Typed by vaa 5/18/67

AUTOMATIC CHANGEOVER FROM EXTERNAL 1 MC STANDARD

TO

INTERNAL 1 MC STANDARD

KIT 215A

TMC SPECIFICATION

NO. s 1192

REV: Ø

COMPILED: RRH **CHECKED:** **APPD:** **SHEET** 2 **OF** 6

TITLE: AUTOMATIC CHANGEOVER FROM EXTERNAL 1 MC STANDARD TO INTERNAL 1 MC STANDARD

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I. **EQUIPMENT AFFECTED**

   A. TMC Model CSS-3 Primary Frequency Standard.

II. **PURPOSE**

   A. Modification of Frequency Standard to provide automatic changeover upon loss of EXTERNAL frequency standard input.

III. **MATERIALS SUPPLIED IN KIT**

ITEM NO.	AMOUNT	DESCRIPTION
1	1	TMC No. NP-362-46 Name Plate
2	1	TMC No. AX-619-2, Switching Unit
3	1	TMC No. MS-4339, Mtg. Plate for AX619-2
4	1	TMC No. EY-102-2, Grommet
5	1	TMC No. CA-1050, Power Cable
6	1	Schematic CK- AX-619-2
7	1	TMC No. CA-480-312, Interconnecting Coaxial Cable
8	4	TMC No. SCBP0632BN5, Screw, Mach. for MS-4339
9	4	TMC No. LWE06MRN, Washer, Lock, for MS-4339
10	3'	TMC No. CD-101-1-MW, Lacing Cord
11	1	TMC No. SCFP0632BN5, Screw, Mach.

IV. **TOOLS REQUIRED**

To be supplied by the installing activity:

1. Soldering iron, medium and 1 foot solder.
2. Pliers, 6" Longnose.
3. Pliers, 6" Diagonal.
4. Screwdriver, 6" Phillips.
5. Tin-snips, 12".
6. Hewlett-Packard 410-BR.
7. Simpson 260

V. **PROCEDURE**

1. Turn CSS front pan 1 STANDBY/ON switch to STANDBY.

2. Disconnect power plug, J-605 from rear of unit.

3. Disconnect all coaxial connecting cables from rear of unit.

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V. <u>PROCEDURE</u> - Cont'd

4. Remove the CSS to a convenient work area.

5. Remove top and bottom covers from CSS.

6. Using the existing holes and hardware, mount Item #3, in the location shown on Figure 3 (NOTE: The 45° angle on the mounting plate clears J-605 for proper orientation of the plate. [Note screw exchange].).

7. Install Item #4 in center hole of mtg. plate just installed in Step 6.

8. Attach the green wire of Item #5 to the (+24V D-C) point located on Figure #1, and the black (ground) wire of Item #5 to the ground point located on Figure #1. Solder these connections.

9. Route Item #5 just installed in Step 8 to rear of chassis and along existing cable, run up through grommet hole, then through grommet hole of Item #3.

   NOTE: There now should be a green & black wire protruding from the rear of MS-4339.

10. Connect and solder the remaining wires of CA-1050, Item #5 to Itam #2 supplied in kit, as follows.

   a. green wire to 24 volt terminal of AX619-2 (located inside unit).
   b. black wire to the ground lug of AX619-2 (located inside unit).

11. Mount Item #2 on Item #3 with Items #8 and #9.

   NOTE: The 3 BNC connectors of the AX619-2 must be located in a horizontal plane nearest the bottom rear of the CSS.

12. Replace bottom cover on the CSS.

13. Replace top cover of CSS.

14. Replace CSS in SBG assembly and reconnect power plug to J-605.

15. Reconnect the BNC connectors at the rear of the unit as follows:

   a. RG-174 plug which originally connected to EXT. 1 MC STD now connects to EXT. STD. IN of AX619-2.
   b. RG-174/U plug which originally connected to 1 MC out of CSS now connects to 1 MC out of AX619-2.
   c. Connect one end of Item #7, supplied in kit, to J-602 located on rear of CSS, and connect the other end of Item 7 to INTERNAL STD. IN of AX619-2.

