENU Five Times

For a description of the diagnostics and adjustments, please see the CP 3808 *Diagnostic Mode* on page 6–71, starting with Step 2. Except as noted, this description applies to the CP 3830.

AUDIO SWITCHING MODE (VENUS SPECIAL STEREO SWITCHING)

The CP 3830 has the capability of controlling Venus Audio Modes, which are Normal, Mix, and Reverse. These changes are made to individual levels prior to completing a switch by pressing the TAKE button.

Note: Audio switching mode can only be used if an appropriately configured Venus switcher is connected.

To Perform a Special Stereo Switch:

1. Select a source.

2. Press MENU.

   The MENU button will light in red. The Current window will show the audio mode for the audio channel shown in the Preset window. In Figure 6–128, the Left audio channel is set to “Normal.”

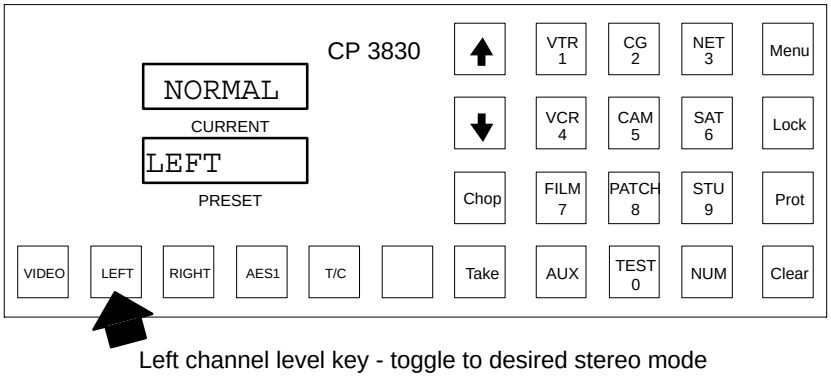


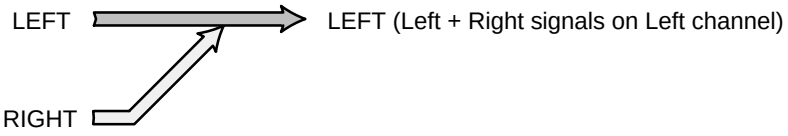
Figure 6–128.

3. Toggle the Left channel level key (see Figure 6–128) to the desired mode:

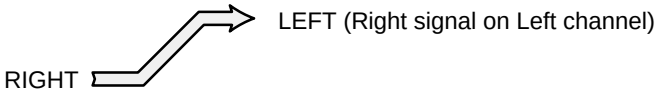
   - NORMAL – Use left audio for this channel

   - MIX – Mix left and right on this channel

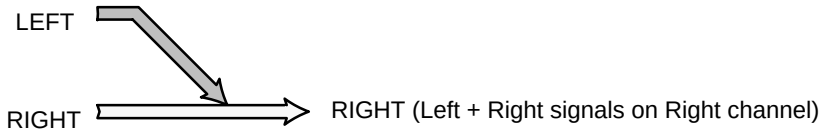
   - REVERSE – Cross opposite channel signal over to this channel

4. Toggle the Right channel soft key to the desired mode:

    - NORMAL – Use right audio for this channel

    - MIX – Mix left and right on this channel



    - REVERSE – Cross opposite channel signal over to this channel

5. Press TAKE.

CP 3832 / 3864 Control Panels

The CP 3832 is a button–per–source control control panel configurable for single bus* (32 X 1) or “split” operation. In split configurations some of the buttons control inputs and some control outputs. The panel includes buttons for TAKE, LOCK,* and PROTECT.* For installation and configuration instructions, please see page 2–58.

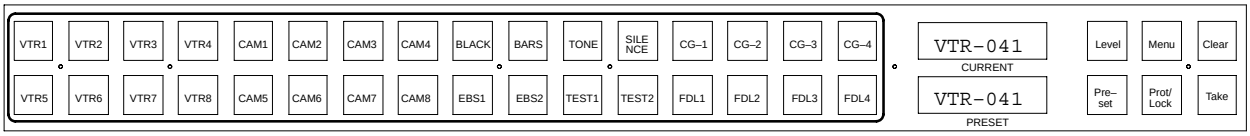


Figure 6–129. *CP-3832.*

The similar CP 3864 is configurable for single bus (64 X 1) or “split” operation. The panel has all of the CP 3832 control buttons, plus a CHOP button. A “Destination” window is also provided. For installation and configuration instructions, please see page 2–60.

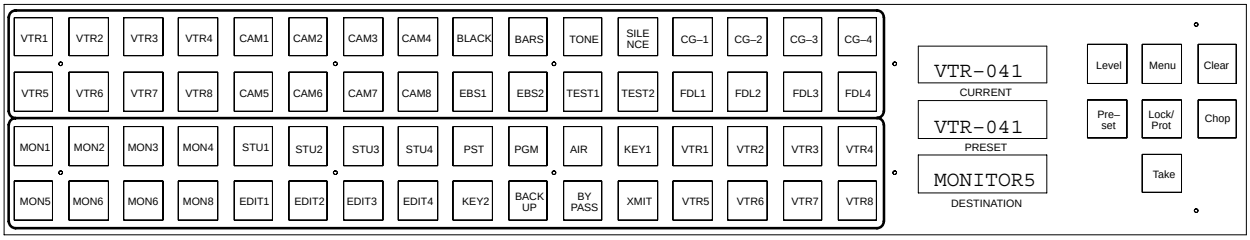


Figure 6–130. *CP-3864.*

All push buttons are capable of green, amber, and red back lighting. On the left side of the panel, green indicates inputs and amber indicates outputs. On the right side, green is generally used to show a selected function and red to indicate an operational mode in progress.

In some applications, the panels will be grouped with additional CP 3832s or CP 3864s to provide control of up to a 128 X 128 router; or, operated in connection with an adjacent CP 3810 Expansion Panel (see page 6–126).

PASSWORDS

Note: For a general description of the Jupiter password system, please see page 5–17.

If entry of a password (“PASS =00”) is requested, the output about to be affected has a password *level* higher than that of the panel. Enter the appropriate password, using the first 10 buttons of the CP 3832/64 to enter digits from 0 to 9 (as shown on page 6–144).

After entry of a higher–level six–digit password, the command can be completed by pressing TAKE; however, the panel will then revert to its previous password level.

SINGLE–BUS OPERATION

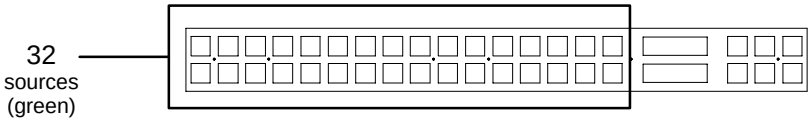


Figure 6–131. *CP 3832.*

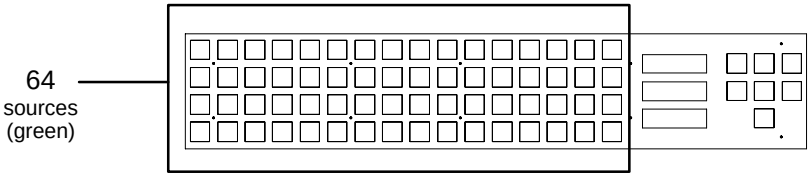


Figure 6–132. *CP 3864.*

Each input button of the CP 3832 / 3864 can be assigned to a specific source using a CP Input set (page 5–71.) The name of this set, and the name of the destination to be controlled, is entered on the MPK Devices table (page 5–111 and following).

To verify destination – for the CP 3832, press MENU. The destination will be shown in the Preset window. Then press CLEAR. On the CP 3864, the destination is always shown in the “Destination” window.

Audio–follow–video switching - (PRESET off.) When one of the source buttons is pressed, a Take* command is issued to all levels of the switcher matrix (pressing the TAKE key is not necessary). A status* signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed and displaying the name of the input in the “Current” window.

To verify a source before switching (PRESET mode) – To examine the mnemonic of a source in the Preset window before a Take, the PRESET button should be **flashing red** or green (press if needed). Select the desired source and check the mnemonic in the Preset window. Then press TAKE.

> Note: If the **PRESET button blinks green continuously**, the panel has been configured on the MPK table (page 5–110) to remain in Preset mode at all times (i.e., to operate as a “CP 3824P” or CP 3832P.”)

Breakaway switching – single level Take – (PRESET Off, or, blinking green.) To switch only a specific switcher level, the level is defined by first pressing the LEVEL button; the name of the first level will be displayed in the “Preset” window. To advance to the next level, press LEVEL again. The TAKE command to the switcher will be executed when an input button is pressed.

If the switch was made on level 1 (usually video) the new input will be displayed in the Current window. If the switch was made on another level, use the LEVEL button to return to that level; the new input will be displayed in the Current window. (To turn off the LEVEL button, press CLEAR.) Notice that only the button for the lowest level will illuminate.

Breakaway switching – multi–level Take – To switch different sources to different levels with a single Take command, press PRESET (so that the button is flashing red). Then press the LEVEL button. The name of the first level will be displayed in the Preset window. Advance to the desired level by pressing LEVEL; then select an input for that level. Press LEVEL to select another level; select the next input, etc. When all selections have been made, press TAKE.

The input for level 1 will be displayed in the Current window. To check the status of another level, use the LEVEL button to return to that level; the new input will be displayed in the Current window. (To turn off the LEVEL button, press CLEAR.) Notice that only the button for the lowest level will illuminate.

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* Defined in Glossary Section

Breakaway Switching – Sticky* Level(s)

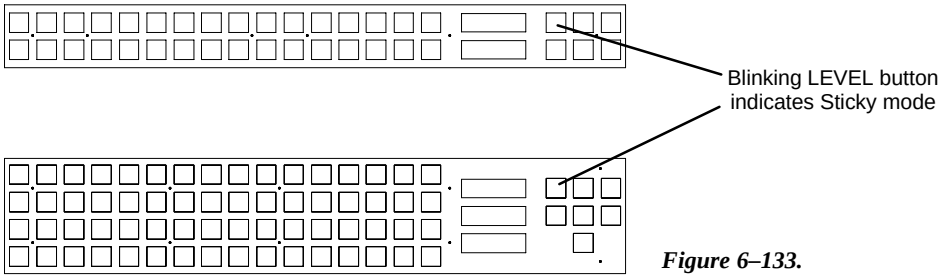

Figure 6–133.

To “retain” certain levels (keep them selected after a Take), press PRESET (so that the button is flashing red). Then press the LEVEL button. The name of the first level will be displayed in the Preset window. Advance to the desired level by pressing LEVEL; then press PROT/LOCK. The message “Retain” will appear briefly in the Current window and the LEVEL button will blink green as an indication that sticky level switching is now in effect. Press LEVEL to select another level; PROT/LOCK again, etc. When all selections have been made, press CLEAR.

To make a switch when sticky levels are in effect (indicated by the **blinking LEVEL button**), select the desired input. Only the sticky levels will switch.

To find out which levels are sticky, press PRESET, then LEVEL. If the first level is sticky, the word “Retain” will appear briefly in the Current window, if the level is not sticky, the message “No retain”will appear. Advance to the next level by pressing LEVEL; when finished, press CLEAR.

To **cancel sticky levels**, press PRESET, then LEVEL. The name of the first level will be displayed in the Preset window. Advance to the sticky (Retained) level by pressing LEVEL; then press PROT/LOCK to cancel stickiness. Press LEVEL to select another level; then PROT/LOCK again, etc. When finished, press CLEAR.

Breakaway statusing – To status a specific level of a previous breakaway level switch, use LEVEL to select the level to be statused; the name of the input will be shown in the Current window.

“Protect/lock” output indicator:

Blinking green – The output has been protected* by this panel. See *Protecting or Unprotecting an Output below.*

Red – The output has been locked* by this panel. See *Locking or Unlocking an Output* below.

Blinking red – The output has been protected or locked by another panel. To find out if the output is protected, or locked, and by what panel, select an input button. Then go to that panel and refer to the appropriate section below.

CHOP (CP 3864 ONLY)

To chop* an output:

1. With PRESET off, select the first source.

2. Press PRESET.

3. Select the second source, and press CHOP.

The CHOP button will blink red, with the first source displayed in the Current window, and the second source displayed in the Preset window.

The chop operation will automatically stop after approximately three minutes. The chop will finish with the source in the Current window remaining switched to the destination. The chop may be manually terminated by performing another source selection.

For additional chop information – see page 6–13.

PROTECTING OR UNPROTECTING AN OUTPUT

Protecting an output prevents that output from being switched by other panels in the system. The protecting panel may still change the outputs.

To protect an output:

1. Press the PROT/LOCK button.

   The Preset display will ask “Lock?”

2. Press the PROT/LOCK button again.

   The Preset display will ask “Protect?”

3. Press TAKE.

   This has the effect of protecting only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will blink “high” green, indicating the output has been protected by this panel. If a CP 3810 expansion panel is associated with the CP 3832/3864 panel, the output button on the expansion panel will also blink green.

   If a CP 3832 or CP 3864 at another location selects this output for control, that panel’s PROT/LOCK button will blink red. If a CP 3810 expansion panel is associated with the remote CP 3832/3864 panel, the output button on the expansion panel will also blink red. If the remote panel attempts to switch this output, a “PROTECT” message will appear, along with the name of the protecting panel.

To unprotect the output:

1. Press the PROT/LOCK button again.

   The Preset display will ask “Unprot?”

2. Press TAKE.

   The PROT button will switch to “low” green.

   If the TAKE command is ignored, the output has been protected by another panel. To find out the name of the panel, select an input button.

