MAINTENANCE MANUAL
MUX CROSS CONNECT
ROA 117 2213

TABLE OF CONTENTS

SPECIFICATIONS

Dimensions	19” x 5 RU’s
Connectors:	
J1, and J2	21 Shielded vertical mount connectors (50 Positions)
J11	
J13 thru J16	
J21	
J23 thru J26	
J1D thru J3D	
J6C	
J4T thru J6T	
J8T and J9T	
J4C, J11D, J12D	25 Telephone modular jacks (6 Contacts)
J13D thru J34D	
J7C, J12C and J12T	3 Header conectors (10 Positions)

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DESCRIPTION

MUX Cross Connect ROA 117 2213 is part of Cross Connect Assembly 188D6225. The Cross Connect assembly replaces external cabling, punchblocks and associated Cross Connect punch block to punch block wiring. The Cross Connect board circuitry, combined with interface cabling, maps signals between INTRAPLEX Multiplex equipment and RS232 Simulcast equipment at the Simulcast Control Point, Simulcast Tx/Rx Sites, MASTR III EDACS Auxiliary Receive sites, and the EDACS Voter interface for auxiliary receive sites equipped for RS232. Each Cross Connect will support interfaces for a single EDACS RS232 Simulcast site interface to a full complement of 24 channels (two Intraplex shelves, one main and one expansion).

Connectors are provided on the Cross Connect in parallel with the MUX **V**oice **F**requency (**VF**) Module interface connections. **Note:** The VF module is a 4-wire, dual E&M Audio module. These connectors allow unused VF in, VF out, “M” lead input, and “E” lead outputs to be brought out to a punchblock for other configurations not particularly applicable to EDACS Simulcast.

Details of the Control Point and Voter signal mapping for RS232 EDACS Simulcast interface is contained on drawing 19C852611.

Details of the Tx/Rx Site and Auxiliary Receive Site signal mapping for RS232 EDACS Simulcast interface is contained on drawing 19C852612.

Simulcast Control Point for Remote Tx/Rx sites

The following signals (Table 1) are mapped by the MUX Cross Connect at the RS232 Simulcast Control Point for Remote Tx/Rx sites (Refer to drawing 19C852615 Sheet 1 for cabling and 188D5012 Sheet 2/Sheet 3 for Control Point/Voter Cross Connect application assembly).

Table 1 - Mapping Of the MUX Cross Connect At The RS-232 Simulcast Control Point For Remote Tx/Rx Sites

Signal	Interconnection
300 Hz Sync tone	To the INTRAPLEX MUX (program encode module VF in interface)
2400 Hz Sync tone	To the INTRAPLEX MUX (program encode module VF in interface)
Simulcast 150 Baud LSD	To the INTRAPLEX MUX (VF module VF in interface)
Alarm modem signals	To/from the INTRAPLEX MUX (VF module VF in/out interface)
Simulcast TX Voice	To the INTRAPLEX MUX (VF module VF in interface)
Voter Receive Voice	From the INTRAPLEX MUX (VF module VF out interface)
Simulcast PTT control	To the INTRAPLEX MUX (VF module "M" lead interface)
Simulcast A/D control	To the INTRAPLEX MUX (VF module "M" lead interface)
Simulcast TX data/clock	To the INTRAPLEX MUX (Sync data module interface)
Voter RX data	From the INTRAPLEX MUX (Sync data module interface)
Simulcast Reference clock	From the INTRAPLEX MUX (Sync data module interface)
150 Baud/300 Hz/2400 Hz/ Alarm	To/from the Simulcast Control Point
Simulcast TX Voice	From the Simulcast Control Point
Voter Receive Voice	To the Voter Cross Connect
PTT & A/D control	From the Simulcast Control Point
Simulcast TX data/clock	From the Simulcast Control Point
Voter RX data	To the Voter Cross Connect
Timing reference	To the Simulcast Control Point

Simulcast Tx/Rx Sites

The following signals (Table 2) are mapped by the MUX Cross Connect at the RS232 Tx/Rx Sites (Refer to drawing 19C852615 Sheet 2 for cabling and 19D904564 Sheet 5/Sheet 6 for Transmit Site Common equipment application assembly).

