Addendum to
Technical Manual
Model HFTM-10KJ
(IN-1042)

General Purpose Transmitter
Model HFTM-10KJ2

Introduction

The HFTM-10KJ2 transmitter is similiar to the HFTM-10KJ. The Technical Manual for the HFTM-10KJ will apply to the HFTM-10KJ2 when the additions, deletions and corrections outlined in this addendum have been incorporated. All references to the HFTM-10KJ within the technical manual will then apply to the HFTM-10KJ2.

The HFTM-10KJ2 is a upgraded version of the HFTM-10KJ. The modifications to the equipment include mechanically controlled TUNE and LOAD controls with numerical digit counters for each control, which simplifies transmitter tuning. Additionally, the HFTM-10KJ2 is fitted with a ballum transformer model TRC-10K-50/600 which provides a 600 ohm balance output. The TRC is a broadband transmitting transformer primarily used for matching coaxial transmission lines to rhombic or other antennas requiring 600 ohms impedance. The TRC provides an insertion loss of less than 1 db.

When the changes outlined in the following paragraphs are incorporated the HFTM-10KJ technical manual will apply to the HFTM-10KJ2.

SECTION - 1

Page 1-0, figure 1-1:

Replace figure 1-1 with new figure 1-1 provided.

Page 1-1, Table 1-1:

Change the nomenclature column as follows:

TABLE 1-1. COMPONENTS OF GENERAL PURPOSE TRANSMITTER

Nomenclature	Common Name
AX5165	Main Meter Panel
AX5170	Power Amplifier
AX5166	Main Control Panel
AX5167	IPA Drawer
AX5168	Exciter Drawer
AX5169	Main Power Panel
AP153	Main Power Supply
AF110	Harmonic Filter
TRC-10K-50/600B	Broadband Transformer (unbalanced to balanced)

Page 1-2, paragraph 1-2:

Add the following to the last sentence:

For transmitters that require a 600 ohm balance output broadband transformer model TRC-10K-50/600B is supplied.

Page 1-3, Table 1-2:

Add the following Output Impedance:

600 ohms balance (with TRC-10K)

Page 1-4, Table 1-3:

Change the part number of V701 to 4CX10,000J.

SECTION - 2

On page 2-2, paragraph 2-3c (1):

Change MS3106B24-2BS to MS3106B24-28S.

On page 2-2, paragraph 2-3c (4):

Change b. to read "Overload Reset, J3003 "d" and "k" (contact closure).

On page 2-2, paragraph 2-3:

Delete sub paragraph e, f, g.

On page 2-5/2-6, figure 2-1:

Replace figure 2-1 with new figure supplied.

For Transformer Installation Instructions, refer to Installation Drawing.

SECTION - 3

On page 3-3, Table 3-1:

Change step 13 to read:

"Remove Bias Control cover on the IPA Drawer front panel. Adjust PA Bias, IPA Bias and 2ND Amp Bias controls to maximum clockwise position".

Add the following to step 18 of Table 1-3:

"The 1st Amp Bias control is located on the bottom chassis of the IPA. Loosen panel locks, pull drawer outward, defeat interlock switch by pulling shaft outward slightly, turn H.V. and adjust 1st Amp Bias".

On page 3-3, Table 3-1:

Bias adjustments mentioned in steps 15 thru 18 should be set to values as follows:

PA Bias	.50 amp to .65 amps
IPA Bias	210 ma to 230 ma
2nd Amp Bias	220 ma to 240 ma
1st Amp Bias	60 ma to 70 ma

On page 3-4, Table 3-1:

Change steps 22, 23, and 24 as follows:

Step		
22	Rotate PA LOAD control clockwise to set load capacitor at minimum.	PA LOAD counter indicates 000 when Load is at minimum.
23	Rotate PA TUNE control clockwise or counterclockwise as necessary to cause a noticable resonsant dip in PA PLATE current meter indication.	PA PLATE current meter will indicate resonant dip and OUTPUT meter will indicate power output.
24	Rotate PA LOAD control counterclockwise as necessary to cause a further increase in PA OUTPUT	OUTPUT meter indicates a further increased indication as transmitter is loaded into antenna or dummy load.

