Collins 618T-(x) HF SSB Airborne transceiver

Schematic Diagrams

Courtesy ACSXP
Modified JA6ATY
Collins 618T-(x) HF SSB Airbone Transceiver

1. Airbone SSB Transceiver 618T-0, Block Diagram
2. 618T-1/2/3 Airbone SSB Transceivers, Block Diagram (Sheet 1 of 2) Figure 17
3. 618T-1/2/3 Airbone SSB Transceivers, Block Diagram (Sheet 2 of 2) Figure 17
4. 618T-1/2/3 Frequency Selection and Translation, Block Diagram Figure 19
5. 618T-1/2/3 Frequency Translation 7 to 29.999 Mhz, Block Diagram Figure 23
6. RF Oscillator A2(528-0251-005), Schematic Diagram Figure 811
7. RF Oscillator A2(528-0251-005) Squelch Board(797-3684-002) with Protection Incorporation of Positive Override Squelch Schematic Diagram, (Sheet 3 of 3) Figure 810A
8. RF Oscillator A2 (528-0690-001), Schematic Diagram Figure 810 (Sheet 1 of 2)
9. RF Oscillator A2 (528-0690-001), Schematic Diagram Figure 810 (Sheet 2 of 2)
10. RF Oscillator (528-0690-002), Schematic Diagram Figure 810A (Sheet 1 of 3)
11. RF Oscillator A2 (544-9285-005), Schematic Diagram Figure 812
12. 618T-1/2/3 kHz-Frequency Stabilizer A4, Schematic Diagram (Late Model) Figure 814
13. MHz-Frequency Stabilizer A10, Schematic Diagram (Late Model) Figure 824
14. IF Translator A3 (544-9286-001), Schematic Diagram Figure 813
15. 618T-1/2/3 RF Translator A12, Schematic Diagram (Late Model) Figure 830 (Sheet 1 of 3)
16. 618T-1/2/3 RF Translator A12, Schematic Diagram (Late Model) Figure 830 (Sheet 2)
17. 618T-1/2/3 RF Translator A12, Schematic Diagram (Late Model) Figure 830 (Sheet 3)
18. 618T-1/2/3 Frequency Divider A1, Schematic Diagram, Figure 809
19. 618T-1/2/3 Autopositioner A12A1, Schematic Diagram Figure 832
20. Electronic Control Amplifier A6, Schematic Diagram Figure 817
21. AM/Audio Amplifier A9, Schematic Diagram (Late Model) Figure 822
22. AM/Audio Amplifier A9, Schematic Diagram (Late Model) Sheet 2 Figure 822
23. Power Amplifier A11, Schematic Diagram (Late Model) Figure 826
24. Low Voltage Power Supply A5, Schematic Diagram Figure 816
25. 3-Phase High-voltage Power Supply A7, Schematic Diagram (Late Model) Figure 818
26. High-voltage Power Supply A7, Schematic Diagram
27. 618T-1/2/3 VFO A12A2, (Model 70K-9), Schematic Diagram (Early Model) Figure 834
28. 618T-1/2/3 VFO A12A2, (Model 70K-9), Schematic Diagram (Late Model) Figure 833
29. 618T-1/2/3 VFO A12A2, (Model 70K-5), Schematic Diagram Figure 835
30. 618T-1/2/3 VFO A12A2, (Model 70K-3), Schematic Diagram Figure 836
31. 618T-1/2/3 Chasis A, Schematic Diagram (Late Model) Figure 807 (Sheet 1 of 3)
32. 618T-1/2/3 Chasis A Schematic Diagram (Late Model), Figure 807
33. 618T-1/2/3 Chasis A Schematic Diagram (Late Model), Figure 807 (Sheet 2)
34. 618T-1/2/3 Chasis A Schematic Diagram (Late Model), Figure 807 (Sheet 3)
35. Airbone SSB Transceiver 618T-3, Control Unit 714E-3, and Antenna Tuner 180L-0, Inter Connecting Wiring Diagram Figure 123
618T-1/2/3 Airborne SSB Transceivers, Block Diagram
Figure 17 (Sheet 1 of 2)
610T-1/2/3 Frequency Translation 7 to 29,999 MHz, Block Diagram