Table 2 - Mapping Of The MUX Cross Connect At The RS-232 Simulcast Tx/Rx Sites

Signal	MUX Cross Connect Intreconnection
300 Hz Sync tone	From the INTRAPLEX MUX (program decode module VF out interface)
2400 Hz Sync tone	From the INTRAPLEX MUX (program decode module VF out interface)
Simulcast 150 Baud LSD	From the INTRAPLEX MUX (VF module VF out interface)
Alarm modem signals	To/from the INTRAPLEX MUX (VF module VF in/out interface)
Simulcast TX Voice	From the INTRAPLEX MUX (VF module VF out interface)
Voter Receive Voice	To the INTRAPLEX MUX (VF module VF in interface)
Simulcast PTT control	From the INTRAPLEX MUX (VF module "E" lead interface)
Simulcast A/D control	From the INTRAPLEX MUX (VF module "E" lead interface)
Simulcast TX data/clock	From the INTRAPLEX MUX (Sync data module interface)
Voter RX data/clock	To the INTRAPLEX MUX (Sync data module interface)
Simulcast Reference clock	From the INTRAPLEX MUX (Sync data module interface)
150 Baud/300 Hz/2400 Hz	To the Tx/Rx Common Equipment
Alarms	To/from the Tx/Rx Common Equipment
Simulcast TX Voice	To the Tx/Rx Common Equipment
Voter Receive Voice	From the Tx/Rx Common Equipment
PTT & A/D control	To the Tx/Rx Common Equipment
Simulcast TX data/clock	To the Tx/Rx Common Equipment
Voter RX data/clock	From the Tx/Rx Common Equipment.
Timing reference	To the Tx/Rx Common Equipment.

Tx/Rx site Co-located with the RS-232 Simulcast Control Point

The following signals (Table 3) are mapped by the MUX cross connect combined with direct connections at a Tx/Rx site co-located with the RS232 Simulcast Control Point. MUX equipment is installed in the Tx/Rx common equipment and connected to loop itself back to back, T1 out wired to T1 in (Refer to drawing 19C852615 Sheet 4 for cabling).

TABLE 3 - Mapping Of the MUX Cross Connect Combined With Direct Connections At A Tx/Rx Site Co-Located ith The RS-232 Simulcast Control Point

Signal	MUX Cross Connect Interconnection
300 Hz Sync tone	From the Simulcast Control Point (direct to Tx/Rx Site common equipment)
2400 Hz Sync tone	From the Simulcast Control Point (direct to Tx/Rx Site common equipment)
Simulcast 150 Baud LSD	To/from the INTRAPLEX MUX (VF module VF in/out interface)
Alarm modem signals	To/from the INTRAPLEX MUX (VF module VF in/out interface)
Simulcast TX Voice	To/from the INTRAPLEX MUX (VF module VF in/out interface)
Voter Receive Voice	From the Simulcast Tx/Rx site (direct to Voter analog cross connect)
Simulcast PTT control	To/from the INTRAPLEX MUX (VF module "E&M" lead interface)
Simulcast A/D control	To/from the INTRAPLEX MUX (VF module "E&M" lead interface)
Simulcast TX data/clock	From the Simulcast Control Point (direct to Tx/Rx Site common equipment)
Voter RX data	From the Simulcast Tx/Rx site (direct to Voter digital cross connect)
Simulcast Reference clock	From the INTRAPLEX MUX (Sync data module interface)

Simulcast Control Point

The following signals (Table 4) are mapped by the MUX cross connect at the RS232 Simulcast Control Point for RS232 MASTR III Auxiliary Receive sites (Refer to drawing 19C852615 Sheet 5 for cabling).

Table 4 - Mapping of the MUX Cross Connect at the RS-232 Simulcast Control Point for RS-232 MASTR III Auxiliary Receive Sites

Signal	MUX Cross Connect Interconnection
Voter Receive Voice	From the INTRAPLEX MUX (VF module VF out interface)
Voter RX data	From the INTRAPLEX MUX (Sync data module interface)
Simulcast Reference clock	From the INTRAPLEX MUX (Sync data module interface)
Voter Receive Voice	To the Voter Cross Connect
Voter RX data	To the Voter Cross Connect
Timing reference	To the Simulcast Control Point

MASTR III Auxiliary Receive Sites

The following signals (Table 5) are mapped by the MUX cross connect at the RS232 MASTR III Auxiliary Receive Sites (Refer to drawing 19C852615 Sheet 6 for cabling).

