

Diagram of the Series II ASP-FAMILY AUDIO MATRIX Front Panel (common to all units)

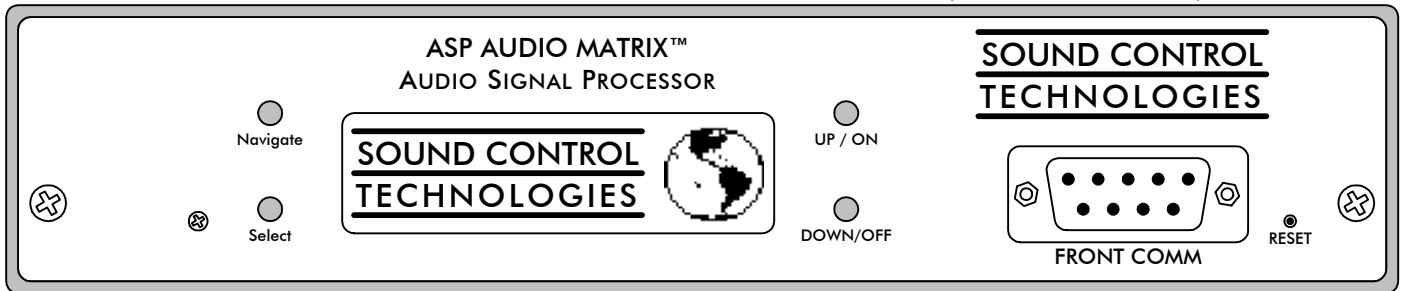


Diagram of the Series II ASP-8x8 AUDIO MATRIX Rear Panel

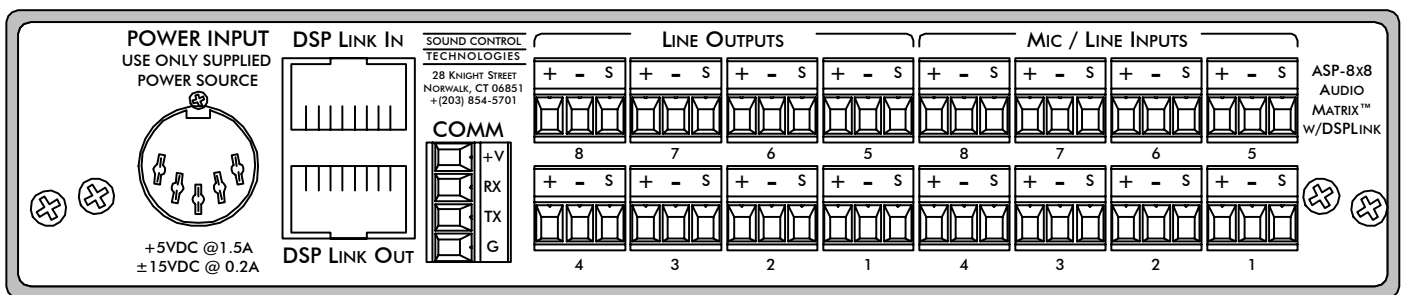


Diagram of the Series II ASP-PA4 AUDIO MATRIX Rear Panel

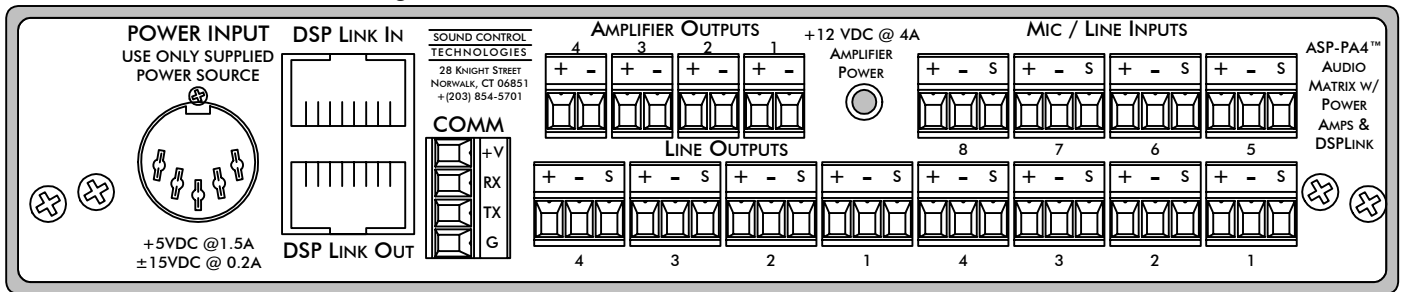
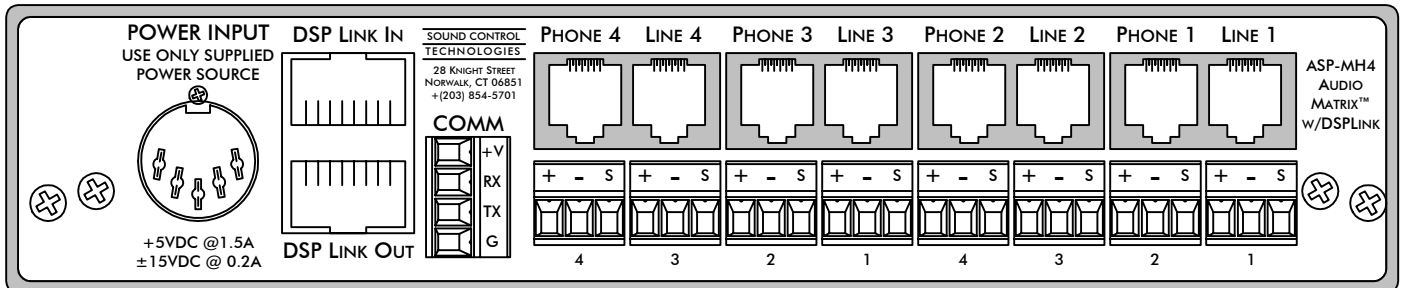