Figure 23
NOTE:
UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS.
DIODES ARE TYPE 1N5304 AND TRANSISTORS ARE TYPE 2N930.
Low-Voltage Power Supply A5, Schematic Diagram
Figure 816
3-Phase High-Voltage Power Supply A7, Schematic
Diagram (Late Model)
Figure 819

NOTES:
1. C41 THRU C46 ARE TYPE IN492 OR IN4069.
2. C7 THRU C24 ARE 1000 UUF.
3. UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS AND ALL CAPACITANCE VALUES ARE IN PICOFARADS.
4. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH A7.
618T-1/2/3 VFO A12A2 (Model 70K-9), Schematic Diagram (Late Model)

Figure 833
618T-1/2/3 VFO A12A2 (Model 70K-3), Schematic Diagram
Figure 836

NOTES:
(1) SELECTED AT FACTORY.
(2) UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND
INDUCTANCE VALUES ARE IN MICROHENRYS.
616T-1/2/3 VFO A12A2 (Model 70K-5), Schematic Diagram

Figure 835
Subject: 618T-1/2/3 Chassis A, Schematic Diagram (Late Model), Figure 807 (Sheet 2).

Correct schematic wiring error of relay K4 pins 7 and 13 as follows:
619T-1/2/3 Chassis A, Schematic Diagram (Late Model)
Figure 807 (Sheet 2)
NOTES:
1. THIS LEAD USED ONLY WITH 180L-3.

2. UNLESS OTHERWISE INDICATED, NO.22 WIRE SIZE LEADS ARE USED.

3. TOTAL RESISTANCE OF POWER LINES TO AND FROM 27.5 VDC POWER SOURCE SHALL NOT EXCEED 0.015 OHMS. NO.8 OR EQUIVALENT SHALL BE THE MINIMUM WIRE SIZE USED.

4. A TERMINAL STRIP PROVIDED IN THE 390J SHOCK-MOUNT CAN BE USED FOR A TIEPOINT AS SHOWN ON THE DIAGRAM.

5. PINS 53 AND 37 ARE EMPLOYED AS BALANCED INPUT FROM INTERPHONE AMPLIFIER. IN THIS CASE, THE WIRES TO PIN 54 AND 18 SHOULD NOT BE CONNECTED. IF AN UNBALANCED CARBON MIKE INPUT IS DESIRED, THE WIRES TO PINS 53 AND 37 SHOULD NOT BE CONNECTED.

6. TOTAL RESISTANCE OF THESE POWER LINES TO AND FROM THE POWER SOURCES SHALL NOT EXCEED 0.15 OHMS. NO.20 SHALL BE THE MINIMUM WIRE SIZE USED.

7. THE RESISTANCE OF EACH OF THESE LINES BETWEEN THE 180L COUPLER AND THE 618T-3 TRANCEIVER SHALL NOT EXCEED 0.20 OHMS. NO.20 SHALL BE THE MINIMUM WIRE SIZE USED.

8. IF A SEPARATE CW KEY LINE IS NOT PROVIDED IN THE AIRCRAFT, 714E-3 PINS k AND m MUST BE JUMPERED TOGETHER BY THE AIRCRAFT WIRING IN ORDER TO PROVIDE CW OPERATION.

9. IF BENCH OPERATION WITHOUT AN ANTENNA TUNING UNIT IS DESIRED, PINS 5 AND 56 ON THE 618T-3 MUST BE CONNECTED TOGETHER TO COMPLETE THE KEY INTERLOCK CIRCUIT. DO NOT CONNECT PINS 5 AND 56 TO AN EXTERNAL DC POWER SOURCE.

10. WHEN THE UNBALANCED CARBON MIKE INPUT IS USED, THE MIKE RETURN CIRCUIT SHOULD BE CONNECTED TO PIN 18 ON THE 618T-3. IT IS RECOMMENDED THAT NO GROUNDS EXTERNAL TO THE 618T-3 CHASSIS BE PLACED ON THIS LINE.