TMC SPECIFICATION

NO. S 1256

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TITLE:

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KIT 356

INTRODUCTION:

The TMC KIT 356 is designed to be used with GPT-10K( ) series of transmitters equipped with an auxiliary frame, directional coupler and wattmeter.

The purpose of the modification kit is to facilitate rear intake cooling of air to the auxiliary frame and provide unbalanced output termination point on the top of transmitter in lieu of the conventional GPT-10KW side output termination.

Part I of this procedure will pertain to the modification of unbalanced output termination and Part II will pertain to rear intake cooling of air to auxiliary frame.

Prior to modification of transmitter, note the following:

ALL PRIMARY AC INPUT TO TRANSMITTER MUST BE TEMPORARILY REMOVED TO PROVIDE MAXIMUM SAFETY TO INSTALLATION PERSONNEL.

MATERIALS SUPPLIED IN KIT 356

I. Unbalanced Output Termination Relocation:

ITEM	DESCRIPTION	QUANTITY
1. MS-2338-2	Plate (balanced bowl cover)	1 ea.
2. SCBP0832BN10	Screw Binderhead	12 ea.
3. FW08HBN	Washer Flat	12 ea.
4. LWS08MRN	Lockwasher Split	12 ea.
5. NTH0832BN10	Nut Hex	12 ea.
6. SCFP1032BN10	Screw Flathead	8 ea.
7. NTH1032BN12	Nut Hex	8 ea.
8. FW10HBN	Washer	8 ea.
9. LWS10MRN	Lockwasher Split	8 ea.
10. MS-4826-13	Right Side Cover Plate	1 ea.
11. SCBP2520BN8	Screw Bolt	4 ea.
12. CA-412-2-6.00	Output Lead	1 ea.
13. CU-102-4	Plastic Clamp	1 ea.

II. Rear Air Intake Cooling Auxiliary Frame:

14. AX-703	Auxiliary Frame, Assembly	1 ea.
15. AD-103-4	Filter (P/O Item 1)	1 ea.
16. MS-2256	Filter Cover Plate	1 ea.
17. NP-362-46	Nameplate	1 ea.

TOOLS REQUIRED BUT NOT SUPPLIED:

1. 7/16" Spintite
2. 3/8" Spintite
3. 1/2" Spintite
4. Phillips Head Screwdriver #2
5. Flat Blade Screwdriver #6
6. 3/4" Open End Wrench

PART I - OUTPUT TERMINATION MODIFICATION

A. Preparation for Modification

1. Remove unbalanced output transmission line, and connector (do not discard hardware).
2. Loosen four (4) mounting bolts on top outer cover of transmitter and temporarily remove cover. (Do not discard cover or hardware.)

---- NOTE ----

To prevent covers; shields from being scratched during installation, the items that must be temporarily removed should be secured in a safe place.

3. Loosen and remove all mounting screws on outer part of front PA window, remove window. (Do not discard windows and mounting screws.)

---- NOTE ----

When transmitter is operated unbalanced, balance bowl assemblies are not installed, and cover plate is provided to be mounted on the top RF shield over bowl assembly holes. However, when transmitter operation is undetermined (balanced or unbalanced) at the time of shipment, balance bowls are installed on top of transmitter, with connector rods removed for ease of installation.

4. Remove mounting plate and/or balance bowls attached to top RF shield and discard.

B. INSTALLATION PROCEDURE (Refer to Figure 1)

1. Disconnect wire from E904 to the threaded stud in the center on the end of directional coupler DC-900. (discard wire and save hardware).

2. Disconnect cable CA-829 (part of frame wire harness) plug numbered 1 (or REF) from the bottom rear side of directional coupler DC-900. Disconnect cable

plug numbered 2 (or FWD) from top rear side of directional coupler DC-900. (Both plugs will be reconnected once directional coupler has been relocated.) Remove plug in diodes foom the coupler & do not discard).

