

Serial Commands for ATV's DPX / SPX line of Multiplexers; Software Version 3.1 and above

These are the available serial commands for use with IBM PC's, running software capable of sending ASCII commands, such as Hyper Terminal.

Note: Some of these commands will NOT be available in SPX models.

Note: See Tech Tip, "How to control an ATV multiplexer from a PC Computer" for instructions on connecting and configuring your PC.

Command	Description
Button Commands	
BD	Display Button
BF	Freeze Button - will cause the DPX16 to freeze current display video
BS	Sequence Button - will cause DPX16 to begin sequencing
BP	PIP Button
BQ	Quadrant Button
BZ	Zoom Button - will cause the DPX16 to enter Zoom mode.
BV	VCR Button - will cause the DPX16 to enter or exit VCR playback mode or "zoom out"
BB	VCR Bypass - will cause the DPX16 to enter or exit the VCR bypass mode
BC n	Camera Button - n is a number 1 through 16 corresponding to the camera number. For backward compatibility the command is accepted without a space.
MD	Move Down - in Zoom mode, will cause the DPX16 display to move down.
ML	Move Left - in Zoom mode; will cause the DPX16 display to move left.
MR	Move Right - in Zoom mode, will cause the DPX16 display to move right.
MU	Move Up - in Zoom mode, will cause the DPX16 display to move up.
CM	Call Monitor - will cause the DPX16 to toggle between "Normal" and "Call Monitor" modes. When in "Call Monitor" mode, button commands will control all Monitor functions.
Immediate Commands	
DM m,c,c,c,...,q	Set Display Mode - will cause the DPX16 to enter the selected display mode with selected cameras in the display inserts where m = display mode, c = camera number, q = quadrant. Display modes are as follows: 0 = Full screen, 1 = 2x2, 2 = 3x3, 3 = 4x4, 4 = PIP, 5 = Dual PIP, 6 = Split screen, 7 = Squish screen, 8 = enter Insert, 9 = Split Quad. Quadrants are: 0 = lower right, 1 = lower left, 2 = upper left, 3 = upper right
TIME hh:mm:ss	Set Time - will set the current time, time must be entered in 24 hour format, an invalid time will be ignored, hh = hours, mm = minutes, ss = seconds, these must all be 2 digits
DATE dd/mm/yy	Set Date - will set the current date, dd = day, mm = month, yy = year, these must all be 2 digits
ENTR	Enter Menu - will cause the multiplexer to enter the top level menu
EXIT	Exit Menu - will cause the multiplexer to exit out of the menus.
ACPT	Accept - the multiplexer will accept all configuration commands previously transmitted
GETCFG n	Get configuration - will transmit a series of configuration commands representing the current settings of the multiplexer. These commands can be stored in a file and transmitted back to the multiplexer to restore that configuration. N = 0 or no parameter, all configuration parameters without time and date; n = 1, all configuration parameters; n = 2, time and date only.
EC n	Echo characters - n = 0, echo OFF; n = 1, echo ON (The factory default is "ON").
HELP	Help command - will display a list of Button and Immediate commands. No help is provided for Menu commands.
VER	Version - will cause the DPX16 to output the current software version number.