Diagram of the Series II ASP-MH4 AUDIO MATRIX Rear Panel



The real power of the *Series II ASP-8x8 AUDIO MATRIX'S™* summing matrix topology is its ability to distribute inputs to multiple outputs at independent levels while simultaneously summing multiple inputs to various outputs. This unique feature is consistent for both cross point gain and signal delay.

|                    |             |             |             |             |             |             |             |             |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Input 8            |             |             |             |             |             |             |             |             |
| Input 7            |             |             |             |             |             |             |             |             |
| Input 6            |             |             |             |             |             |             |             |             |
| Input 5            |             |             |             |             |             |             |             |             |
| Input 4            |             |             |             |             |             |             |             |             |
| Input 3            |             |             |             |             |             |             |             |             |
| Input 2            |             |             |             |             |             |             |             |             |
| Input 1            |             |             |             |             |             |             |             |             |
| CrossPoint<br>Gain | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t |
|                    | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 8           |

Gain setting matrix

|                     |             |             |             |             |             |             |             |             |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Input 8             |             |             |             |             |             |             |             |             |
| Input 7             |             |             |             |             |             |             |             |             |
| Input 6             |             |             |             |             |             |             |             |             |
| Input 5             |             |             |             |             |             |             |             |             |
| Input 4             |             |             |             |             |             |             |             |             |
| Input 3             |             |             |             |             |             |             |             |             |
| Input 2             |             |             |             |             |             |             |             |             |
| Input 1             |             |             |             |             |             |             |             |             |
| CrossPoint<br>Delay | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t | O<br>u<br>t |
|                     | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 8           |

Delay setting matrix

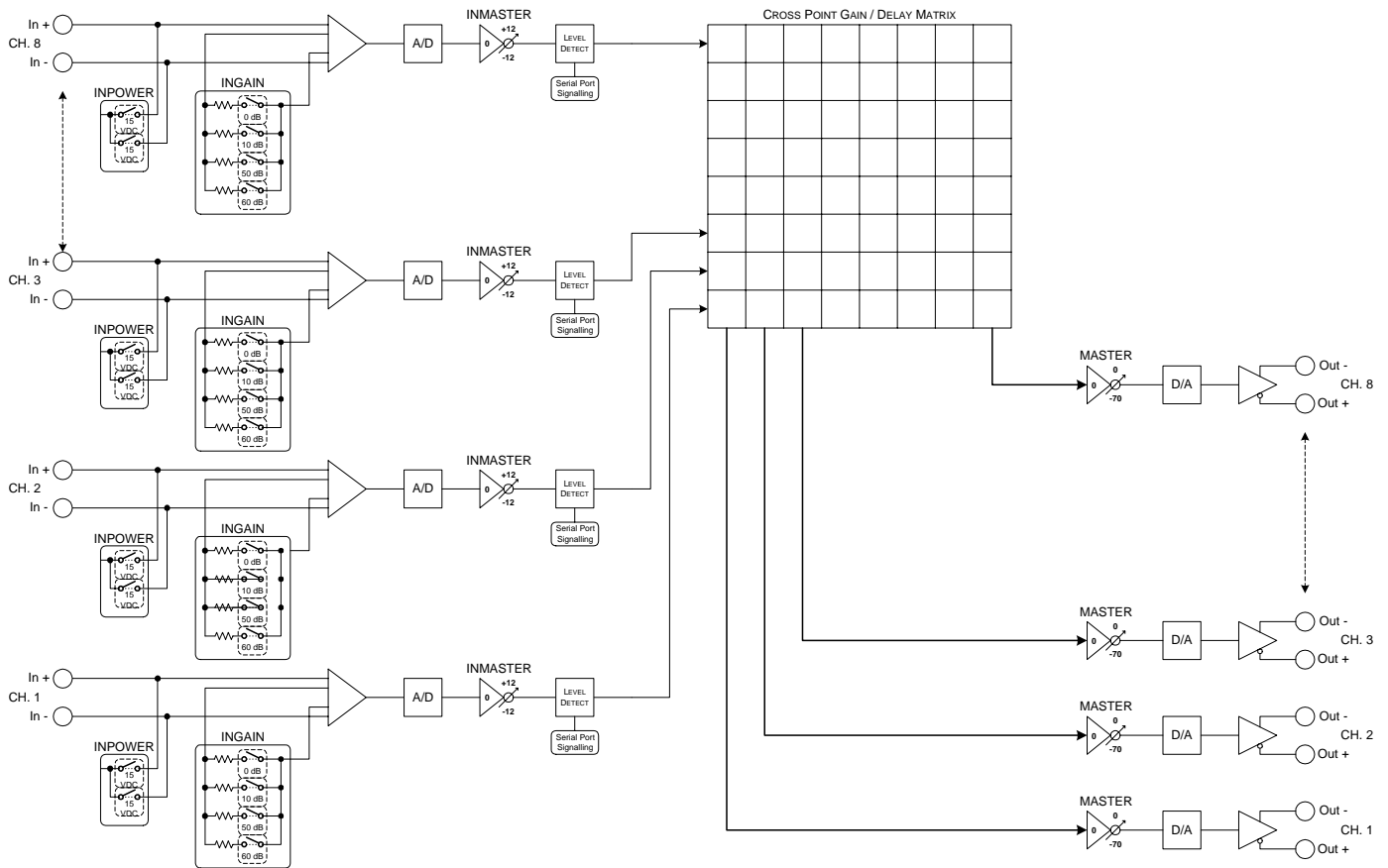
The *Series II ASP-8x8 AUDIO MATRIX™* DSP Audio Signal Processor provides up to eight analog inputs and eight analog outputs to and from a central Digital Signal Processing matrix. Up to four units can be cascaded on SCT's DSPLink™ to build a true 32 x 32 matrix. Input signals can vary between many types of Microphone, Line and telephone Level devices on a per channel basis. Phantom Power is software selectable on a per channel basis. Output signals can vary between Line, telephone and Speaker Level devices on a per channel basis.

