KIT-221

S991

TMC SPECIFICATION			NO. S 991
REV: 0 A B			
COMPILED:	CHECKED:	APPD: [signature] 7/22/65	SHEET 1 OF 7
TITLE:			

I N S T R U C T I O N S

for

CONVERSION OF HFI-1 TO HFIR-1

(KIT-221)

CAUTION: DO NOT ROTATE ANY LEDEX SHAFTS UNTIL ENTIRE INSTRUCTIONS HEREIN CONTAINED ARE REVIEWED.

I. PURPOSE:

To provide modification instructions for conversion of an HFI-1 to an HFIR-1. This modification will be referred to as KIT-221.

II. MATERIALS SUPPLIED:

ITEM	QTY.	PART NO.	DESIGNATION
1	2	AX-544	Auto-Ass'y
2	2	MC-130	Cplg, Rigid
3	2	MC-131-1	Cplg. Rigid
4	1	NP362-29	Plate Indent.
5	4	SLHC0832SN3	Set screw (for MC130)
6	2	PN59-062-8	Pin Spring
7	8	SCBP0832BN5	Scr. Mach.
8	8	LWE08MRN	Wash, LK, Ext.
9	1	A-4196	Auto-Ass'y w/CBL
10	1	A-4197	Auto-Ass'y
11	1	SCBP0632BN6	Scr. Mach.
12	8	NTH0832BN10	Nut, Plain Hex
13	1	LD1751/MS4298	Plate, Switch, AGC

III. PROCEDURE:

1. Place Template (TP-136) against rear panel with pilot plugs in extreme "B" holes. Use MS2729 print to locate these holes on rear plate.
2. Using tool TP-133, center punch through all 1/8" Dia. holes on template.

NOTE: DO NOT DRILL THROUGH TEMPLATE.

3. With 1/8" Dia. Bit. pilot all center punch marks.

4. All "G" holes shown on MS2729 are then opened up to 13/64" to accom-date for 8-32 hardware.

5. On the "H" detail center hole, used to mount connector on CA959, enlarge the center hole to 1/2" diameter to accomadate rectangular punch screw. Assemble punch in 1/2" hole as per instructions accompaning TP113. Cutout to be orientated as per MS2729. Clean cutout with file to insure a proper fit.

6. All holes necessary in rear panel have been accomplished as to mount connector and Ledex Brackets.

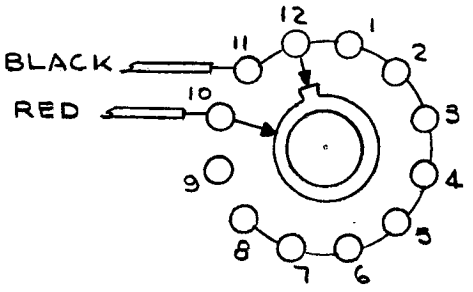
7. On the front of HFI-1, Remove gain control knob with #8 Allen Wrench. Then remove lock nut from R6222 and withdraw the potentiometer from front panel. Next, unsolder leads from lugs of R6222.

8. Place template TP134 pilot plug in gain control hole, with template lip resting on top of front panel edge. Punch 1/8" pilot hole marked "B" on TP134 drawing. Remove template, and using a 9/64" drill, to clear hole for 6/32" mounting hardware.

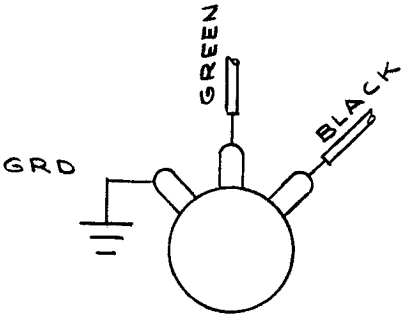
9. The new RF gain control assembly A-4196 can now be installed. As follows: Place control shaft through panel, assemble Plate, Item 13, and tighten down lock nut. Then fasten to front pnl with a 6-32 screw provided. Replace RF gain control knob. Transfer unsoldered potentiometer leads to the new potentiometer on A-4196. (R6228) Next, transfer former leads going to switch on rear of RF gain control in the following manner; solder the red lead to

the wiper of the 3rd Ledex wafer. Solder the black lead to Lug #11 of the same wafer.

NOTE: ILLUSTRATION BELOW:



LEDEX (3RD WAFER)