An output may be force unprotected, regardless of the panel that protected it, if the password level of the unprotecting panel is level 90 or greater. The password level is defined on the MPK Device table (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

LOCKING OR UNLOCKING AN OUTPUT

Locking an output prevents that output from being switched by any panel in the system, including the initiating panel. In a single destination panel, it essentially locks the panel from further operator action until unlocked.

To lock an output:

1. Press the PROT/LOCK button.

   The Preset display will ask “Lock?”

2. Press TAKE.

   This has the effect of locking only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will illuminate in red, indicating the output has been locked by this panel. (To adjust button brightness, see page 6–114.) If a CP 3810 expansion panel is associated with the CP 3832/3864 panel, the output button on the expansion panel will also illuminate in red.

   If a CP 3832 or CP 3864 at another location selects this output for control, that panel’s PROT/LOCK button will blink red. If a CP 3810 expansion panel is associated with the remote CP 3832/3864 panel, the output button on the expansion panel will also blink red. If the remote panel attempts to switch this output, a “Locked” message will appear, along with the name of the protecting panel.

To unlock the output:

1. Press the PROT/LOCK button again.

The Preset display will ask “Unlock?”

2. Press TAKE.

   The PROT/LOCK button lamp will switch to “low” green.

   If the TAKE command is ignored, the output has been locked by another panel. To find out the name of the panel, select an input button.

An output may be forced unlocked, no matter which panel locked it, if the password level of the unlocking panel is level 90 or greater. The password level is defined in the MPK Devices table entry (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unlock the output prior to changing its source selection.

For additional protect/lock information – see page 6–12.

SPLIT PANEL OPERATION

Figure 6–134. *Examples of CP 3832 split configurations.*

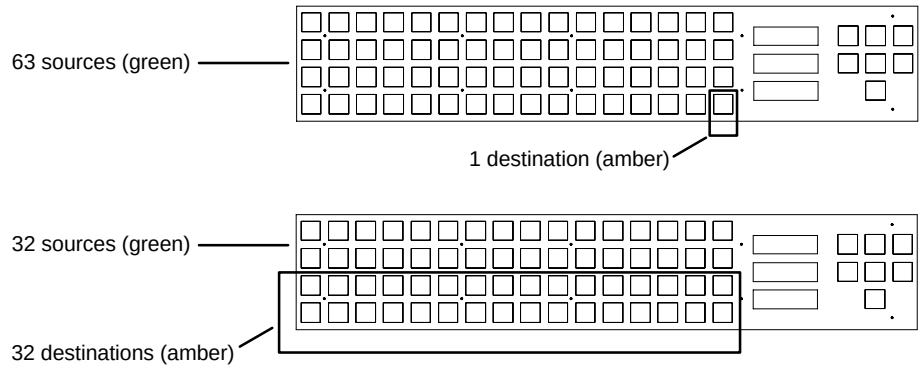

Figure 6–135. *Examples of CP 3864 split configurations.*

In split panel applications, the buttons illuminated in green have been configured to select inputs; the buttons illuminated in amber have been configured to select outputs.

During the configuration process, EXP (expansion) is set to “Y” on the MPK Devices Table (page 5–110). The sources are defined in a CP Input set of type “cp3832” (page 5–71); the destinations are defined in a CP Output set of type “cp3832” (page 5–92).

Audio–follow–video switching - (PRESET off.) Check to see that the desired output has been selected (amber button); if not, select it now. When a source (green button) is pressed, a Take* command is issued to all levels of the switcher matrix. (It is not necessary to press the TAKE key.) A status* signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed in “high” green and displaying the name of the input in the “Current” window.

Breakaway switching – single level Take – (PRESET off.) Check to see that the desired output has been selected; if not, select it now. To switch only a specific switcher level, the level is defined by first pressing the LEVEL button; the name of the first level will be displayed in the “Preset” window. To advance to the next level, press LEVEL again. The TAKE command to the switcher will be executed when an input button is pressed.

If the switch was made on level 1 (usually video) the new input will be displayed in the Current window. If the switch was made on another level, use the LEVEL button to return to that level; the new input will be displayed in the Current window. (To turn off the LEVEL button, press CLEAR.) Notice that only the button for the lowest level will illuminate.

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* Defined in Glossary Section

Breakaway switching – multi–level Take – Check to see that the desired output has been selected on the bottom row; if not, select it now. To switch different sources to different levels with a single Take command, turn PRESET on (the button will flash red). Then press the LEVEL button. The name of the first level will be displayed in the Preset window. Advance to the desired level by pressing LEVEL; then select an input for that level; the selection will be shown in the Current window. Press LEVEL to select another level; select the next input, etc. When all selections have been made, press TAKE.

The input for level 1 will be displayed in the Current window. To check the status of another level, use the LEVEL button to return to that level; the new input will be displayed in the Current window. (To turn off the LEVEL button, press CLEAR.) Notice that only the button for the lowest level will illuminate.

Breakaway switching – sticky* level(s) – See page 6–102.

Split statusing – To status a specific level of a previous breakaway level switch, use LEVEL to select the level to be statused; the name of the input will be shown in the Current window.

“Protect/lock” output indicator:

Blinking green – The output has been protected* by this panel. See *Protecting or Unprotecting an Output* on page 6–103.

Red – The output has been locked* by this panel. See *Locking or Unlocking an Output* on page 6–104.

Blinking red – The output has been protected or locked by another panel. To find out if the output is protected, or locked, and by what panel, select an input button. Then go to that panel and refer to the section on Protecting (page 6–103) or Locking (page 6–104), as appropriate.

OPERATION AS A SOURCE OR DESTINATION EXPANSION PANEL

The CP 3832 / 3864 can be combined with other CP 3832s and CP 3864s to increase the number of sources and destinations to a maximum of 128 x 128. Examples are shown in Figures 6–136, 6–137, and 6–138.

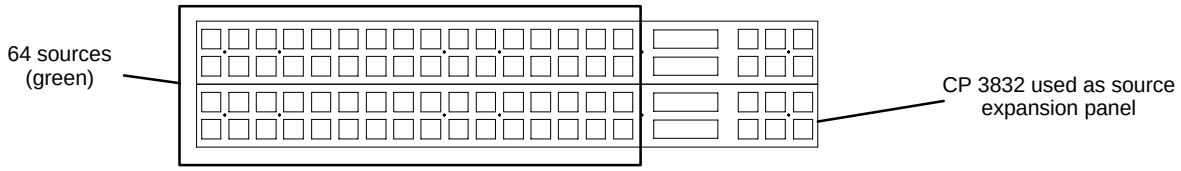

Figure 6–136.

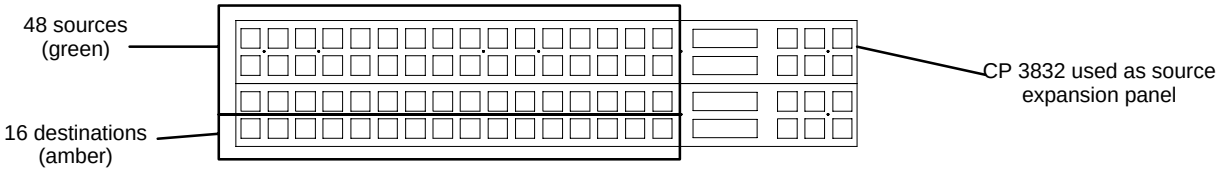

Figure 6–137.

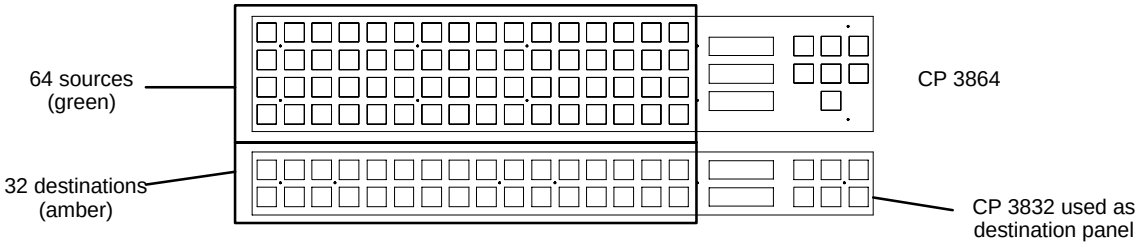

Figure 6–138.

Many configurations are possible, but in all cases the buttons illuminated in green control inputs; the buttons illuminated in amber control outputs.

Single–Bus Operation

For single–bus applications, such as illustrated in Figures 6–139 and 6–140, operation is very similar to that described on page 6–101. The main difference is that only the Main panel's control buttons ("LEVEL," "TAKE," etc.) are normally used. On the expansion panel(s), the control buttons are not illuminated and the word "Source" always appears in the Preset window.

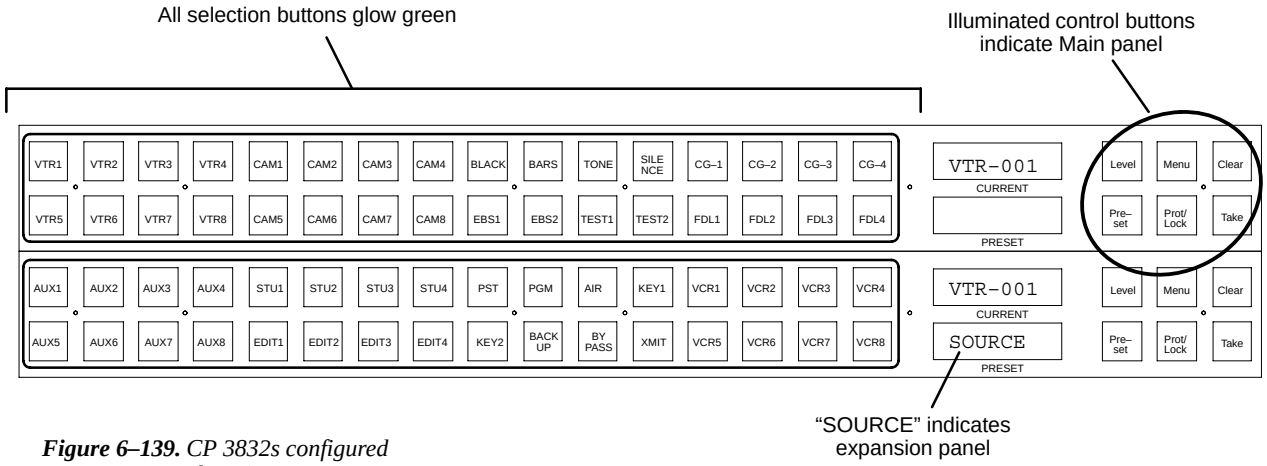

Figure 6–139. *CP 3832s configured as 64 x 1 control station.*

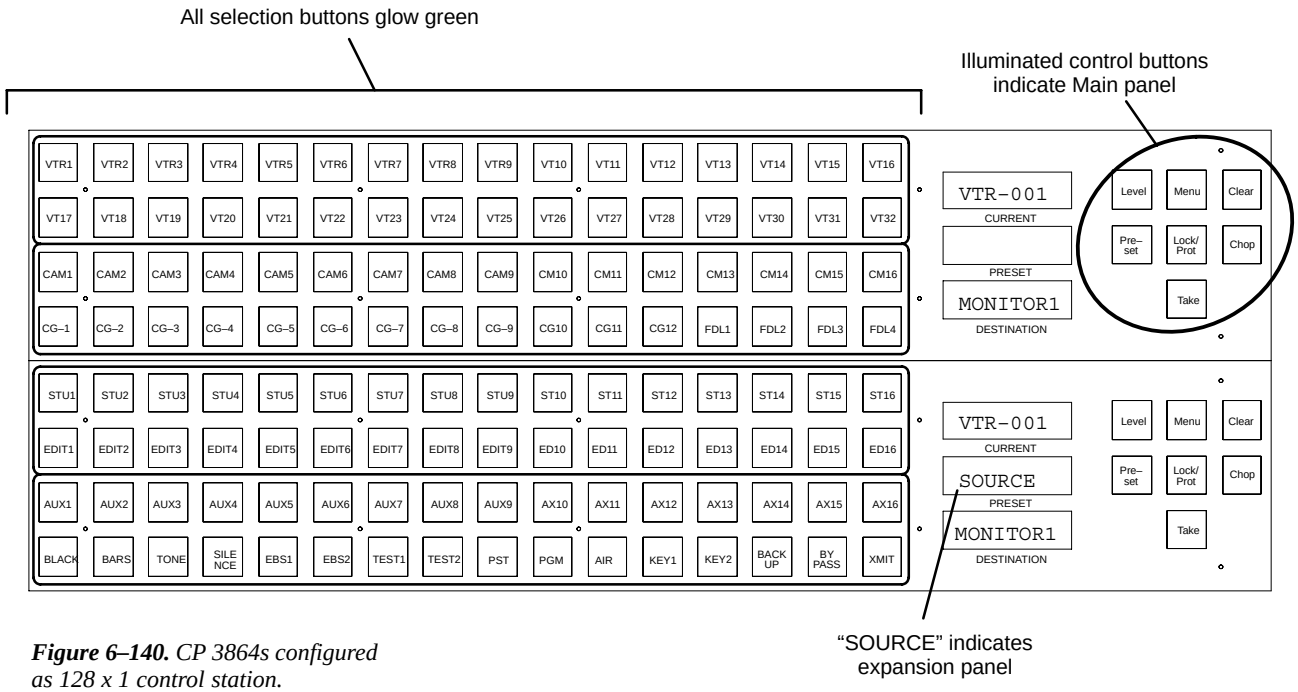

Figure 6–140. *CP 3864s configured as 128 x 1 control station.*

Source Expansion Operation (with "balanced Split" 16 x 16 Main Panel)

For expansion with balanced split§ main panel applications, such as illustrated in Figure 6–141, operation is very similar to that described on page 6–106. The main difference is that only the Main panel's control buttons ("LEVEL," "TAKE," etc.) are normally used. On the expansion panel(s), the control buttons are not illuminated and the word "Source" always appears in the Preset window.