On page 3-7, paragraph 3-5:

Delete sub paragraph a.

SECTION - 3 (cont)

NOTE

THE VSWR indication observed on the transmitter's REFLECTED power meter is an indication of the combined impedances of the antenna and the balance transformer. Therefore, the SWR overload pointer should be set to approximately 3:1.

SECTION - 4

On page 4-1, paragraph 4-1:

Change the last sentence in the first paragraph to read:

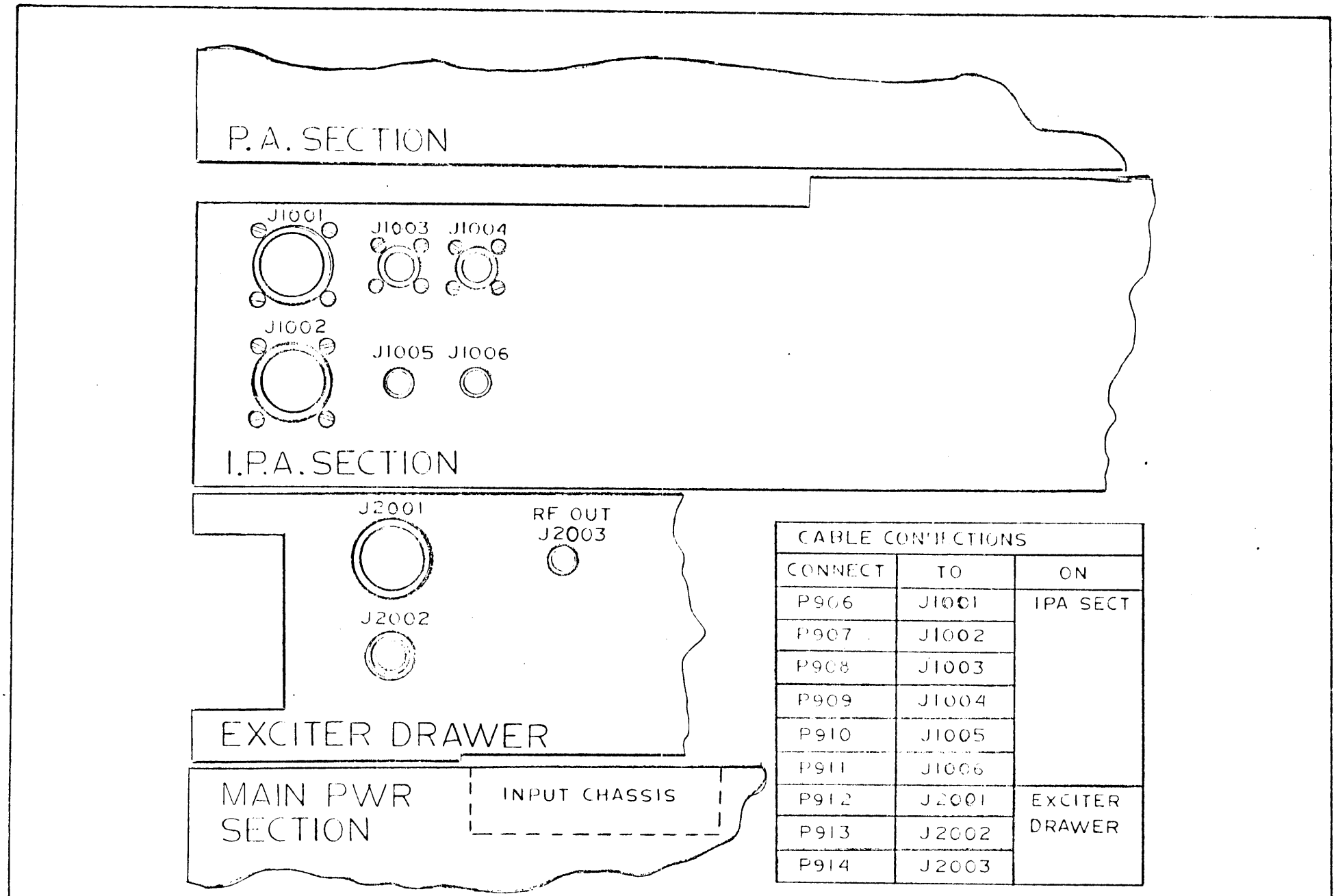
"The output is then routed through a directional coupler to the unbalanced input of ballum transformer TRC-10K. The TRC provides a 600 ohm balanced output".

