
SERVICE LETTER

Equipment Type(s): CN-1506A Control Unit

Subject: Future Revision 11 to RDR-1500B Volume 3 Manual
(006-15591-0000) (I.B. 21500B)

Reference: Change Page Package on following pages.
(These pages can be printed and inserted in your manual)

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MAINTENANCE MANUAL
CN-1506A CONTROL UNIT

SECTION III FAULT DIAGNOSIS

1. General

This section provides troubleshooting information, for use when the CN-1506A Control Unit fails to meet the performance requirements in functional test procedure, located in Part 3, Section II of this manual.

2. Test Equipment

In general, entry into the Fault Diagnosis section starts from the functional test procedure. The only test equipment required to troubleshoot the control unit is a DVM (13). Item number 13 identifies the test equipment in table 1-1, Part 9 of this manual.

3. Troubleshooting

A. General

A faulty switch, potentiometer, connector or wiring in the control unit can cause a failure in the functional test procedure. The troubleshooting procedure consists of referring to figure 7-1 (Part 7, Section 7) and performing continuity and resistance checks are given in table 3-1 to isolate the fault. After fault isolation and repair, the unit should be retested using the functional test procedure in Part 3, Section II of the manual.

When any panel lamps fail on the front panel, remove light panel. Apply +5 Vdc (-0651) or +28 Vdc (-0652) to check parallel string of panel lamps. Replace panel lamps that remain off.

B. Fault Isolation

The fault isolation procedure follows:

- (1) Disconnect cable from rear connector.
- (2) Using DVM (13), perform continuity and resistance measurements given in table 3-1 to isolate fault within unit.

4. Retest Procedure

After a fault is isolated and repaired, perform the functional test in Part 3, Section II, to ensure that the repaired area is operating correctly and that other areas were not damaged during the repair procedure.

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4.

CHECK	SW/POT. SETTING	FROM J1001 PIN	TO J1001 PIN	DVM INDICATION	
RADAR Switch S1001A	S1001A-2	J	A	Continuity	
	Other settings	J	A	Open	
	S1001A-3	J	B	Continuity	
	Other settings	J	B	Open	
	S1001A-4	J	C	Continuity	
	Other settings	J	C	Open	
	S1001A-5	J	D	Continuity	
	Other settings	J	D	Open	
	S1001A-6	J	E	Continuity	
	Other settings	J	E	Open	
	S1001A-7	J	H	Continuity	
	Other settings	J	H	Open	
	S1001A-8	J	--	Open	
	Other settings	J	--	Open	
	S1001A-9	J	--	Open	
	Other settings	J	--	Open	
	S1001B	S1001B-2 and -3	c	R	Continuity
		Other settings	c	R	Open
	S1001C	S1001C-2 to -7	r	FF	Continuity
		Other settings	r	FF	Open
S1001D	S1001D-3 to -7	r	q	Continuity	
OVERLAY Switch S1002A	S1002A-5	U	A	Continuity	
	Other settings	U	A	Open	
	S1002A-6	U	E	Continuity	
	Other settings	U	E	Open	
	S1002A-7	U	C	Continuity	
	Other settings	U	C	Open	
	S1002A-8	U	D	Continuity	
	Other settings	U	D	Open	
	S1002B	S1002B-6 to -8 with S1001 in STBY.	q	r	Continuity
		Other settings	q	r	Open
PULSE Switch S1008	Closed	X	D	Continuity	
	Open	X	D	Open	

CN-1506A Continuity and Resistance Measurements
Table 3-1 (Sheet 1 of 3)

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4.

CHECK	SW/POT. SETTING	FROM J1001 PIN	TO J1001 PIN	DVM INDICATION	
DISPLAY Switch S1003	S1003-6	V	C	Continuity	
	Other settings	V	C	Open	
	S1003-7	V	B	Continuity	
	Other settings	V	B	Open	
	S1003-8	V	A	Continuity	
	Other settings	V	A	Open	
STAB Switch S1004A	Closed	CC	Y	Continuity	
	Open	CC	Y	Open	
	S1004B	Closed	W	A	Continuity
		Open	W	A	Open
BCN Switch S1005	Closed	X	A	Continuity	
	Open	X	A	Open	
CODE Switch S1006	Closed	X	B	Continuity	
	Open	X	B	Open	
HOLD Switch S1007	Closed	X	C	Continuity	
	Open	X	C	Open	
OFFSET Switch S1009	Closed	X	E	Continuity	
	Open	X	E	Open	
RESET Switch S1010	Closed				
	Open	X	F	Continuity	
ENTER Switch S1011	Closed				
	Open	X	G	Continuity	
FTC Switch S1007	Closed	X	G	Open	
	Open	X	B	Continuity	
		X	B	Open	

CN-1506A Continuity and Resistance Measurements
Table 3-1 (Sheet 2)

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4.

CHECK	SW/POT. SETTING	FROM J1001 PIN	TO J1001 PIN	DVM INDICATION
R/B Switch S1012	Closed Open	X X	H H	Continuity Open
RATE Switch S1013	Closed Open	Y Y	A A	Continuity Open
RNG ↑ Switch S1014	Closed Open	Y Y	C C	Continuity Open
RNG ↓ Switch S1015	Closed Open	Y Y	D D	Continuity Open
SLEW Switch S1016	Straight up Straight down Straight right Straight left	Z Z Z Z	A C B D	Continuity Continuity Continuity Continuity
Roll Trim Pot. R1001	Full range	<u>z</u>	GG	0 to 2.8 kilohms
Pitch Trim Pot. R1002	Full range	EE	<u>u</u>	0 to 2.8 kilohms
SRCH GAIN Pot. R1004	Full range	<u>m</u>	S	0. to 5.5 kilohms
BCN GAIN Pot. R1003	Full range	n	T	0 to 11.3 kilohms
Tilt Adjust Pot. R1005	Full range	HH	DD	0 to 7.6 kilohms
STC Pot. R1006	Full range	<u>k</u>	<u>w</u>	0 to 11.3 kilohms

CN-1506A Continuity and Resistance Measurements
Table 3-1 (Sheet 3)