

RF-553-01

REMOTE PRESELECTOR

INTERFACE

(A24 ASSEMBLY)

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RF-553-01 REMOTE CONTROL ADAPTER GENERAL DESCRIPTION

The RF-553-01 Remote Control Adapter enables the RF-551A/552 Preselector to be remotely controlled by the RF-590 Receiver. This option consists of A24 Interface PWB (10073-6900) and necessary interconnecting cables and connectors.

The A24 Interface PWB (10073-6900) is used to convert serial data from the RF-590 to parallel data for use with either preselector. Serial data is supplied to J2 of A24 Interface PWB from A14 Control PWB through W21. Parallel data to the remote preselector is sent through Interconnect Cable W41 (10073-6917) from J9 on the rear panel of the RF-590 Receiver. Figure 1 shows the location of the A24 Interface PWB on the RF-590 Receiver Chassis.

2. FUNCTIONAL DESCRIPTION

Refer to the component location diagram, figure 2; schematic diagram, figure 3; Interface (A24) Interconnect diagram, figure 4; and Interconnect Cable diagram, figure 5 through this discussion.

Upon initial turn on of the RF-590, R10, C13 and inverter U7 produce the trailing-edge-triggering for U8. U8 enables the shift registers U1, U2, and U3 and gated buffers U4, U5, and U6 to load frequency information to the preselector.

Serial data from the RF-590 is clocked into U1, U2, and U3 and latched with strobe 1. U8 is a retriggerable one shot that enables frequency information to be sent to the preselector \approx 1 second after a frequency change. When a frequency change is made, strobe 2 is generated causing U8 to disable the shift registers while data is being loaded. Once data is loaded and strobe 2 remains in a low state, U8 \overline{QA} enables the shift registers after a one second delay set by C9, R1 time constant.

If frequency changes are made at less than one second intervals, the preselector will not respond. A bypass signal is provided for system applications. There is no bypass mode in the RF-551/552 Preselector, a large degradation in sensitivity will be noted for a large frequency change due to the one second delay of frequency information to the preselector.

U8 QB signal is delayed 0.1 milliseconds by R7 and C4 to allow frequency information to be loaded into U4, U5, and U6 from the shift registers. R6 and C5 produce a 1 millisecond delay before U4, U5, and U6 are latched holding the frequency data to the preselector.

3. PARTS LIST

Table 1 is a comprehensive parts list for the A24 Interface PWB Assembly. Tables 2 and 3 are the parts lists for the cable assemblies used in this option.

