

6-28 RS232 CONNECTOR BD. (81425)

Note: This board is optional and is used with the Model 236, Model 237, or Model 258 PARAGON accessories.

This board contains a Female DB-25 connector for communicating with an external computer via a simple 4-wire cable. There is also a 5-pin cable connector which connects to the 81363 RS232 Interface Board. In addition, there are two 8-pin and one 2-pin cable connectors. These connectors are used to daisy chain the eight Low Pass Filter select signals

from the 81377 Control Filter board to the 81341 Transmit Lowpass Filter board. The six higher frequency filter select lines also go directly to connections on the DB-25 and are used to control an external Linear Amplifier. The two lowest frequency select lines are or'd together by diodes D1 and D2 and applied to pin 10 of the DB-25 connector. The 2-pin cable connector is connected to "T" voltage and also goes to pin 9 of the DB-25 connector. The connections to the DB-25 connector are shown below in TABLE 6-1.

TABLE 6-1. RS232 CONNECTOR PINOUTS

<u>DB-25 PIN NO.</u>	<u>FUNCTION</u>
1	CHASSIS GROUND
2	TxD OUTPUT (RS232 LEVELS)
3	RxD INPUT (RS232 LEVELS)
4	NO CONNECTION
5	NO CONNECTION
6	NO CONNECTION
7	SIGNAL GROUND
8	NO CONNECTION
9	PARAGON "T" OUTPUT
10	BAND #1 OUTPUT (0.1 - 2.5 MHz)
11	RxD INPUT (TTL LEVELS)
12	NO CONNECTION
13	NO CONNECTION
14	NO CONNECTION
15	BAND #7 OUTPUT (22 - 30 MHz)
16	NO CONNECTION
17	BAND #6 OUTPUT (15 - 22 MHz)
18	TxD OUTPUT (TTL LEVELS)
19	NO CONNECTION
20	NO CONNECTION
21	BAND #5 OUTPUT (10.5 - 15 MHz)
22	NO CONNECTION
23	BAND #4 OUTPUT (6.5 - 10.5 MHz)
24	BAND #2 OUTPUT (2.5 - 4.0 MHz)
25	BAND #3 OUTPUT (4.0 - 6.5 MHz)