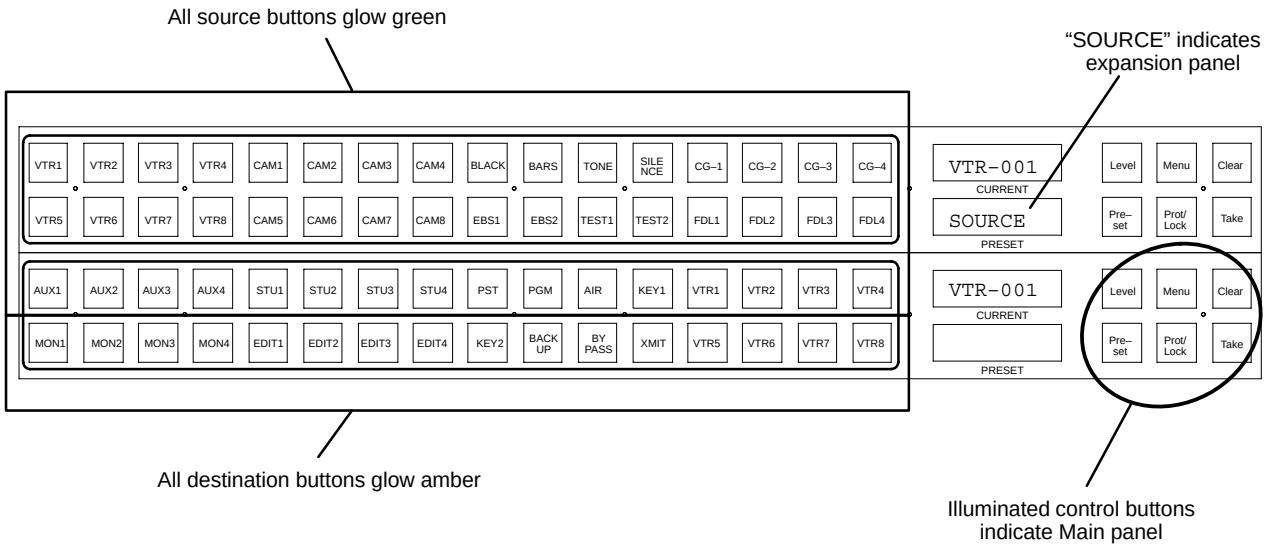

Figure 6–141. *CP 3832s configured as 48 x 16 control station.*

§ For a discussion of balanced and unbalanced split configurations, see page 2–58.

Destination Expansion Operation

For destination expansion applications, such as illustrated in Figure 6–142, operation is very similar to that described on page 6–106. Configuration will be slightly different (since neither panel in Figure 6–142 is being used in the “split” mode).

In terms of operation, only the Main panel’s control buttons (“LEVEL,” “TAKE,” etc.) are normally used. On the expansion panel(s), the control buttons are not illuminated and the word “Destnatn” always appears in the Preset window.

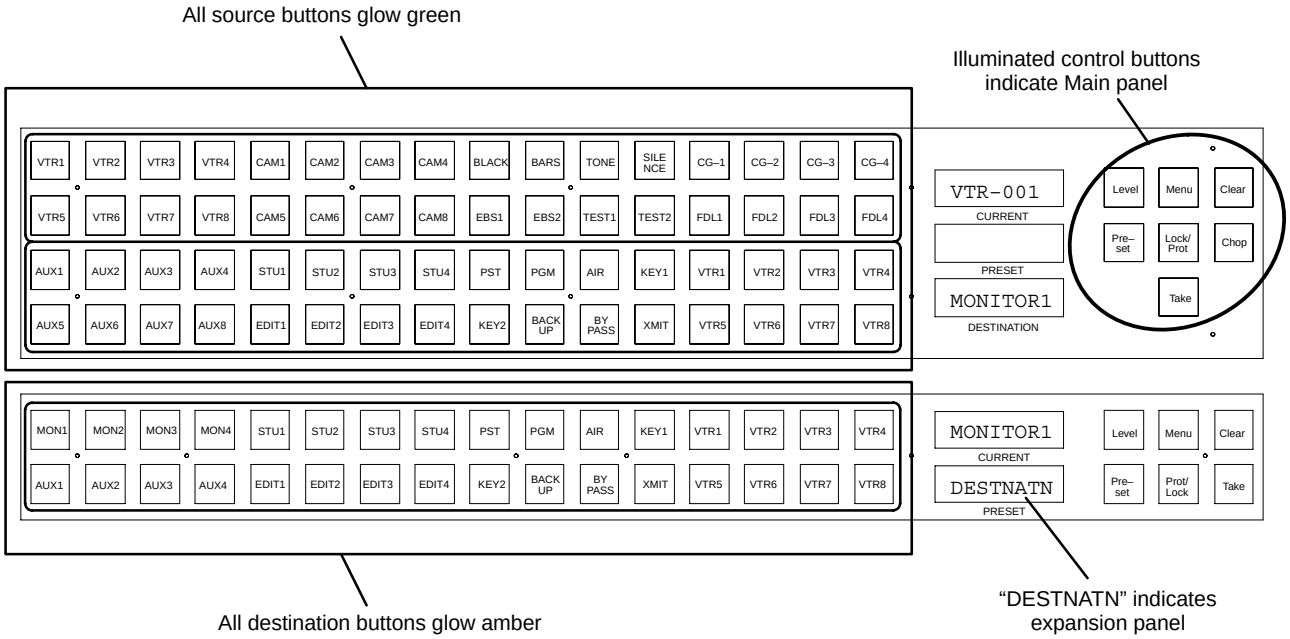

Figure 6–142. *CP 3832 used as destination panel for 64 x 32 control station.*

MENU FUNCTIONS

Destination Mode — Press MENU Once

In this mode the destination is shown in the Preset window. If the panel is equipped with a CP 3810 Expansion, the outputs controlled by that panel will be indicated.

To exit this mode, press CLEAR.

Audio Status Mode— Press MENU Twice

Note 1: Audio status mode can only be used if an appropriately configured Venus switcher is connected.

This mode is accessed by pressing MENU twice; the MENU button will light in red and the Preset window will display the name of the first audio level. The Current window will show the audio mode for that level. In Figure 6–143, the Left audio channel is set to “Normal.”

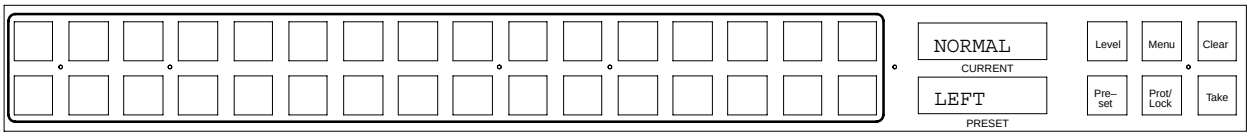

Figure 6–143.

Other possibilities are:

- MIX – Left and right channels are combined on this channel.
- REVERSE – Channels are swapped.

To move beyond the first audio level, use the LEVEL button.

Note 2: You cannot *change* settings in Audio Status mode; this must be done using Audio Switching mode. See page 6–115.

Panel Name — Press MENU Three Times

This option displays the name of the panel as entered on the MPK Devices table.

Panel ID (Address) Mode — Press MENU Four Times

This option displays the current MPK address for this panel in the Preset window.

Diagnostics Mode — Press MENU Five Times

Note: CP 3832/3864 diagnostics are internal to the control panel and will operate with or without the panel connected to a controller board (such as a VM/SI 3000) via the MPK cable.

1. Press and release MENU until “DIAGNOSE” appears in the Current window.

2. Use the LEVEL button to select the desired diagnostic.

3. Press TAKE. Instructions for each diagnostic are given below.

   To exit the diagnostics mode press CLEAR at any time. (It may be necessary to press CLEAR twice.)

LED Test

This test cycles through the button lamps (LEDs) and illuminates them in green and then red. The test will stop after one cycle. Pressing CLEAR during this test will cancel this test and return the panel to the beginning of the current diagnostic. Pressing CLEAR again will exit the Diagnostic mode.

Info

Info displays the panel’s Application (PROM) version , Xilinx FPGA* version, Variant version (not implemented), and PCB (hardware) version. Press CLEAR to exit.

Baud Rate

When selected, this option displays the current baud rate for the panel. Press LEVEL to cycle through the baud rate settings. Available baud rates are: 38400, 19200, 9600, 4800, 2400, and 1200. Pressing TAKE will program the changed setting; CLEAR will cancel.

The baud rate must agree with the setting for the VM/SI 3000 port used by the panel (see *Serial Protocol* on page 5–25).

Panel ID

This diagnostic requires the panel be disconnected from the MPK data cable.

When selected, this option displays the current MPK address for this panel and permits entry of a new address. Use the top row of buttons to enter a hexadecimal address (see Figure 6–144).

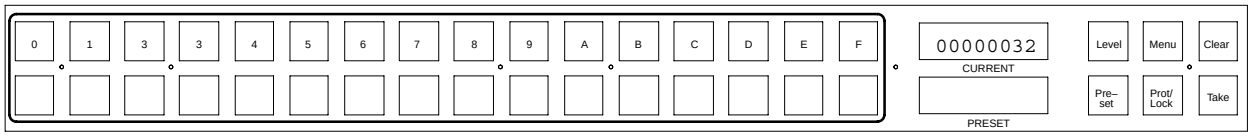

Figure 6–144. *CP 3832 buttons used to enter hex address. CP 3864 buttons are similar.*

The CP 3264 panel operates in a similar manner.

Pressing TAKE will program the newly entered address; CLEAR will cancel.

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* Defined in Glossary section

The address must agree with the setting for the panel on the MPK Devices table (see page 5–108).

MPK Test

This diagnostic requires the panel be disconnected from the MPK data cable.

This test allows the factory to test the MPK connection on the control panel.

Illumination Adjustment

This option allows the user to change the “Low” and “Medium” levels of green button illumination, the “Low” and “Medium” levels of red button illumination, and the level of LED (display character) illumination. The “High” button levels are not adjustable.

The “Low” green level is used for normal button lighting. “High” green and “high” red are also used, but these are not adjustable.

Note: The amber color, which is used for output buttons, is created by combining Low green and Low red.

For each setting, use the LEVEL button to increase brightness and PRESET to decrease. Press TAKE to save the setting and advance to the next color. Press CLEAR to exit.

Burn In

This test rotates through the button lamp and Display tests continually. Press CLEAR to cancel.

Keyboard Test

This diagnostic displays the number of each button as it is pressed. Pressing the LEVEL key will change the lamp color. Pressing CLEAR twice exits.

Display Test

This test cycles through and displays all legal characters. The test will stop after one cycle. Pressing CLEAR exits. (On the CP 3810, press the CLEAR button twice to exit.)

AUDIO SWITCHING MODE (VENUS SPECIAL STEREO SWITCHING)

The CP 3832/64 has the capability of controlling Venus Audio Modes, which are Normal, Mix, and Reverse. These changes are made to individual levels prior to completing a switch by pressing the TAKE button.

Note: Audio switching mode can only be used if an appropriately configured Venus switcher is connected.

To perform a special stereo switch:

1. Enter Preset mode by pressing PRESET. The button will flash red.

2. Select a source. The source mnemonic will appear in the Preset window.

3. Press MENU.

   The MENU button will light in red and the Preset window will display the level mnemonic. The Current window will show the audio mode for the left channel.

   In Figure 6–145, the left audio channel is set to “Normal.”

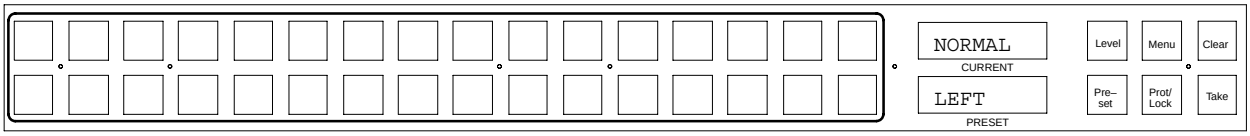


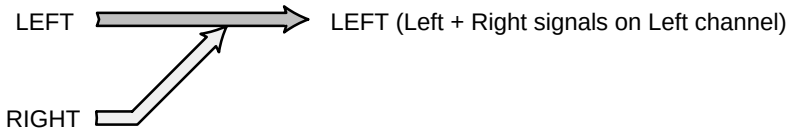
Figure 6–145.

4. Toggle the left channel to the desired mode by pressing PRESET:

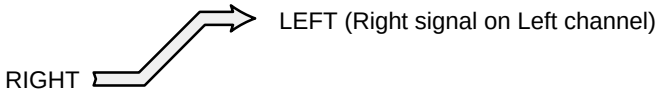
   - NORMAL – Use left audio for this channel

   - MIX – Mix left and right on this channel

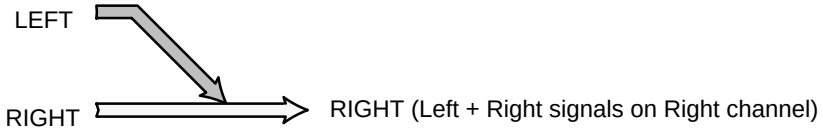
   - REVERSE – Cross opposite channel signal over to this channel

5. Press the LEVEL button to move to the right channel. Toggle the right channel to the desired mode by pressing the PRESET button.:

    - NORMAL – Use right audio for this channel

    - MIX – Mix left and right on this channel



    - REVERSE – Cross opposite channel signal over to this channel

6. Press TAKE.

CP 3832L / 3864L Control Panels

The CP 3832L is a CP 3832 panel configured so that the right–hand group of six buttons function as level selection buttons.