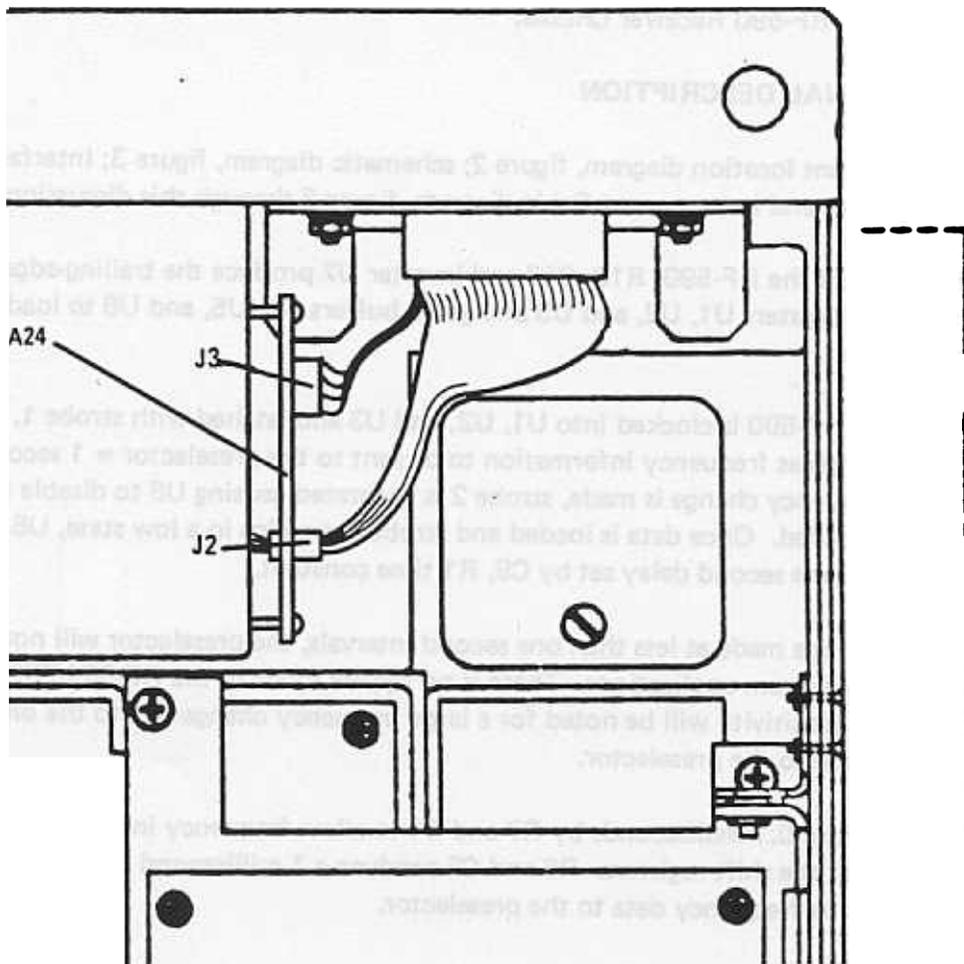


Figure 1. A24 Interface PWB Location


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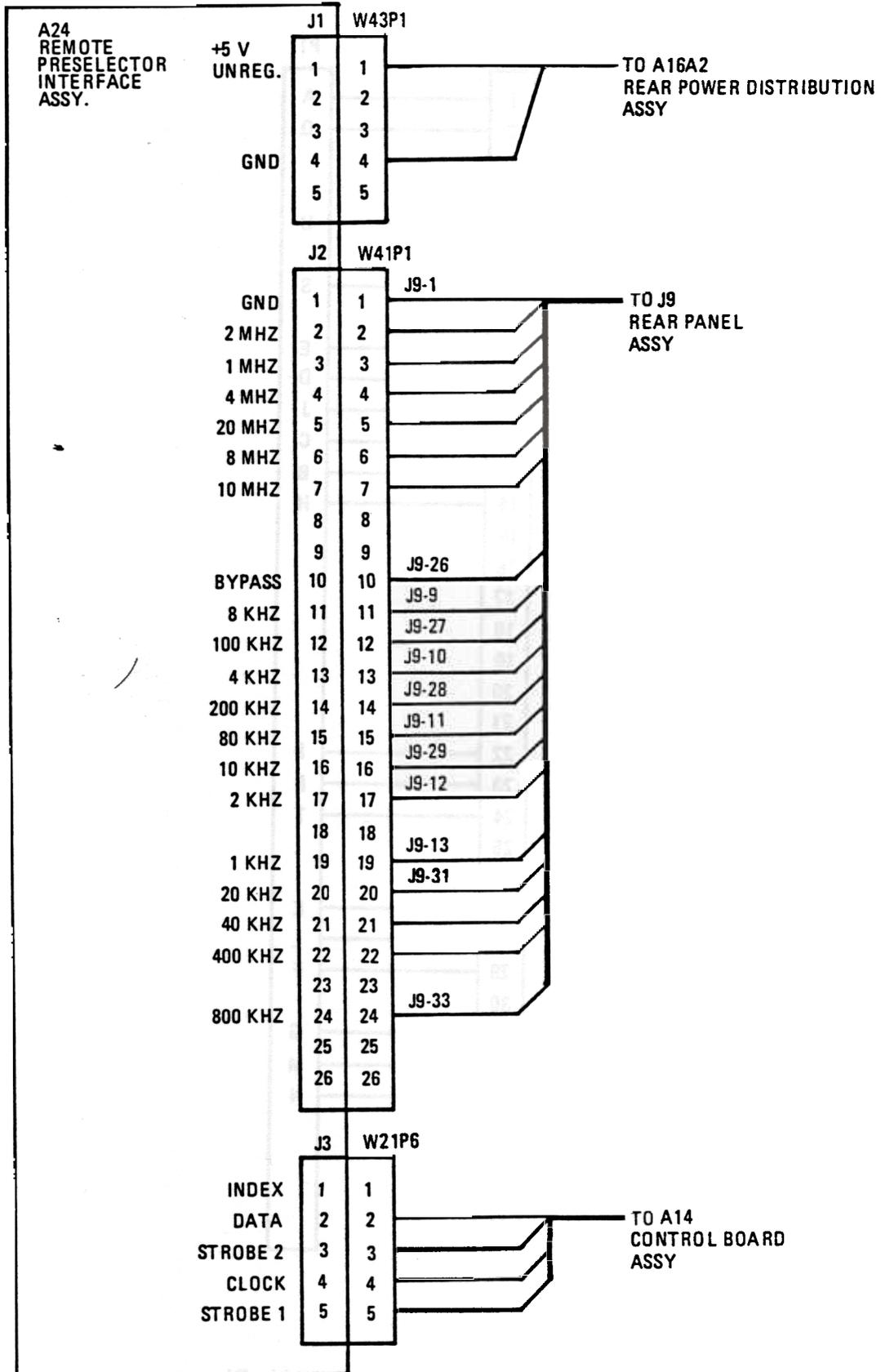