3. Remove mounting hardware on directional coupler mounting plates (MS2702) from the outside of transmitter. Carefully remove mounting plates and then directional coupler from coupler mounting bracket. Save mounting plates with spacers attached

---- NOTE ----

Once coupler has been removed from transmitter, the coupler must first be installed on modified balanced output bowl cover plate (Item 1, P/N MS-2338-2). This installation must be performed in the following manner: (Refer to Figure 2)

4. Place directional coupler upright with threaded stud end on work bench; with cable jacks facing installation personnel.

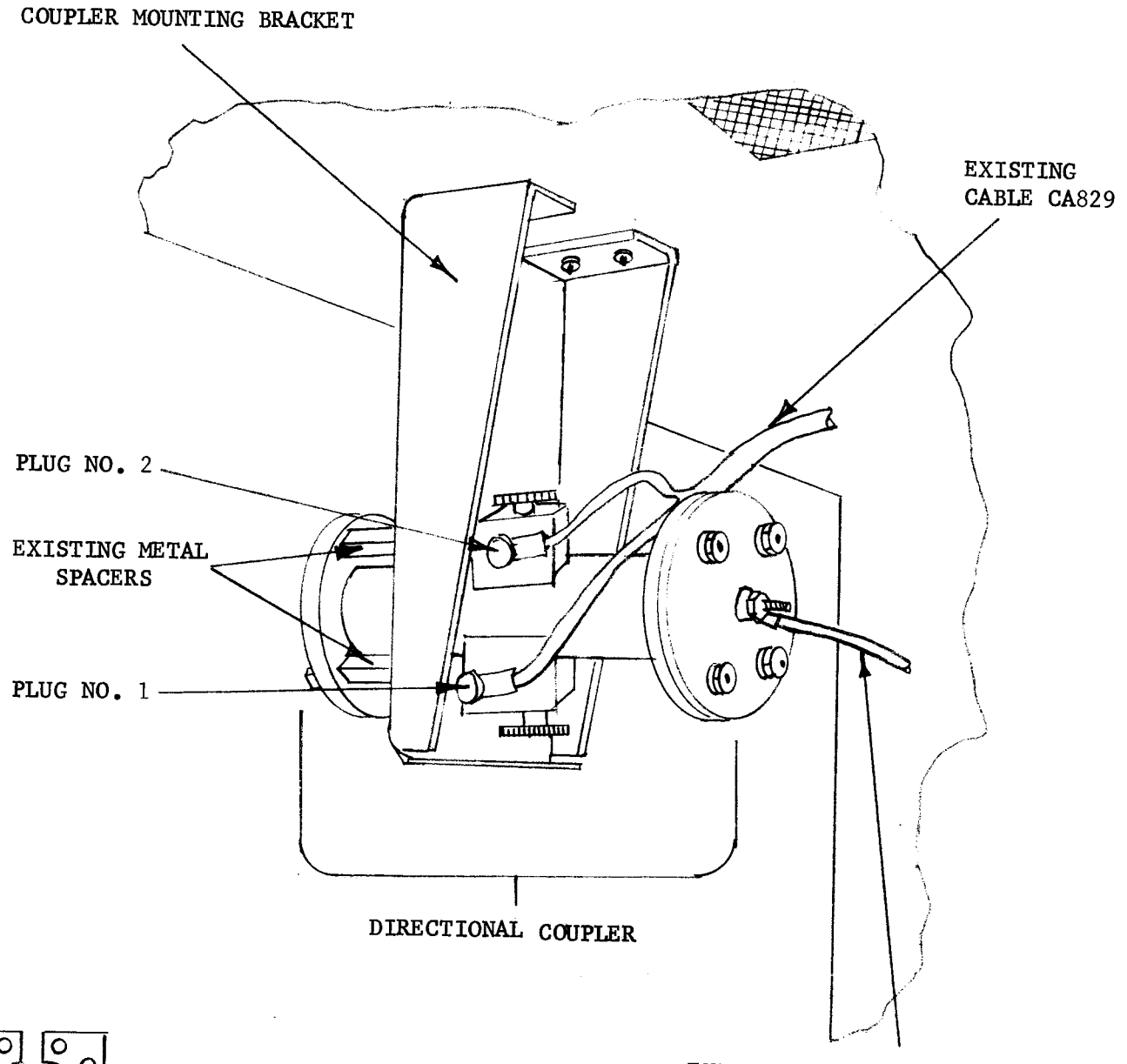
CAUTION

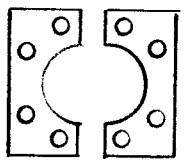
--- BE CAREFUL NOT TO DAMAGE THREADED STUD ---

5. Place Item 1 (modified balanced bowl cover plate, MS-2338-2) over directional coupler. (Cover plate must be positioned with counter-sunk holes facing work bench and large hole on right side.)

