TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL
RADAR INTERFACE EQUIPMENT MAINTENANCE
RADAR INTEGRATION UNITS 1 AND 2

EXPANDED TROUBLESHOOTING
(LOGIC DIAGRAMS)

GUIDED MISSILE
AIR DEFENSE SYSTEM
AN/TSQ-73

HEADQUARTERS, DEPARTMENT OF THE ARMY

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REPORTING OF ERRORS

You can help improve this publication. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, U.S. Army Missile Command, ATTN: AMSMI-LC-ME-P, Redstone Arsenal, AL 35898-5238. A reply will be furnished to you.

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SECTION XV. RADAR INTEGRATION UNITS

5-48. General. This manual is Volume 5 of TM 9-1430-655-20-3, Radar Interface Equipment Maintenance for Guided Missile Air Defense System AN/TSQ-73. It contains the logic diagrams covering radar integration units (RIU) 1 and 2 for use and guidance of advanced personnel responsible for repair of the RIE. Foldouts 126 through 165 cover RIU 1 and foldouts 166 through 205 cover RIU 2. RIU 1 and 2 are located in equipment rack 1, 1A1A1, door A, in two card cage bays. Figure 5-4 illustrates bay 1 and figure 5-5 illustrates bay 2.

5-49. Logic Diagrams. Logic diagrams provide the maintenance technician pin to pin signal flow, traceable by signal mnemonics and I/O tables, to help identify faulty cards and to troubleshoot faults in the backplane wiring and other areas that are beyond fault isolation capabilities of the MTS.

5-50. Using Logic Diagrams. Logic diagrams in this manual show signal flow in functional subsystems of RIU 1 and 2. Signal flow is traceable between circuit card pin numbers and is shown as inputs and outputs of integrated circuit logic devices on the circuit card. A specific signal can be followed between foldouts by using the signal mnemonic and the logic diagram input/output table. The circuit card slot is shown within the integrated circuit card device symbol. Table 5-39 contains the circuit card slot and the part number of the card. Table 5-40 contains, by card part number, the test point for each of the 80 pins of MTS testable cards.

