

## MARK 5 MEMO #010.1

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To: Mark 5 Development Group

From: Dan L. Smythe

Subject: Mark 5 Adapter Modules

Some of the various modules that get connected together in a Mark 5 system have different pin assignments. The pin assignments for each of the modules is shown in Table 1. All signals are RS422 compatible, so simple passive adapters can be used to interconnect the various modules. Table 2 lists the adapters required for these interconnections. The Mark 5A system will have an I/O Panel with input connectors for a Mark 4 or VLBA Formatter, and output connectors to a Mark 4 Station Unit.

The pin assignments of the output to a Station Unit are the same as the input from a VLBA Formatter, so these connectors can be used to daisy-chain multiple Mark 5A recording systems to increase the storage capacity for extended unattended operation.

<b>Table 2. MARK 5 ADAPTER MODULES</b>			
<b>From</b>	<b>To</b>	<b>Adapter</b>	<b>Comment</b>
Mk4 Stack 1	Mark 5P	Mk4to5P	
Mk4 Stack 2	Mark 5P	None	
VLBA Formatter	Mark 5P	VLBA2Mk5P	Kokee, Mark 5 Memo # 6
Mk4 Stack 1	Mark 5A	I/O Panel	Mark 5 Memo # 7
Mk4 Stack 2	Mark 5A	I/O Panel	Mark 5 Memo # 7
VLBA Formatter	Mark 5A	None	Feed-through on I/O Panel
Mark 5 P or A	Station Unit	None	Feed-through on I/O Panel
Mark 5A	Mark 5A	None	Daisy Chain

**Table 1. VLBI INTERCONNECT CABLE PIN ASSIGNMENTS**

Head ("Track") Signal	Mk4 Formatter Out Head Stack #2 Mark 5P In		SU Input Mark 5 P,A Out		VLBA Formatter Out Mark 5 A In		Mk4 Formatter Out Head Stack #1 (50-pin connector)	
	Pin(+)	Pin(-)	Pin(+)	Pin(-)	Pin(+)	Pin(-)	Pin(+)	Pin(-)
0	NA	NA	1	2	1	2	NA	NA
2	5	6	3	4	3	4	37	38
4	7	8	5	6	5	6	3	4
6	9	10	7	8	7	8	5	6
8	11	12	9	10	9	10	7	8
10	13	14	11	12	11	12	9	10
12	15	16	13	14	13	14	11	12
14	17	18	15	16	15	16	13	14
16	19	20	17	18	17	18	15	16
18	21	22	19	20	19	20	19	20
20	23	24	21	22	21	22	21	22
22	25	26	23	24	23	24	23	24
24	27	28	25	26	25	26	25	26
26	29	30	27	28	27	28	27	28
28	31	32	29	30	29	30	29	30
30	33	34	31	32	31	32	31	32
32	35	36	33	34	33	34	35	36
34	NA	NA	35	36	35	36	NA	NA
Gnd	NA	NA	37**	38**	37	38	1	2
Clk0	40*	39*	39**	40**	39	40	39	40
Clk2	1*	2*	NA	NA	NA	NA	17	18
1	NA	NA	1	2	1	2	NA	NA
3	5	6	3	4	3	4	37	38
5	7	8	5	6	5	6	3	4
7	9	10	7	8	7	8	5	6
9	11	12	9	10	9	10	7	8
11	13	14	11	12	11	12	9	10
13	15	16	13	14	13	14	11	12
15	17	18	15	16	15	16	13	14
17	19	20	17	18	17	18	15	16
19	21	22	19	20	19	20	19	20
21	23	24	21	22	21	22	21	22
23	25	26	23	24	23	24	23	24
25	27	28	25	26	25	26	25	26
27	29	30	27	28	27	28	27	28
29	31	32	29	30	29	30	29	30
31	33	34	31	32	31	32	31	32
33	35	36	33	34	33	34	35	36
35	NA	NA	35	36	35	36	NA	NA
Gnd	NA	NA	37**	38**	37	38	1	2
Clk1	40*	39*	39**	40**	39	40	39	40
Clk3	1	2	NA	NA	NA	NA	17	18

\* Not used by Mark 5P      \*\*Not used by SU