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Menu Commands	Any letter represents a decimal value, 0xaa represents a 2 digit hex number, 0xaaaa represents a 4 digit hex number, and 0xaaaaaaaa represents an 8 digit hex number.
Time/Date Commands	
AMPM n	AM/PM display enable - n = 0, display 24 hour format; n = 1, display 12 hour format
DTME n	Date/time enable - 0 = Off; 1 = VCR On; 2 = Display On; 3 = VCR and Display On
DTML n	Date/time location - n = 0, upper left; n = 1, upper right; n = 2, lower right; n = 3, lower left
VCR Commands	
VSEL n	VCR Select- n < 250 : NTSC VCRs; n = 250+: PAL VCRs (see VCR Table for numbers)
VFMT n,m	n = VCR format - This selects the hourly mode for the VCR. The range of valid values for n is 0 through 7. m = VCR alarm format - This selects the hourly mode for the VCR when in alarm mode. The range of valid values for n is 0 through 7. Set n and m to 99 for Camera switch.
CDTH h,h,h,h,h,h,h,h	Custom delay table hours - This sets the hour's field in the custom delay table. The range of valid values for h is 1 through 9999.
CDTF f,f,f,f,f,f,f,f	Custom delay table field counts - This sets the field count field in the custom delay table. The range of valid values for f is 1 through 999.
VOUT n	VCR output on alarm - Sets VCR output mode, n = 0, normal multiplexing; n = 1, multiplex alarm cameras only.
VOPT 0xaa	VCR options - bit 0, record/playback field mode enable; bit 1: S-Video enable, bit 3: discriminator enable, bit 4: camera-switch pulse positive polarity enable. Bit = 0, disabled; bit = 1, enabled.
CFPP n	Camera-switch fields per pulse - n is the number of fields per pulse. The range of valid values for n is 1 through 99.
VPBO n	VCR playback option - selects the incoming tape format for playback: n = 0, Normal; n = 1, Robot; n = 2, Dedicated Micros;
Camera Commands	
LBL n	Camera label enable - 0: Off; 1: Monitor enabled; 2: VCR enabled; 3: Both enabled
CLBL n,"label"	Set Camera label - n = camera number 1-16, "label" is the label. Each label is a string surrounded by quotes, not longer than 13 characters
ACTM n	Activity multiplexing enable - n = 0 disables, n = 1 enables
MPRI n,m	Multiplexing priority - n = camera number 1-16; m = 0, low; m = 1, medium; m = 2, high; m = 3, alarm.
MOND 0xaaaa	Monitor disable - each bit of 0xaaaa represents the corresponding camera (bit 0 = camera 1). Bit=0, camera is recorded only; Bit=1, camera is displayed and recorded.
Motion Commands	
MTHR n,m	Motion thresholds - n = camera number 1-16; m = motion threshold 1 through 99.
MOTE n,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa,0xaaaa	Motion enables - used to enable/disable cells on the screen for motion detection, n = row 1-16, each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the cell in the row n. Bit = 0 disables motion detection in that cell, bit = 1 enables.
MTYP n,m	Motion type - defines the motion type for camera n: n = camera number 1-16: m = 0, Activity; m = 1, All Motion; m = 2, Horizontal; m = 3, Vertical; m = 4, Left to Right; m = 5, Right to Left; m = 6, Top to Bottom; m = 7, Bottom to Top.
MSIZ n,h,w	Motion size - sets the motion size for camera n: n = camera number 1-16; h = height 1-16; w = width 1-15.

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Sequence Commands	
MSEQ n	Monitor sequence dwell time - n = dwell time in seconds from 1 to 255.
SFUL 0xaaaa	Full screen sequence camera enables - each bit of 0xaaaa represents the corresponding camera (bit 0 = camera 1). Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
S2X2 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa	2x2 screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
S3X3 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa	3x3 screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
S4X4 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa	4x4 screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
SPIP 0xaaaa, 0xaaaa	PIP screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
SDPP 0xaaaa, 0xaaaa, 0xaaaa	Dual PIP screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
SSPL 0xaaaa, 0xaaaa	Split screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
SSQD 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa	Split Quad screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
SCTR 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa, 0xaaaa	Center Insert screen sequence camera enables - each bit of each 0xaaaa represents the corresponding camera (bit 0 = camera 1) for the insert. Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
CSEQ n	Call monitor sequence dwell time - n = dwell time in seconds from 1 to 255.
SCLL 0xaaaa	Call Monitor sequence camera enables - each bit of 0xaaaa represents the corresponding camera (bit 0 = camera 1). Bit=0, camera is disabled from the sequence; Bit=1, camera is in the sequence. 0xaaaa cannot be 0.
Alarm Commands	
AEXT 0xaaaa	External alarm enables - each bit of 0xaaaa represents the corresponding alarm (bit 0 = alarm 1). Bit=0, alarm disabled; Bit=1, alarm enabled.
AMOT 0xaaaa	Motion alarm enables - each bit of 0xaaaa represents the corresponding alarm (bit 0 = alarm 1). Bit=0, alarm disabled; Bit=1, alarm enabled.
AVLS 0xaaaa	Video loss alarm enables - each bit of 0xaaaa represents the corresponding alarm (bit 0 = alarm 1). Bit=0, alarm disabled; Bit=1, alarm enabled.
ASON hh:mm, hh:mm, hh:mm, hh:mm, hh:mm, hh:mm	Alarm schedule on time - The hh:mm (hour:minutes) is in 24-hour format for each day of the week starting with Sunday.
ASOF hh:mm, hh:mm, hh:mm, hh:mm, hh:mm, hh:mm	Alarm schedule off time - The hh:mm (hour:minutes) is in 24-hour format for each day of the week starting with Sunday.
ASCH 0xaaaa	Alarm schedule enable - each bit of 0xaaaa represents the corresponding alarm (bit 0 = alarm 1). Bit=0, alarm schedule disabled; Bit=1, alarm schedule enabled.
AHLD n	Alarm hold-time - n = alarm hold-time in seconds from 0 to 255.
ATIM n	Alarm timeout time (disable alarms after this timeout) - n = alarm timeout time in seconds from 0 to 255.