Table 5 - Mapping of the MUX Cross Connect At The RS-232 MASTR III Auxiliary Receive Sites

Signal	MUX Cross Connect Interconnection
Voter Receive Voice	To the INTRAPLEX MUX (VF module VF in interface)
Voter RX data	To the INTRAPLEX MUX (Sync data module interface)
Simulcast Reference clock	From the INTRAPLEX MUX (Sync data module interface)
Voter Receive Voice	From the Auxiliary Receive Equipment.
Voter RX data/clock	From the Auxiliary Receive Equipment.
Timing reference	Fo the Auxiliary Receive Equipment.

RELATED DRAWINGS

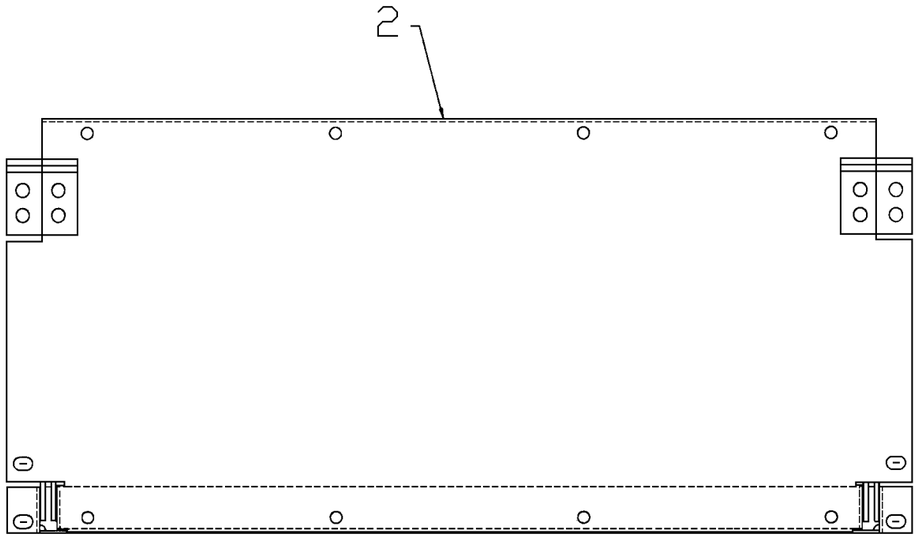
Drawing Number	Title	Publication
188D6225	MUX Cross Connect assembly using ROA1172213	
19C852611	Control Point MUX Cross Connect connections	
19C852612	Tx/Rx Site MUX Cross Connect connections	LBI-39131
19C852615 Sh. 1	Control Point MUX Cross Connect interface cabling connections	
19C852615 Sh. 2	Tx/Rx Site MUX Cross Connect interface cabling connections	LBI-39131
19C852615 Sh. 4	Co-located Tx/Rx Site Cross Connect interface cabling connections	LBI-39131
19C852615 Sh. 5	Voter MUX Cross Connect interface cabling connections	
19C852615 Sh. 6	RS-232 MIII Auxiliary receiver Site MUX Cross Connect interface cabling connections	
188D5012 Sh. 2 & Sh. 3	Control Point/Voter Cross connect application assembly	
19D904564 Sh. 5 & Sh. 6	Transmit Site Common equipment application assembly	LBI-39131
188D5450 Sh. 7 & Sh. 8	Auxiliary Receive Site application assembly	
19C852600, Sh. 5	MUX Cross Connect Panel Connection Chart - Transmit Site	LBI-39131