The *Series II ASP-8x8 AUDIO MATRIX™* allows flexible and fine adjustments on audio signal gain structure and signal delay within the audio system. In the *Series II ASP-8x8 AUDIO MATRIX™* environment any audio input can be routed to any audio output.

Input signals can be routed, summed, distributed and delayed all within the -8x8 Matrix environment. Unique to the *Series II ASP-8x8 AUDIO MATRIX™* architecture, multiple inputs can be summed to various outputs at unity gain or each individual input can have a unique gain structure to any (individual or multiple) output. Additionally, any input can have a unique delay setting to any (individual or multiple) output. Each input signal can have individually adjustable signal delay of over 500 ms. to any output.

DSP settings are stored in non-volatile memory, and can be configured in up to eight preset environments or individual crosspoints may be addressed. Set-up of pre-sets, changing individual settings or recalling pre-sets is accomplished via the RS-232 port. Settings may be changed at any time via the RS-232 port and a PC or remote control system.

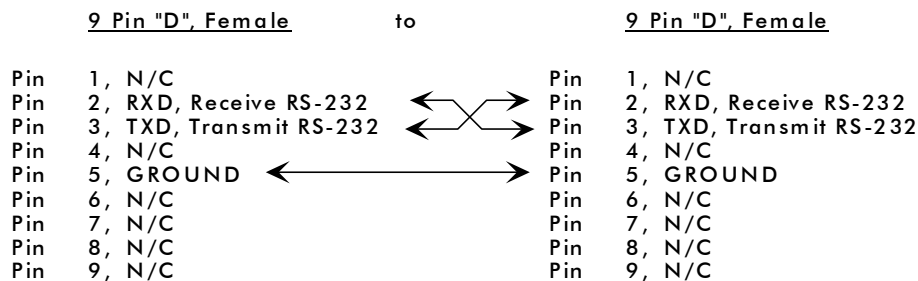
The diagram below is a simplified signal flow schematic of a single Series II ASP-8x8 AUDIO MATRIX™ with eight inputs and eight outputs. This diagram would expand inputs and outputs **simultaneously** by eight if multiple Series II ASP-8x8 AUDIO MATRIXES™ are linked using the high speed DSPLink™ interface (two units provide a 16 x 16 matrix).




The following is a complete overview of remote control interfacing to the Series II ASP-8x8 AUDIO MATRIX™. All communications are via wired serial RS-232 either to the front or rear communications port.

All functions of the unit are available for control via the serial ports and are programmable with AVTPANEL™, a 32 bit user interface program for control and demonstration of Series II AVT-24™, Series II AVT-44™, VF1-8x8 FEATURECARD™ and Series II ASP-8x8 AUDIO MATRIX™. AVTPanel™ requires Microsoft Corp.'s Windows95™, Windows98™, Windows ME™, Windows 2000™ or Windows XP™ operating system.

It is important to have the proper "null modem" cable interface between the Series II ASP-8X8 AUDIO MATRIX™ and computer. This is wired with "Transmit Data" (TXD) on the computer connected to "Receive Data" (RXD) on the Series II ASP-8X8 AUDIO MATRIX™ and "Receive Data" (RXD) on the computer with "Transmit Data" (TXD) on the Series II ASP-8X8 AUDIO MATRIX™. Typically, a "female" 9-Pin D connector will be on both ends of the cable connecting the computer to the Series II ASP-8X8 AUDIO MATRIX™.





From any terminal emulation program typing **H**  will display a full listing of available commands for that unit's software release. All serial commands issued to the Series II ASP-8X8 AUDIO MATRIX™ require a carriage return.

### Serial Port Set-up:

|               |           |                      |   |                         |
|---------------|-----------|----------------------|---|-------------------------|
| Com 1 (Front) | Baud Rate | (9.6K, 19.2K, 38.4K) | n | No parity               |
| Com 2 (Rear)  | Baud Rate | (9.6K, 19.2K)        | 1 | Stop Bit                |
|               | 8         | Data Bits            | N | No hardware handshaking |

All commands received by the ASP followed by a carriage return () will issue a line feed followed by the action response with a closing "@".