The CP 3832L is a button–per–source control control panel configurable for single bus* (32 X 1) or “split” operation. In split configurations some of the buttons control inputs and some control outputs. For installation and configuration instructions, please see page 2–58.

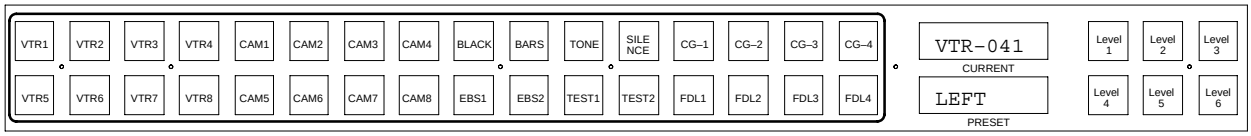


Figure 6–146. *CP-3832.*

The CP 3864L is a CP 3864 panel configured so that the upper right–hand group of six buttons function as level selection buttons and the adjacent lower button functions as a Protect key. (The Lock function is not available for this panel.)

The CP 3864L is configurable for single bus (64 X 1) or “split” operation. A “Destination” window is also provided. For installation and configuration instructions, please see page 2–60.

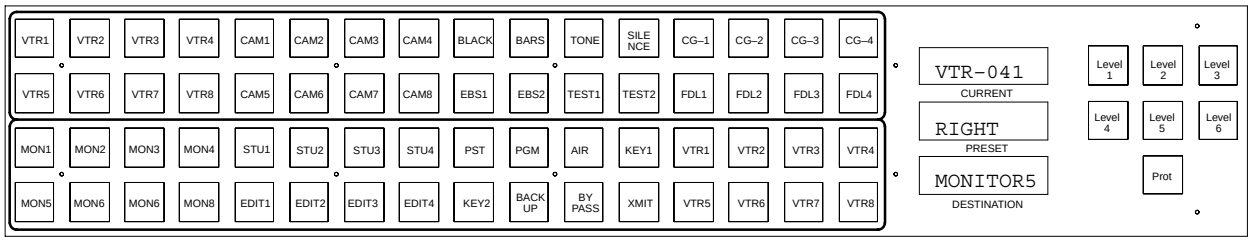


Figure 6–147. *CP-3864.*

PASSWORDS

The Password function is limited to the password level assigned to the panel on the MPK table. It isn’t possible to enter a supervisory password to temporarily raise the password level of the panel.

Note: For a general description of the Jupiter password system, please see page 5–17.

SINGLE–BUS OPERATION

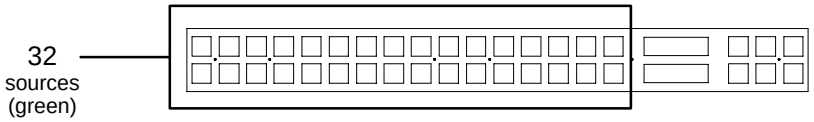


Figure 6–148. *CP 3832L.*

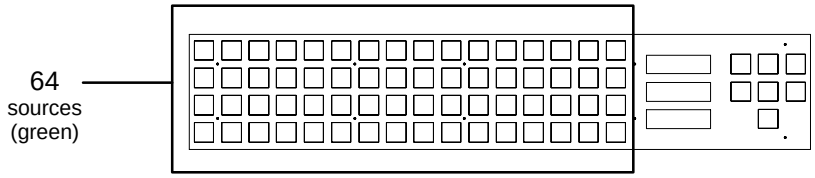


Figure 6–149. *CP 3864L.*

Each input button of the CP 3832L / 3864L can be assigned to a specific source using a CP Input set (page 5–71.) The name of this set, and the name of the destination to be controlled, is entered on the MPK Devices table (page 5–111 and following).

To verify destination (CP 3864L only) – On the CP 3864, the destination is always shown in the “Destination” window.

Audio–follow–video switching – When one of the input buttons is pressed, a Take* command is issued to all levels of the switcher matrix. A status* signal is then returned to the control panel; this confirms the action by lighting the selected input button and displaying the name of the input in the Current window.

Split switching – When the operator desires to take only specific switcher levels, those levels are defined by first pressing one or more of the six level breakaway buttons. The Take command to the switcher will be executed when an input button is pressed. The switcher will confirm the action by lighting the selected input button. Since the panel always operates in “sticky level” mode, the selected level buttons will remain lit after the input button has been pressed.

Split statusing – To status a specific level of a previous breakaway level switch, select the level to be statused; one of the input buttons will illuminate and the Current window will indicate the source for that level. If more than one level status button has been toggled on (like A1 and A2), only the lowest level (A1) will be statused.

* Defined in Glossary Section

PROTECT/UNPROTECT FUNCTIONS

CP 3832L

A CP 3832L will indicate when another panel has protected (or locked) an output by flashing the last selected input button. The CP 3832L cannot protect/unprotect (or lock/unlock) an output.

CP 3864L

Protecting an output prevents that output from being switched by other panels in the system. The protecting panel may still change the output.

To protect an output with the CP 3864L:

1. Press the Protect button.

   This has the effect of protecting only those levels this control panel can control (as defined on the CP Level set assigned to the panel). The button will blink “high” green, indicating the output has been protected by this panel. In addition, the associated input button will *also* blink green.

   If another panel attempts to switch this output, a “Protected” indication will appear on that panel.

To unprotect the output:

1. Press the Protect button again.

   The Protect button will switch to “low” green.

   If the Protect command is ignored, the output has been protected by another panel. To find out the name of the panel, select an input button.

An output may be force unprotected, regardless of the panel that protected it, if the password level of the unprotecting panel is level 90 or greater. The password level is defined on the MPK Device table (page 5–108). This operation is useful for a master panel capable of switching any source to any destination. The operator would be required to force unprotect the output prior to changing its source selection.

If *another* panel has protected (or locked) the output, the CP 3864 Protect button will blink *red*. In addition, the last selected input button on the CP 3864L will blink *green*.

The CP 3864 cannot lock or unlock an output.

For additional Protect information – see page 6–12.

SPLIT PANEL OPERATION

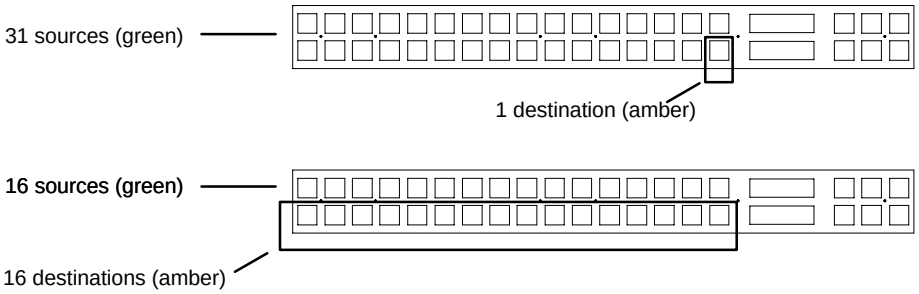


Figure 6–150. *Examples of CP 3832L split configurations.*

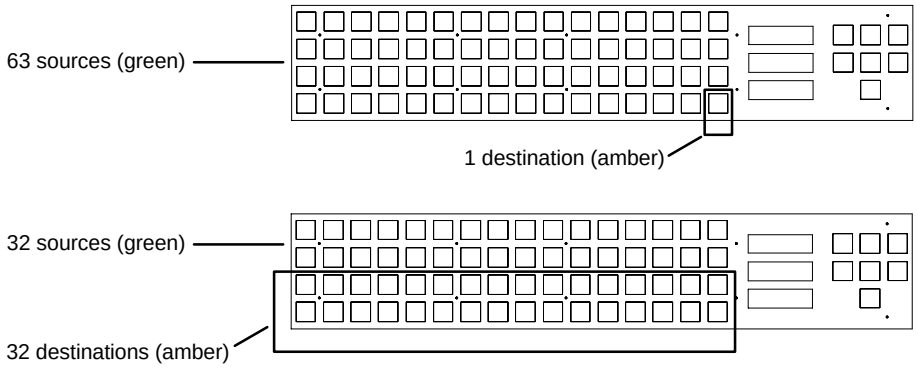


Figure 6–151. *Examples of CP 3864L split configurations.*

In split panel applications, the buttons illuminated in green have been configured to select inputs; the buttons illuminated in amber have been configured to select outputs.

During the configuration process, EXP (expansion) is set to “Y” on the MPK Devices Table (page 5–110). The sources are defined in a CP Input set of type “cp3832” (page 5–71); the destinations are defined in a CP Output set of type “cp3832” (page 5–92).

Audio–follow–video switching - Check to see that the desired output has been selected (amber button); if not, select it now. When a source (green button) is pressed, a Take* command is issued to all levels of the switcher matrix. A status* signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed in “high” green and displaying the name of the input in the “Current” window.

Breakaway switching – single level Take – Check to see that the desired output has been selected; if not, select it now. To switch only a specific switcher level, the level is defined by first pressing the appropriate level button; the name of the first level will be displayed in the “Preset” window. The Take command to the switcher will be executed when an input button is pressed.

* Defined in Glossary Section

Breakaway switching – multi–level Take – Check to see that the desired output has been selected on the bottom row; if not, select it now. To switch different levels with a single command, press the first desired level button. The name of the first level will be displayed in the Preset window. Press the next desired level button, etc. When all selections have been made, perform the switch by pressing an input button.

Split statusing – To status a specific level, select the desired level button. The name of the input will be shown in the Current window. Then toggle off the level button. To status another level, select another level button, toggle the button off, etc.

DIAGNOSTICS MODE

Although the CP 3832L and 3864L do not have “Menu,” “Level,” etc. buttons as such (because the buttons are used as level selection keys), the “Diagnostic” functions are still available indirectly. To access these functions, the MPK cable on the rear of the unit must first be disconnected. Then use the buttons as described below.

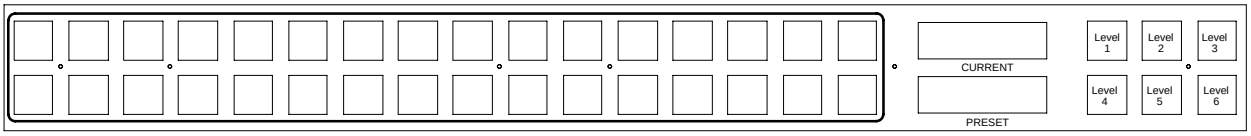


Figure 6–152. *CP 3832L buttons as used during Diagnostic Mode.*

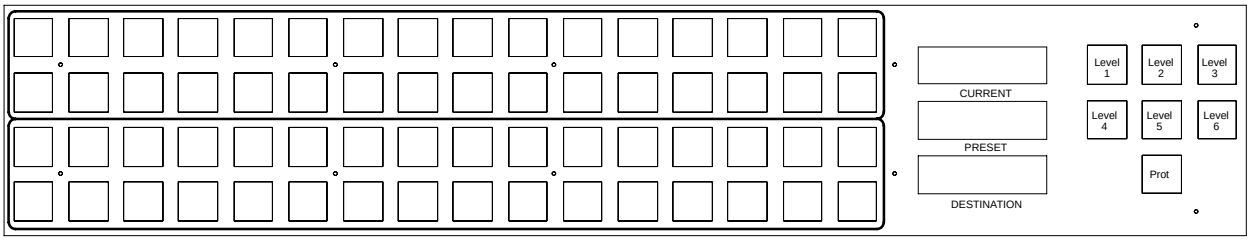


Figure 6–153. *CP 3864L buttons as used during Diagnostic Mode.*

1. Press and release the “Level 2” button until “DIAGNOSE” appears in the Current window.

2. Use the “Level 1” button to select the desired diagnostic.

3. Press the “Level 6” button (CP 3832L) or the “Protect” button (CP 3864L). Instructions for each diagnostic are given below.

   To exit the diagnostics mode press “Level 3” at any time. (It may be necessary to press Level 3 twice.)

LED Test

This test cycles through the button lamps (LEDs) and illuminates them in green and then red. The test will stop after one cycle. Pressing Level 3 during this test will cancel this test and return the panel to the beginning of the current diagnostic. Pressing Level 3 again will exit the Diagnostic mode.

Info

Info displays the panel’s Application (PROM) version , Xilinx FPGA* version, Variant version (not implemented), and PCB (hardware) version. Press Level 3 to exit.

Baud Rate

When selected, this option displays the current baud rate for the panel. Press Level 1 to cycle through the baud rate settings. Available baud rates are: 38400, 19200, 9600, 4800, 2400, and 1200. Pressing the “Level 6” button (CP 3832L) or the “Protect” button (CP 3864L) will program the changed setting; Level 3 will cancel.

The baud rate must agree with the setting for the CM 4000 port used by the panel (see *Serial Protocol* on page 5–25).

Panel ID

When selected, this option displays the current MPK address for this panel and permits entry of a new address. Use the top row of buttons to enter a hexadecimal address (see Figure 6–144).

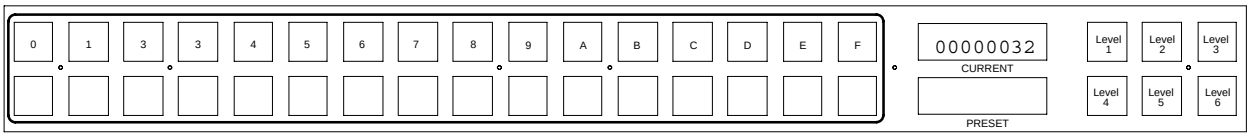


Figure 6–154. *CP 3832 buttons used to enter hex address. CP 3864 buttons are similar.*

The CP 3264 panel operates in a similar manner.

Pressing the “Level 6” button (CP 3832L) or the “Protect” button (CP 3864L) will program the newly entered address; Level 3 will cancel.