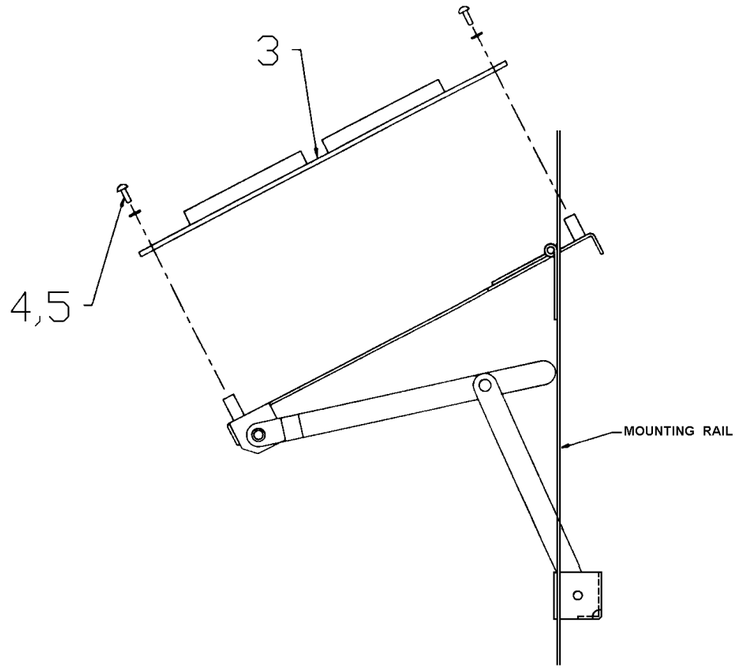
PARTS LIST

INTRAPLEX MUX CROSS CONNECT

ROA 117 2213

SYMBOL	PART NO.	DESCRIPTION
		--CONNECTORS--
J1		
and		
J2	RNT403237/050	Connector: Printed Wire
J11	RNT403237/050	Connector: Printed Wire.
J13		
thru		
J16	RNT403237/050	Connector: Printed Wire.
J1D	RNT403237/050	Connector: Printed Wire.
J21	RNT403237/050	Connector: Printed Wire.
J23		
thru		
J26	RNT403237/050	Connector: Printed Wire.
J2D		
and		
J3D	RNT403237/050	Connector: Printed Wire.
J4C	RNV40304/6	Connector
J4T		
and		
J5T	RNT403237/050	Connector: Printed Wire.
J6C		
and		
J6T	RNT403237/050	Connector: Printed Wire.
J7C	RPV403143/010	Connector
J8T		
and		
J9T	RNT403237/050	Connector: Printed Wire.
J11D	RNV40304/6	Connector
J12C	RPV403143/010	Connector
J12D	RNV40304/6	Connector
J12T	RPV403143/010	Connector
J13D		
thru		
J34D	RNV40304/6	Connector
		--MISCELLANEOUS--
3	RPV403143/901	Connector
		MUX CROSS CONNECT ASSEMBLY 188D6225G1
1	188D6225P1	Panel Assembly.
4	N80P13006B6	Screw: Machine.
5	N404P13B6	Washer: Lock.