### COMMAND IDENTIFIER:

|   |   |
|---|---|
| <b>1. HELP=</b>  | <u>Requests all available commands (shortcut H )</u> |
| Commands:   |   |
| DEVICE=   | Requests device type  |
| VERSION=  | Requests firmware version   |
| DSPVERSION=   | Requests DSP version  |
| STATUS=   | Detailed status report  |
| DSPRESET=   | Commands a DSP reset  |
| REBOOT=   | Commands a system time-out & reboot   |
| DELAY=  | Requests or sets channel crosspoint delay   |
| GAIN=   | Requests or sets channel crosspoint gain  |
| MASTER=   | Requests or sets channel master gain  |
| RESET=  | Commands a system reset   |
| SAVE=   | Saves settings to a preset (1 - 8)  |
| RESTORE=  | Restores presets from memory (1 - 8)  |
| REPORT=   |   |
| DEFAULT=  | Requests or sets default preset   |
| INGAIN=   | Requests or sets channel input gain   |
| INPOWER=  | Requests or sets channel Phantom Power  |
| TEST=   | Requests or sets audio test signals   |
| UNIT=   | Requests or sets unit ID number   |
| INMUTE=   | Requests or sets input channel mute   |
| STATUS2=  | Consolidated status report  |
| VU=   | Requests ALL input levels   |
| COM1=   | Requests or sets Baud rate  |
| COM2=   | Requests or sets Baud rate  |
| FREEZE=   | Lock/Unlock active matrix   |
| S2=   | Shorthand for ALL system levels   |





MASTER=m,-

Decrements the audio level for this MASTER output

### PRESET SETTINGS:

- 10. SAVE=x
- 11. RESTORE= x
- 12. DEFAULT= x

### (8 available)

(x= 1 - 8, \*); Saves Preset Set-up, "\*" saves to all pages  
(x= 1 - 8); Recalls and loads Preset 1  
(x= 1 - 8); Set the default "Power On" default setting.

### UNIT SETTING:

- 13. UNIT=x

### (5 available)

x= (0,1 - 4); "0" is a stand-alone unit  
"1" is the Master of multiple units, up to 4 units total

- 14. TERM=1/0

Units are, by default, Auto-terminated

- 15. RESET=1

Clears current working environment (Preset 0)

- 16. RESET=\*

Clears Preset 0, sets ALL settings to Factory Default

- 17. REBOOT=1

Equivalent to a power cycle

- 18. @

All successfully received commands are followed by "@".  
Programmers should wait for an acknowledging "@"  
before sending the next command.

- 19. ?

An unrecognized command will generate a "?" response

### UNIT BAUD Rate:

- 20. COM1=b
- COM2=b

### (3 available)

Front: (b=5,6,7); 5 = 9600, 6 = 19,200, 7 = 38,400  
Rear: (b=5,6); 5 = 9600, 6 = 19,200

### UNSOLICITED MESSAGES TRANSMITTED BY THE ASP-8X8 AUDIO MATRIX™ SERIAL PORT:

- 21. !GOOD=n
- 22. !FAIL=n
- 23. !LD=
- 24. !MX=
- 25. !RING=i
- 26. !2WIRE=i,0/1

"n"= Unit ID communicating on the DSPLink™  
"n"= Unit ID no longer communicating on the DSPLink™  
See Level Detection section  
See Level Detection and Auto-Mix Section  
Ring notification for i=Input number  
Telephone Line Input On or Off hook

### AUDIO INPUT & OUTPUT LEVEL MEASUREMENT:

- 27. VU=
- VU=v,v,v,v,v,v,v,v

Requests the level, Log weighted, of all inputs.  
"v"= Log value of input signal measured after input gain  
setting, "v"= (0 - 70dB).

VU=A

Requests all VU Inputs & Outputs in compressed format

VU=I

Requests all VU inputs

VU=O

Requests all VU outputs

### Notes on the VU-meters:

VU= Lists all input VU meters  
Response: VU=0,0,0,0,0,0,0,0

VU=I Lists all input VU meters  
Response: VU=I:0,0,0,0,0,0,0,0

VU=O Lists all output VU meters  
Response: VU=O:0,0,0,0,0,0,0,0

VU=A Lists all input and output VU's, using single-character indicators.  
Response: VU=0!(0A-BEKA45\*+^\  
Note: all inputs listed first, then all outputs  
input VU's are: 0!(0A-BE

output VU's are: KA45\*+^\

Note: dB-to-Character mapping (0 dB to 63dB in 1dB steps):

|               |     |             |             |
|---------------|-----|-------------|-------------|
| (n=low digit) |     |             |             |
| dB            |     | 0123456789  |             |
| +             | --- | -----       | Examples:   |
| 0n            |     | 0123456789  |             |
| 1n            |     | ABCDEFGHIJ  | "J" = 19 dB |
| 2n            |     | KLMNOPQRST  | "P" = 25 dB |
| 3n            |     | UVWXYZ!"#\$ |             |
| 4n            |     | %&'()*+,-.  |             |
| 5n            |     | /:<=>[\]^   |             |
| 6n            |     | _{ }        | "}" = 63 dB |

### GETTING STARTED:

|     |            |  |
|-----|------------|--|
| 28. | HELP=      | Displays all commands for a current firmware version   |
| 29. | VERSION=   | Displays current firmware version  |
| 30. | CONFIG=    | Displays hardware port configurations  |
| 31. | FREEZE=0/1 | Sets RS-232 to buffer data until FREEZE=0 is received.<br>This utility speeds up transfer of matrix reconfiguration. |

### PORT LABELS:

|     |                    |  |
|-----|--------------------|--|
| 32. | INPORTNAME=i,name  | Sets a port name for a particular Input  |
| 33. | OUTPORTNAME=o,name | Sets a port name for a particular Output |

In both cases "i,-" clears the label.