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ADWL n	Alarm dwell time - n = alarm dwell time in seconds from 1 to 255.
ATYP 0xaaaa, 0xbbbb, 0xcccc, 0xdddd	Alarm activation type - each bit of each parameter represents the corresponding alarm (bit 0 = alarm 1). Bit=0, alarm type disabled; Bit=1, alarm type enabled. 0xaaaa determines if the alarm is normally open, 0xbbbb determines if the alarm is normally closed, 0xcccc determines if the alarm is active high, and 0xdddd determines if the alarm is active low. Since each alarm must have one and only one type defined the following must be true: 0xaaaa + 0xbbbb + 0xcccc + 0xdddd must equal 0xffff, otherwise it is an invalid command.
AMCD n	Display Multi-camera Alarm or Alarm camera Set - n = 0, display alarm camera sets; n = 1, display multi-camera alarms
ASET n, 0xaaaa	Alarm camera set enables - n = camera numbers 1-16; each bit of 0xaaaa represents the corresponding camera (bit 0 = camera 1). Bit=0, camera is not in the set; Bit=1, camera is in the set
MSAE n	Master-alarm enable - determines the function of the Freeze/Master enable input pin, n = 0, the pin is freeze; n = 1, the pin is master enable.
MSAL n	Master alarm logic level - sets the logic level for the master enable input, n = 0, the input is active low; n = 1, the input is active high.
ADIS n	Displays alarm on main and/or call monitors - 0: do not display; 1: main monitor; 2: call monitor; 3: both monitors
ASER n	Serial alarm output enable - n = 0, output disabled; n = 1, output enabled.
Other Commands	
IRCD n	IR code selection - n = 0, IR Off; n = 1, ATV Code 1; n = 2, ATV Code 2;
SLCK 0xaa	Security lock enable - bit 1: button lock; bit 2: IR lock; bit 3: Serial Lock; Bit = 0, unlocked; bit = 1, locked. Bit 0 is not used.
MLCK n, mmmmmmmmm	Menu Lock and Set Password - n = 0 Menu unlocked; m = 1 Menu locked. mmmmmmmmm is the password, it can be a string of 1 to 9 digits where each digit is a number from 0 to 9. Password must be entered when locking and unlocking the menu.
TXTC n	Text Color - For color units n = 0, White; n = 1, yellow; n = 2, cyan; n = 3, green. For black and white units n = 0, White; n = 1, light gray; n = 2, dark gray; n = 3, N/A.
DLSV n	Daylight Savings Time Enable Enter DST / Exit DST (2am for all) n = 0: Off n = 1: North American 1 st Sun in April / Last Sun in Oct n = 2: Europe Last Sun in Mar / Last Sun in Oct n = 3: Australia Last Sun in Oct. / Last Sun in Mar n = 4: Tasmania 1 st Sun in Oct / Last Sun in Mar n = 5: Brazil 1 st Sun in Oct / Last Sun in Feb n = 6: Fiji 1 st Sun in Nov / Last Sun in Feb n = 7: Mongolia Last Sun in Mar / Last Sun in Sept
TXTB n	Text Background Enable - n = 0, text background off; n = 1, text background on.
CFLT n	Chroma filter enable - n = 0, chroma filter off; n = 1, chroma filter on.
LANG n	Select language - n = 0, English, n = 1, Spanish; n = 2, French; n = 3, German; n = 99, Alternate language.