

DATE 16 December 1964

SHEET 1 OF 6

TMC SPECIFICATION NO. S 886

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*TKA*  
COMPILED

*[Signature]*  
CHECKED

TITLE:

*[Signature]*  
APPROVED

Typed by mtp

PRODUCTION TEST PROCEDURE

for

PFCB-1 DOPPLER CORRECTOR UNIT

DATE 16 December 1964

SHEET 2 OF 6

# TMC SPECIFICATION NO. S 886

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I N T R O D U C T I O N

The TMC Doppler Corrector Unit is an accessory for the PFCB-1. The frequency comparison system provides a method of correction for the relative motion of two (2) frequency standards; one fixed and one mobile.

This plug-in unit is 4" X 4-1/2" X 9" overall, with meter indicating frequency difference. The circuitry is on a circuit board.

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## I. EQUIPMENT REQUIRED

1. Oscilloscope (Tektronix #541 or equivalent).
2. Frequency Counter (HP5245-L or equivalent).
3. PFCB-1 in good repair.
4. Tuning tools for cores and potentiometers.
5. 1 mc frequency standard (CSS-2 or equivalent).

## II. PRELIMINARY INSPECTION

1. Inspect for mechanical defects.
2. Check for wiring defects.
3. Check orientation of components, including transistors.

## III. PROCEDURE

1. Apply 1 mc signal from standard to both test and reference inputs of PFC-1.
2. Set PFC-1 to parts in  $10^6$ . Apply power.
3. With doppler corrector in place, turn S-1 to 0-100 cps. Resistors R23 and R24 should be set for maximum resistance.
4. Connect oscilloscope probe to junction of R812, L801 and CR802, and ground.
5. Tune T801 for maximum signal.
6. Connect probe to junction of C806 and C813. Tune T802 for maximum signal.
7. Connect probe (adjust scope for d-c operation) to junction of L801 and capacitors C819 and C816.
8. Voltage should be approximately 3 volts peak-to-peak, actual value varying from 8 to 11 volts d-c.
9. Adjust frequency control for zero frequency (1,000 <sup>the</sup> .100kc), same as Y501 in the PFCB-1 card Z501. Loosen set screws and move knob so that the pointer

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III. PROCEDURE - cont'd

is up for this setting with capacity increasing as knob is rotated counter-clockwise.

10. Connect frequency counter to output jack J111, Pin 4 on PFCB-1, and measure maximum frequency at both extremes -- this shall be a least 100 cycles from zero frequency.

11. Adjust frequency control for 10 cycles on the counter.

12. Set selector switch S801 in 0 - 10 cycle position.

13. Adjust resistor, R824, for full scale.

14. Set selector switch, S801, in 0 - 100 position.

15. Adjust frequency control for 50 cycles.

16. Adjust resistor R823 for reading of 5.

17. Check settings on both ranges for linearity. Excessive variation indicates poor tolerance in timing components, C820 and R822.

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PECB-1 DOPPLER CORRECTOR UNIT

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THE TECHNICAL MATERIEL CORP.  
MAMARONECK, N.Y.

TEST DATA SHEET - DOPPLER CORRECTOR UNIT

SERIAL NO.: \_\_\_\_\_

MFG. NO.: \_\_\_\_\_

Mechanical \_\_\_\_\_ OK

Wiring \_\_\_\_\_ OK

Component Orientation \_\_\_\_\_ OK

Oscillator Frequency: 1,000 , 100 cps +100 cps \_\_\_\_\_ OK

0 - 10 cps \_\_\_\_\_ OK

0 - 100 cps \_\_\_\_\_ OK

DATE: \_\_\_\_\_

TESTER: \_\_\_\_\_