### INPUT "TRIM" CONTROL:

|     |                    |  |
|-----|--------------------|--|
| 34. | INMASTER=i         | Report setting for input i (-12 to +12, 1.5dB steps) |
|     | INMASTER=i,g       | Set input i to gain g (-12 to +12, 1.5dB steps)      |
|     | INMASTER=i,+       | Increment input trim gain                            |
|     | INMASTER=i,-       | Decrement input trim gain                            |
|     | INMASTER=i,M       | Mute input i   |
|     | NO--> INMASTER=i,U | Unmute input i (set to 0dB) NO NO NO                 |

|    |       |
|----|-------|
| g: | +12.0 |
|    | +10.5 |
|    | + 9.0 |
|    | + 7.5 |
|    | + 6.0 |
|    | + 4.5 |
|    | + 3.0 |
|    | + 1.5 |
|    | 0.0   |
|    | - 1.5 |
|    | - 3.0 |
|    | - 4.5 |
|    | - 6.0 |
|    | - 7.5 |
|    | - 9.0 |
|    | -10.5 |
|    | -12.0 |

### INPUT "MUTE" CONTROL:

|     |            |                        |
|-----|------------|------------------------|
| 35. | INMUTE=i,M | Mutes input channel    |
|     | INMUTE=i,U | Restores input channel |

### ASP-Telephone controls:

36. 2WIRE=i  
2WIRE=i,1  
2WIRE=i,0  
Report hookswitch setting for port i  
Go off-hook on port i  
Go on-hook on port i
37. DTMF=o:dddddd  
Dial digits d (string of digits) on port o
- Note: Possible DTMF digits are:  
1 2 3 4 5 6 7 8 9 \* 0 # (standard tones)  
A B C D (extra 4th column tones)  
, (comma = 1-second pause)
38. DTMFMUTE=i,1/0  
Allows Received DTMF tone to be muted from Incoming audio.  
Will insert a mute for the duration of the DTMF tone.
39. AGC=i,  
Not yet fully implemented, will provide AGC on  
incoming audio from telephone network

### INPUT "TEST" SIGNALS:

40. TEST=(0/1/2/3/4)  
TEST=(0/1/2/3/4),i  
Test signal which replaces Input Channel 1, default setting  
Test signal which replaces Input Channel i
- TEST=0, Normal Audio Path  
TEST=1, Impulse Generator  
TEST=2, Pink Noise Generator  
TEST=3, 1 kHz Tone Generator  
TEST=4, Variable Tone Generator
- TESTGAIN=x  
x= (0 - 20) 0= Unity & 1 dB steps of cut
- TESTFREQ=  
TESTFREQ=+  
TESTFREQ=-  
Frequency in Hz, 100 - 10,000 Hz  
Increment test frequency by step-size  
Decrement test frequency by step-size
- TESTSTEP=  
TESTSTEP=s  
Report step size for TESTFREQ  
Sets step size for TESTFREQ, 1 - 1000 Hz range

### "ALL" MODE COMMANDS:

41. ALLINPOWER=ppp.p.p  
ALLINPOWER=:p  
*can be used to request or set settings*  
set power to 1 (on) or 0 (off)  
Note: no commas, but periods can be placeholders.  
set all power as specified
42. ALLGAIN=i  
ALLGAIN=i,  
ALLGAIN=i,,,g,g,,,  
ALLGAIN=i,g,g,g,g,g,g,g  
ALLGAIN=i,+,-,g,U,+,M,+  
report list  
report list  
Set sparse array  
Set full array  
Inc/Dec specified crosspoints (can mix gain, mute/unmute)
- ALLGAIN=i:g  
ALLGAIN=i:+  
ALLGAIN=i:-  
ALLGAIN=i:M  
Set all gains the same  
Increment all gains for this input  
Decrement all gains for this input  
Mute all gains for this input
43. ALLDELAY=i  
ALLDELAY=i,  
ALLDELAY=i,,,d,d,  
ALLDELAY=i,d,d,d,d,d,d,d  
ALLDELAY=i,+,-,d,+,d,+,-,-  
report list  
report list  
Set sparse array  
Set full array  
Inc/Dec specified delays (can combine with 'd' delay values)

