

MC-4000 Connection Guide

Internal Mode
Using Internal SCX400 Controller

January 28, 2015

VIDEO INPUTS: Channel 1 and 2 share all 32 inputs. Sources can be put on any of the 32 inputs and are configured in the SCX400 and MC4000 tables.
32 Inputs: SDI: Max length 1000' using 8281 HD: Max length 500' using 1694A. All sources must be within +/- 1 H line of reference
REFERENCE must be one of the 32 inputs and must be a constant signal of the same video format used in each MC4000 channel: SD = any SMPTE 259M HD = any SMPTE 292M

U-NET Port - Connects to external U-NET devices, such as UCP Panels or via daisy-chain (using standard CAT5 cable). Maximum U-NET length is 1000'.

SCX400 Serial 1 and Serial 2 – used for RS-232 or RS-422 interface. Format is jumper selectable. Serial Port Pin Outs> **RS-232:** 1 – NA, 2 – TXD, 3 – RXD, 4 – NA, 5 – GRD, 6 – NA, 7 – NA, 8 – NA, 9 – NA. **RS-422:** 1 – N/A, 2 – TX-, 3 – RX+, 4 – N/A, 5 – GND, 6 – N/A, 7 – TX+, 8 – RX-, 9 – N/A.

SYNC PORT - Sync source must be analog black burst. DO NOT connect SDI reference signals.

CH1 - GPIO 11-21 - Relay Port B Pin #'s ("Rx"=relay number):R11=1&2, R12=3&4, R13=6&7, R14=8&9, R15=10&11, R16=13&14, R17=16&17, R18=19&20, R19=21&22, R20=23&24, R21=25&26, GND=5,12,15&18

CH2 - GPIO 11-21 - Relay Port B Pin #'s ("Rx"=relay number):R11=1&2, R12=3&4, R13=6&7, R14=8&9, R15=10&11, R16=13&14, R17=16&17, R18=19&20, R19=21&22, R20=23&24, R21=25&26, GND=5,12,15&18

MX-BUS - MX-Bus connects to MX bus connections on router frames. Both ports must be terminated, either on the V-32R frame or other router chassis. Total maximum length of 300 feet. Please note that the diagram to the left only applies IF the control section of the SCXV-400 is enabled.

REMOTE CHNG OVER - Pin 1 one side of remote changeover. Pin 2 & 3 remote reset

SMPTE ALARM - Pin 1 & 2 SMPTE contact. Pin 3 one side of remote changeover.

VIDEO OUTPUTS: CH 1 (same for CH 2) **PROGRAM OUT** - 2 Connections; 1 for downstream devices and 1 for monitoring. **MONITOR OUT** – Preset ONLY. **PREVIEW** or **Clean feed out** - Configurable as either type. **AUX OUT** - Additional Spare Output

Timecode IN
TC+ = 1
TC- = 2
GND = 9

CH1 - GPIO 1-10 - Relay Port A Pin #'s ("Rx"=relay number):R1=1&2, R2=3&4, R3=6&7, R4=8&9, R5=13&14, R6=16&17, R7=19&20, R8=21&22, R9=23&24, R10=25&26, GND=5,12,15&18, N/A=10&11

MON OUT - Future

SCX LAN - Connected via CAT-5 cable to the control system network, Hub or Ethernet panels.

CH 1 - AES IN PGM & PST Pin #'s; 1=PS1+, 2=PS2+, 3=PS3+, 4=PS4+, 5=PG1+, 6=PG2+, 7=PG3+, 8=PG4+, 11=PS1-, 12=PS2-, 13=PS3-, 14=PS4-, 15=PG1-, 16=PG2-, 17=PG3-, 18=PG4-, 19=PS1gnd, 20=PS2gnd, 21=PS3gnd, 22=PS4gnd, 23=PM1gnd, 24=PG2gnd, 25=PG3gnd, 26=PG4gnd

CH1 - AES IN / PVW & EXT1 Pin #'s; 1=P1+, 2=P2+, 3=P3+, 4=P4+, 5=E1+, 6=E2+, 7=E3+, 8=E4+, 11=P1-, 12=P2-, 13=P3-, 14=P4-, 15=E1-, 16=E2-, 17=E3-, 18=E4-, 19=P1gnd, 20=P2gnd, 21=P3gnd, 22=P4gnd, 23=E1gnd, 24=E2gnd, 25=E3gnd, 26=E4gnd

