Alto 1822 Interface cable descriptions

These pages describe various cables and connectors used with Alto-1822 interfaces.

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Alto internal cable 1822 interface (PC version)

One end is a 40 conductor PC edge connector and the other is a DCC-37S. The wire is 40 conductor ribbon cable.

DCC-37S connector	Alto card connector	Signal name
1	1	TYIB’
20	2	TYIB
2	3	+2.4
21	4	GND
3	5	RFNHB’
22	6	RFNHB
4	7	+2.4
23	8	GND
5	9	LIB’
24	10	LIB
6	11	+2.4
25	12	GND
7	13	IData’
26	14	IData
8	15	+2.4
27	16	GND
9	17	HData’
28	18	HData
10	19	GND
29	20	GND
11	21	LHB’
30	22	LHB
12	23	RFNIB’
31	24	RFNIB
13	25	GND
32	26	GND
14	27	TYHB’
33	28	TYHB
15	29	IRT
34	30	IMR
16	31	GND
35	32	GND
17	33	blank
36	34	blank
18	35	HRT
37	36	HMR
19	37	blank

38	blank	Not wired at DCC-37
39	blank	Not wired at DCC-37
40	blank	Not wired at DCC-37

Alto 1822 Interface External Extension Cable

One end is a DCC-37P connector and the other is a DCC-37S. The wire is Belden 8775 - 11 shielded pairs or equivilent. The horizontal lines indicate the pairs and corresponding shields.

DCC-37S connector	Wire color	Signal name
1	Red	TYIB’
20	Blue	TYIB
2		+2.4
21	Shield	GND
3	Red	RFNHB’
22	Green	RFNHB
4		+2.4
23	Shield	GND
5	White	LIB’
24	Black	LIB
6		+2.4
25	Shield	GND
7	Red	IData’
26	White	IData
8		+2.4
27	Shield	GND
9	Orange	HData’
28	Black	HData
10	Shield	GND
29	Shield	GND
11	Red	LHB’
30	Black	LHB
12	Green	RFNIB’
31	Black	RFNIB
13	Shield	GND
32	Shield	GND
14	Brown	TYHB’
33	Black	TYHB
15	Red	IRT
34	Yellow	IMR
16	Shield	GND
35	Shield	GND
17		blank
36		blank
18	Blue	HRT
37	Black	HMR
19		blank

Alto 1822 PRU cable

One end is a DCC-37P connector and the other is a MIL 48-16R18-31P. The wire is Belden 8775 - 11 shielded pairs or equivilent. The horizontal lines indicate the pairs and corresponding shields.

Notes: The Parc PRU cable is wired with all the color pairs reversed and the ASD PRU cable uses a different kind of wire... These colors should be taken only as a recommendation.

DCC-37S connector	PRU connector	Wire color	Signal name
1	6	Red	TYIB’
20	5	Blue	TYIB
2		+2.4	
21	31	Shield	GND
3	8	Red	RFNHB’
22	7	Green	RFNHB
4		+2.4	
23	31	Shield	GND
5	2	White	LIB’
24	1	Black	LIB
6		+2.4	
25	31	Shield	GND
7	4	Red	IData’
26	3	White	IData
8		+2.4	
27	31	Shield	GND
9	24	Orange	HData’
28	23	Black	HData
10	31	Shield	GND
29	31	Shield	GND
11	22	Red	LHB’
30	21	Black	LHB
12	18	Green	RFNIB’
31	17	Black	RFNIB
13	31	Shield	GND
32	31	Shield	GND
14	20	Brown	TYHB’
33	19	Black	TYHB
15	14	Red	IRT
34	13	Yellow	IMR
16	31	Shield	GND
35	31	Shield	GND
17		blank	
36		blank	
18	12	Blue	HRT
37	11	Black	HMR
19		blank	

Alto 1822 interface to IMP adapter Cable

One end is an DBC-25P and the other is a DCC-37P.