- |     |  |  |
|-----|--|--|
|     | <pre>ALLDELAY=i:d ALLDELAY=i:+ ALLDELAY=i:-</pre>  | <pre>Set all delays for this input to value d Increment all the delays for this input Decrement all the delays for this input</pre>  |
| 44. | <pre>ALLMASTER= ALLMASTER=g,M,g,g,M,,g ALLMASTER=-,+,,-,+  ALLMASTER=:g ALLMASTER=:+ ALLMASTER::- ALLMASTER=:M ALLMASTER=:U</pre>  | <pre>Display list Set masters 1..n to gain value "g" or muted "M" Inc/Dec specified gains (You can mix g, M, + and -)  Set all masters the same Increment all masters Decrement all masters Mute all masters (current gain is saved) Unmute all masters (previous gain is restored)</pre>                                  |
| 45. | <pre>ALLINMASTER= ALLINMASTER=g,,g,g,,,g ALLINMASTER=g,g,g,g,g,g,g,g ALLINMASTER=M,,M... ALLINMASTER=-,+,-,-,+  NO--&gt; ALLINMASTER=,,U,  ALLINMASTER=:g ALLINMASTER=:+ ALLINMASTER::- ALLINMASTER=:M</pre> | <pre>report list Set sparse array (-12 to +12, 1.5dB steps) Set full array (-12 to +12, 1.5dB steps) Mute specified trims Inc/Dec specified trims. Also can use with g and M commands.  Unmute input *** NO NO NO **  Set all gains the same Increment all input trims Decrement all input trims Mute all inputs now</pre> |
| 46. | <pre>ALLINGAIN= ALLINGAIN=L0,L1,M0,M1,etc. ALLINGAIN=:g</pre>  | <pre>report list Set one of 4 levels for each input Set all to the same gain value</pre>   |
|     | <p>Note:g =</p>  | <pre>L0 = ( 0 dB) L1 = (+10 dB) H0 = (+50 dB) H1 = (+60 dB)</pre>  |
| 47. | <pre>ALLINMUTE=MMU..U.U ALLINMUTE=:M ALLINMUTE=:U  ALLINMUTE=M.UMMUUM</pre>  | <pre>Set specified mute controls (also 1=mute, and 0=unmute) Note: no commas, but periods can be placeholders.  Mute all inputs Unmute all inputs  Mutes, Un-Mutes or (.) no change to INMUTE 2</pre>  |
| 48. | <p><b>All Cross Point&gt;Output gain controls:</b></p> <pre>ALLXOUT=o ALLXOUT=o, ALLXOUT=o,,,g,g,,, ALLXOUT=o,g,g,g,g,g,g,g,g ALLXOUT=o,+,-,g,M,+,M,+  ALLXOUT=o:g ALLXOUT=o:M</pre>                         | <pre>report list report list Set sparse array Set full array Inc/Dec specified crosspoints (can mix with gain and mute)  Set all gains the same Mute all gains for this output</pre>   |
| 49. | <pre>ALLINPORTNAME=n,n,n,n,n,n,n,n</pre>   | <pre>Sets all INPORT names</pre>   |
| 50. | <pre>ALLOUTPORTNAME=n,n,n,n,n,n,n,n</pre>  | <pre>Sets all OUTPORT names</pre>  |

In both cases "--" clears the label.

**"GRP" COMMANDS:**

- 51. INGRP=g:i,i,i  
INGRP=g:  
INGRP=g:-  
INGRP=g,M  
INGRP=g,U  
INGRP=g,+  
INGRP=g,-  
INGRP=g,0
  
- 52. OUTGRP=g:i,i,I  
OUTGRP=g:  
OUTGRP=g:-  
OUTGRP=g,M  
OUTGRP=g,U  
OUTGRP=g,+  
OUTGRP=g,-  
OUTGRP=g,0

**Grouping of inputs (INGAIN) or outputs (MASTER)**

- "g" = Group (1 - 24), " i " = Inputs to be grouped (1 - 8)  
Returns Inputs within this INGRP  
Clears this INGRP  
Mutes the audio for this INGRP  
Un-Mutes the audio for this INGRP  
Increments the audio level for this INGRP  
Decrements the audio level for this INGRP  
Clears the audio level offset for this INGRP
  
- "g" = Group (1 - 24), " i " = Outputs to be grouped (1 - 8)  
Returns Outputs within this OUTGRP  
Clears this OUTGRP  
Mutes the audio for this OUTGRP  
Un-Mutes the audio for this OUTGRP  
Increments the audio level for this OUTGRP  
Decrements the audio level for this OUTGRP  
Clears the audio level offset for this OUTGRP

**LEVEL DETECTORS & AUTO-MIX:**

- 53. LMMODE=g:m  
  
0 = Off  
1 = LD only (no mix) mode  
2 = LD only (no mix) mode  
3 = MIX only (no LD) mode  
4 = MIX only (no LD) mode  
5 = Both LD & mix mode  
6 = Both LD & mix mode

**Grouping of inputs (INGAIN) or outputs (MASTER)**

- Command string for level detector & mix mode  
g = group (1 - 16), m = mode (0 - 6 below)  
  
= N-above(Avg+Thr)  
LD reporting format: !LD=g:m,s  
= N-above(Thr)  
LD reporting format: !LD=g:m,s  
= N-above(Avg+Thr)  
MX reporting format: !MX=m,s  
= N-above(Thr)  
MX reporting format: !MX=m,s  
= N-above(Avg+Thr)  
LD+MX reporting format: !LD=g:m,s and/or !MX=m,s  
= N-above(Thr)  
LD+MX reporting format: !LD=g:m,s and/or !MX=m,s

Note: 's' = status, 0 = became inactive, 1 = became active

- 54. LMGRP=g:i,i,i,i,i...                      g = group, i = list of inputs  
Operation notes:  
1. An input can only be used once for (mx)mode or (ld+mx)mode purposes.  
2. An input can be used any number of times for (ld)mode purposes.  
3. Illegal input use is automatically checked (and fixed) when selecting (mx) or (ld+mx) modes.