SHARED CH1/CH2 PORTS - CLEAN OUT Pin #'s; 1=CH1 CL1+, 2=CH1 CL2+, 3=CH1 CL3+, 4=CH1 CL4+, 5=CH2 CL1+, 6=CH2 CL2+, 7=CH2 CL3+, 8=CH2 CL4+, 11=CH1 CL1-, 12=CH1 CL2-, 13=CH1 CL3-, 14=CH1 CL4-, 15=CH2 CL1-, 16=CH2 CL2-, 17=CH2 CL3-, 18=CH2 CL4-, 19=CH1 CL1gnd, 20=CH1 CL2gnd, 21=CH1 CL3gnd, 22=CH1 CL4gnd, 23=CH2 CL1gnd, 24=CH2 CL2gnd, 25=CH2 CL3gnd, 26=CH2 CL4gnd

MED 1 LAN – Future Graphics Port

CH 1 LAN – Standard Ethernet Connection. We recommend the Ethernet system include only Utah Scientific Equipment

CH 2 - AES IN PGM & PST Pin #'s; 1=PS1+, 2=PS2+, 3=PS3+, 4=PS4+, 5=PG1+, 6=PG2+, 7=PG3+, 8=PG4+, 11=PS1-, 12=PS2-, 13=PS3-, 14=PS4-, 15=PG1-, 16=PG2-, 17=PG3-, 18=PG4-, 19=PS1gnd, 20=PS2gnd, 21=PS3gnd, 22=PS4gnd, 23=PM1gnd, 24=PG2gnd, 25=PG3gnd, 26=PG4gnd

CH2 - AES IN / PVW & EXT1 Pin #'s; 1=P1+, 2=P2+, 3=P3+, 4=P4+, 5=E1+, 6=E2+, 7=E3+, 8=E4+, 11=P1-, 12=P2-, 13=P3-, 14=P4-, 15=E1-, 16=E2-, 17=E3-, 18=E4-, 19=P1gnd, 20=P2gnd, 21=P3gnd, 22=P4gnd, 23=E1gnd, 24=E2gnd, 25=E3gnd, 26=E4gnd

CH1 - AES Out – PGM/MON Pin #'s; 1=M1+, 2=M2+, 3=M3+, 4=M4+, 5=P1+, 6=P2+, 7=P3+, 8=P4+, 11=M1-, 12=M2-, 13=M3-, 14=M4-, 15=P1-, 16=P2-, 17=P3-, 18=P4-, 19=M1gnd, 20=M2gnd, 21=M3gnd, 22=M4gnd, 23=P1gnd, 24=P2gnd, 25=P3gnd, 26=P4gnd

MED 2 LAN – Future Graphics Port

CH 2 LAN – Standard Ethernet Connection. We recommend the Ethernet system include only Utah Scientific Equipment

SHARED CH1/CH2 PORTS - EXTERNAL 2 Pin #'s; 1=CH1 E2 1+, 2=CH1 E2 2+, 3=CH1 E2 3+, 4=CH1 E2 4+, 5=CH2 E2 1+, 6=CH2 E2 2+, 7=CH2 E2 3+, 8=CH2 E2 4+, 11=CH1 E2 1-, 12=CH1 E2 2-, 13=CH1 E2 3-, 14=CH1 E2 4-, 15=CH2 E2 1-, 16=CH2 E2 2-, 17=CH2 E2 3-, 18=CH2 E2 4-, 19=CH1 E2 1gnd, 20=CH1 E2 2gnd, 21=CH1 E2 3gnd, 22=CH1 E2 4gnd, 23=CH2 E2 1gnd, 24=CH2 E2 2gnd, 25=CH2 E2 3gnd, 26=CH2 E2 4gnd