The address must agree with the setting for the panel on the MPK Devices table (see page 5–108).

MPK Test

This test allows the factory to test the MPK connection on the control panel.

Illumination Adjustment

This option allows the user to change the “Low” and “Medium” levels of green button illumination, the “Low” and “Medium” levels of red button illumination, and the level of LED (display character) illumination. The “High” button levels are not adjustable.

The “Low” green level is used for normal button lighting. “High” green and “high” red are also used, but these are not adjustable.

Note: The amber color, which is used for output buttons, is created by combining Low green and Low red.

For each setting, use the Level 1 button to increase brightness and Level 4 to decrease. Press the “Level 6” button (CP 3832L) or the “Protect” button (CP 3864L) to save the setting and advance to the next color. Press Level 3 to exit.

* Defined in Glossary section

Burn In

This test rotates through the button lamp and Display tests continually. Press Level 3 to cancel.

Keyboard Test

This diagnostic displays the number of each button as it is pressed. Pressing the Level 1 key will change the lamp color. Pressing Level 3 twice exits.

Display Test

This test cycles through and displays all legal characters. The test will stop after one cycle. Pressing Level 3 exits.

CP 3809 Expansion Panel Operation

The CP 3809 can be used as a companion to the CP 3808 Switcher Control Panel or to the CP 3830 Control Panel. Each button on the CP 3809 panel represents a destination, with the display line above providing status. Up to five CP 3809 panels can be associated with a CP 3808 or CP 3830, providing up to 40 outputs for control. Figure 6–155 illustrates a control panel array for CP 3809 control of 16 outputs.

For multi–bus control the desired source can be selected on the CP 3808/3830; the CP 3809 would then be used to select the destination(s). The selected output button will glow “high” green to show that it will be affected by the switch. To complete the switch, the operator presses the TAKE button on the CP 3808/3830. (This action does not affect the output being controlled by the CP 3808 or CP 3830.)

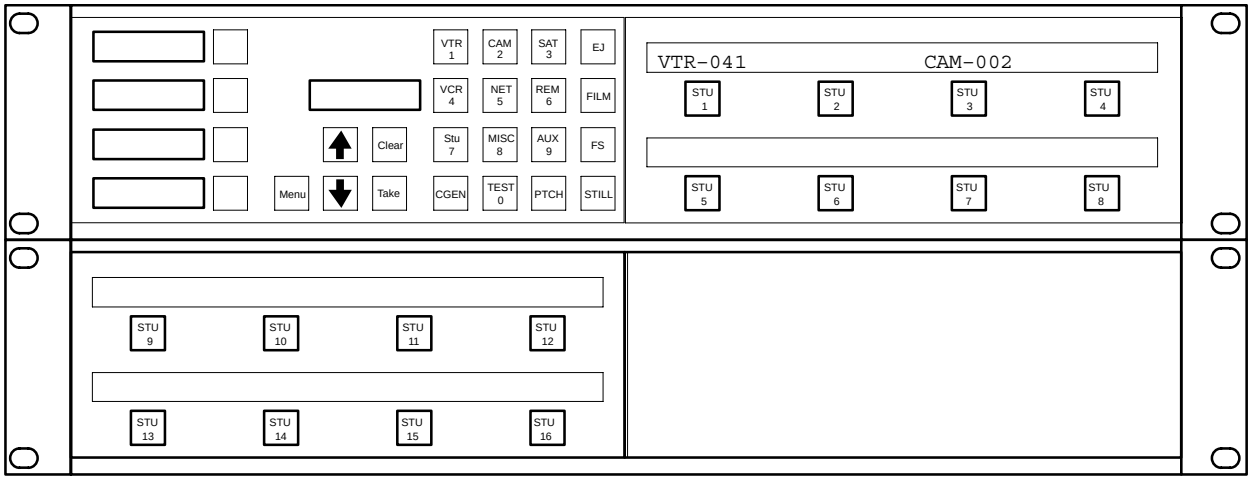


Figure 6–155. *CP 3808/E (top) with CP 3809/1 Expansion Panel (below)*

Dynamic Assignment of Outputs to Expansion Panel Buttons

The process of assigning outputs to the expansion panel is the same as assigning the output to be controlled by the CP 3808/3830, except that the desired button is pressed on the expansion panel (rather than TAKE on the main panel):

1. On the CP 3808 or CP 3830, press MENU. Then select an output.

   For details concerning this procedure, see page 6–65 (CP 3808). or page 6–76 (CP 3830).

2. On the expansion panel, press the appropriate destination key.

   To check the new assignment, press MENU.

   Note: Only the output button positions *not* defined in the CP Output Set may be changed. See page 5–77.

Deleting an Output on TAKE Key

To delete an output that has been dynamically assigned to the expansion panel, use the CP 3808/3830 to select an output that is not defined and press the appropriate button on the expansion panel.

Permanent Assignment of Outputs to the Expansion Panel

Outputs can also be assigned permanently, using the CP Output Set. See page 5–77.

Since there are no output displays, Thomson recommends fixing these outputs in the CP Output Set and installing permanent labels in the buttons.

Diagnostics Mode

On the CP 3809, diagnostics mode is entered by pressing and holding the first button while pressing the eighth button.

For a description of the diagnostics and adjustments, please see the CP 3830 *Diagnostic Mode* on page 6–87, starting with Step 2. Except as noted, this description applies to the CP 3809.

CP 3810 Expansion Panel Operation

The CP 3810 panel can be associated with a CP 3832, CP 3864, CP 3808, or CP 3830 Main panel, providing control of up to 80 outputs. The CP 3810 can be configured as a "CP 3810L," allowing it to be assigned to one output; this provides break-away (split) switching and/or multi–level status. Alternatively, it can be configured as a "CP 3810S," meaning that the selected outputs will remain selected until explicitly changed by the operator.

The CP 3810 can also be used as a limited–function machine control panel, providing Play and Stop commands for VTRs.

Figure 6–156 illustrates a CP 3810 with a CP 3832 panel.

> Note: Even when associated with a CP 3810, the Main panel is still configured independently and can be operated independently.

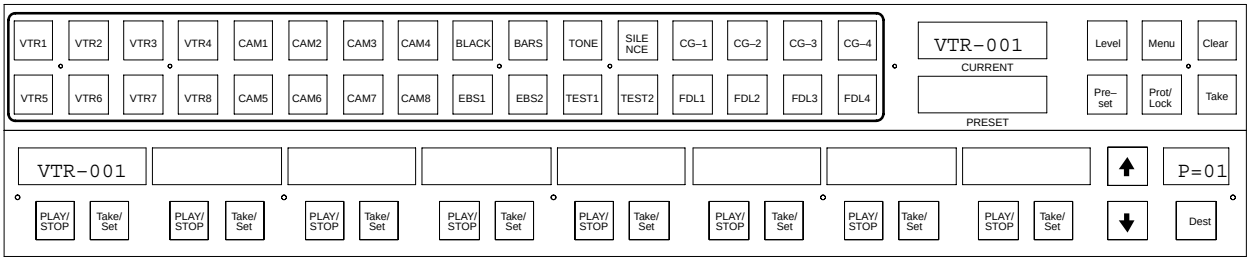


Figure 6–156. *CP 3832 with CP 3810 (bottom).*

For a general description of the CP 3810, and hardware installation instructions, see page 2–63. For software configuration instructions (MPK table), see page 5–137.

To assign CP 3810 buttons to outputs, see page 5–77.

Configuration for machine control applications and the method by which machines are assigned to the panel are discussed on page 5–158.

MULTI–BUS CONTROL

When configured for multi–bus control, the status of eight buses will normally be seen in the CP 3810's eight–character display windows. The "page" of status of eight destinations can be scrolled with the arrow buttons to display up to 80 possible destinations; the current page number is shown in the window above the DEST button.

To verify destinations – For the CP 3810, press DEST; the destinations will be shown in the eight display windows. The "page" of eight destinations can be scrolled with the arrow buttons to display up to 80 possible destinations. To return to status mode, press DEST again. For the Main panel, press MENU, then CLEAR.

Audio–follow–video Switching

PRESET OFF method. See Figure 6–157.

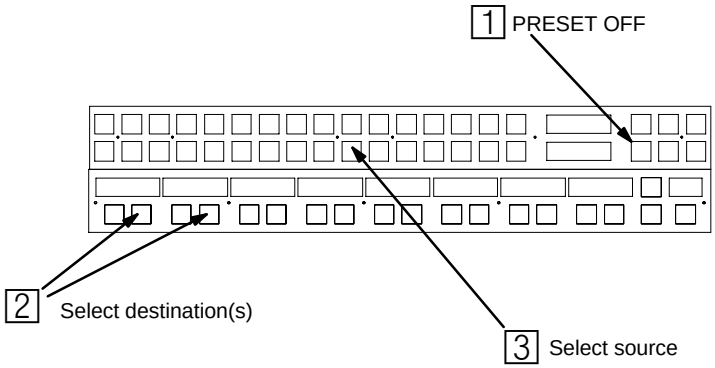


Figure 6–157. *Switching with Preset OFF.*

1. Check to see that PRESET is OFF.

2. Use the CP 3810 to select the destination(s).

   The “page” of eight destinations can be scrolled with the arrow buttons to display up to 80 possible destinations. The selected output button(s) will glow “high” green to show it will be affected by the switch.

3. Use the Main panel to select the source. This completes the switch.

   When one of the source buttons is pressed, a Take command is issued to all levels of the switcher matrix. (Press the TAKE key is not necessary.) A status signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed and displaying the name of the input in the “Current” window of the Main panel and the appropriate windows on the CP 3810.

   This action does not affect the output being controlled by the Main panel.

   If the CP 3810 has been configured for “sticky output” operation (CP 3810S), selected outputs will remain selected until the Take/Select button(s) are toggled off.

   If entry of a password is requested on the Main panel (“PASS =00”), the output about to be affected has a password *level* higher than that of the panel. For more information about passwords, refer to the operation instructions for the Main panel.

PRESET ON method. See Figure 6–158.

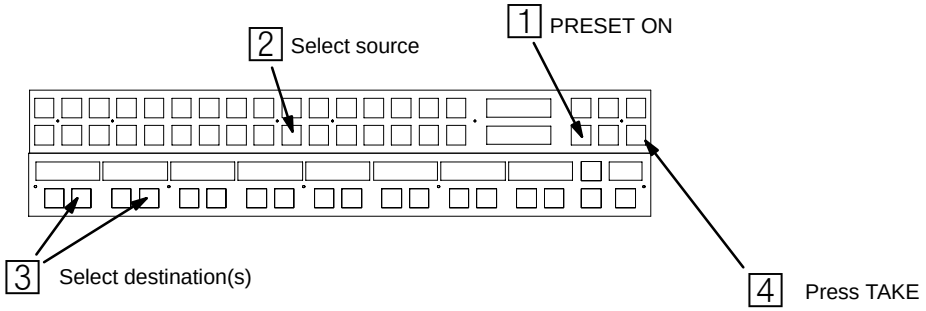


Figure 6–158. *Switching with PRESET ON.*

1. Check to see that PRESET is ON.

2. Select a source using the Main panel.

3. Use the CP 3810 to select the destination(s).

   The “page” of eight destinations can be scrolled with the arrow buttons to display up to 80 possible destinations. The selected output button(s) will glow “high” green to show that it will be affected by the switch.

4. Press the TAKE key.

   A status signal is then returned to the control panel; this confirms the action by lighting the input button that was pressed and displaying the name of the input in the “Current” window of the Main panel and the appropriate windows on the CP 3810.

   If the CP 3810 has been configured for “sticky output” operation (CP 3810S), selected outputs will remain selected until the Take/Select button(s) are toggled off.

   If entry of a password is requested on the Main panel (“PASS =00”), the output about to be affected has a password *level* higher than that of the panel. For more information about passwords, refer to the operation instructions for the Main panel.

SINGLE–BUS CONTROL

In the example shown in Figure 6–159, a CP 3832 is used to select inputs and a “CP 3810L” is used to control the individual levels of one output. The CP 3810 can thus be used for **breakaway** switching.

To find out what output is being controlled by the CP 3810, use the “show destination” procedure for the Main panel. In the example shown in Figure 6–159, the CP 3832 MENU button would be pressed.

> Note: To verify that the CP 3810 has been configured as a “CP 3810L,” press the DEST button. This will display level names if the panel has been configured as a CP 3810L.

Switching Procedure

PRESET OFF method. See Figure 6–159.

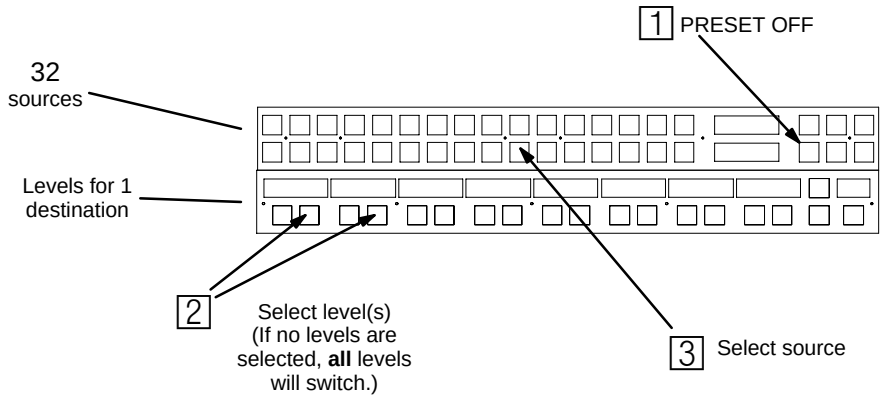


Figure 6–159. *Switching with Preset OFF.*

PRESET ON method. See Figure 6–160.