**Level-detect (camera positioning) related commands:**

- 55. LDTHR=g:t,d                      t = level-detect minimum threshold in "vu" units  
   min=1 (1dB), max=63 (63dB)  
   d = level-detect delta above avg in VU units (avg-mode only)  
   min=0 (1dB), max=63 (63dB)
  
- 56. LDNOM=g:t                      n = number of mics allowed to be considered as "active"  
   min=0 (all mics in group) max=32
  
- 57. LDPRIO=g:i,p                      i = input number, p = priority: 0(highest)..15(lowest)
  
- 58. LDTIME=g:h                      h = hold time in 100mSec units (1 = 100mSec)  
   min=1 (100msec) max=20 (2Sec)

\*\*\* Note: Each input can have different priority settings for each group that it's part of.  
For example, if input-1 is part of groups 3 and 5, then input-1 could have priority-level 3

in group 3 and level 12 in group 5.

### **Auto-mix (mic-gating) related commands:**

59. MXTHR=g:t,d      t = automix threshold in "vu" units  
                         min=0 (0dB), max=63 (63dB)  
                         d = level-detect delta above avg in VU units (avg-mode only)  
                         min=0 (1dB), max=63 (63dB)
60. MXNOM=g:n      n = number of open mics allowed  
                         min=0 (all mics in group), max=32
61. MXPRIO=g:i,p      i = input number, p = priority: 0(highest)..15(lowest)
62. MXLOW=i,v      i = input # (1..32)  
                         v = low gain value to use when input not enabled  
                         min=0 (0dB), max=70 (-70dB)
63. MXTIME=g:h      h = hold time in 100mSec units (1 = 100mSec)  
                         min=1 (100msec), max=20 (2Sec)
64. MXREPORT=e      e = enable MX reporting if (1), disable if (0) (used for (mx)mode only)
65. MXHOLD=g:h      h = "hold last mic open" mode, 1 = on, 0 = off

### **OUTPUT EQUALIZER CONTROLS:**

66. EQOUT=o      o=output, request the on/off status of an output-equalizer  
                         such as "EQOUT=1,N" or "EQOUT=1,Y"
- EQOUT=o,Y      = turn on Eq  
EQOUT=o,N      = turn off Eq (bypass - but settings are still saved)
- EQOUT=o,b      b=Band, request filter band info of Gain, Freq and filter-Q
- EQOUT=o,b,g,f,q      For an Output, set a band Gain, Freq and filter-Q

#### **Notes:**

output = port number 1..32  
band = filter band 1..5  
g = gain in +/- dB, float values, range is -12 to +6, in 1 dB steps  
f = filter center frequency, in Hz  
q = filter Q factor 0.05 to 10.00

### **GLOBE ROTATION:**

67. W=0      Stop world spinning.  
W=1..19      Set world spinning (forward), 1=fast, 19=slow
- W=R      Set world spinning in reverse direction (doesn't change speed)  
W=R1..R19      Set reverse direction AND set the speed
68. BELL=0/1      Turns On/Off ASCII Bell for Incoming Ringing Telephone signal
69. TIMEOUT=t      Display timeout in seconds, 1 - 30 seconds

### **DISPLAY NETWORK INFORMATION (Special diagnostic commands):**

70. W=112      Turn off X:31 display on LCD  
W=113      Turn on X:31 display on LCD  
W=114      Reset the X:31 counter, but doesn't change the on/off state.

### SHORTHAND COMMAND METHOD:

For increased serial port response time, use the following abbreviated commands by utilizing a "#" prefix character and a 2-digit hex number. Please note that these commands include the "=" . Note that the response format of these shorthand commands will still be in the longhand format. The shorthand commands "#00" through "#63" are reserved - DO NOT USE.

For example:

"ALLINMASTER=3,0,0,6,6,3,9,9"

can also be sent in shorthand notation as:

"#903,0,0,6,6,3,9,9"

In either example, the response from the ASP-8x8 (if ECHO=1) would be:

"ALLINMASTER=3,0,0,6,6,3,9,9"