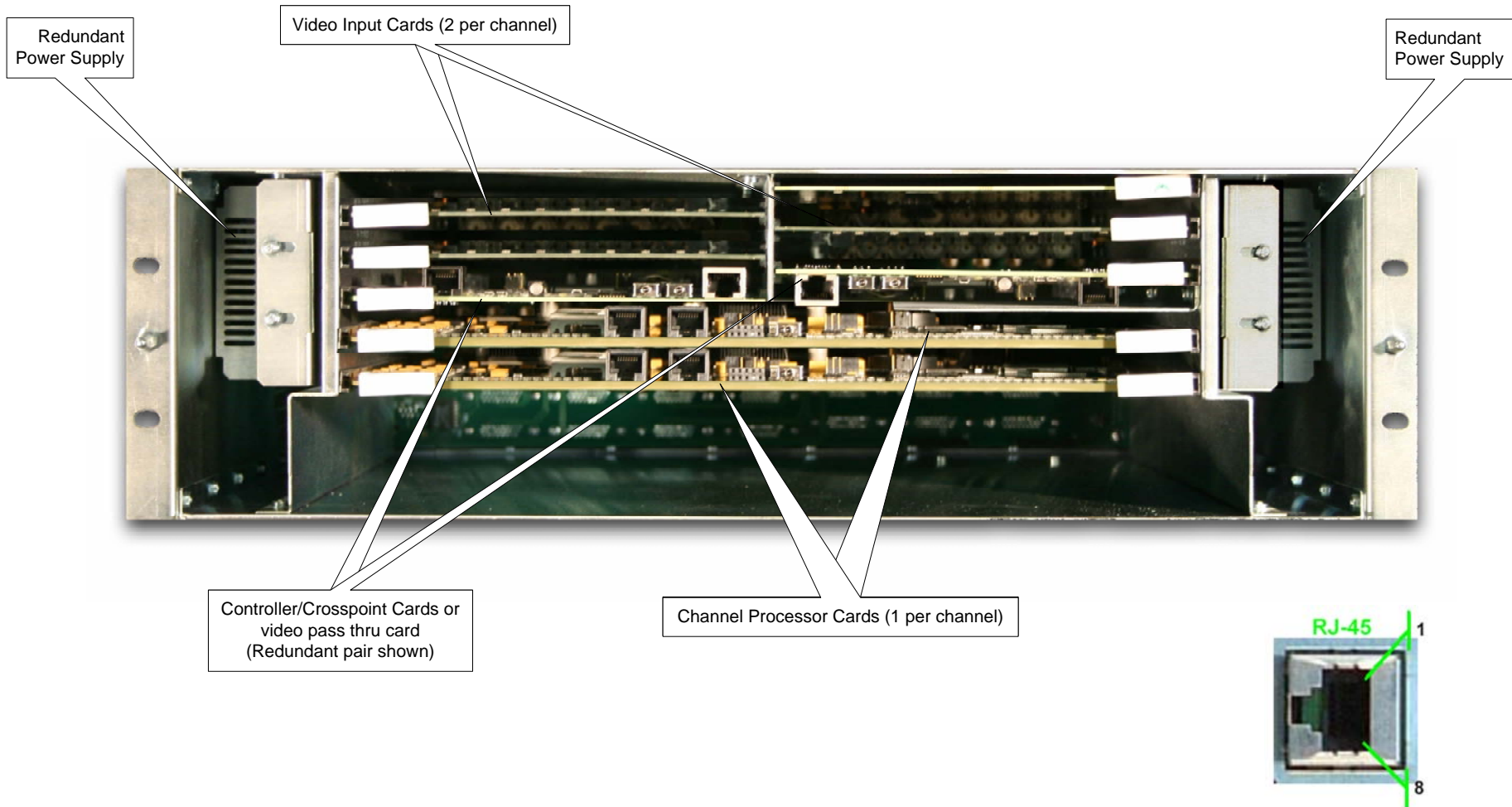
4) RS-422 or 232 Serial Ports & Pin#'s. **RS-232:** 2=RX, 3=TX, 5=GND. **RS-422:** 1=CD, 2=RX-, 3=TX+, 4=TC, 5=GND, 6=RC, 7=RX+, 8=TX-, 9=GND (applies to quad cable)

CH2 - AES Out – PGM/MON Pin #'s; 1=M1+, 2=M2+, 3=M3+, 4=M4+, 5=P1+, 6=P2+, 7=P3+, 8=P4+, 11=M1-, 12=M2-, 13=M3-, 14=M4-, 15=P1-, 16=P2-, 17=P3-, 18=P4-, 19=M1gnd, 20=M2gnd, 21=M3gnd, 22=M4gnd, 23=P1gnd, 24=P2gnd, 25=P3gnd, 26=P4gnd

CH2 - GPIO 1-10 - Relay Port A Pin #'s ("Rx"=relay number):R1=1&2, R2=3&4, R3=6&7, R4=8&9, R5=13&14, R6=16&17, R7=19&20, R8=21&22, R9=23&24, R10=25&26, GND=5,12,15&18, N/A=10&11

MC-4000 Front View Guide

Wednesday, January 28, 2015



Note: your system may contain 2 master control systems in 1 chassis.