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V. <u>PROCEDURE</u> - Cont'd

16.   Place the CSS front panel STANDBY/ON switch to ON.

17.   This completes TMC No. KIT-215A modification of CSS-3

18.   Apply Item #1 directly below name plate of CSS-3.

VI. <u>ALIGMENT</u>

1.   On AX619-2, turn R1 counter-clockwise.

2.   Connect the VTVM across the output of the External Standard at J-602 and set the output for 1.0 Volt.

3.   Connect the Simpson to read Ohms across 8 & 9 of TB1. Met r should read short.

4.   Slowly turn R1 clockwise until the terminals 8 & 9 open. Check to see that the External Standard output is still 1.0 Volt.

5.   Reduce the output of the External Standard, until terminals 8 & 9 show a short again. The output level should not fall below 0.707 Volts.

6.   Raise the output to 1.0 Volt again. Ternimals 8 & 9 should open. A slight adjustment of R1 may be necessary.

7.   Repeat Steps 5 and 6.

8.   Set R617 for 1.0 Volt and lock R1 and R617.

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F I G U R E # 1

BOTTOM VIEW

FRONT OF CSS

F I G U R E # 2

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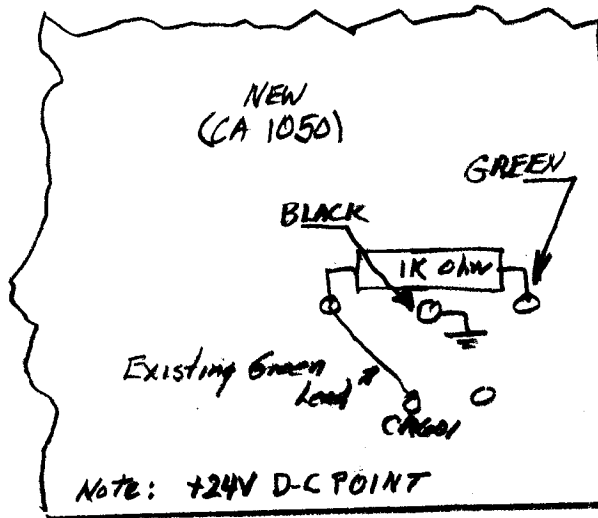COMPILED: RRH   CHECKED: APPD: SHEET 6 OF 6

TITLE: AUTOMATIC CHANGEOVER FROM EXTERNAL 1 MC STANDARD TO INTERNAL 1 MC STANDARD
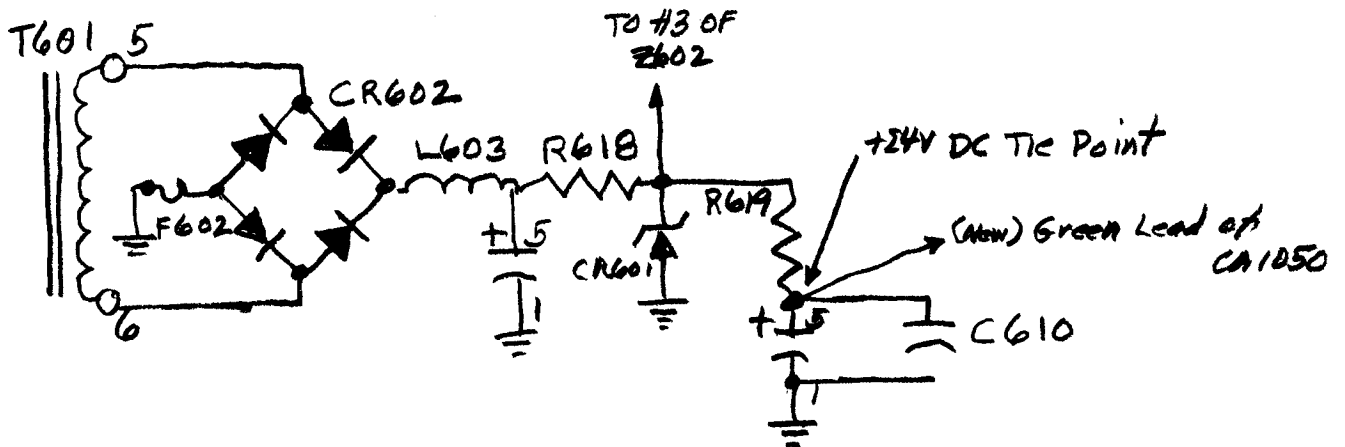
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F I G U R E # 3

REAR VIEW OF CSS CHASSIS

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK   NEW YORK

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LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
5/19/67	Ø			ORIGINAL RELEASE FOR PRODUCTION	

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TMC FORM MLR-1 2-65—AINS.