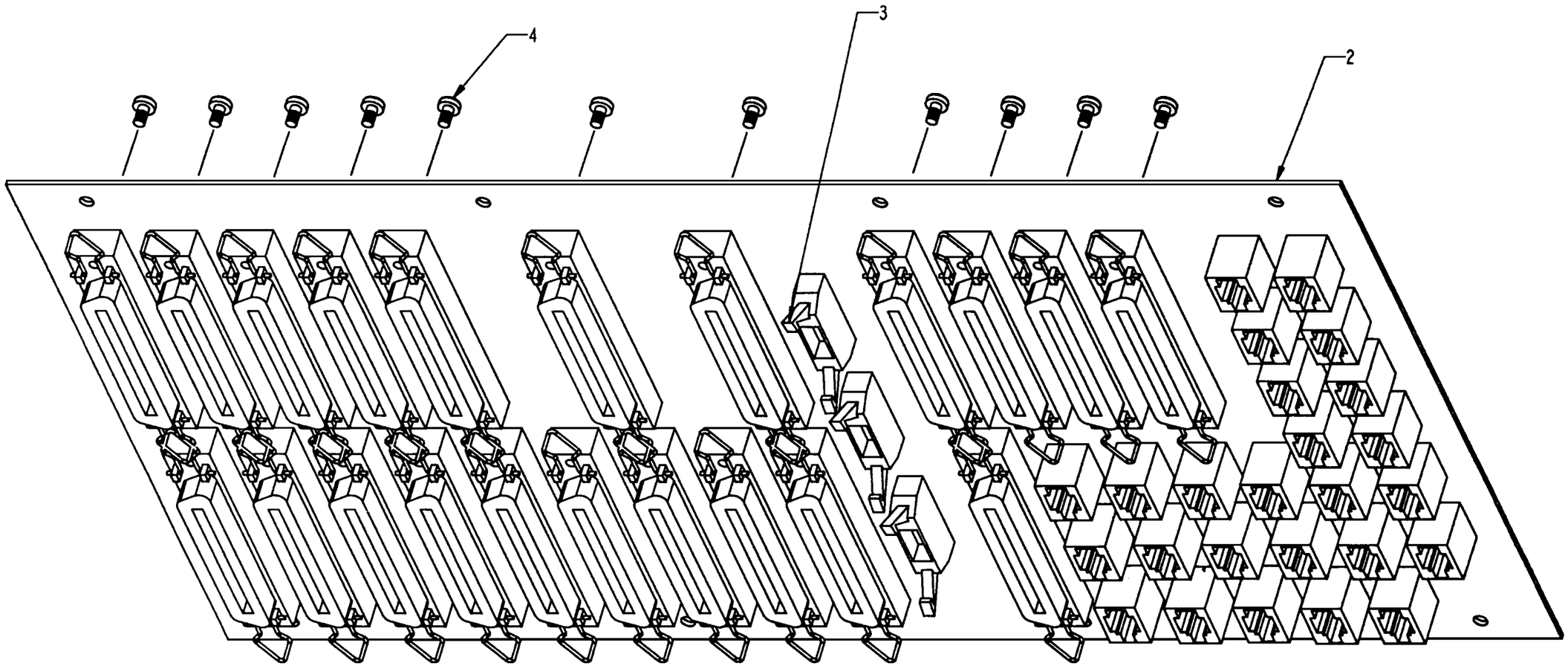




RIGHT SIDE VIEW
PARTIALLY OPEN

PL ISSUED

(1) ASSEMBLY DWG.



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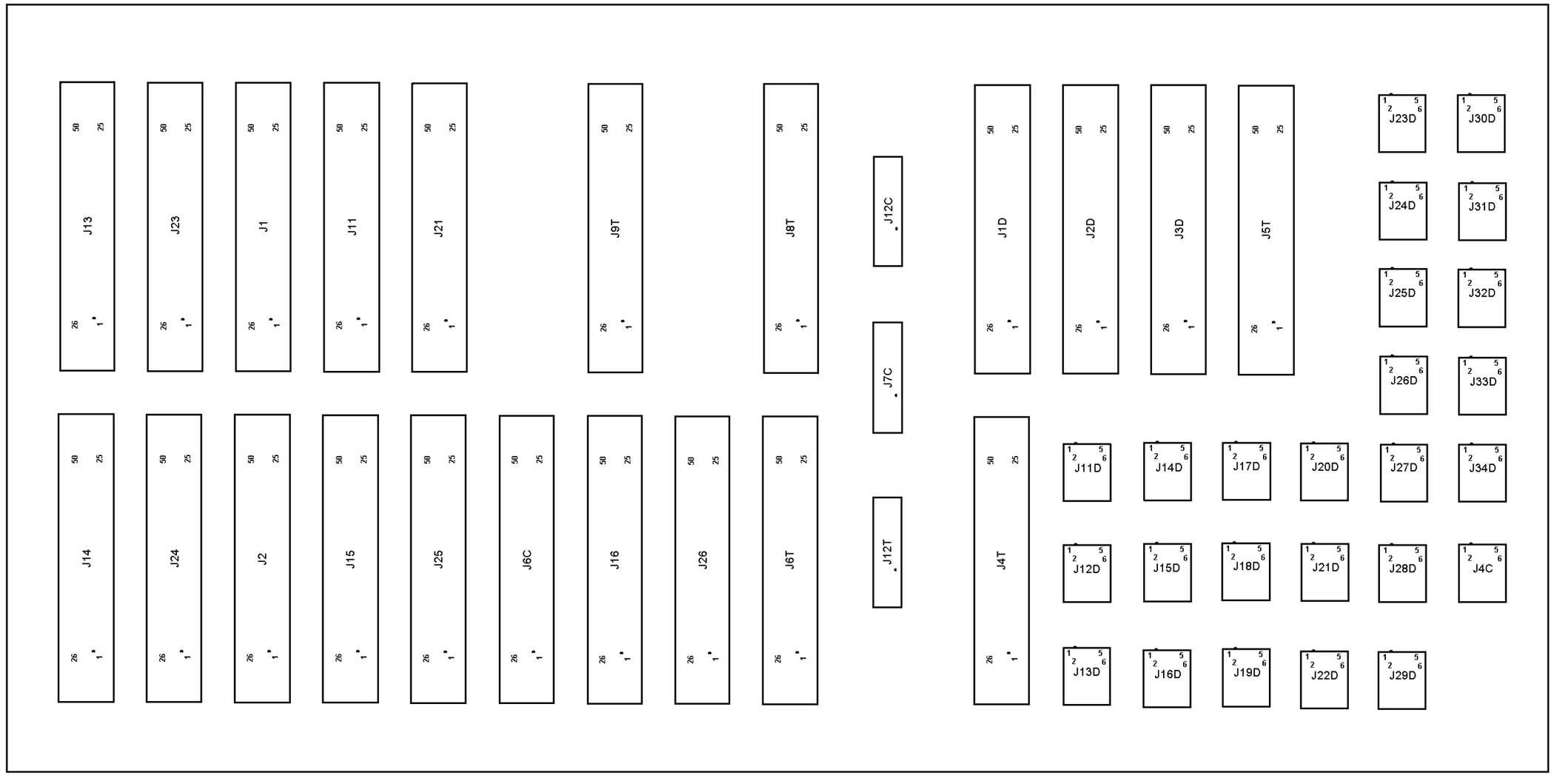