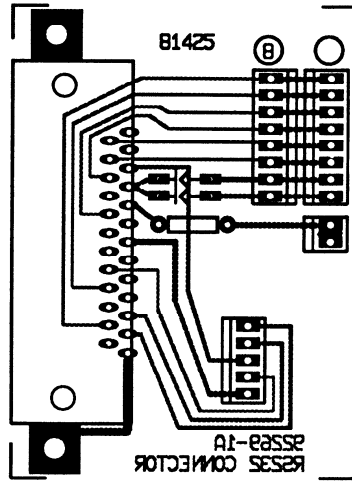


FIGURE 6-80. 81425 RS232 CONNECTOR BOARD CIRCUIT TRACE

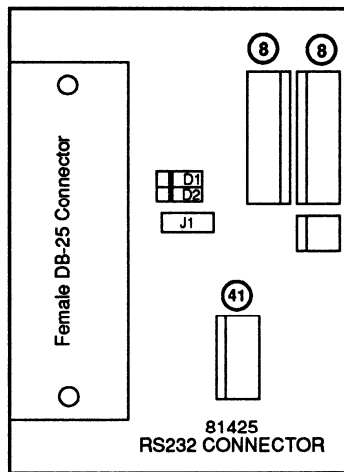
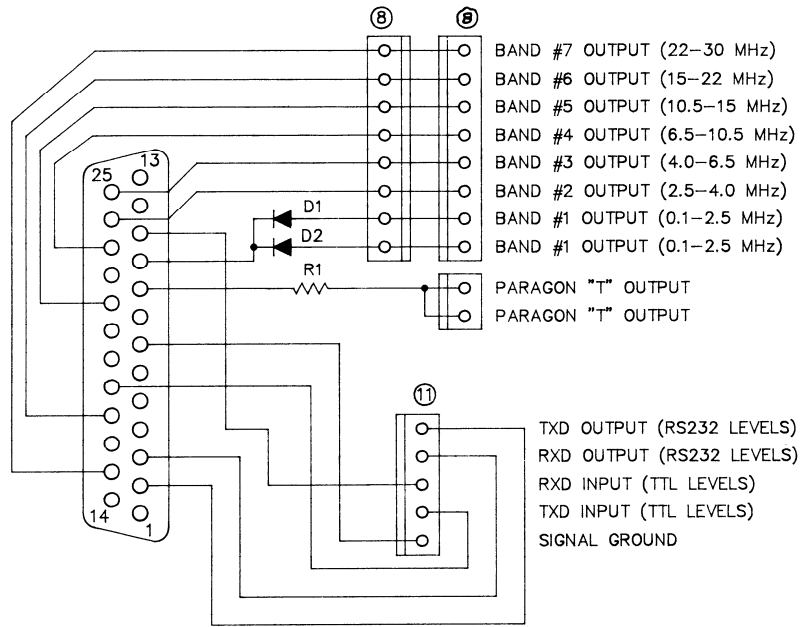


FIGURE 6-81. 81425 RS232 CONNECTOR BOARD COMPONENT LAYOUT



D1,D2 - 1N4148
 R1 - 0 OHM JUMPER

FIGURE 6-82. 81425 RS232 CONNECTOR BOARD SCHEMATIC

6-29 RS232 INTERFACE BD. (81363)

Note: This board is optional and is used with the Model 258 PARAGON accessory.

This assembly contains the circuitry required to interface the PARAGON with an external computer system via the RS232 connector mounted on the rear panel of the PARAGON. The heart of the interface is U1, a CMOS Asynchronous Communications Interface Adapter, which provides bi-directional communications using the RS232 data format and timing specifications. This integrated circuit contains an integral baud rate generator and all required timing control circuitry. The baud rate, parity, and handshaking are all software programmable. For use in the PARAGON, the baud rate is preset to 1200, with 8 data bits, 1 stop bit, and no parity. Also, due to memory restrictions in the PARAGON, the hardware handshaking is not used. Instead, program timing loops are required for reliable

interfacing between the PARAGON and an external computer. This has the advantage that it makes the interface hardware requirements simpler and less computer dependent. The transmit data and receive data lines from U1 go to U2 and to pins 18 and 11 respectively on the DB-25 connector. These signals are TTL levels and are required by some computers in stead of the standard RS232 levels.

Integrated circuit U2 is an RS232 level conversion circuit which changes the 0 to 5 Volt TTL signals to standard -10 to +10 Volt RS232 levels. U2 is powered from the +5 Volt line and uses a built-in DC-to-DC converter to obtain the proper output conversion. The RS232 level transmit data and receive data go the DB-25 pins 2 and 3 respectively.

Table 6-2, below, lists the command codes used to control the PARAGON. For further information refer to the programming information supplied with your software package.

TABLE 6-2. RS232 PARAGON COMMAND CODE CHART

KEY FUNCTION	CHARACTER	ASCII CODE	KEY FUNCTION	CHARACTER	ASCII CODE
0	0	30	FAST	G	47
1	1	31	RX OFF.	H	48
2	2	32	TX OFF.	I	49
3	3	33	SPLIT	J	4A
4	4	34	MS/RATE	K	4B
5	5	35	FM	L	4C
6	6	36	AM	M	4D
7	7	37	LSB	N	4E
8	8	38	USB	O	4F
9	9	39	CW	P	50
RCL/GLC	:	3A	TUNE	Q	51
MLC/SET	;	3B	6.0 FILTER	R	52
STO/GL	<	3C	2.4 FILTER	S	53
CLEAR	=	3D	1.8 FILTER	T	54
VOICE	>	3E	.50 FILTER	U	55
SPOT	?	3F	.25 FILTER	V	56
ENTER	@	40	. (DEC. PT.)	W	57
MT/10 HZ	A	41	SHIFT	X	58
DISP.>	B	42	DOWN/HBD	Y	59
LCK	C	43	UP/HBU	Z	5A
ML/MC	D	44	TUNE UP	[5B
A=B	E	45	STATUS	\	5C
A/B	F	46	TUNE DOWN]	5D