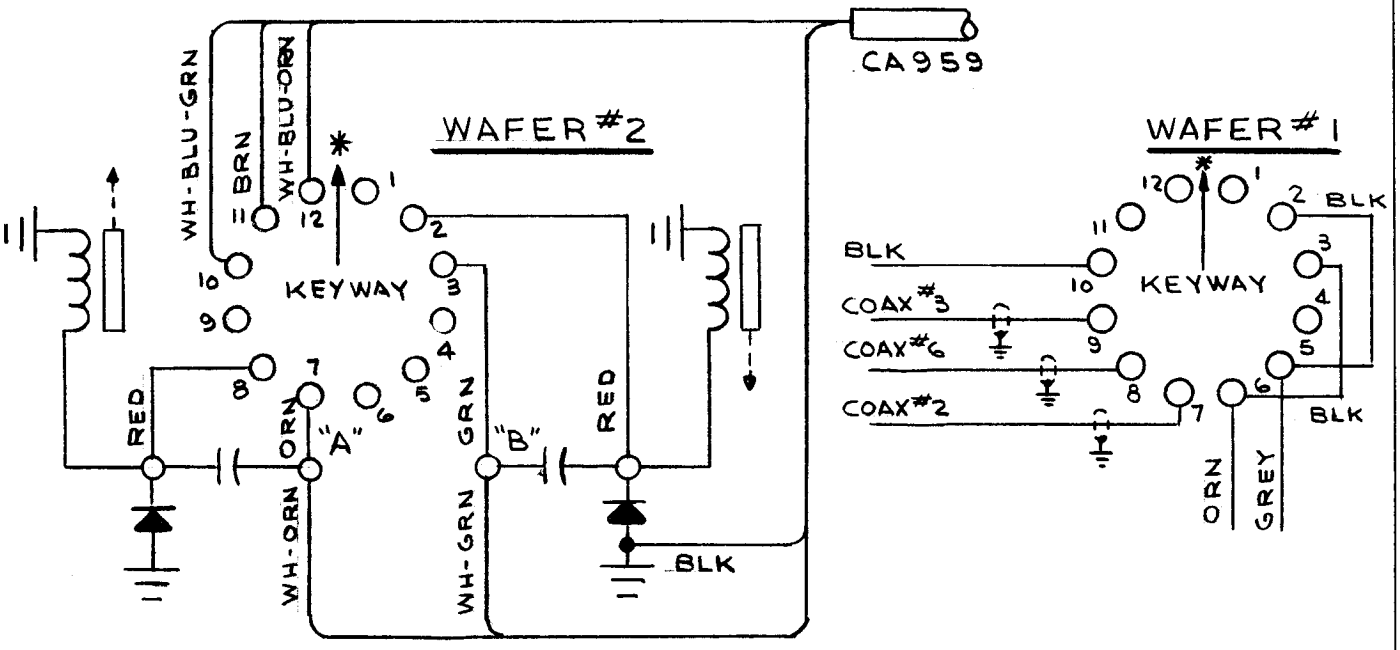


NEW
POTENTIOMETER (R 6228)

10. Then take cable assembly CA959 which is attached to A-4196, and guide the 6 loose leads thru the 2nd grommet directly under the RF gain control. Dress remainder of cable along back of front panel and along right side plate to rear of back plate, and then mount connector into "H" detail as outlined on MS2729.

11. Next, remove AFC ON/OFF knob with #8 Allen Wrench. Remove lock nut from switch bushing. Switch may now be removed from panel. Leads from the switch lugs should now be transferred to A-4197, wafer closest to frame of new AFC ON/OFF switch. In order to minimize the possibilty of an error in wiring it is suggested that each lead be removed and transferred individually.

12. At this point it will be necessary to solder leads from CA959 to 2nd wafer of the AFC ON/OFF switch. Also to terminal posts marked "A" and "B" on the below diagram:



13. It is very inportant that the wiring harness on the AFC ON/OFF switch is installed in a neat manner to insure that lead dressing does not interfere with operation of solenoid linkage.

14. The A-4197 AFC ON/OFF switch assembly may be mounted to the front panel as follows: Holding switch assembly just above the edge of the front panel on a 45° angle, place end of control shaft thru mounting hole and bring switch assembly down into position. Replace lock nut and control knob. Insure that dressing of harness leads don't interfere with the solenoid operation.

NOTE: CAUTION AX522 HAS BEEN PRE-ALIGNED AT THE FACTORY AND EXTREME CARE MUST BE EXERCISED TO AVOID MOVING THE SHAFT.

15. On AX-522 mount a MC131 multi-jaw coupling onto the Ledex shafts to an approximate depth of 3/8", and fasten set screw to flat surface.

16. Place an AX-522 over each IF Bandwidth "G" detail mounting holes as indicated on MS-2729. Fasten in place with 8-32 mounting hardware.

17. Place both IF Bandwidth selector switch knobs to 1 KC DS position.

18. Replace existing rigid coupling located midway between wafer decks on both "A" and "B" IF bandwidth selector switches with new MC130 rigid coupling. This may be accomplished by removing set screws and withdrawing shaft from knob end sufficient to replace with new coupling then reinsert shaft into broached end of the new coupling. Set screws should then be tightened down. Then drill thru pilot hole of coupling and shaft with #52 drill (supplied), and inserting pin (Item 6) PN59-062-8. Place MC131 multi-jaw coupling on switch shaft and allow to remain free. Next, slide switch shaft multi-jaw coupling forward to mate snugly with multi-jaw coupling on ledex drive unit. Tighten set screws.

19. This completes the conversion of the HFI-1 to HFIR-1.

TOOLS REQUIRED: (FOR KIT-221)

One take-off tool (or transfer punch) TP-133

One #52 high speed drill

One 1/8" high speed drill

One 9/64" high speed drill

One 13/64" high speed drill

One 1/2" high speed drill

One 5/8" round style "R" punch TP113

One 3/4" style "S" punch

One TP134 Print

One TP134 Template

One MS2695 Print

One MS2729 Print

One TP136 Print

One TP136 Template

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S991
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
7/22/65		1 of 6		O=ORIGINAL RELEASE FOR PRODUCTION.	
2/7/66	A	all	15724	Revised per EMN	
8/16/72	B	5,6	20827	Revised per EMN 20827	

TMC FORM MLR-1 2-65—AINS.