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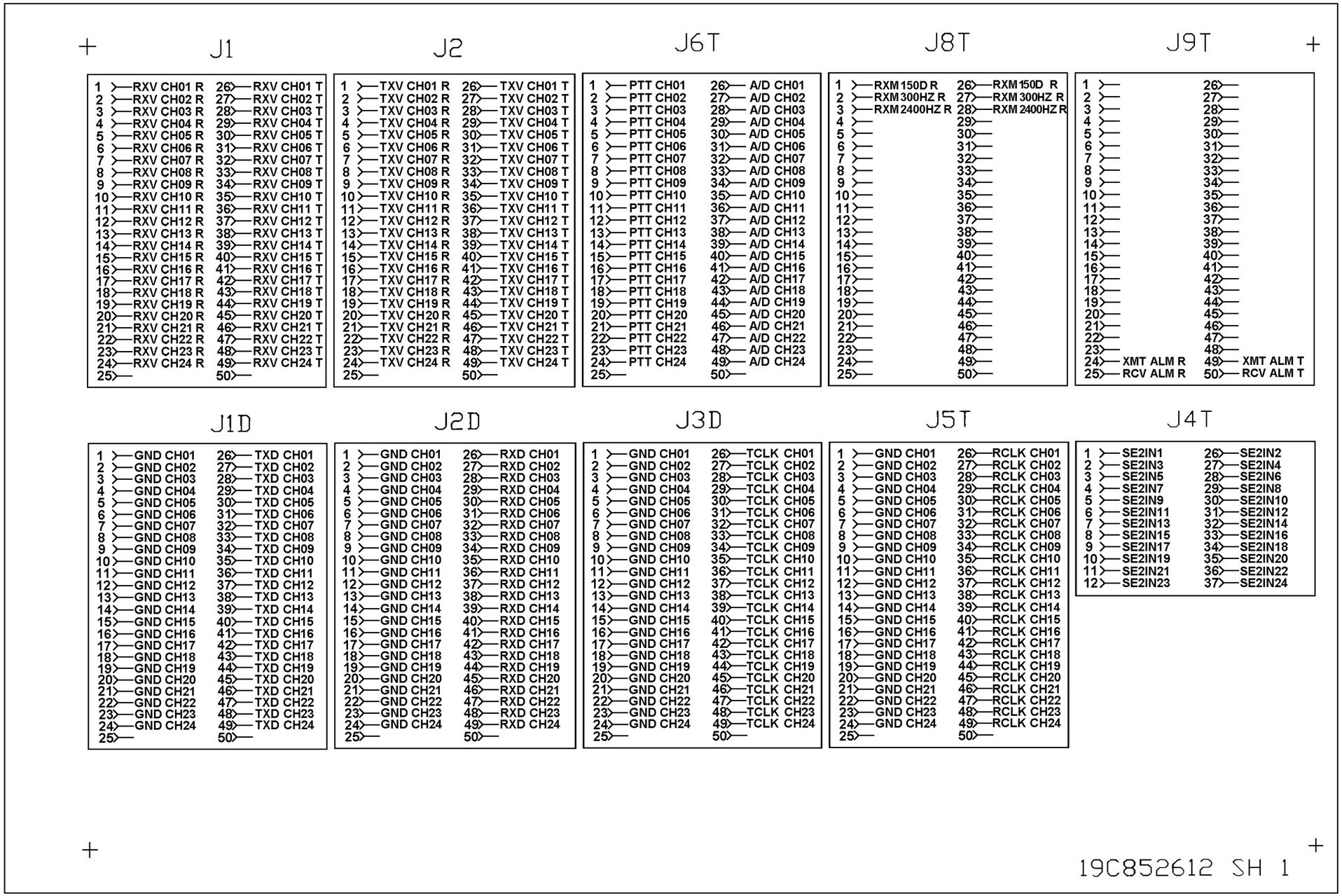