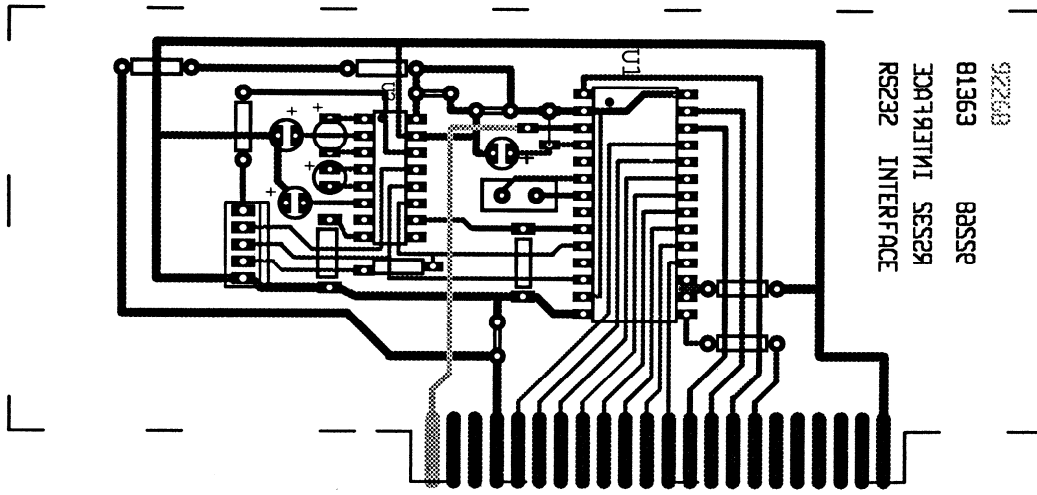


FIGURE 6-83. 81363 RS232 INTERFACE BOARD CIRCUIT TRACE

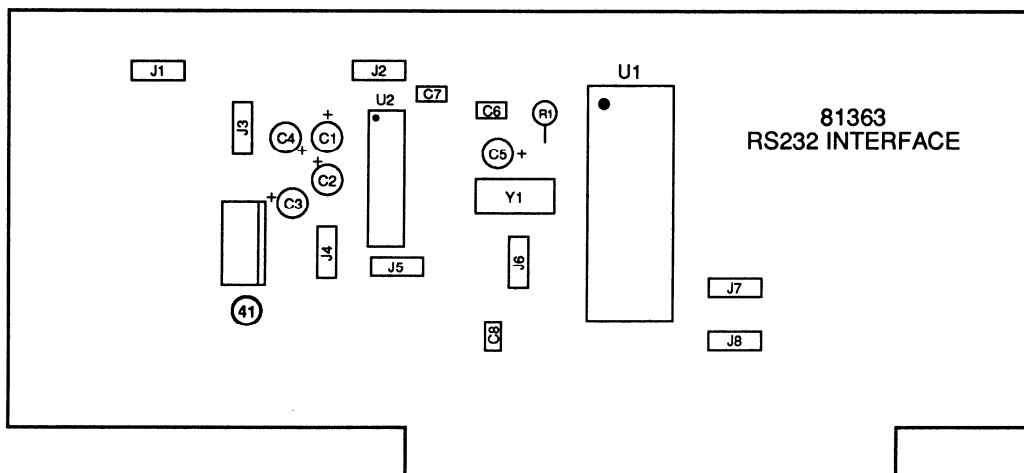
