

Issue 1
19.1.73

DESIGNS DEPARTMENT SPECIFICATION

NO.5.213(71)

Automatic Intercarrier Monitor MN2/522

NON STANDARD



.....
(G. J. JOHNSTONE)
for Head of Designs Department

Written by:- M.T. Ellen

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BBC

DS/SPA4

D.D.Spec.No.5.213(71)
Title Sheet

DESIGNS DEPARTMENT SPECIFICATION NO. 5.213(71)

Automatic Intercarrier Monitor MN2/522

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MN2/522

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Automatic Intercarrier Monitor MN2/522

1. INTRODUCTION

The MN2/522 was designed to monitor the output of the EP7/513A & B and the EP7/514A & B translators and active deflectors. When used in these equipments its video input is derived from a UN24/501 which is a coupler on the output of the equipment.

The video signal applied to PLA is passed through a 6MHz filter to extract the intercarrier sound component and it is then rectified and used to operate a relay. The relay has one make contact which is closed when the sound and vision are present. When used in the translator or active deflector the MN2/522 should be adjusted so that a drop of 3dB in sound level does not de-energise the relay.

2. MECHANICAL CONSTRUCTION

All the components including the relay are mounted on a printed board inside a CH1/57B. In order to facilitate the inspection of the printed board the plug PLA should not be soldered until the unit is tested.

3. GENERAL SPECIFICATION

Power Supply	+6V	28 ± 2mA
	-6V	26 ± 2mA
I/P sensitivity		
R12 at minimum setting	<	100mV
R12 at maximum setting	>	300mV
Backlash in relay operation		
R12 at minimum setting	<	1.5dB
R12 at maximum setting	<	4dB
Output		One make contact which is closed when the signal is present.
Relay contact rating	50V	200mA
Connectors		
input		Sealectro SMB snap on
supply		Filtercons
output		Feedthrough solder tags

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Automatic Intercarrier Monitor MN2/522

PRODUCTION TEST SCHEDULE

Equipment Required

- AVO 8
- Video Oscillator (e.g. Wayne Kerr type 022D)
- Double power supply
- General purpose oscilloscope (to display 6MHz) sensitivity 10mV/div.
(e.g. Tektronix type 585 with plug in type 82).

Test Procedure

Remove the printed board from the CH1/57B and check that it has been manufactured satisfactorily. Replace the printed board and solder PLA in position.

Connect +6V and -6V to C7 and C8 respectively and connect an AVO set to an ohms range to the contacts of R1A. Adjust R12 so that the relay contacts make and then back off R12 until the contacts just break. The unit is now set to its most sensitive condition. Connect a video oscillator set to 6MHz to PLA (note, the input impedance of the unit is high with respect to 75 ohms) and increase its level until the relay contacts make, now measure the output level from the oscillator and check that it is within the specification.

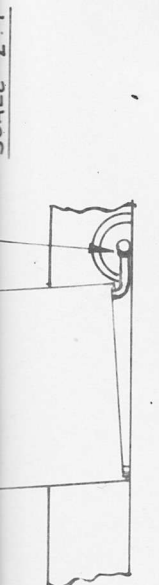
Increase the output from the video oscillator to 1 volt and adjust R12 until the relay contacts break, now back off R12 until the relay contacts just make. The unit is now set to its least sensitive position. Reduce the output level of the oscillator until the contacts break then gradually increase the level until the contacts make. Measure the output level of the oscillator and check that it is within the specification. Reduce the input level by 5dB and check that the relay contacts open.