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J11 & J21

1		26	
2	RXM 150D R	27	RXM 150D T
3		28	
4		29	
5	XMT ALM R	30	XMT ALM T
6	PCV ALM R	31	PCV ALM T
7		32	
8		33	
9	RXV CH01 R	34	RXV CH01 T
10	TXV CH01 R	35	TXV CH01 T
11	PTT CH01	36	A/D CH01
12		37	
13	RXV CH02 R	38	RXV CH02 T
14	TXV CH02 R	39	TXV CH02 T
15	PTT CH02	40	A/D CH02
16		41	
17	RXV CH03 R	42	RXV CH03 T
18	TXV CH03 R	43	TXV CH03 T
19	PTT CH03	44	A/D CH03
20		45	
21	RXV CH04 R	46	RXV CH04 T
22	TXV CH04 R	47	TXV CH04 T
23	PTT CH04	48	A/D CH04
24		49	
25		50	

J13 & J23

1	RXV CH05 R	26	RXV CH05 T
2	TXV CH05 R	27	TXV CH05 T
3	PTT CH05	28	A/D CH05
4		29	
5	RXV CH06 R	30	RXV CH06 T
6	TXV CH06 R	31	TXV CH06 T
7	PTT CH06	32	A/D CH06
8		33	
9	RXV CH07 R	34	RXV CH07 T
10	TXV CH07 R	35	TXV CH07 T
11	PTT CH07	36	A/D CH07
12		37	
13	RXV CH08 R	38	RXV CH08 T
14	TXV CH08 R	39	TXV CH08 T
15	PTT CH08	40	A/D CH08
16		41	
17	RXV CH09 R	42	RXV CH09 T
18	TXV CH09 R	43	TXV CH09 T
19	PTT CH09	44	A/D CH09
20		45	
21	RXV CH10 R	46	RXV CH10 T
22	TXV CH10 R	47	TXV CH10 T
23	PTT CH10	48	A/D CH10
24		49	
25		50	

J14 & J24

1	RXV CH11 R	26	RXV CH11 T
2	TXV CH11 R	27	TXV CH11 T
3	PTT CH11	28	A/D CH11
4		29	
5	RXV CH12 R	30	RXV CH12 T
6	TXV CH12 R	31	TXV CH12 T
7	PTT CH12	32	A/D CH12
8		33	
9	RXV CH13 R	34	RXV CH13 T
10	TXV CH13 R	35	TXV CH13 T
11	PTT CH13	36	A/D CH13
12		37	
13	RXV CH14 R	38	RXV CH14 T
14	TXV CH14 R	39	TXV CH14 T
15	PTT CH14	40	A/D CH14
16		41	
17	RXV CH15 R	42	RXV CH15 T
18	TXV CH15 R	43	TXV CH15 T
19	PTT CH15	44	A/D CH15
20		45	
21	RXV CH16 R	46	RXV CH16 T
22	TXV CH16 R	47	TXV CH16 T
23	PTT CH16	48	A/D CH16
24		49	
25		50	

J15 & J25

1	RXV CH17 R	26	RXV CH17 T
2	TXV CH17 R	27	TXV CH17 T
3	PTT CH17	28	A/D CH17
4		29	
5	RXV CH18 R	30	RXV CH18 T
6	TXV CH18 R	31	TXV CH18 T
7	PTT CH18	32	A/D CH18
8		33	
9	RXV CH19 R	34	RXV CH19 T
10	TXV CH19 R	35	TXV CH19 T
11	PTT CH19	36	A/D CH19
12		37	
13	RXV CH20 R	38	RXV CH20 T
14	TXV CH20 R	39	TXV CH20 T
15	PTT CH20	40	A/D CH20
16		41	
17	RXV CH21 R	42	RXV CH21 T
18	TXV CH21 R	43	TXV CH21 T
19	PTT CH21	44	A/D CH21
20		45	
21	RXV CH22 R	46	RXV CH22 T
22	TXV CH22 R	47	TXV CH22 T
23	PTT CH22	48	A/D CH22
24		49	
25		50	