On page 4-1, paragraph 4-1:

Delete "external RF GAIN" from the third paragraph.

On page 4-2, figure 4-1:

Replace figure 4-1 with new figure 4-1 supplied.



CABLE CONNECTIONS		
CONNECT	TO	ON
P906	J1001	IPA SECT
P907	J1002	
P908	J1003	
P909	J1004	
P910	J1005	
P911	J1006	
P912	J2001	EXCITER DRAWER
P913	J2002	
P914	J2003	

Figure 2-1. Interconnect Diagram

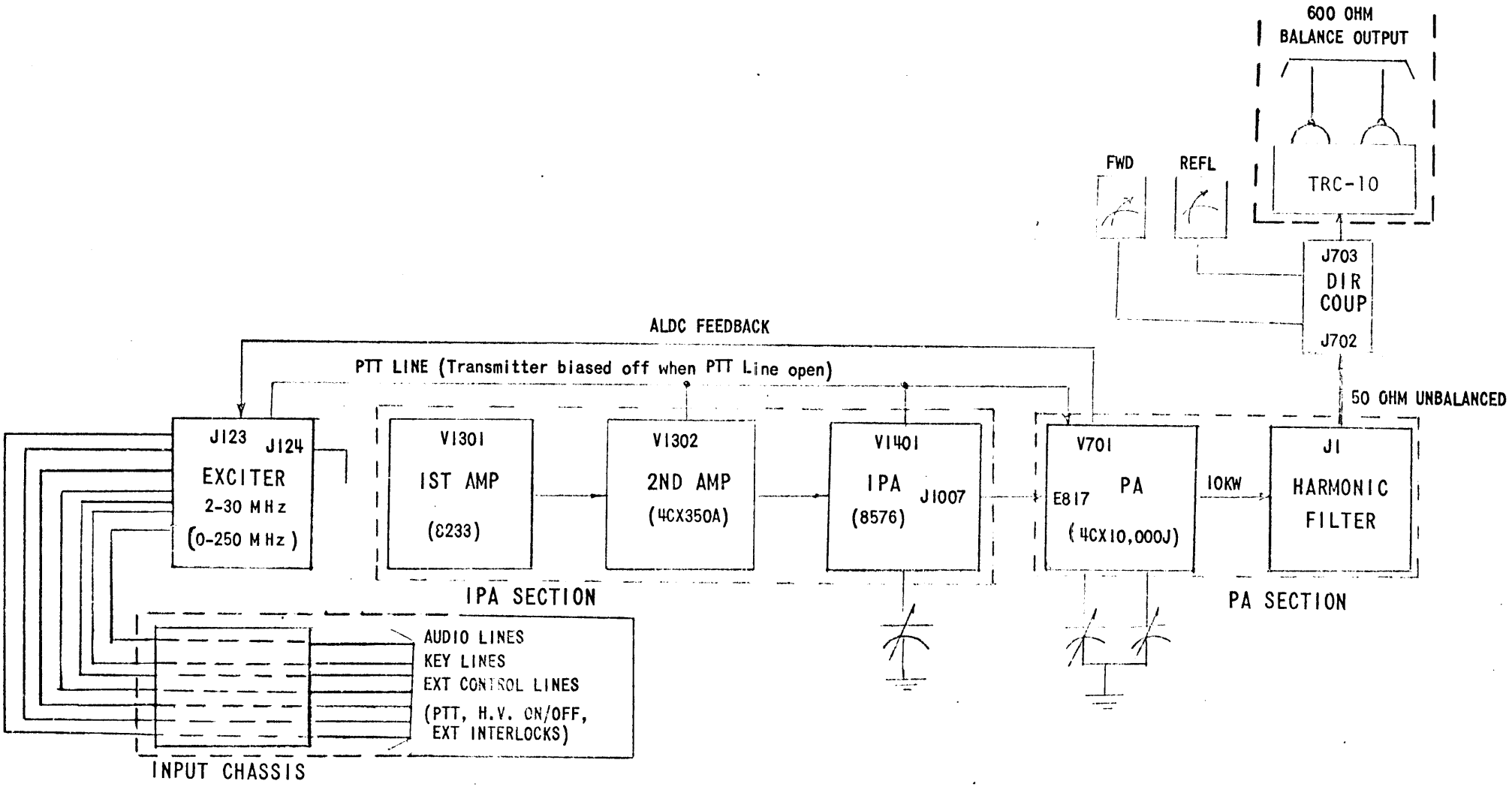
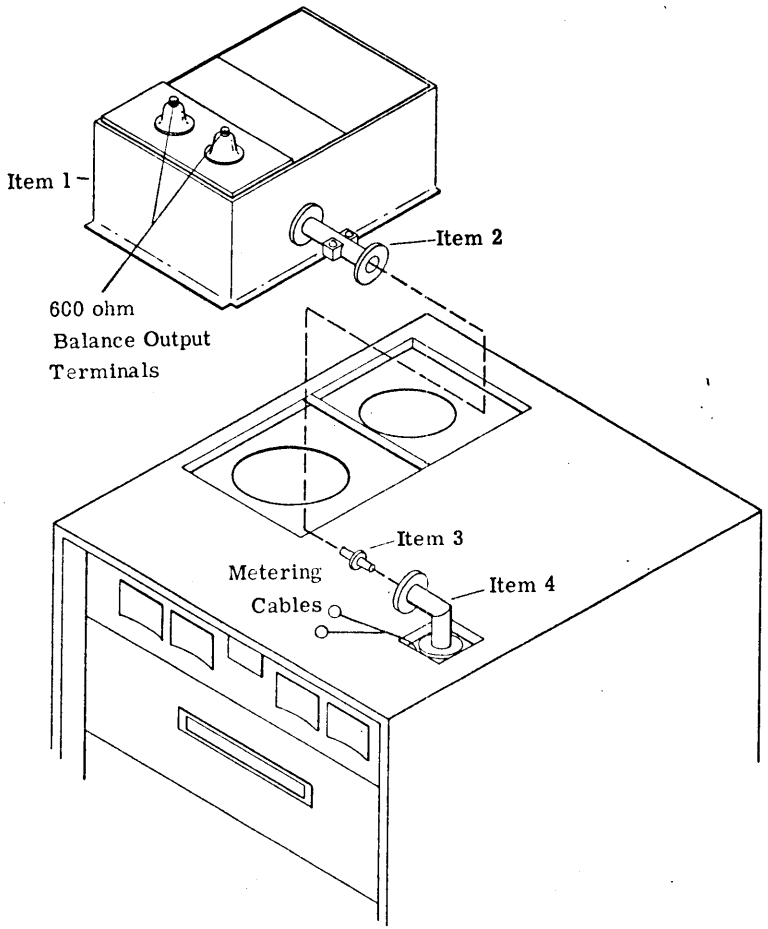


Figure 4-1. Block Diagram



BALANCE OUTPUT TRANSFORMER

INSTALLATION INSTRUCTIONS

1. Remove 600 ohm output transformer, with direction coupler attached, from crate. (Item 1, Item 2)

2. Place transformer assembly on top of transmitter frame as shown.

3. Remove elbow connector (1-5/8" EIA) and bullet insert from crate. (Item 3, Item 4)

4. Connect elbow connector to flange on top of transmitter as shown. (Item 4)

5. Insert bullet connector into elbow connector and connect directional coupler and elbow together with hardware provided.

6. Fasten transformer case to top of transmitter. Use mounting holes and hardware provided.

7. Connect output metering cables to directional coupler as follows: Output metering cable marked FWD connect to 20KW diode jack. Output metering cable marked REFL connect to 5KW diode jack.

8. Connect 600 ohm antenna lead in wires to 600 ohm bowl terminals on top of transformer assembly.