| Shorthand | Standard notation       |       |                                  |
|-----------|-------------------------|-------|----------------------------------|
| -----     | -----                   | "#8F" | "INMASTER="                      |
| "#64"     | "HELP="                 | "#90" | "ALLINMASTER="                   |
| "#65"     | "DEVICE="               | "#91" | "CUSTOMER="                      |
| "#66"     | "VERSION="              | "#92" | "SERNUMBER="                     |
| "#67"     | "DSPVERSION="           | "#93" | "CONFIG="                        |
| "#68"     | "STATUS="               | "#94" | "AA="                            |
| "#69"     | <reserved - do not use> | "#95" | "ALLAA="                         |
| "#6A"     | "REBOOT="               | "#96" | <reserved - do not use>          |
| "#6B"     | "DELAY="                | "#97" | "CUSTLOGO="                      |
| "#6C"     | "GAIN="                 | "#98" | "INPORTNAME="                    |
| "#6D"     | "MASTER="               | "#99" | "OUTPORTNAME="                   |
| "#6E"     | "MXHOLD="               | "#9A" | "INGRPNNAME="                    |
| "#6F"     | "RESET="                | "#9B" | "OUTGRPNNAME="                   |
| "#70"     | "SAVE="                 | "#9C" | "INGRP="                         |
| "#71"     | "RESTORE="              | "#9D" | "OUTGRP="                        |
| "#72"     | "LDTIME="               | "#9E" | "INGRPALL="                      |
| "#73"     | "REPORT="               | "#9F" | "OUTGRPALL="                     |
| "#74"     | "DEFAULT="              | "#A0" | "TERM="                          |
| "#75"     | "INGAIN="               | "#A1" | "LDNOM="                         |
| "#76"     | "INPOWER="              | "#A2" | "MXTHR="                         |
| "#77"     | "TEST="                 | "#A3" | "MXNOM="                         |
| "#78"     | "UNIT="                 | "#A4" | "MXLOW="                         |
| "#79"     | "INMUTE="               | "#A5" | "MXTIME="                        |
| "#7A"     | "STATUS2="              | "#A6" | "MXREPORT="                      |
| "#7B"     | "LMODE="                | "#A7" | "2WIRE="                         |
| "#7C"     | "LMGRP="                | "#A8" | "TESTFREQ="                      |
| "#7D"     | "LDPRIO="               | "#A9" | "TESTSTEP="                      |
| "#7E"     | "LDTHR="                | "#AA" | "TESTGAIN="                      |
| "#7F"     | "VU="                   | "#AB" | "DTMF="                          |
| "#80"     | "COM1="                 | "#AC" | "LOCK="                          |
| "#81"     | "COM2="                 | "#AD" | "AUTODISC="                      |
| "#82"     | "FREEZE="               | "#AE" | "BACKLIGHT="                     |
| "#83"     | "MXPRIO="               | "#AF" | "EQOUT="                         |
| "#84"     | "S2="                   | "#B0" | "ALLEQ="                         |
| "#85"     | "ALLGAIN="              | "#B6" | "ECHO="                          |
| "#86"     | "ALLDELAY="             | "#B7" | "ALLXOUT="                       |
| "#87"     | "ALLMASTER="            | "#B8" | "allinportname                   |
| "#88"     | "ALLINGAIN="            | "#B9" | "alloutportname                  |
| "#89"     | "ALLINPOWER="           | "#BA" | "HWSERNUM="                      |
| "#8A"     | "ALLINMUTE="            | "#BB" | "DTMFMUTE="                      |
| "#8B"     | "ALLLDMODE="            | "#BC" | "BELL="                          |
| "#8C"     | "ALLLDTHR="             | "#BD" | "TIMEOUT="                       |
| "#8D"     | "ALLLDPRIO="            | "#BE" | "AGC="                           |
| "#8E"     | <reserved - do not use> | "#BF" | <reserved - do not use>          |
|           |                         |       | (end of shorthand command table) |

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**Technical Specifications**

Analog Audio Input: \_\_\_\_\_ Software Selectable Microphone/Line  
Input Selection Mute/ 0/ +10/ +50/ +60 dB software Variable, 2.0 K $\Omega$  Terminations  
Phantom Power Software Selectable On/Off +12.5VDC  
Throughput Gain Unity Gain Max. -1 dB Steps, 70 dB range plus crosspoint mute  
64 simultaneous crosspoints (x8 Presets)  
8 Output Channels

Analog Audio Output: \_\_\_\_\_  
Output Line level, Variable, 100  $\Omega$  Termination  
Master Gain -1.5 dB Steps, 46.5 dB range plus output channel mute

Signal to Noise Ratio (Line Level Throughput): \_\_\_\_\_ >80 dB

Frequency Response: \_\_\_\_\_  
Mic / Line Level \_\_\_\_\_ 20 - 15000 Hz

Programmed Signal Delay: \_\_\_\_\_  
Crosspoint Based \_\_\_\_\_ 0 ms. to 500 ms., 1 ms. resolution  
Max. Signal Delay 64 simultaneous crosspoints (x8 Presets)

Throughput Delay (Signal Propagation Delay with Minimum Settings): \_\_\_\_\_  
Any Input to any output <35  $\mu$ S

Control Interfaces:  
Front Panel Push Button \_\_\_\_\_ I.D. Select, Preset, Default Preset, Manual Routing  
Serial Remote Control COMM1 (Front Panel 9 Pin D, Male) RS-232D  
COMM2 (Rear, Removable mini "Captive Wire" Connector) RS-232D

High Speed DSPLink™: \_\_\_\_\_ RJ-45, Sheilded Category 5, 2' Max. length  
Interconnecting cable must be high quality network grade shielded Category 5

Audio and Control Connections: \_\_\_\_\_ Removable Polarized mini "Captive Wire" Connectors  
Power Connection: Removable Polarized 5 Pin Din Connector

Power Requirements: \_\_\_\_\_ +5VDC, 1.5A,  $\pm$ 15VDC, .2A  
External Plug-In, Universal AC Input Supply Included

Size: (1/2 Rack Wide, Mounting Kits Available) H 1.75", W 7.50", D 9.00"  
Rack Mounting: RK-1 (Optional), Single unit centered in one rack space  
RK-2 (Optional), mounts 2-up in one rack space  
RK-4 (Optional), mounts 4-up in two rack space

Weight: \_\_\_\_\_ 2.5 lbs.

Technical specifications are subject to change. This information applies to a product under development. Its specifications are subject to change without notice. For the original equipment supplier, custom configurations of the Series II ASP-8X8 AUDIO MATRIX™ and other SCT equipment are available. Please contact SCT for details on pricing and availability.