

OPERATOR MENU

O.OPERATOR

This group of functions is provided for additional support and control for the system operator. It includes diagnostic routines, a terminal emulator for communicating directly with the serial (RS-232) devices on the system, and several "blind" mode options for running through the system with the physical output channels frozen at their current levels. Use of these functions requires an in-depth understanding of all of the systems involved, and should only be used when the stage is clear of all personnel and in a "safe" condition, and by operators who understand the operation and functions of the Show Control System.

Note: In all menus allowing selection of Analog or Digital channels, it is possible to select the display page in the status window using the Bank or Group selection mode, even if these options are not displayed on the menu.

It is possible to select up to 32 subchannels for a given logical digital channel. Triad decoder/driver cards are available in 16, 24, and 32 outputs per physical card, however it is possible to configure the TC-3161 for either the upper or lower 16 channels per logical card. Thus, two adjacent 16 channel cards may make up a 32 sub-channel logical output channel.

- B.lind** Enters a menu of blind mode options. When a channel (analog or digital) is set to "blind", the current status or value is locked out from changes from animation, events, or lighting cues. It is still possible to use the diagnostics options to change the value of a channel in blind mode, which is displayed with a black background in the status window. Several options are available to expand the use of channel blinding for large groups of functions.
- A.na** Requests the analog channel you wish to blind or unblind in the range of 1- 512. This is a toggle, and the status is shown as either a black (blinded) or color background field. Channels may be selected by entering the number, or using the cursor keys to locate the channel and verifying with <Enter>.
- D.ig** Prompts for the channel (or card) number [1-16] followed by a sub-channel [1-32] within the channel. The current status is flipped; if it was blind, it is enabled, and vice versa. Press ESC.ape to select another channel, and ESC.ape again to return to the B.lind menu. Once a channel number is entered, the name list will appear for the sub-channels assigned for the given channel.
- C.hnSet** Selects the current channel set as the group of analog and/or digital channels to put into blind status. The current blind status is "swapped" with the channel set, so that two sets may be toggled. (See Channel Set description below.)
- I.nvert** Flips the blind status of all current channels - those that were selected as blind are enabled and vice versa.
- U.nblind** Clears the blind status of all analog and digital channels. Use extreme caution when performing this operation in case there is a radical difference in the stage status at the time the channels were put into blind mode.
- O.ut** Global blind.
- B.ank** Not displayed on menu. Rotates to next successive bank of (eight) analog channels that are shown in the analog status display window. Pressing Shift-B rolls back to the previous bank, again by eight. Pressing CTRL-B homes the display, beginning at channel 1.
- G.roup** Not displayed on menu. Alternately selects between group 1 (1-256) and group 2 (257-512) for display in the digital status window. Note that it is possible to access any

digital channel within the system even if the display is currently showing a different group.

ESC.ape Return to previous menu

C.hnSet

A channel set may be defined to select analog or digital channels that will be used in other operations. At this time, the B.lind menu offers use of a defined channel set to enable or inhibit a group of control channels specified by the current channel set. Selected channels are displayed with a blue background; unselected channels are normally displayed in green. Other uses for channel sets involve programming and installation, and are not discussed here.

A.na Requests the analog channel you wish to select or deselect, in the range of 1- 512. This is a toggle, and the status is shown as either a blue (selected) or green (normal) background field. Channels may be selected by directly entering the number, or using the cursor keys to locate the channel and verifying with <Enter>.

D.ig Prompts for the channel number [1-16] followed by the sub-channel [1-32] within the card. The current status is flipped; if it was selected (blue), it is cleared (green), and vice-versa. Press ESC.ape to select another channel, or ESC.ape again to return to the Channel Set menu. Once a channel number is entered, the name list will appear for the sub-channels assigned for the given channel.

I.nvert Flips the Channel Set status of all current channels - those that were selected are cleared and vice versa.

U.nSet Clears the Channel Set status of all analog and digital channels.

L.oad Loads a channel set file. Before loading, an option is given to R.eplace the current channel set, or P.ile On (add to) the current channel set.

S.ave Saves the currently defined channel set to a disk file.

B.ank Not displayed in menu. Rotates to next successive bank of (eight) analog channels that are shown in the analog status display window. Pressing Shift-B rolls back to the previous bank, again by eight. Pressing CTRL-B homes the display, beginning at channel 1.

G.roup Not displayed in menu. Alternately selects between group 1 (1-256) and group 2 (257-512) for display in the digital status window. Note that it is possible to access any digital channel within the system even if the display is currently showing a different group.