6. Place directional coupler mounting plates (2 plates that were removed when coupler was removed from transmitter in step 3) under swivel end of directional coupler with four metal spacers facing up, lift cover plate (Item 1) until flush with mounting brackets. Align the eight (8) counter-sunk holes with the eight holes on mounting bracket.

7. Install Item 6 (1032 Flat head screws) in the eight countersunk holes on the underside of the cover plate. Secure Item 6 with flat washer, Item 8; lockwasher, Item 9; hex nut, Item 7.





EXISTING COUPLER MTG PLATES MS2702

FIGURE 1

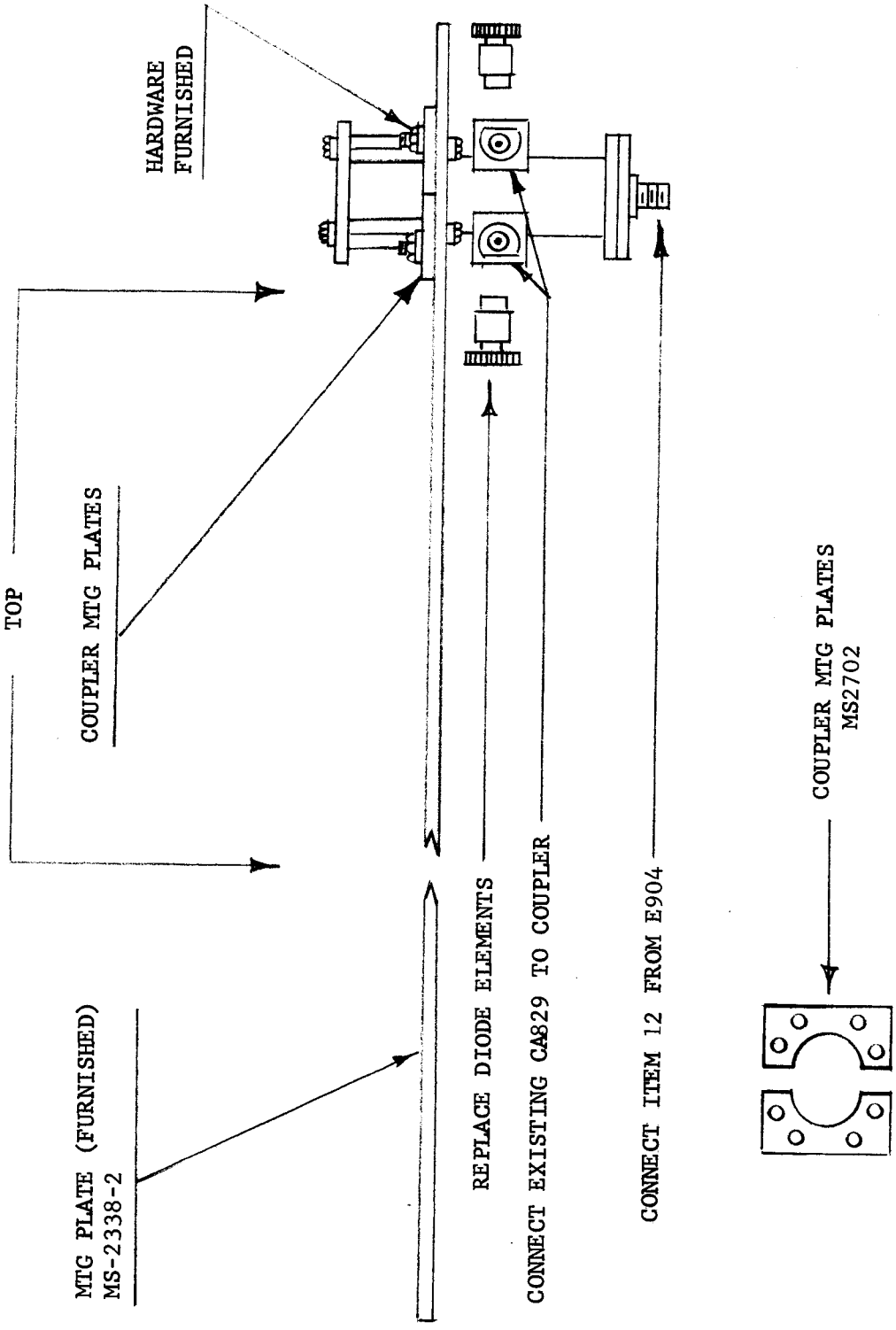

HARDWARE FURNISHED
TOP
COUPLER MTG PLATES
MTG PLATE (FURNISHED) MS-2338-2
REPLACE DIODE ELEMENTS
CONNECT EXISTING CA829 TO COUPLER
CONNECT ITEM 12 FROM E904
COUPLER MTG PLATES MS2702

FIGURE 2

---- NOTE ----
After completion of the aforementioned steps 3 thru 7 the directional coupler, DC-900 is ready for re-installation ON TOP OF TRANSMITTER

8. Take coupler assembly (coupler and cover plate mounted together) and mount on TOP OF TRANSMITTER with the bottom portion of directional coupler extending through the right balanced bowl hole. (rightbalanced bowl hole as viewed from the front of transmitter)

9. Secure coupler assembly to top of transmitter frame with Items 2, 3, 4 and 5 (8/32 screw, binder head; flat washer, split lockwasher and hex nut).

10. Connect Item 12 (CA-412-2-6.00 insulated lead) from E904 to threaded stud end of directional coupler, secure connection with hardware that was previously used prior to modification.

11. Replace diode elements in their respective sockets.

---- NOTE ----