All signal pairs such as 20,21 22,23 ..... 34,35 should be twisted pairs. The colors are for the Maxc2 adapter cable. Groups of wires separated by horizontal lines indicate the cable pairing. The colors are only intended as a suggestion. Note that pins 16 and 35 of the DCC-37P are used twice. (This cable is used between Maxc2 and the IMP).

DCC-37P	DBC-25P	Wire	Signal name
1 jump to 2			TYIB' - 2.4v
20	5	Red	TYIB
21	18	White	GND
3 jump to 4			FRNHB' - 2.4v
22	7	Green	RFNHB
23	20	Brown	GND
5 jump to 6			LIB' - 2.4v
24	1	Yellow	LIB
25	14	Brown	GND
7 jump to 8			IData' - 2.4v
26	3	Orange	IData
27	16	Brown	GND
28	8	Red	HData
10	21	Brown	GND
30	6	Violet	LHB
29	19	White	GND
31	2	Blue	RFNIB
13	15	White	GND
33	4	Green	TYHB
32	17	White	GND
15	11	Green	IRT
16	24	Black	GND
34	12	Red	IMR
16	25	Black	GND
18	9	Yellow	HRT
35	22	Black	GND
37	10	Blue	HMR
35	23	Black	GND

Alto - 1822 Interface Distant host test plug

This plug loops back the Alto-1822 interface using 'Distant-Host' signals

Plug type DCC-37P

On the DCC-37P connector	Jumper pins			
TYIB'	1	to	14	TYHB'
TYIB	20	to	33	TYHB
RFNHB'	3	to	12	RFNIB'
RFNHB	22	to	31	RFNIB
LIB'	5	to	11	LHB'
LIB	24	to	30	LHB
IData'	7	to	9	HData'
IData	26	to	28	HData
IRT	15	to	18	HRT
IMR	34	to	37	HMR

Alto - 1822 Interface Local host test plug

This plug loops back the Alto-1822 interface using 'Local-Host' signals

Plug type DCC-37P

On the DCC-37P connector	Jumper pins			
TYIB'	1	to	2	+2.4v
RFNHB'	3	to	4	+2.4v
LIB'	5	to	6	+2.4v
IData'	7	to	8	+ 2.4v
TYIB	20	to	33	TYHB
RFNHB	22	to	31	RFNIB
LIB	24	to	30	LHB
IData	26	to	28	HData
IRT	15	to	18	HRT
IMR	34	to	37	HMR

1822 Cable Breakout Box

This is a 122 pin edge-connector wire-wrap board plus several scotchflex to DB-37 adaptors. It is a debugging tool really.

DCC-37 connector	Alto card connector	Card A connector	Card B connector	Signal name
1	1	1	23	TYIB’
20	2	62	84	TYIB
2	3	2	24	+2.4
21	4	63	85	GND
3	5	3	25	RFNHB’
22	6	64	86	RFNHB
4	7	4	26	+2.4
23	8	65	87	GND
5	9	5	27	LIB’
24	10	66	88	LIB
6	11	6	28	+2.4
25	12	67	89	GND
7	13	7	29	IData’
26	14	68	90	IData
8	15	8	30	+2.4
27	16	69	91	GND
9	17	9	31	HData’
28	18	70	92	HData
10	19	10	32	GND
29	20	71	93	GND
11	21	11	33	LHB’
30	22	72	94	LHB
12	23	12	34	RFNIB’
31	24	73	95	RFNIB
13	25	13	35	GND
32	26	74	96	GND
14	27	14	36	TYHB’
33	28	75	97	TYHB
15	29	15	37	IRT
34	30	76	98	IMR
16	31	16	38	GND
35	32	77	99	GND
17	33	17	39	blank
36	34	78	100	blank
18	35	18	40	HRT
37	36	79	101	HMR
19	37	19	41	blank
	38	80	102	blank
	39	20	42	blank
	40	81	103	blank