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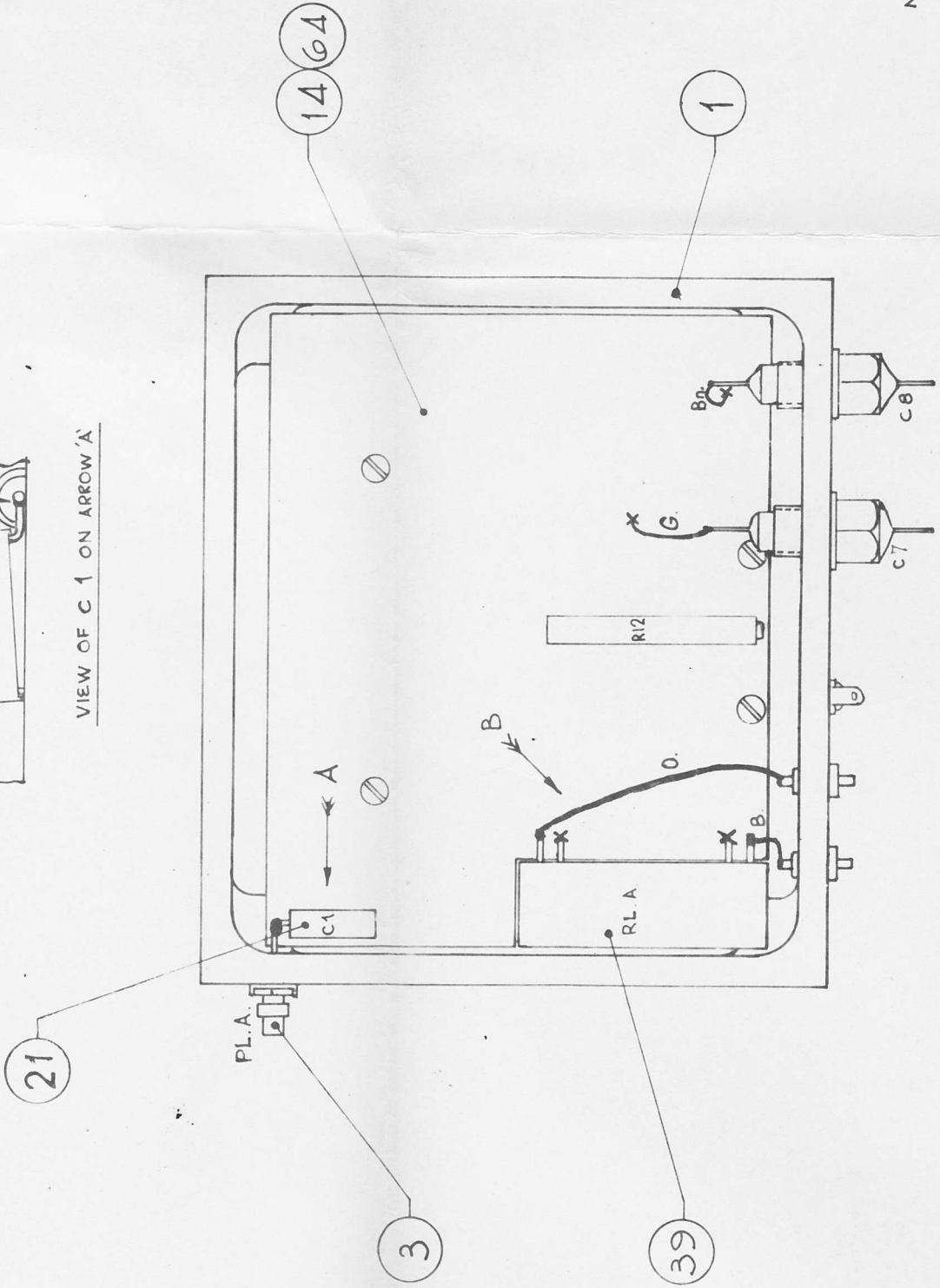


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ISS.	CHANGE	ITEM No.	QTY	DESCRIPTION	CCT REF.	BBC REF. OR DRG. No.
1	24-11-71					
2	SPEC. ADDED. ITEM 1 REVISED. J.H.					
3	R.B.A. 9-3-72. ITEMS 12 & 18 ADDED. CF11170(2) JRS					
4	ITEM 13 & 20 ADDED. ITEMS 14, 16 & 19 WERE * - ITEM 12 DELETED. JRS 8-11-72					
5	ITEM 3 WAS 1-045-0000 CF 7B3A(5) ITEM 7 WAS 50AF " 15 # 1/6 WAS MARKED + R.L.B. CF 7B19 R.L.B. 7.8.73					
				ITEM 13 DELETED. ITEMS 14, 18, 19, EMB. LOAN # ADDED. VAL H.J.M. 7-12-72		
DRAWING NUMBERS.						
				Circuit	D30401A3	
				Parts List	D30402A4	
				Assembly & WIRING	D30403A2	
				Assembly Notes	D30404A4	
				Details 1	D30405A3	
				Detail 2	D30406A4	
				P.B. Wiring	D30407A2	
				P.B. Comp. Loc.	D30408A4	
				P.B. Drilling	D30409A4	
(FURTHER INFORMATION REQUIRED FOR MANUFACTURE.)						
				Unit Assembly Information	EA10484	
				UNIT WIRING INFORMATION	EA10140	
				SPEC. ED/MN2/522		
1	*			Chassis CH1/57B modified BY CONTRACTOR AS FOLLOWS:-	SPEC. ED/CH1/57	
				Frame DRILLED TO:-		D30405A3, Det. 1
2						
3	1	*		Bulkhead receptacle sealectro type 51-045-9009		1-24682-503
4				1-24682-500 CAN BE USED WHILEST STOCK LAST		
5	1	*		Unit Label		D30406A4, Det. 2
6						
7	7	*		Vero half Pin TP 11034		
8						
9	2	*		Lead through tag		1-28652-002
10						
11	1			6BA Solder Tag D/E'		
12						
13				* PRINTED BOARD TAG ASSEMBLY INCLUDING ITEMS 7, 14, 18, 19, 21, 24, 28, 29, 32, 35, 36, 39, 41, 43, 57, 59, 66		
14	1	*		Printed Board		D30407A2, D30408A4 D30409A4
				CAPACITORS, FEED THROUGH 1kv.		
15						
16	1	*		.002µF	C7	1-20638-286
17	1	*		.002µF	C8	" "
18	1	*		50µF 10V ELECTROLYTIC	C9	1-20733-482
19	1	*		0.0068µF	C10	1-20615-334
20	1	*		LABEL, BLICK SELF ADHESIVE REF. N° 8 COLOURED GREEN.		



VIEW OF C 1 ON ARROW 'A'



VIEW WITH LID REMOVED FOR CLARITY

- NOTES:
1. ASSEMBLE 1, 4 & 7
 2. ENSURE THE ASSEMBLY IS IN THE CORRECT POSITION
 3. POSITIVE
 4. ALL BLACK