

DATE 3-5-62

SHEET 1 OF 3

TMC SPECIFICATION NO. S 664

R.K.
COMPILEDRK
CHECKED

TITLE:

PRODUCTION TEST PROCEDURE, SBT-1KQ/AN/FRT-56

Ron Kuhn
APPROVED

SFM

A. INTRODUCTION:

The SBT-1KQ is a general purpose linear power amplifier and master oscillator designed for use with various types of exciter units. Dependent upon the exciter (s) used, the unit is capable of 1KW PEP and 1KW, CW.

B. MAIN COMPONENTS:

The SBT-1KQ consists of seven separate units integrated to form the system, These components are:

- 1) Rack Assembly RAK-9Q.
- 2) Auxiliary Power Panel APP-4.
- 3) High Voltage Power Supply P.S.-5.
- 4) Low Voltage Power Supply P.S.-4A.
- 5) Linear Power Amplifier RFD-1A.
- 6) Variable Frequency Oscillator VOX-5.
- 7) Standing Wave Ratio Indicator SWR-1K.

C. TEST PROCEDURE:

The test procedure for the SBT-1KQ system is outlined on the following pages. Before the system can be tested correctly, all components except the RAK-9Q rack assembly must be tested and passed by the test department as per the specific test requirements for each unit.

I EQUIPMENT REQUIRED:

- 1) 52 ohm Dummy Load, 1KW dissipation.
- 2) AC Power Cable.
- 3) RF output cable, RG-8/U.
- 4) Hewlett Packard VTVM, model 410B.
- 5) Voltmeter, Simpson 260 or equivalent.
- 6) Test Chart, SBT-1KQ, last page of this spec.
- 7) Jumper cable.
- 8) CA-383-73C, coaxial. Connect from J203 (CP 615) on VOX-5 to J201 on the RFD-1A.

II PROCEDURE:

1. Install AC input power cable from J601 of RAK-9Q to the AC line.
2. Connect cable from J609 jack on the AX-198 assembly (mounted on RAK-9Q) to dummy load input.
3. Connect jumper from terminal 5 on the rear of the APP-4 to terminal 8. This completes the external interlock circuit.
4. Set MAIN POWER switch on APP-4 to ON position. The red MAIN POWER indicator lamp should light.
5. Set MAIN POWER switch on PS-4A to ON position. The

DATE 3-5-62

SHEET 2 OF 3

TMC SPECIFICATION NO. S 664

R.K.
COMPILEDRK
CHECKED

TITLE: PRODUCTION TEST PROCEDURE SBT-1KQ/AN/FRT-56


 APPROVED

NOTE: green MAIN POWER indicator lamp should light and RFD-1A blower and PS-5 fan should start running. PS-4A TRANSMITTER VOLTAGES switch should be in STANDBY position: FINAL VOLTAGES switch in OFF position and OVER-LOAD breakers in ON position. Adjust PA PRI voltage to 115 volts, rack fan should start running.

6. Turn on POWER switch on VOX. The red MAIN POWER lamp and INNER OVEN and OUTER OVEN lamps should light.
7. After a warm-up time of approximately 5 minutes, set the TRANSMITTER VOLTAGES switch to ON position. The red indicator lamp should light.
8. Turn the VOX METER switch to HFO position.
9. Set VOX HFO switch to ON position.
10. Set VOX MASTER OSCILLATOR FREQUENCY as per the Test Chart.
11. Adjust the VOX output to zero.
12. Set the FINAL VOLTAGES switch on the P.S.-4A to ON position. Red indicator should light.
13. Adjust the VOX and RFD-1A for 1KW, CW, at the test frequency. See Test Chart.
14. Place voltmeter across terminals 3 and 4 of the APP-4. Meter should read 115 volts A.C. This is transmitter antenna relay voltage, and may vary + 10%.
15. Set TRANSMITTER VOLTAGES switch on the P.S.-4A to STANDBY.
 - a. Voltmeter should read zero volts.
 - b. FINAL VOLTAGE AND TRANSMITTER VOLTAGE indicators on P.S.-4 should go out.
16. Place a jumper across terminals 1 and 2 on APP-4. TRANSMITTER VOLTAGES and FINAL VOLTAGES indicator should light. Remove jumper.
17. Place an ohmmeter across terminals 24 and 25 on APP-4. The ohmmeter should read 10 ohm + 10% between 24 and 25 and ∞ between 23 and 24.
18. Place a jumper across terminals 1 and 2 to key the unit. An ohmmeter connected between 23 and 24 should read 10 ohm + 20% between 24 and 25 should read ∞ .
19. Turn all switches OFF. Remove AC input cable and test cable assembly.
20. This completes operational testing of system SBT-1KQ.
21. Check cables, hardware and slides for ease of movement. Units should tilt without obstruction.
22. This completes testing of system SBT-1KQ.

DATE 1-5-62
 SHEET 3 OF 3

TMC SPECIFICATION NO. S 664

R.K.
 COMPILED

RK
 CHECKED

TITLE: TEST CHART SBT-1KQ

Ron Koh
 APPROVED

TEST FREQ MCS	VOX BAND SETTING	VOX SETTING	DRI VER BAND RFD-1A	1st. AMP. TUNING RFD-1A	PA GRID TUNING RFD-1A	PA LOAD	PA LOADING SWITCH	PA CURRENT IN MA. PLATE	CURRENT SCREEN	SWR-1K WATTS FWD REF
2	2-4	2000								
5	4-8	2500								
10	8-16	2500								
20	16-32	2500								
32	32-64	2000								

MODEL	SERIAL NO.
SBT-1KQ	
SWR-1K	
SBT-1A	
VOX-5	
P.S.-4A	
P.S.-5	
App-4	

ITEM	ACCEPT	REJECT
1. AC POWER TO APP-4		
2. AC POWER TO P.S.-4A		
3. AC POWER TO VOX-5		
4. INTERLOCK CIRCUIT		
5. 115V ANTENNA RELAY		
6. REMOTE XMTR PLATE CIRCUIT		
7. RECEIVER MUTING		

NOTES:
 1KW is 225V @ 52 ohm as measured with the HP-410VTVM.