Rubicon Installation

The Rubicon console from Sierra Automated Systems is a Control Surface comprised of several independent modules housed a common, passive, mainframe. The modules communicate to a 32KD using CAT 5 wiring, RJ-45 connections, T568B wiring standard on the Rubicon bottom panel. The wires typically punch down to blocks on the 32KD system side to either RIO chassis RS-485 ports or to DRC module RS-485 ports. The physical communication is via SAS standard RS-485 protocol, with 4 module slots per port (per wire pair). Therefore one RJ-45 connector (4 pair) supports up to a 16 slot Rubicon frame, two RJ-45 connectors up to a 32 slot Rubicon frame, and three RJ-45 connectors for up to 48 slots (40 is the largest mainframe available as of this writing).

The Rubicon is typically powered from a SAS **SPR-200** rack mounted power supply. Two supplies may be used to provide full redundancy. Each SPR-200 provides four 24 VDC power ports. A typical distribution is one port to Rubicon Console, one port to Rubicon Meter Pod and one port to RIOlink chassis. Sometimes a second RIO chassis is used in the control room to obtain additional I/O, and a power port is also provided for this. Any additional equipment will require additional power supplies. Turret panels are powered from separate 12 VDC power supplies, one supply for up to four turret panels.

The Rubicon Meter Pod is available in many configurations. Each Pod provides one or more **Audio Meters**, each displaying Average Audio Level (VU) with a bar and Peak Audio Level (PPM) with a dot. Each stereo Audio Level Meter requires one AES3 digital audio connection.

The meter pod also provides a **Clock** and/or **Timer**. The **Clock** is connected with a shielded twisted wire pair and may be connected to SMPTE or ESE data. Small pluggable jumpers are located inside of the end panel to program the clock for differing standards. The clocks are shipped for SMPTE operation as standard (see page 3).

The **Timer** is controlled via dry contact inputs. The Timer is wired with a CAT 5 cable that is normally punched down to relay outputs from a RIO chassis.

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Rubicon Tub Wiring – RIO Link

Rubicon RJ-45, J201/J202/J203 to RIO Link RS485 J1501 (RJ21connector),
RJ21 pinouts given; +,-
Example given is typical only. Also see SAS Drawing 16BW1 for Krone, S-66 pinout.

Rubicon J201:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		RIO	
1-4	1,2 (WHT/ORG, ORG)	to	3,4	to	J1501	pins 27,2
5-8	3,6 (WHT/GRN, GRN)	to	5,6	to	J1501	pins 28,3
9-12	5,4 (WHT/BLU, BLU)	to	9,10	to	J1501	pins 30,5
13-16	7,8 (WHT/BRN, BRN)	to	11,12	to	J1501	pins 31,6

Rubicon J202:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		RIO	
17-20	1,2 (WHT/ORG, ORG)	to	15,16	to	J1501	pins 33,8
21-24	3,6 (WHT/GRN, GRN)	to	17,18	to	J1501	pins 34,9
25-28	5,4 (WHT/BLU, BLU)	to	21,22	to	J1501	pins 36,11
29-32	7,8 (WHT/BRN, BRN)	to	23,24	to	J1501	pins 37,12

Rubicon J203:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		RIO	
33-36	1,2 (WHT/ORG, ORG)	to	27,28	to	J1501	pins 39,14
37-40	3,6 (WHT/GRN, GRN)	to	29,30	to	J1501	pins 40,15

Rubicon Tub Wiring – DRC-16 Module

Rubicon RJ-45, J201/J202/J203 to 32KD DRC-16E Module, Euro pinouts given; +,-
Example given is typical only. Also see SAS Drawing 16BW1 for Krone, S-66 pinout.

Rubicon J201:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		DRC	
1-4	1,2 (WHT/ORG, ORG)	to	3,4	to	DRC Port 1	pins C1,B1
5-8	3,6 (WHT/GRN, GRN)	to	5,6	to	DRC Port 2	pins C2,B2
9-12	5,4 (WHT/BLU, BLU)	to	9,10	to	DRC Port 3	pins C3,B3
13-16	7,8 (WHT/BRN, BRN)	to	11,12	to	DRC Port 4	pins C4,B4

Rubicon J202:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		RIO	
17-20	1,2 (WHT/ORG, ORG)	to	15,16	to	DRC Port 5	pins C5,B5
21-24	3,6 (WHT/GRN, GRN)	to	17,18	to	DRC Port 6	pins C6,B6
25-28	5,4 (WHT/BLU, BLU)	to	21,22	to	DRC Port 7	pins C7,B7
29-32	7,8 (WHT/BRN, BRN)	to	23,24	to	DRC Port 8	pins C8,B8

Rubicon J203:

Rubicon Slot	RJ-45 pins		Krone/S-66 Block		RIO	
33-36	1,2 (WHT/ORG, ORG)	to	27,28	to	DRC Port 9	pins C9,B9
37-40	3,6 (WHT/GRN, GRN)	to	29,30	to	DRC Port 10	pins C10,B10

Rubicon Meter Pod Wiring

Meter Pod Internal Wiring — *User Wiring*

Meters 1 to 4, CAT 5, Blue		***RJ-45 Coupler pins***	***T-568B Color Standard***
+,-			
Program (Meter 1)	WHT/BRN, BRN	1,2	WHT/ORG, ORG
Meter 2	WHT/ORG, ORG	3,6	WHT/GRN, GRN
Meter 3	WHT/GRN, GRN	5,4	WHT/BLU, BLU
Meter 4	WHT/BLU, BLU	7,8	WHT/BRN, BRN

Meter 5 (if provided), CAT 5, White

+,-			
Meter 5	WHT/BRN, BRN	1,2	WHT/ORG, ORG

Pairs 2,3 & 4 not used

Timer Logic Inputs, CAT 5, Pink

GND, Logic In			
Stop	WHT/ORG, ORG	1,2	WHT/ORG, ORG
Start	WHT/GRN, GRN	3,6	WHT/GRN, GRN
Not used	WHT/BLU, BLU	5,4	WHT/BLU, BLU
Reset	WHT/BRN, BRN	7,8	WHT/BRN, BRN

Clock Input, Shielded pair, Red

+, - (Shield) RED, BLK (Shield) for SMPTE time code

NOTE: For ESE time code connect center conductor to BLK, Coaxial Shield to RED.

Torpey Clock; jumpers to select time code are accessible by removing side plate only.

Jumpers as follows, left to right:
J12
J11
J10 – X (Jumpered for SMPTE – standard)
J9

SMPTE – jumper J10, all others open
ESE TC89 – jumper J9, all others open
ESE TC90 – jumper J9 and J12, others open
For other options please see full Torpey manual, included on CD.