ESC.ape Return to previous menu.

Note: The current blind status for analog and digital status is loaded and saved in the channel set file.

D.iagnostic

Enters a submenu that allows manual control of all digital and analog channels for test and adjustment.

A.nalog Requests the analog channel you wish to control [1- 512], followed by the value [0-255] for the selected channel. Press ESC.ape to select another channel, and ESC.ape again to return to the diagnostic menu. Numbers are entered in decimal, but hex may be used by preceding the number with a "\$".

D.igital Prompts for the channel (or card) number [1-16] followed by a sub-channel [1-32] within the card. The current status is flipped; if it was off, it is turned on, and vice versa. Pressing <return> will toggle the last channel on and off until a new sub-

channel is entered. Press ESC.ape to select another card, and ESC.ape again to return to the D.iagnostics menu. Once a channel number is entered, the name list will appear for the sub-channels assigned on that card, and channels may be selected using the cursor keys.

- M.ake** Transfers ALL of the current analog and digital values into a default preset table. Once these defaults are established, they will be restored whenever the R.eset key is pressed from the Main menu, or whenever the system is restarted. Analog channels that have been P.reset to 255 will NOT be updated from the reset/preset table during a reset.
- P.reset** Used prior to selecting A.nalog or D.igital diagnostics, updates the DEFAULT (preset) values as well as the current analog or digital channel value. In other words, any analog or digital setting selected in PRESET mode will become the new default value whenever the system is reset. If the S.ave Preset option is used, the default presets will be set whenever the system is rebooted. The P.reset flag is cleared each time after ESC.aping from the A.nalog or D.igital select mode.

NOTE: P.resetting an analog channel to 255 is a way to leave the value set to the CURRENT level when the system is R.eset.

- L.oad** Loads DEFAULT.DFL.
- S.ave** Saves the current default analog and digital settings, ALONG WITH THE CURRENT PATCH BAY ASSIGNMENTS, communications port settings, and other parameters, in a disk file which will be used to preset all channels whenever the system is started or R.eset from the main menu. This data is normally saved in file DEFAULT.DFL.
- s.etup** (SHIFT-S) enters a privileged menu for setting installation-specific parameters and options. Normally these settings must not be changed unless specifically directed by an authorized representative. COM3: and COM4: have initter routines as well as some polled support (albeit with NO interrupt provisions). Make sure they are DISABLED in DEFAULT.DFL so Synthesis doesn't reinitialize the comm port for the modem. All parameters are saved in a file named "DEFAULT.DFL" which is loaded when the system is booted.
- B.ank** Not displayed in menu. Rotates to next successive bank of (eight) analog channels that are shown in the analog status display window. Pressing Shift-B rolls back to the previous bank, again by eight. Pressing CTRL-B homes the display, beginning at channel 1. Analog channels not currently shown on the display may still be accessed using diagnostics.
- G.roup** Not displayed in menu. Alternately selects between group 1 (1-256) and group 2 (257-512) for display in the digital status window. Note that it is possible to access any digital channel within the system even if the display is currently showing a different group.
- ESC.ape** Return to previous menu.

NOTE: If you are using a type II console and the console becomes disconnected at any time, the C.onsole will automatically be changed to a different type. Use S.etup C.onsole to select it again if it does not appear to work.

- E.ase-In** Toggles the Ease In mode (an EZ will be displayed just to the left of the real time clock).
- K.alc** A simple calculator for converting frames (i.e. for laser video discs) to time and vice versa. The start time or frame and either the delta time (length), number of frames,

end time, or end frame number may be entered, and all other conversions will be made. This function is also available on the Operator menu.

O.utput

This is a "toggle" (on/off) that disables all digital and analog output transmissions to the I/O racks. When in Output Blind mode, a flashing "BL" will appear on the top status line. The screen will continue to reflect the current status of analog and digital channels. Serial output to any Comm port through the Events system is **not** disabled while in blind.

Caution: When restoring outputs, make certain that all animation and effects are in a home and safe position, and that the output is being restored in the same position. Otherwise, radical movements to the "stage" could cause damage or injury.

S.chedule

Used for systems that require automated, timed show operation. Allows entry of the days and times for automatic, timed presentations. Used to enter and edit the real-time show performance schedule.