Figure 4. Interface (A24) Interconnect Diagram

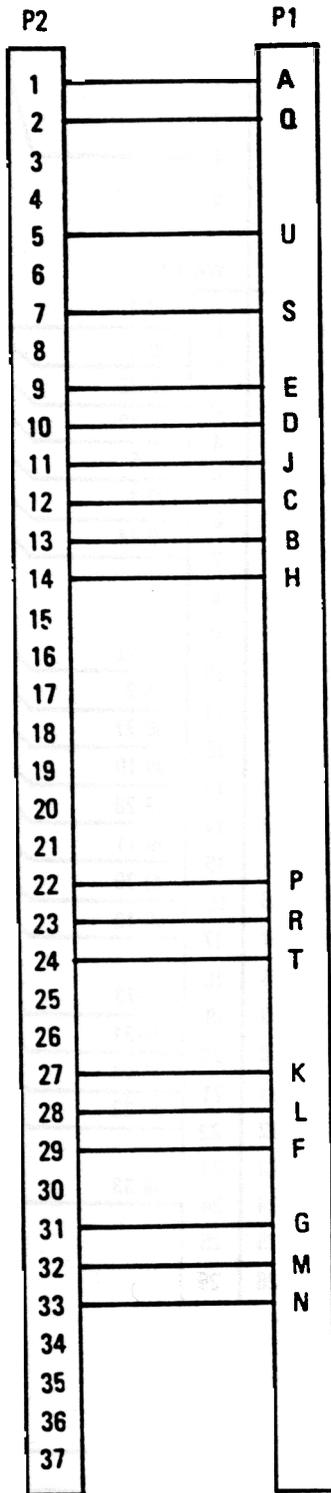


Figure 5. Interconnect Cable Assembly Diagram

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Table 1. A24 Interface PWB Parts List

Ref. Desig.	Part No.	Description
C1-C8	10073-6900	Interface PWB Assembly
C9	CK06BX104K	Capacitor, Ceramic, 1 uF, 100 V
C10	C26-0016-330	Capacitor, 33 uF
C11, C12	C26-0025-339	Capacitor, 3.3 uF
C13	CK06BX104K	Capacitor, Ceramic, 1 uF, 100 V
J1	C26-0016-330	Capacitor, 33 uF
J2	J46-0032-005	Connector, 5 Pin
J3	J46-0031-026	Connector, 26 Pin
L1	J46-0032-005	Connector, 5 Pin
R1	MS75085-13	Coil
R2-R4	R65-0003-303	Resistor, Carbon, Film, 30K, 1/4 W, 5%
R5, R6	R65-0003-473	Resistor, Carbon, Film, 47K, 1/4 W, 5%
R7	R65-0003-103	Resistor, Carbon, Film, 10K, 1/4 W, 5%
R8-R10	R65-0003-102	Resistor, Carbon, Film, 1K, 1/4 W, 5%
U1-U3	R65-0003-473	Resistor, Carbon, Film, 47K, 1/4 W, 5%
U4-U6	I01-0000-156	Integrated Circuit, CMOS, CD4094BE
U7	I05-0000-373	Integrated Circuit, 74LS373
U8	I01-0000-018	Hex Inverter - Buffer
	I01-0000-353	Dual Monostable, CD4538BEX

Table 2. In/Output Cable Assembly Parts List

Ref. Desig.	Part No.	Description
J1	10073-6916	In/Output Cable
1	J20-0004-104	Connector, 37
2	J45-0003-101	Sockets
3	MP-3633	Key
	10073-6918	Cable Assembly

Table 3. Interconnect Cable Parts List

Ref. Desig.	Part No.	Description
P1	10073-6917	Cable Interconnect
P2, P3	905-0042	Connector Kit
20	J20-0004-004	Connector, 37
	J45-0015-333	Contact Pins

- NOTES: UNLESS OTHERWISE SPECIFIED:
1. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN. FOR COMPLETE DESIGNATION PREFIX WITH UNIT NUMBER AND/OR ASSEMBLY DESIGNATION.
 2. RESISTOR VALUES ARE IN OHMS, 1/K Ω , 5K.
 3. CAPACITOR VALUES ARE IN MICROFARADS.
 4. VENDOR AND/OR JEDEC PART NUMBER CALLOUTS ARE FOR REFERENCE ONLY. COMPONENTS ARE SUPPLIED PER PART NUMBER IN PARTS LIST.