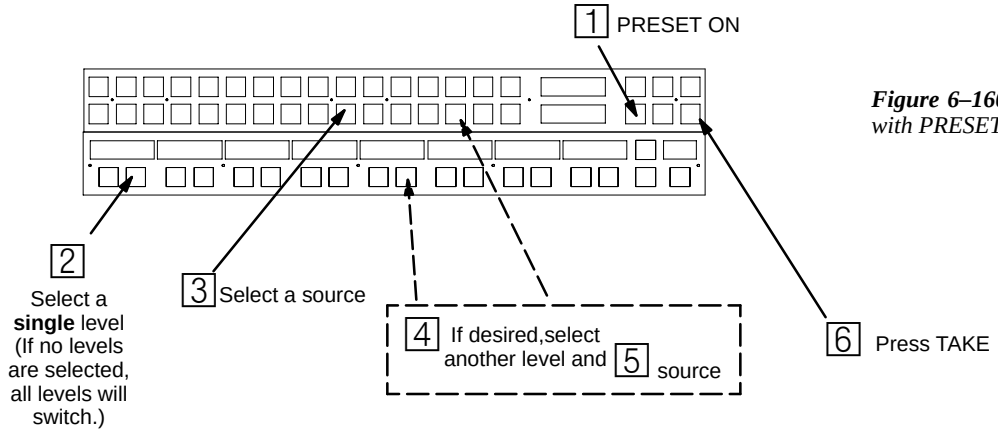


Figure 6–160. *Switching with PRESET ON.*

X–Y Application

In the example shown in Figure 6–161, a CP 3864 is used to select inputs, a CP 3832 is used to select outputs, and a “CP 3810L” is used for control/status the individual levels of the output selected by the CP 3832. The CP 3810 can thus be used for break-away switching.

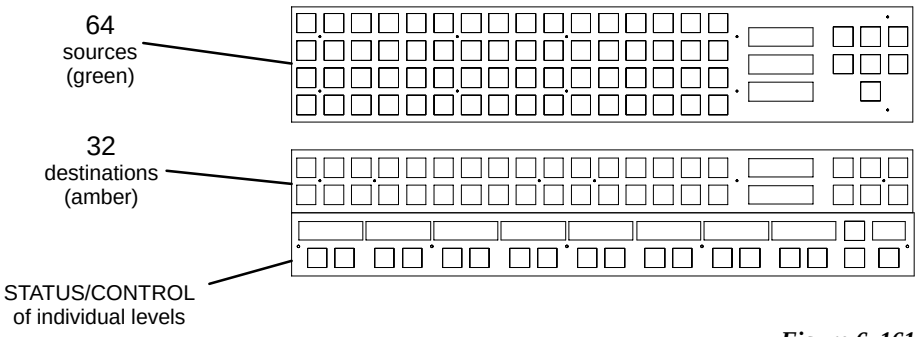


Figure 6–161

Once a destination has been selected, the switching procedure is similar to that just described (page 6–129). The “page” of eight levels can be scrolled with the arrow buttons to display additional levels.

SINGLE–BUS STATUS ONLY (STAND–ALONE)

In this mode, a “CP 3810L” is configured to status the output assigned on the MPK Devices table. No other panel is associated with the panel and there is no switcher control.

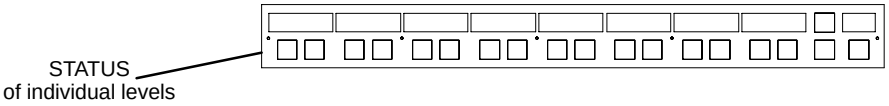


Figure 6–162

To verify levels, press DEST. The level names will be shown in the eight display windows.

DIAGNOSTICS MODE

On the CP 3810, diagnostics mode is entered by pressing and holding the first button on the left while pressing DEST. This will display the Panel (Device) Name and the Panel ID (Address) from the MPK Devices table. To clear the ID and enter the Diagnostic mode, press DEST again. Use the soft–keys labelled with the UP and DOWN arrows to to select the desired diagnostic; press the TAKE soft–key to start the diagnostic.

For a description of the diagnostics and adjustments, please see *Diagnostic Mode* on page 6–112.

MC 3000 Machine Control Panel and CP 3010 Expansion Panel

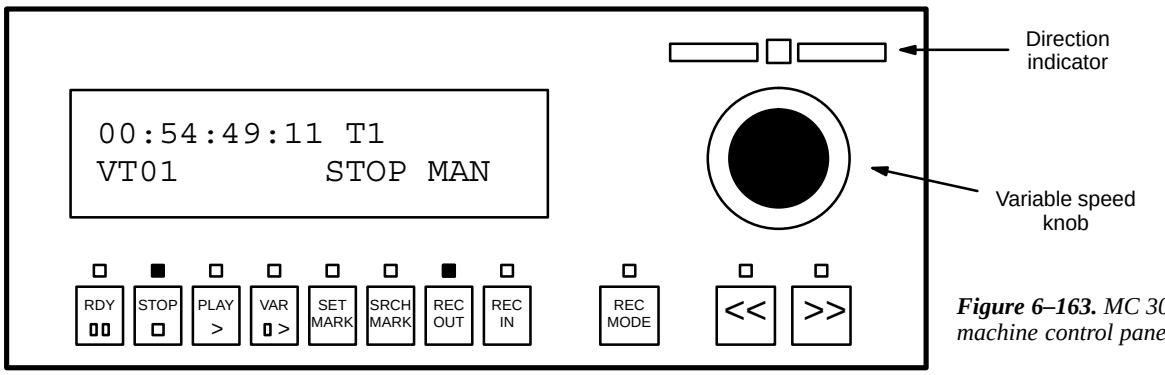


Figure 6–163. *MC 3000 machine control panel*

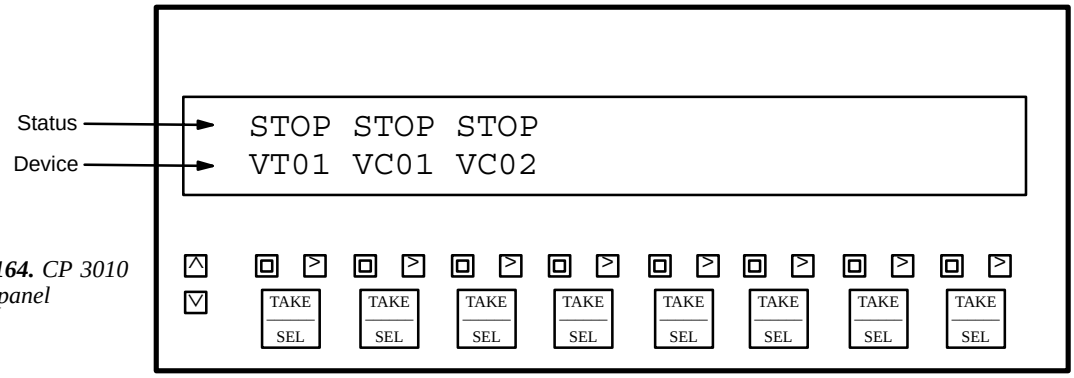


Figure 6–164. *CP 3010 expansion panel*

Installation of these panels has already been described (page 2–45).

The MC 3000 machine control panel includes a series of push buttons for motion control (PLAY, STOP, etc.). A variable speed knob, with a color–coded direction/speed indicator, is also included.

The machine to be operated can be selected using the adjacent CP 3010 expansion panel (Figure 6–164), which can display the names of eight linked machines over a row of selection buttons. Additional pages of eight machines can be called up for display in the window as required.

The method by which machines are linked (assigned) to the CP 3010 is described in detail elsewhere in this manual (see *Assigning Machines to Control Panels* on page 5–151). Essentially, each TAKE/SELECT button is “associated” with a particular output of the routing switcher and switching a VTR to that output will cause the VTR to appear over the button. This “follow–the–switcher” concept should be understood before operating either of these panels.

The CP 3010 can also be used as a limited–function machine control panel, providing Start and Stop commands for VTRs.

MC 3000 CONTROL FUNCTIONS

Toggles the machine in and out of scanner ready mode.

Stops machine regardless of mode.

Playback mode. May or may not override current mode, depending on machine.

Slow motion playback. Speed is indicated in the display window.

May or may not override current mode, depending on machine. When first pressed, speed will be 1/5 or +0.2 play speed. Typical speed range, using variable speed knob, is –1 to +3 times play speed.

Captures current time code.

The actual value will depend on the machine and interface used. If the machine is connected to the system using a TCS–1–type interface (as shown on page 2–89), time code will not be available but a CUE/MARK command may be used instead. For more information concerning TCS–1 interfaces, see Appendix E.

Go to time code point captured with *Set Mark* command, minus Preroll value set on the Machine Control Devices table, and stop. For more information, see *Preroll* on page 5–150.

If the machine is connected to the system using a TCS–1–type interface, time code will not be available but a SEARCH/CUE command may be used instead. See Appendix E.

End record mode (same as ESbus *Exit* command). Normally used to terminate an Insert edit, in which case machine drops out of record mode but keeps on playing.

When machine is stopped, pressing RECORD OUT also serves to place machine in Tape Monitor mode.

REC IN

When pressed at the same time as PLAY, starts record mode and illuminates Record LED. Same as ESbus *Play* and *Enter.*

When machine is stopped, pressing RECORD IN places machine in E–E Monitor mode.

REC MODE

Select a recording mode. Depending on the machine, pressing the button will cycle through the following, as indicated in the display window:

Off – Record inhibit.

Manual – Pressing PLAY and RECORD IN will begin a recording, during which no editing functions will be enabled.

Assemble – Pressing PLAY and RECORD IN will begin an Assemble edit.

Insert – Pressing PLAY and RECORD IN will begin an Insert edit.

<< or >>

Full–speed shuttle (rewind or fast forward); speed is shown in the display window. Speed can be reduced by variable speed knob; direction can be reversed if desired.

<< ***and*** >>

Press both buttons at once for **Jog** (frame advance). Direction and speed is determined by variable speed control. (This is supported for true ESbus controlled VTRs only, e.g., DCR 500.)

Shuttle knob

Shuttle mode can be entered by turning the knob more than approx. 30 degrees.

RDY ***and*** >>

Press both buttons at once for Diagnostic mode. Diagnostics are similar to those supplied with the MC 3010 (as described on page 6–137). To exit individual diagnostics, use the Fast Forward (>>) key. To exit diagnostic mode, press both Ready and Fast Forward at the same time.

Using the MC 3000 to Access Sony Auto–Edit Mode

To mark the edit beginning point, press the SET MARK key. Use any method to reach the edit ending point on the tape. To mark the end point *and initiate the edit*, press and hold REC IN, then press PLAY, then release both buttons. The VTR will rewind to the edit begin point minus the set preroll time, go into Play mode, and at the edit beginning point (where you pressed SET MARK) go into Record mode. It will stay in Record until the edit ending point (where you pressed REC IN + PLAY), at which point the VTR will continue on for a few frames, then go into Variable Play, rewind to the edit ending point, then stay in Variable Play with a velocity of 0.00.

CP 3010 CONTROL FUNCTIONS

The method by which machines are linked (assigned) to the CP 3010 is described in detail elsewhere in this manual (see *Assigning Machines to Control Panels* on page 5–151). Linkage is indicated by the name of the machine appearing in the display window.

When a machine name appears in the window, pressing SEL enables Start/Stop control (described below). It also enables control using the adjacent MC 3000 Machine Control Panel (if any). The TAKE legend does not apply to machine control.

Starts machine shown in window.

Stops machine shown in window.

Scrolls window up to next page of machine names.

Scrolls window back one page.

MC 3010 Machine Control Panel

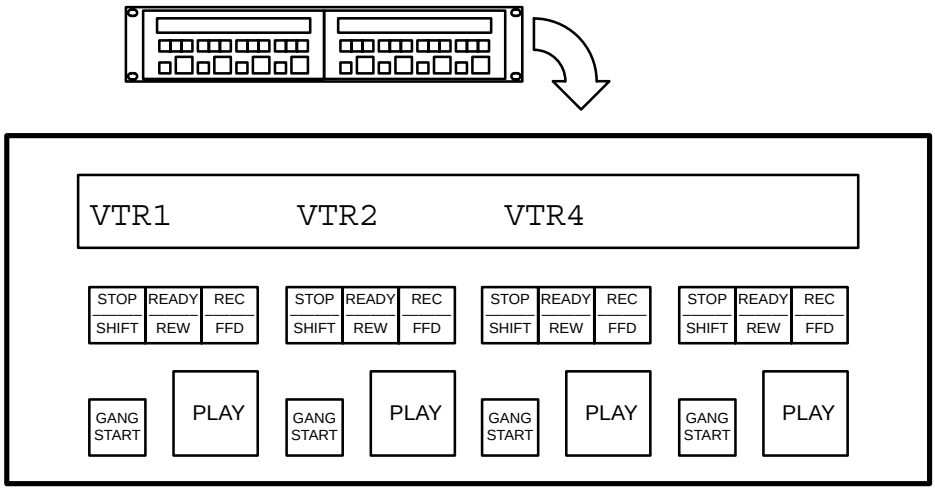


Figure 6–165. *MC 3010/2 Dual 4–Machine Control Panel*

Installation of these panels has already been described (page 2–45).

The MC 3010 is used to control four (MC 3010/1 version) or eight (MC 3010/2 version) tape machines. The display window shows the name of the machine presently linked to the button group immediately below. Lighted, re–legendable push buttons are provided for motion control (PLAY, STOP, etc.). Machine commands and status indications are shown in Figure 6–166.

The method by which machines are linked (assigned) to the MC 3010 is described in detail elsewhere in this manual (see *Assigning Machines to Control Panels* on page 5–151). Essentially, each button group is “associated” with a particular output of the routing switcher and switching a VTR to that output will cause the VTR to appear over the button group. This “follow–the–switcher”concept should be understood before operating the panel.