- D.ate Displays current date. You need to go to DOS to change the date and time.
- T.ime:* Not implemented yet. Time is reserved for setting the time through Synthesis.
- W.day Shows the day of the week. The current day of the week is capitalized.
- E.dit Allows you to edit your real time schedule. The following keys apply:
 - Enter key moves from field to field
 - Space toggles between upper and lower case in the day schedule field
 - Left arrow and right arrow move one day in the day schedule field
- C.lear Clears the execution flags.
- U.pld* Not implemented yet. Reserved for uploading the schedule file to the BART or LDC.
- L.oad Loads a schedule file.
- S.ave Saves a schedule file.
- ESC.ape Return to previous menu.

T.erminal

Opens a window into a "dumb" terminal routine which allows communication with the serial ports (COM1: and COM2: if present on the computer). Keys pressed will be sent in ASCII out the current serial port (in full duplex), and received characters will be displayed in the terminal window on the CRT.

To exit the terminal program, hold the <alt> key and press "x".

To reconfigure the serial port, hold <alt> and press "p". A menu of options will appear as follows:

- C.onfig Configuration of the baud rate and word length
- P.ort Toggles between Comm port 1 and 2
- R.esume Returns to the terminal window
- Upld* Not implemented yet.
- Dnld* Not implemented yet.
- ESC.ape Returns to the O.perator menu

Configure offers these common comm port options:

- 1/200 baud
- 192/00 baud (press 2)

3/00 baud
 7/bit EP
 8/bit NP
 9/600 baud

U.pload

Allows uploading of animation cues and event data in either TekHex format, or Triad 6502 monitor format. All data is output on either the COM1: or COM2: serial port at the current baud rate. Note that only 64K of animation cues may be uploaded in one pass. On COM1:, the terminal window is opened and all characters are echoed back from the BART/LDC (in TC-Mode) to the screen. (This does not happen yet with COM2:.) At this time, I wait for each character to echo, so the throughput is cut in half. It works correctly even with 1 stop bit, so it should prove to be very reliable.

The target address for event subroutines is now automatically calculated (at the end of time based events plus 1). Hopefully this will eliminate a potential "gotcha" caused by trying to load too many subroutines and not changing the \$2600 to a lower value. To keep things clean, an events Z.ap is recommended to initialize RAM prior to uploading (especially to existing systems).

C.ues -> Allows the entry of an address to start writing cue information.

E.vnts -> Allows the entry of an address to start writing events information.

f.file (Shift-F) Now prompt for a file to upload. It takes an .INT file (from the CASM assembler) and translates it into TC format to upload programs into RAM for test and debugging or for emergency field patches. As it is using the same file handler as upload/download files, it is not possible to use "file" output as the destination (if you try, it will wipe out the .INT source file!!!). As described above, due to the echoing of characters, it does run a bit slow, but hopefully very reliably, as we are not currently using checksums or other error detection.

CAUTION: Unlike "G.o", the file upload option does not automatically issue a wakeup call, so be sure that the processor is in MARVIN. Standard TC format files may still be uploaded and downloaded using ^PgUp and ^PgDn in terminal mode as before.

Thus, the need for ROMBAKE is reduced (it doesn't appear to work on some newer/faster machines!). This is not on the menu yet and it is a work in progress (but it works!).

F.oramat Toggles the output format between TC (Triad proprietary format), TekHex, Intel, Motorola* and binary formats. *Not implemented yet.

R.om Allows selection of the ROM size. Valid choices are 2k, 4k, 8k, 16k, 32k, and 64k.

D.o Starts a cue upload process. Must confirm with an "Enter".

G.o Starts an event upload process. Must confirm with an "Enter". G.o now does an automatic "W.ake" to hopefully ensure that the LDC/BART is in MARVIN.

O.ut Sets the output port. Valid choices are COM1:, COM2:, Con:., and File:.

S.tall Prompts for a number which sets a time delay between characters based on CPU speed.

B.ias Prompts for a hex value to offset cue or event data within an EPROM or upload file.

T.erm Goes into terminal mode.

W.ake Talks directly to the processor you are connected to and rouses MARVIN.

ESC.ape Return to previous menu.

NOTES:

The TRIAD TC-500 SMPTE Reader/Controller normally operates at 1200 baud, 8 bit, no parity, and is always connected through the COM1: port on the PC.

The TC-750S SMPTE Reader operates at 9600 baud, 8 bit, no parity.

To reconfigure COM2:, enter the terminal program, press ALT-P and select P.ort to select port 2, reconfigure as required, and use the S.ave P.reset option on the O.perator menu to make the changes permanent. Note that the current analog and digital presets are also saved.

More extensive communications port parameters and other setup configuration options are allowed under D.iagnostics S.etup.

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