J16 & J26

1	RXV CH23 R	26	RXV CH23 T
2	TXV CH23 R	27	TXV CH23 T
3	PTT CH23	28	A/D CH23
4		29	
5	RXV CH24 R	30	RXV CH24 T
6	TXV CH24 R	31	TXV CH24 T
7	PTT CH24	32	A/D CH24
8		33	
9		34	
10		35	
11		36	
12		37	
13		38	
14		39	
15		40	
16		41	
17		42	
18		43	
19		44	
20		45	
21		46	
22		47	
23		48	
24		49	
25		50	

J121

1	RXM 300HZ T
2	RXM 300HZ R
3	GND
4	RXM 2400HZ T
5	RXM 2400HZ R
6	
7	
8	
9	
10	

19C852612 SH 2

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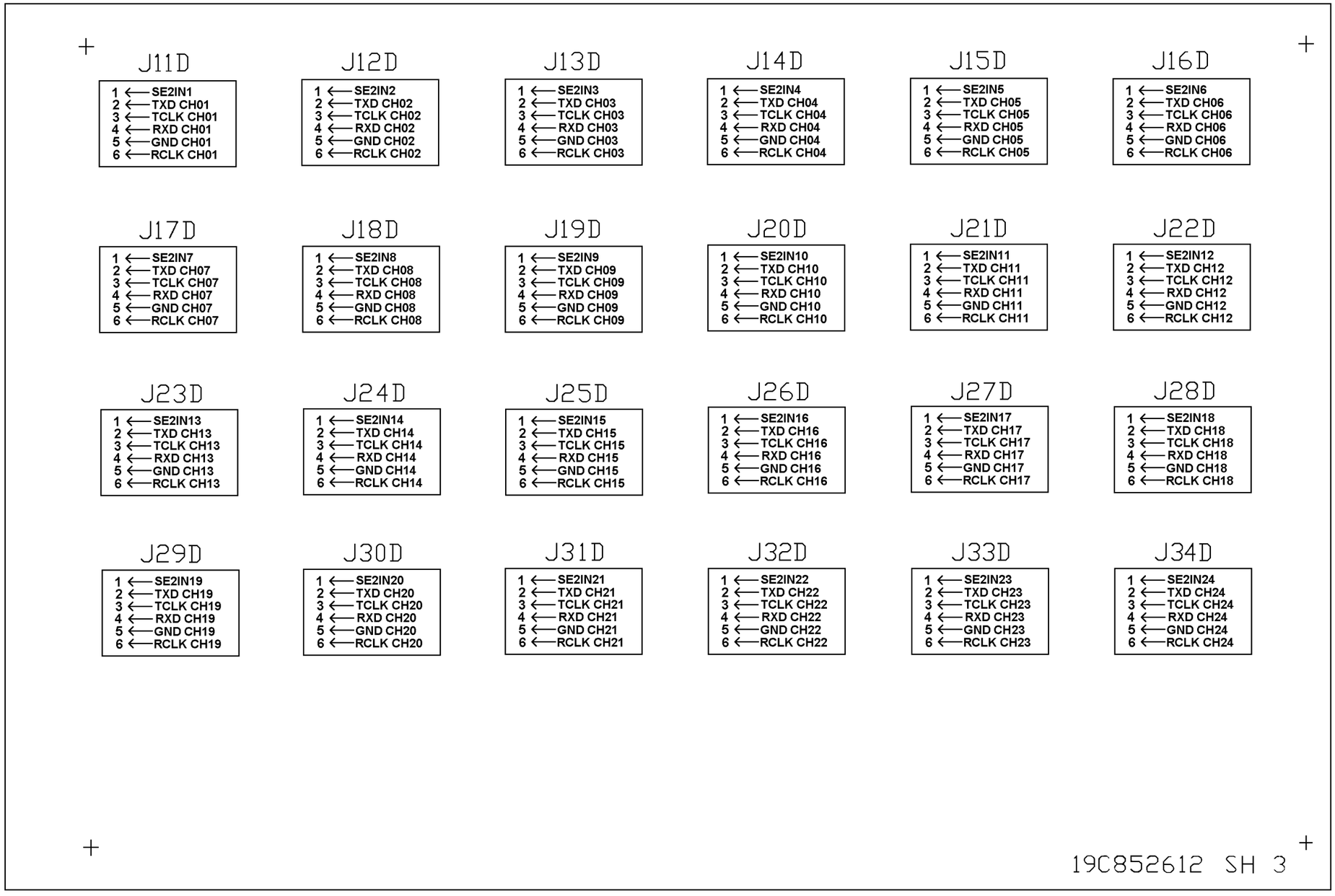

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