Gang Start

To send the same command to more than one machine, toggle on the GANG START key for each desired machine. Then press the appropriate command key (RECORD, STOP, etc). All following commands will be sent to all marked machines until the GANG START keys are toggled off.

Gang Start commands will be applied to marked machines on both left and right halves of a dual panel.

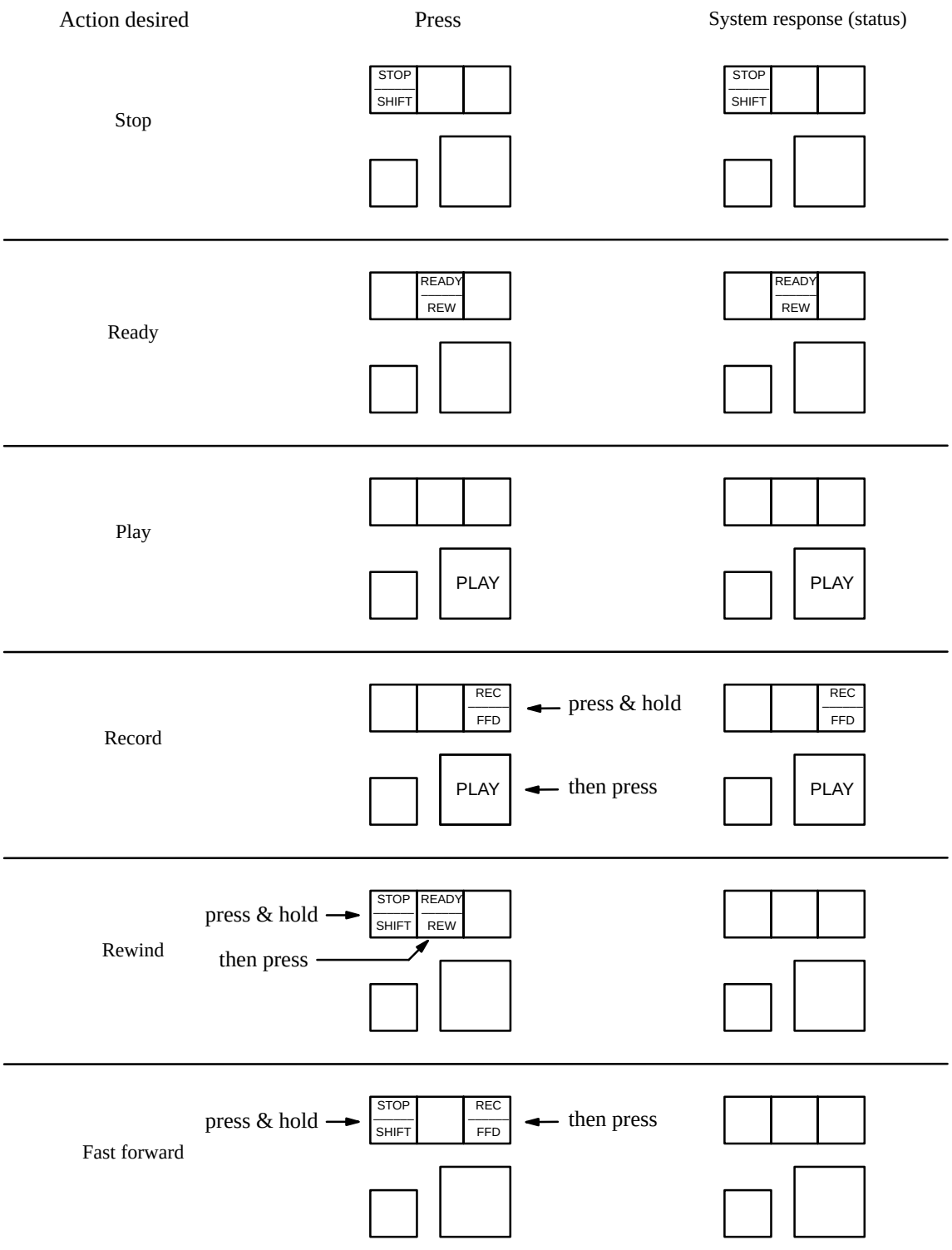
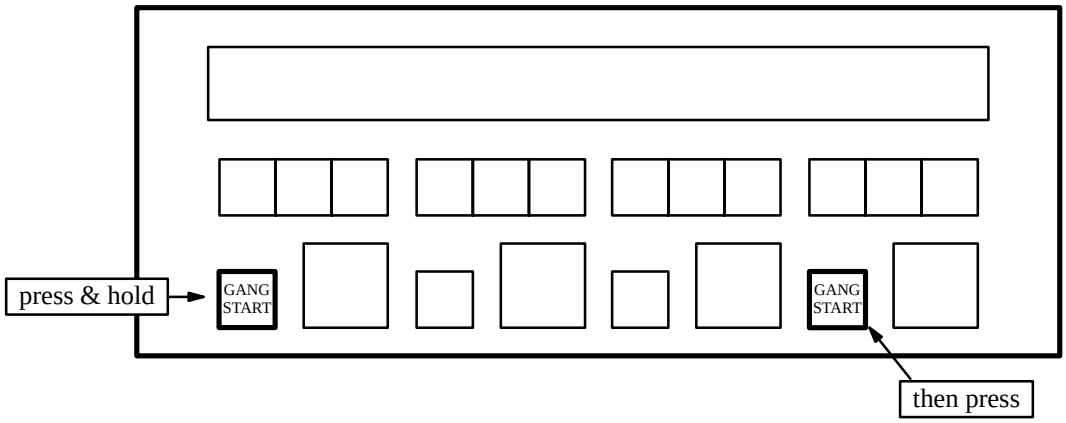


Figure 6–166. *MC 3010 Operation and status*

DIAGNOSTICS

The diagnostics mode allows several panel functions to be checked without sending any machine commands.

Figure 6–167. *Keys used to enter diagnostic mode.*



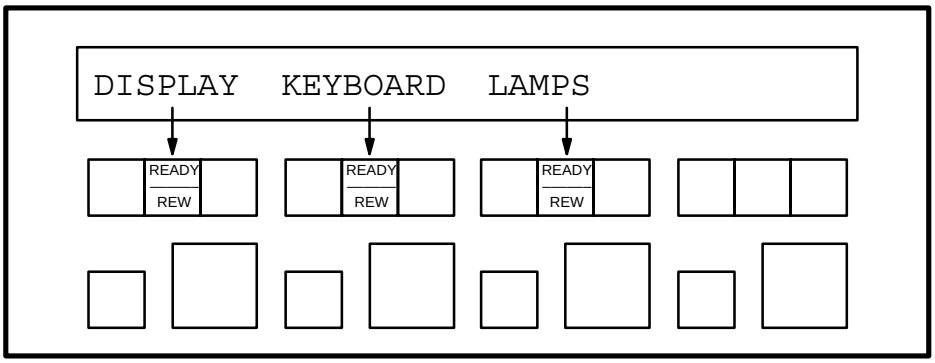


Figure 6–168. *Diagnostic menu. Press appropriate READY/REWIND key to select test.*

Display	The display test will cycle through the character set used in the display window and repeat. To exit to the diagnostic menu (Figure 6–168), press any READY/REWIND key.
Keyboard	The keyboard test will report the key number of each button pressed. To exit to the diagnostic menu, press any READY/REWIND key *twice*.
Lamps	After starting the lamp test, it will take about 10 seconds for the first MC 3010 key to light. To exit to the diagnostic menu, press any READY/REWIND key.

To exit the diagnostic mode, repeat the step shown in Figure 6–167. (If in keyboard test (as indicated by a “Key =” message), you must first press any READY/REWIND key twice.)

MC 3020L Linkage Panel Operation

Installation of this panel is shown on page 2–68; software configuration is described starting on page 5–118.

The MC 3020L is used for manual assignment of one machine to a button group on an MC 3000 or MC 3010 Machine Control panel. The machine is selected on the MC 3020L main panel; the desired panel/button group is selected on the CP 3021 Expansion Panel. See Figure 6–169.

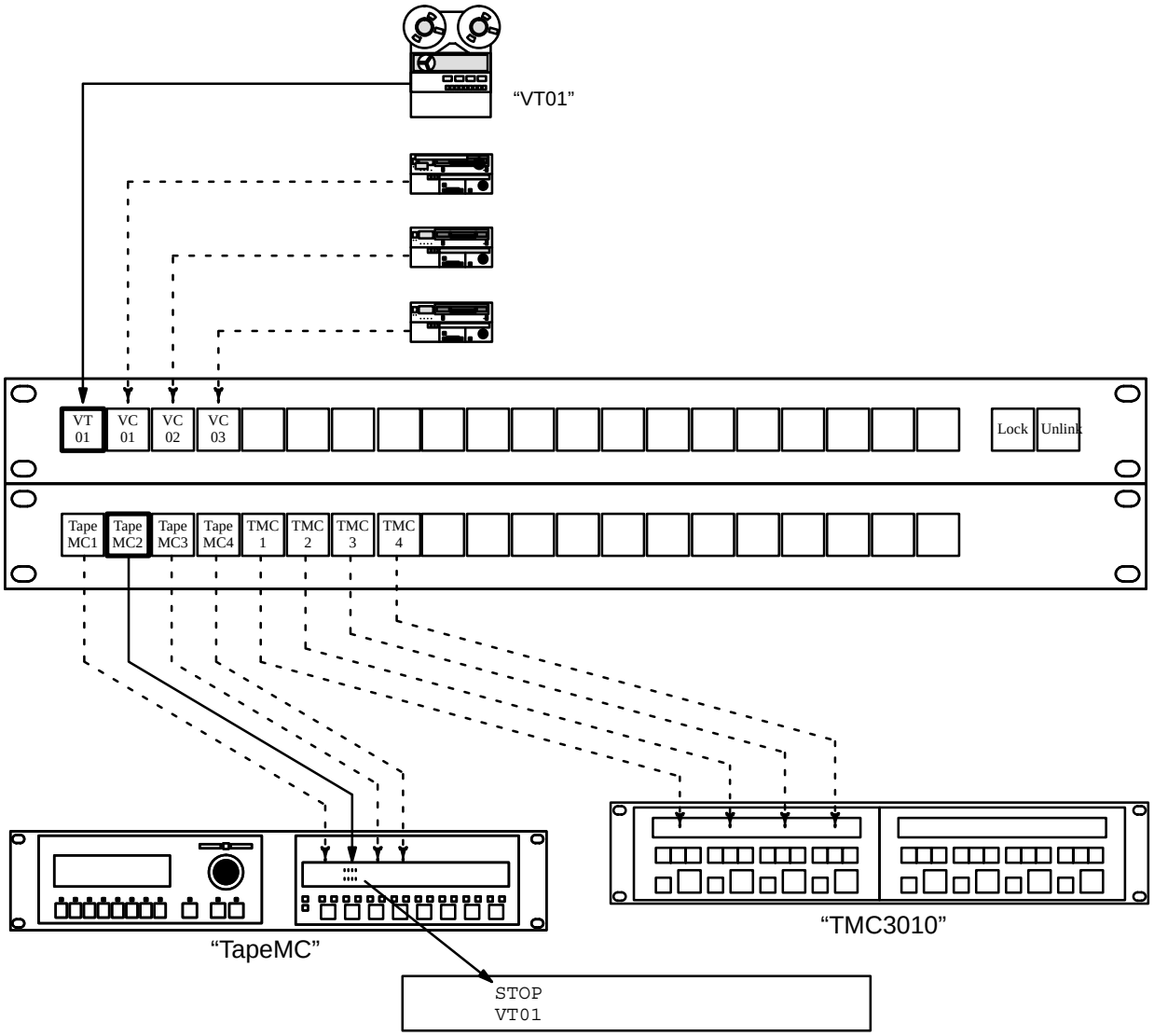


Figure 6–169. *MC 3020L Linkage Panel showing example of assignment to MC 3000 Machine Control expansion panel.*

Continuing with the installation and configuration example already discussed, the panel shown in Figure 6–169 could be operated as follows:

1. Select machine “VT01” on the main panel.

2. Select “TapeMC2” on the expansion panel.

   This will assign VT01 to the second control position on the MC 3000 expansion panel; the name “VT01,” and the status of the machine, will appear over the second SELECT button. This is described as “linking” the machine to a control station.

   The MC 3020L buttons will illuminate to indicate that the link has been made.

3. To break the control link (so that control can be assigned to another location), press UNLINK.

4. While a link is established, the LOCK button can be used if desired to prevent control being shifted to any other panel.

   The LOCK button will light whenever a locked machine/control panel pair is selected.

   If LOCK is not used, it is possible for the link to be broken by action taken at other control panels. For example, if the system has been configured to allow automatic linkage (where machine control follows the router), then switching the video from “VT01” to a particular destination could cause control of the machine to shift to another machine control panel. Along these same lines, a simple link could be broken by action taken at an MC 3020D Delegation Panel. If the MC 3020D was used to allow automatic linkage to a control panel group that does not include the MC 3000/3010 now controlling the machine, the link would be broken. In any case, the LOCK function prevents such interruptions.

   To unlock control assignment of a machine, select the machine on the main panel and press LOCK again. UNLINK can then be used to de–assign the machine.

MC 3020D Delegate Panel Operation

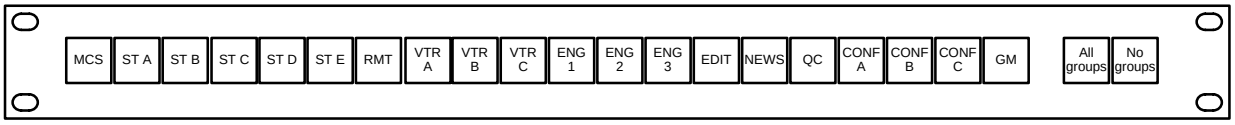


Figure 6–170. *MC 3020D Delegate Panel with example labels.*

Installation of this panel is shown on page 2–70 (panel–per–machine arrangement) and page 2–71 (central control arrangement).

