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CONVERSION OF AFC-2A TO AFC-8

KIT-266

	TN	IC SPEC	IFICATI	ON	NO. 5 10 5	<del>= 1</del>
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TITLE: C	ONVERSION OF	F AFC-2A TO	AFC-8 -	KIT-266		
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### I. EQUIPMENT AFFECTED

AFC-2A

### II. PURPOSE OF MODIFICATION

To convert the AFC-2A to AFC-8.

## III. MATERIAL SUPPLIED IN KIT

Item	Symbol	Qty.	TMC Part #	Description
1	<b>Z</b> 5005	1	AO-112-2	350 KC Osc. Assembly
2	<b>Z</b> 5002	1	NF-107-350	Filter Bandpass 350KC 1st IF
3	<b>Z</b> 5001	1	NF-108-350	Filter Bandpass 350KC 2nd IF
4	<b>Z</b> 5003	1	NF-110-350	Filter Bandpass 350KC 3rd IF
5 6		1	CK594 NP <sub>0</sub> 362 <u>-</u> 54,	Diagram Schematic AFC-8 Plate, Identification

### IV. TOOLS SUPPLIED BY TMC

Item	Quantity	TMC Part #	Description
1	1	WR-100-3	#6 Allen Wrench

# V. TOOLS SUPPLIED BY INSTALLING ACTIVITY

Item	Quantity	Description		
*1	1	Long Nose Pliers		
2	ı	1/4 Nut Driver		
3	1	#1 Phillips Screwdriver		

<sup>\*</sup> This tool might be found convenient to use in performing the modification even though it is not mandatory.

## VI. CONVERSION OF AFC-2A TO THE AFC-8

## A. Pr cedure (Conv rsion)

1. Remove OSC cabl s from J 5004 and J 5005.

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### VI. CONVERSION OF AFC-2A TO THE AFC-8

### A. Procedure (Conversion) - Cont'd

- 2. Loosen the Allen screws on shaft coupling (shown in Fig. 1) with #6 Allen wrench supplied with KIT.
- 3. Remove V 5011 (6C4) and V 5012 (12AT7) from 705 KC dscillator assembly.
- 4. Using Phillips screwdriver, remove four screws holding 705 KC oscillator assembly to the chassis.
- 5. Remove 705 KC oscillator assembly, and replace tubes. Keep oscillator assembly aside for disposition as directed.
- 6. Insert Item 1 in place of 705 KC oscillator assembly making sure that tubes face the front panel.
  - 7. Remove V 5011 (6C4) from its socket.
  - 8. Replace the four screws using the Phillips screwdriver.
- 9. Shift Item 1 until the shaft coupling is easily slipped onto the oscillator shaft. Tighten down the four screws using the Phillips screwdriver, and tighten down the four Allen screws on the shaft coupling using the #6 Allen wrench.
  - 10. Replace the V 5011 (6C4) in its socket.
- 11. Replace the power cable (Item 1) to J 5004, and the signal cable to J 5005.
- 12. Using 1/4" nut driver, remove each nut and lockwasher (6 of each) which fasten the NF-107-705, NF-108-705, and NF-110-705 to the chassis (as shown in Fig. 2). Remove NF-107-705, NF-108-705 and NF-110-705 from their sockets.
  - 13. Replace with Item 2, 3 and 4 as shown in Fig. 1.
- 14. Fasten with nuts and lockwashers which were removed in Step 12, and using 1/4" nut driver, fasten securely to chassis making sure that any ground lugs are also fastened to Items 4 and 2 as shown in Fig. 2.

#### B. Alignment Procedure

- 1. Equipm nt Requir d:
  - a. Frequency Count r, Hewlett-Packard Model 524C or equival nt.
  - b. AC VTVM, Ballantine Mod 1 314 or equivalent.

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# VI. CONVERSION OF AFC-2A TO THE AFC-8

- B. Alignment Procedure Cont'd
  - 2. Place AC VTVM on Pin 1 (V 5010).
  - 3. Connect the frequency counter to the VTVM output.
  - \* 4. Turn on AFC-8.
    - 5. A low a-c voltage will be observed.
    - 6. Switch AC VTVM to AMP, and observe frequency on counter.
    - 7. Loosen screws connecting shaft coupler to shaft.
    - 8. Adjust shaft coupling for a reading on the counter of 350 KC.
- 9. Adjust tuning knob on front panel to zero, and tighten shaft coupler.
  - \* 10. Turn the AFC-8 off.
    - 11. Place a jumper across the resent switch.
  - \* 12. Ground AGC at junction of L 5037 & C 5091. Turn on B+.
    - 13. Set A-C VTVM to read volts.
    - 14. Adjust Z 5002 for maximum indication.
- 15. Connect A-C VTVM to Pin 1 of V 5009 and tune Z 5001 for maximum indication on the VTVM.
  - 16. Remove the jumper connected in Step 12.
  - 17. Tune Z 5003 for minimum indication on the VTVM.
  - 18. Connect the A-C VTVM to J 5003. The meter should read IV +10%.
- 19. Before resetting the tuning knob permanently to zero, while oscillator is at 350 KC, make sure the ovens cycle at least 1 hour. Reset as in Step 9.
- 20. After resetting the tuning control, turn the control to -3. The counter should read 347 KC or lower. (Counter connected to J 5003.)

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# VI. CONVERSION OF AFC-2A TO THE AFC-8

- B. Alignment Procedure Cont'd
  - 21. Turn the control to +3. The counter should read 353 KC or greater.
- 22. Stick Item 6 (Identification Plate) to any convenient place on front panel.
- 23. This completes the conversion of the AFC-2A to the AFC-8. Remove all jumper cables.
  - \* NOTE: The AFC-8 must be inter-connected to the SBS-8 to receive power since the AFC receives its power from the SBS power supply. Therefore, to turn the power ON in the AFC, the STANDBY/ON POWER switch on the SBS must be activated.

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