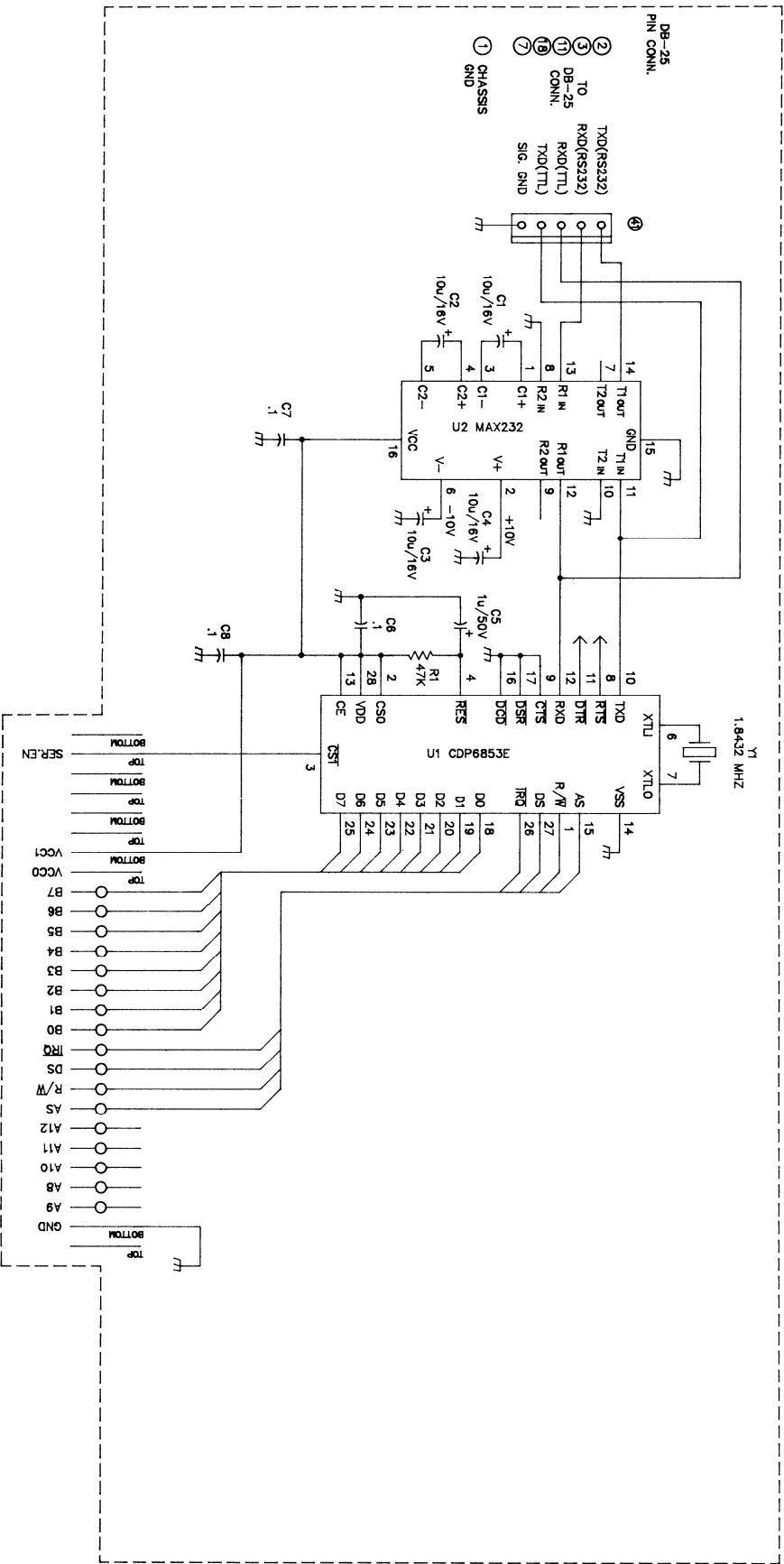


FIGURE 6-84. 81363 RS232 INTERFACE BOARD COMPONENT LAYOUT



REFERENCE DESIGNATORS LAST USED
 CA.U2.R1.71