The panel is used to delegate control of a machine to a single remote panel, a group of panels, multiple groups, or to all remote panels. In the panel–per–machine arrangement, only the button for the desired group need be pressed. In the central control arrangement, the group is selected on the MC 3020D and the desired machine on the CP 3021 Expansion Panel.

If no group is selected, then control remains with the local control panel (on the machine itself).

Note that the MC 3020D does not actually connect a control panel to a machine; rather, it ***allows*** the connection to be made using the normal machine linkage procedures already described on page 5–151.

Configuration of the MC 3020D is described in *Delegation Groups*, starting on page 5–161. An example of a delegation and linkage sequence is described on page 5–165.

VGA Status Display Operation

The VGA Status Display provides a supervisory, system–wide display of switcher, machine, or system status. The display video is provided by the VGA output of a VM 3000. The display format is initially based on a set of factory default pages, but can be customized as needed. (For more information about installation and configuration, see Appendix A.)

Basic controls for this display are located on the front panel of the VM 3000 (Figure 6–171).

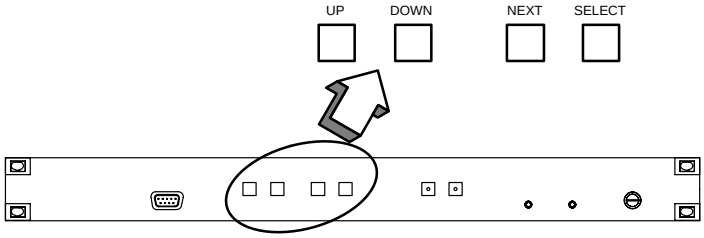


Figure 6–171. *VGA controls on VM 3000*

For easier operation, the VM 3000 can be connected to one CP 3020 control panel, which in this application is configured as device type “VC 3020” (see Figure 6–172). To use the VGA to best advantage, it should also be connected to a CP 3000 Switcher Control Panel and an MC 3000 Machine Control Panel. The RGB display monitor and the controls just described should be located as close together as possible, preferably in the same equipment rack.

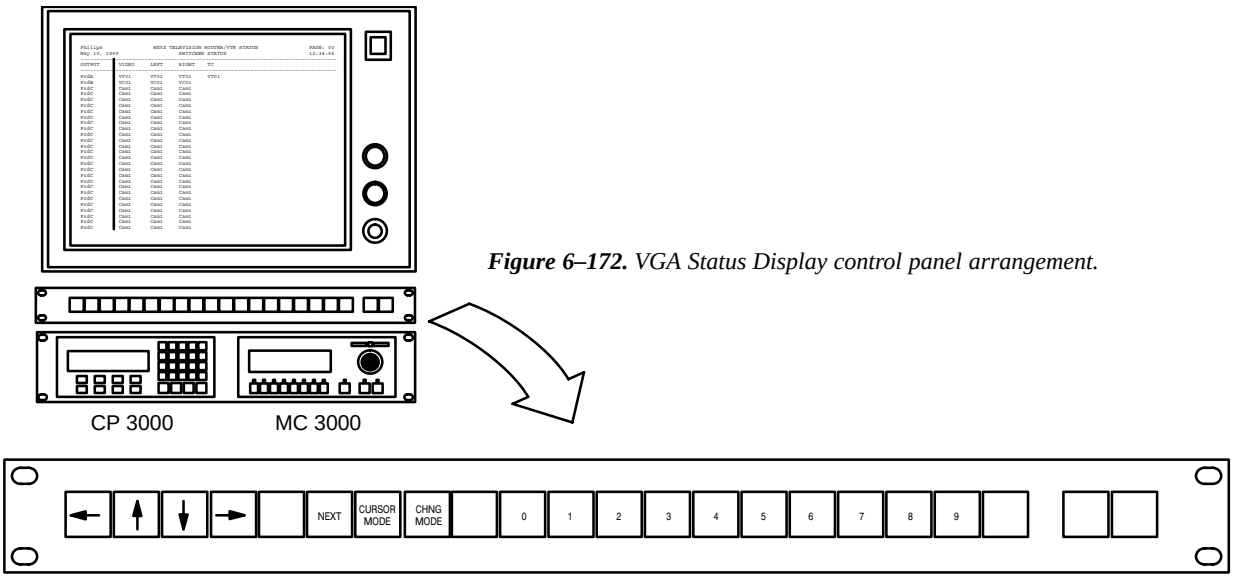


Figure 6–172. *VGA Status Display control panel arrangement.*

CP 3020 control panel, showing suggested labels for VC 3020 application

The VGA display starts up on Page #0 as defined in the VGA Page Description File. Display pages 0–9 are selected with the number buttons.

> Note: Page decades are accessed using 9+UP ARROW or 0+DOWN ARROW. For example, for pages 10–19, press “9,” then UP ARROW; the “0” button will light indicating page 10, and the number buttons will select pages 10–19. To return to pages 0–9, press “0,” then DOWN ARROW; the “9” button will light and the number buttons will select pages 0–9.

The following discussion is based on the factory default set of display pages.

SWITCHER OUTPUT STATUS PAGE

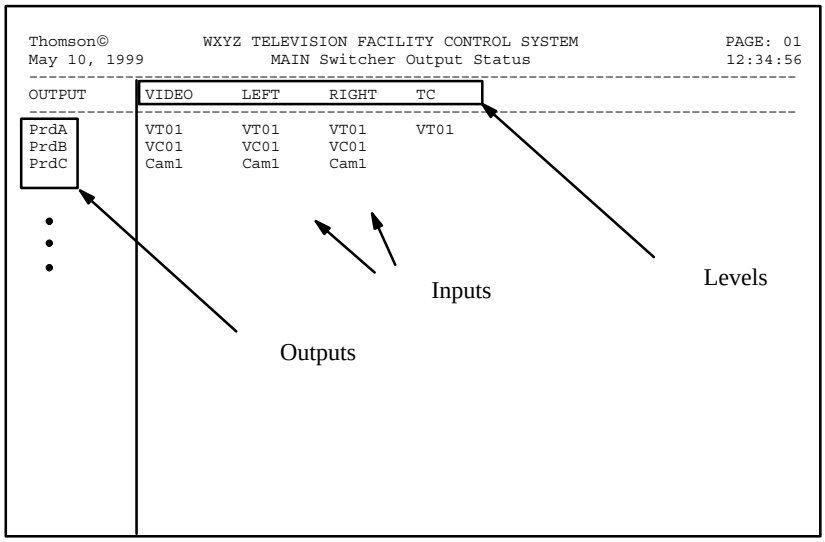


Figure 6–173. *Switcher output status page (example)*

A switcher output status page (Figure 6–173) can provide a list of switcher outputs and the name of the input switched to each. Separate columns for each level can be used to report split switches; these can be highlighted with a distinct color.

An alternating (flashing) display indicates that the output is locked or protected:

- The first flashing character shows “L” if the output is locked; “P” if the output is protected.
- If a single flashing character is shown next, it indicates a special control device (i.e., not an MPK panel) has set the the lock or protect. “A” is for an ASCII protocol device (e.g., an automation computer); “S” is for an ES–switch protocol device (ditto) and “P” is for a Party Line panel.
- The following characters show the name of the locking/protecting device. The name is usually taken from (or shortened from) that shown on the MPK Devices table. However, if the locking or protecting panel is a Party Line type, the PL board and control panel polling numbers are shown.

NEXT is used to cycle through additional logical switchers (if any). UP and DOWN (or the arrow buttons on the CP 3020) will step through additional pages of outputs; hold the key down to auto–repeat.

Cursor Mode – Selecting an Output for Control

To enter cursor mode, press SELECT on the VM 3000 (or CURSOR MODE on the CP 3020). This will cause the name of the first output to appear in reverse video. The UP and DOWN buttons (or arrow buttons) will move the cursor from one output to another. An output pointed to by the cursor is automatically selected as the output to be controlled by the CP 3000 Switcher Control Panel associated with the VM 3000 providing the VGA display.

Note 1: If an output cannot be switched, it may be that the output or input requested is not included in the CP Output Set assigned to the CP 3000. See page 5–115. This may also be the case if asterisks appear in place of the normal status indication.

Note 2: If the cursor mode in the switcher status display will not work, it may be that no CP 3000 was defined for the VGA on the MPK Devices table (page 5–115).

Force Unprotect / Force Unlock

As a supervisory system, the VGA / CP 3000 can be configured such that it can unprotect or unlock any output shown on the display.

— If the panel has been so configured on a permanent basis (as described on page 5–115), place the cursor on the output and press PROTECT (or LOCK) and TAKE.

— If the panel has *not* been configured permanently, login to the panel using a 90 level or above password. This will allow use of the force unprotect/unlock command until logoff.

Important: It is possible for the VGA / CP 3000 to unlock or unprotect outputs regardless of password levels, including the outputs of an MCS 2000 Master Control Switcher. The outputs will not be re–protected until the MCS 2000 is reset.

For additional protect/lock information – See page 6–12.

MACHINE & DELEGATION STATUS PAGE

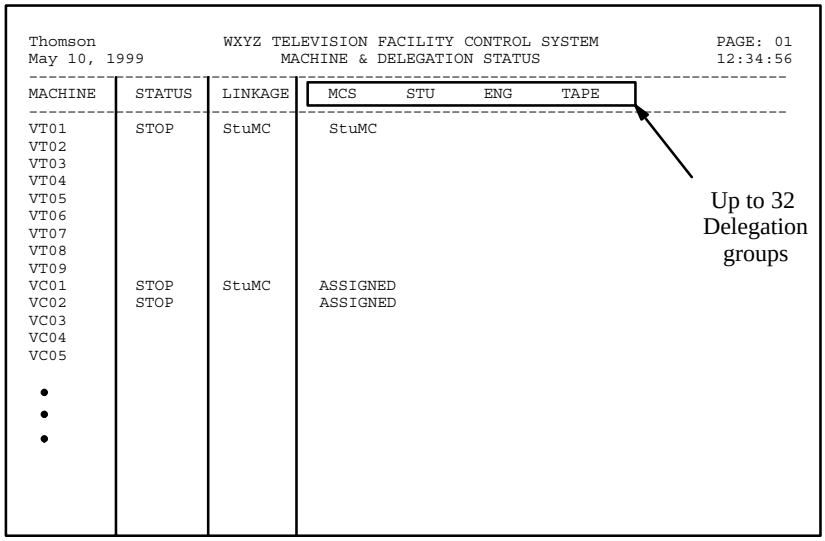


Figure 6–174. *Machine & delegation status page (example).*

A machine and delegation status page (Figure 6–174) can provide a list of all VTRs and other machines listed on the Machine Control Devices table (page 5–141). The UP and DOWN buttons (or arrow buttons on the CP 3020) will step through additional pages of machines. Hold the key down to auto–repeat.

Depending on the machine, TMC (Transport Motion Control) status is shown as follows:

OFF NOT REM EJECT STOP STOP–RDY PLAY VAR PLAY FAST F REWIND SHUTTLE + SHUTTLE –

Delegation and linkage status of each machine is shown as follows:

BLANK	The machine is not delegated or linked.
"ASSIGNED"	The machine has been delegated to this group but no link has been made.
"PANELNAME"	When the name of a specific control panel appears (such as "StuMC"), it means that (1) the machine has been delegated (using an MC 3020D) to the group indicated, and that (2) a *link* between the machine and the panel has been established using the distribution switcher.

The VGA can display as many as 32 delegation groups, compared to the 20 groups that can be identified by an MC 3020D Delegate Panel. Creation of a 21st delegation group, and delegation of a machine to that group using the VC 3020, would thus prohibit operation of the machine by a control panel in any of the first 20 groups.

CURSOR MODE – SELECTING A MACHINE FOR CONTROL

To enter cursor mode, press SELECT on the VM 3000 (or CURSOR MODE on the CP 3020). This will cause the name of the first machine to appear in reverse video. When in cursor mode, the UP and DOWN buttons (or arrow buttons) will move the cursor from one machine to another. A machine pointed to by the cursor is automatically selected as the machine to be controlled by the adjacent MC 3000 Machine Control Panel (i.e., the MC 3000 connected to the VM 3000 providing the VGA display).

Note that the MC 3000 can send control commands to any selected machine, even when the machine has not been delegated ("assigned") to any delegation group.

Important: As a supervisory system, the VGA / MC 3000 can send control commands to any machine, even to a machine linked to and being controlled by another panel. In this condition **both** panels will be able to send commands. However, the VGA can take exclusive control by using CHANGE MODE as described below.

Note: Since the VGA / MC 3000 cannot normally *link* itself to a machine, time code will not be shown in the MC 3000 window. Linkage and display of time code under these circumstances is discussed in a note on page 5–158.

Change Mode – Changing Delegation of a Machine

This function is available with the CP 3020 panel only.

While in Cursor Mode, the CHANGE MODE button can be used to "un–delegate" a machine. To do this, the cursor is moved to the row showing the desired machine, then, using the RIGHT and LEFT keys, to a delegation group column showing the word "Assigned" or the showing the name of the panel now linked to the machine. When CHANGE MODE is pressed, the delegation/link will be cut and the VG 3000/MC 3000 will have exclusive control. If CHANGE MODE is pressed again, the machine will again be delegated to the group shown at the top of the column; however, another associative switcher Take will have to occur to re–establish the *link*.

Note: Even after a machine is un–delegated by the VGA, it can still be re–delegated at any time with an MC 3020D panel.