SECTION II

OPERATING PROCEDURES

2-1. GENERAL.

2-2. The following paragraphs describe the various panel controls of the Globe King Transmitter, Model 500B. Tune-up and operating procedures are outlined following the description of controls. It is recommended that this section be studied thoroughly before any attempt is made to place the transmitter in operation.

2-3. DESCRIPTION OF CONTROLS.

2-4. OSC. TUNING. Tunes oscillator plate circuit to fundamental, second or third harmonic of crystal, or VFO frequency.

2-5. EXCITER BAND SWITCH. Selects proper amount of inductance in both oscillator and buffer plate circuits.

2-6. BUFFER TUNING. Tunes buffer plate circuit to oscillator frequency, or selected harmonic.

2-7. METER SWITCH. Places meter M1 into any one of the following four circuits. OSC. PLATE, BUFF. PLATE, FINAL GRID or FINAL SCREEN.

2-8. FUNCTION SWITCH. Serves three purposes. Inserts high resistance in power amplifier screen grid circuit for tune-up, shorts modulation choke for CW operation, inserts modulation choke into power amplifier screen grid circuit for AM operation.

2-9. DRIVE CONTROL. Controls Screen voltage of buffer stage, thereby controlling power amplifier grid current and RF drive.

2-10. ANT. COUPLING. Inserts added inductance or capacity into the output circuit for proper antenna match.

2-11. FINAL PLATE TUNING. Tunes plate circuit of power amplifier stage to resonance. Must be retuned after any adjustment of either ANT. LOAD control or ANT. COUPLING control.

2-12. FINAL BAND SWITCH. Inserts proper amount of inductance into the Pi network to resonate on selected band.

2-13. ANTENNA LOAD. Varies amount of loading by matching power amplifier plate circuit to antenna circuit. Always start with this control in the "MIN" position. This corresponds to maximum capacity of condenser, and at this setting will match lowest impedance.

2-14. SSB-AM SWITCH. Changes class of operation of the power amplifier tube from class "C" to class "B". Also removes all low B plus voltages from oscillator and buffer stages for SSB operation of the power amplifier.

2-15. AUDIO GAIN. Controls level of modulation in AM operation.

2-16. FILAMENT SWITCH. (Modulator section panel). Applies AC power to the modulator section.

2-17. PLATE SWITCH. (Modulator section panel). Actuates two relays. One applies AC to the modulator plate transformers, the other removes a short circuit from across the secondary of the modulation transformer (shorted for CW operation).

2-18. FILAMENT SWITCH. (Power supply panel). Applies AC power to the entire transmitter.

2-19. EXCITER SWITCH. Applies AC power to low B plus plate transformer for the exciter section, and to the VFO switching relay.

2-20. TRANSMIT SWITCH. Applies AC power to plate transformer for high B plus voltage for the power amplifier tube. Also applies AC voltage to the exciter plate transformer. Push-to-talk switch on the microphone stand will also energize the complete transmitter by relay control.

2-21. XTAL-VFO SWITCH. In VFO position shorts osc. cathode choke RFC1, also connects VFO to input of crystal stage.

2-22. KEYING ADJ. Regulates amount of bias applied to keyer tube and may be adjusted for best keying characteristics.

2-23. COMPRESSION. Switches speech compression circuit in or out as desired.

2-24. VFO BAND SWITCH. Selects proper band of operation for VFO with the transmitter. Must be set to same band of operation as the EXCITER BAND SWITCH and FINAL BAND SWITCH.

2-25. VFO TUNING. Tunes the VFO to the desired frequency of operation.

2-26. EXTERNAL CONNECTIONS.

WARNING

Before making any external connections to the transmitter, remove the AC line cord plug from the AC outlet. Also place all power switches in the OFF, or down position and ground cabinet.

2-27. PATCH IN. This jack is wired to the top of the audio GAIN control so that an external audio signal, such as from a phone patch, may be fed into the speech stages independently of the microphone.

2-28. KEY JACK. Closed circuit type wired in the grid circuit of the keyer stage for sequential keying.