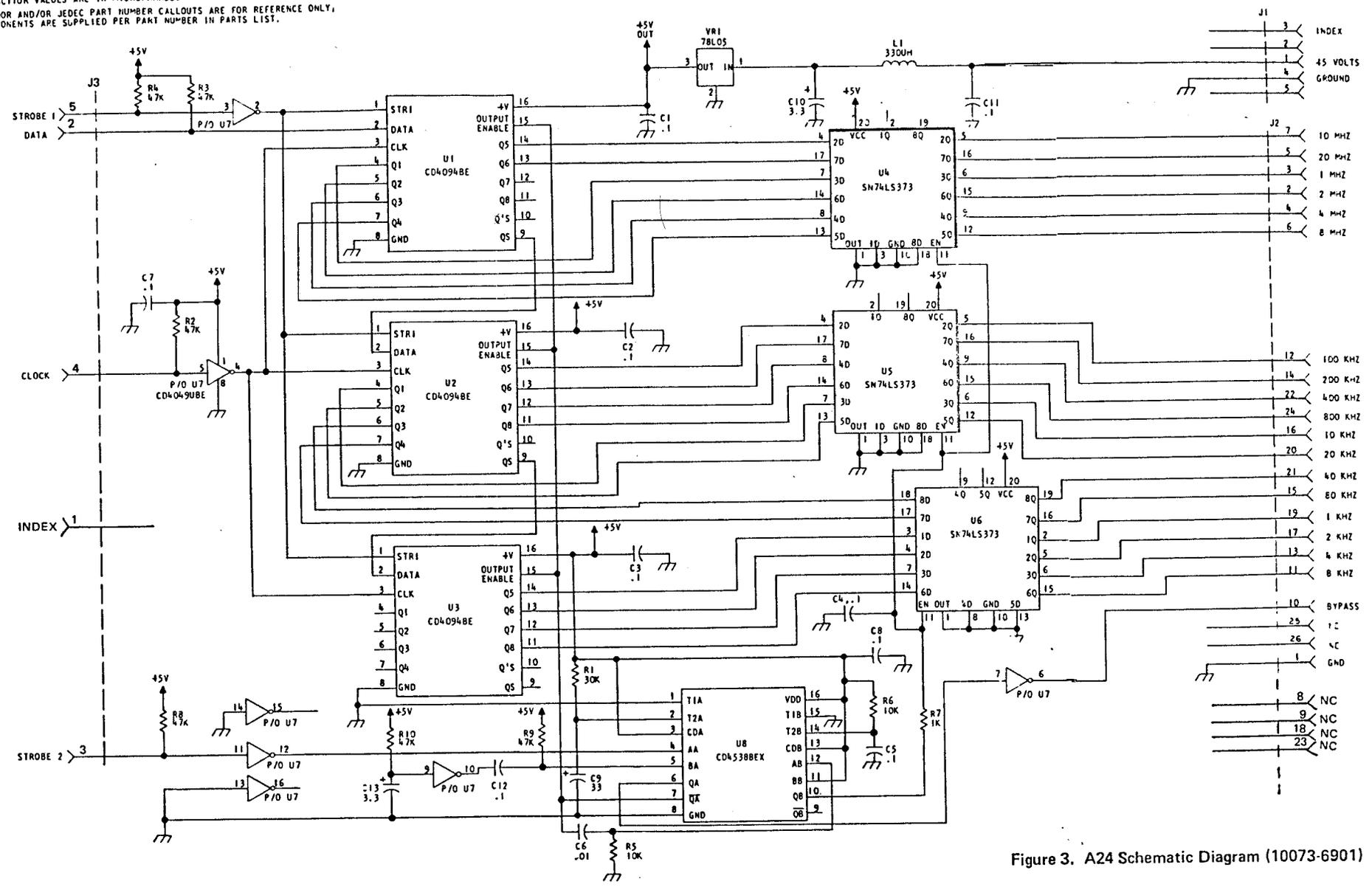


Figure 3. A24 Schematic Diagram (10073-6901)