THE DIODE ELEMENTS MUST BE ORIENTATED IN THE FOLLOWING MANNER: THE FORWARD POWER DIODE ELEMENT MUST HAVE ARROW POINTING IN THE DIRECTION OF RF OUTPUT POWER FROM TRANSMITTER TO ANTENNA. (POINTING UP TOWARD TOP OF TRANSMITTER) THE REFLECTED POWER DIODE ELEMENT MUST HAVE ARROW POINTING IN THE EXACT OPPOSITE DIRECTION OF THE FORWARD POWER DIODE. DIODE ELEMENTS ARE MARKED AS FOLLOWS:

10KW - DD-109-1 = FORWARD POWER
1KW - DD-109-2 = REFLECTED POWER

12. Connect Cable CA-829 (part of frame wire harness) plug numbers 1 and 2 to the jacks located on directional coupler. Dress the remainder of the cable and secure with cable clamp provided (Item 13). Cable marked #2 connects to forward power diode, cable #1 connects to reflected power diode.

13. Replace top outer cover and reconnect transmission line.

---- NOTE ----
If top outer cover is fitted with outer cover plate, remove and discard this plate.

14. Affix Item 10 (right side cover plate) to right side of transmitter, on the coupler mounting bracket using Item 11.
15. Replace front PA window (use original hardware when window was removed in Paragraph A-3.)

This completes PART I - Relocation of Unbalanced Output Termination.

PART II -

1. Open and remove existing Auxiliary Frame Door, by lifting door off hinges. (discard door)

. Take Item 14, AX-703 Auxiliary Frame Door, and mount on hinges.

3. Remove Air Filter & Grill fron right side skin (viewed from back). Filter & Grill may be used as a spare for installations that have the GPT-40K, or it can be discarded.

4. Install Item 16 (Cover Plate) in place of Filter Grill, previously removed in step #3.

5. Close New Auxiliary Frame Door and secure.

6. Affix Item 17 (Nameplate) below transmitter overall Nameplate to indicate completion of modification.

* [illegible] listed in Part II of [illegible]

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S 1256
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
8/20/69	Ø			ORIGINAL RELEASE FOR PRODUCTION	

TMC FORM MLR-1 2-65—AINS.