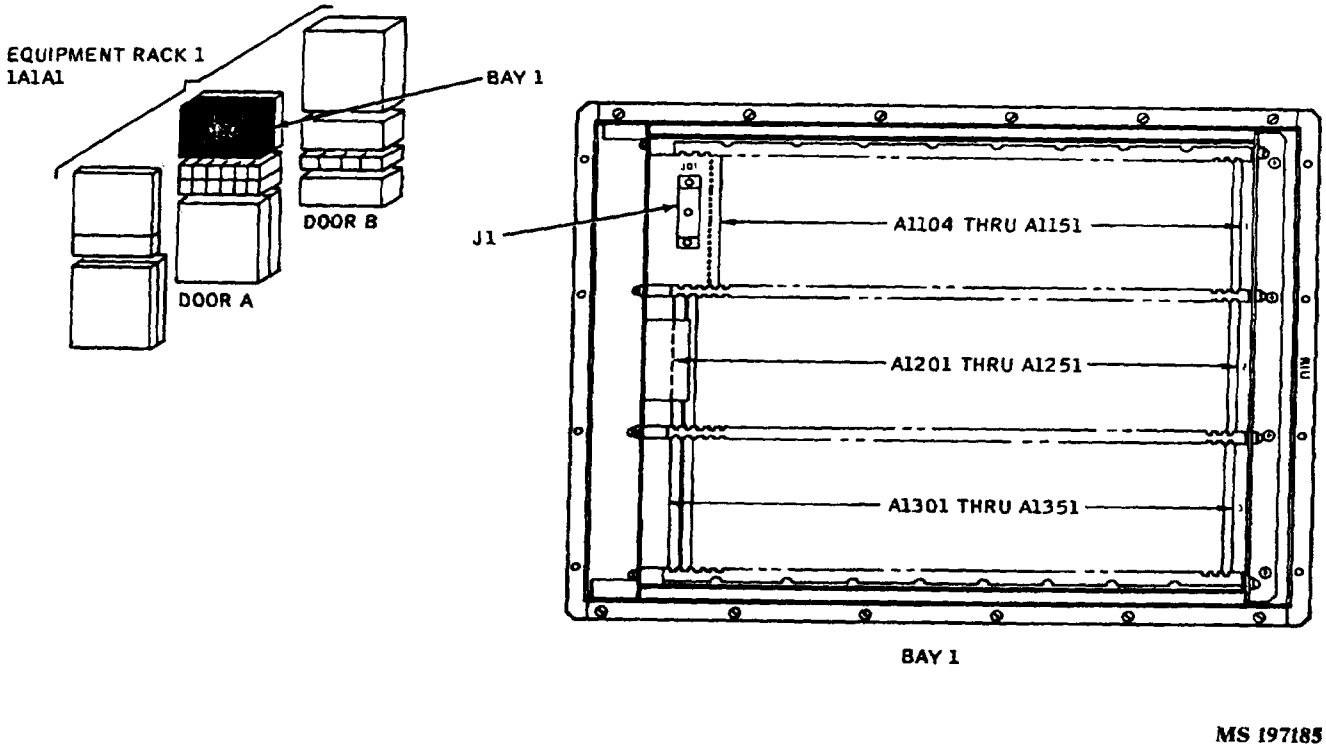

Figure 5-4. Radar Integration Unit 1A1A1A4 Bay 1, Component Location

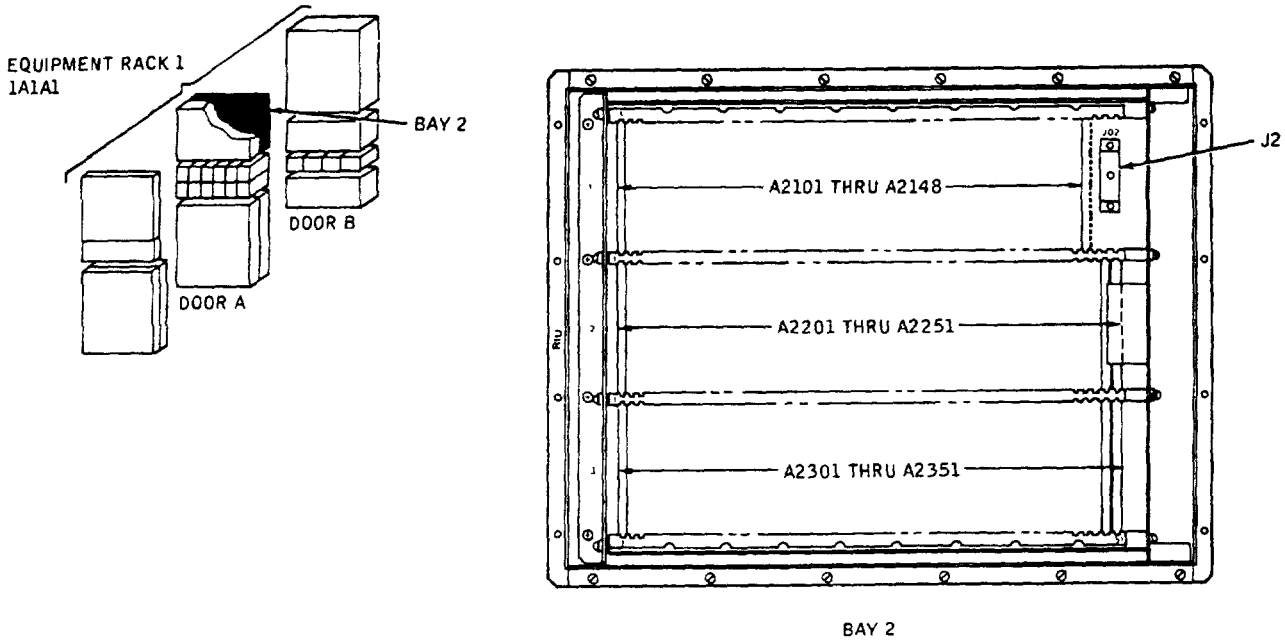

Figure 5-5. Radar Integration Unit 1A1A1A4 Bay 2, Component Location

Table 5-39. Radar Integration Unit 1A1A1A4, Circuit Card Location

Card slot	Part number	Card type	Color code 1	2	3	4
		BAY 1-SHELF 1				
A1101	-	-	-	-	-	-
A1102	-	-	-	-	-	-
A1102	-	-	-	-	-	-
A1103	-					
A1104	W308	Connector	-	-	-	-
A1105	W309	Connector	-	-	-	-
A1106	W528	Connector	-	-	-	-
A1107	W529	Connector	-	-	-	-
A108	587104-102	Dual 4-input NAND gate	-	-	Yellow	-
A109	587104-102	Dual 4-input NAND gate	-	-	Yellow	-
A110	587104-102	Dual 4-input NAND gate	-	-	Yellow	-
A111	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1112	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1113	587100-102	4/8 MHz oscillator	-	-	-	-
A1114	10281652	3-input J-K flip-flop	Brown	Blue	Green	Red
A1115	10281652	3-input J-K flip-flop	Brown	Blue	Green	Red
A1116	10281652	3-input J-K flip-flop	Brown	Blue	Green	Red
A1117	10281652	3-input J-K flip-flop	Brown	Blue	Green	Red
A1118	10281652	3-input J-K flip-flop	Brown	Blue	Green	Red
A1119	587102-102	Quad 2-input NAND gate	-	-	-	Red
A1120	587102-102	Quad 2-input NAND gate	-	-	-	Red
A1121	10281606	Hex 4-bit shift register	Brown	Blue	Black	Blue
A1122	10281606	Hex 4-bit shift register	Brown	Blue	Black	Blue
A1123	587119-100	240-ohm resistor	-	-	-	-
A1124	587108-102	Single 8-input NAND gate	-	-	Gray	-
A11251	10281610	Hex 4-bit comparator	Brown	Blue	Brown	Black
A1126	10281609	Quint 4-bit adder	Brown	Blue	Black	White
A1127	10281609	Quint 4-bit adder	Brown	Blue	Black	White
A1128	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1129	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1130	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1131	587102-102	Quad 2-input NAND gate	-	-	Red	-
A11321	587104-102	Dual 4-input NAND gate	-	-	Yellow	-
A1133	587102-102	Quad 2-input NAND gate	-	-	Red	-
A1134	587102-102	Quad 2-input NAND gate	-	-	Red	-

See footnote at end of table.