MULTIFREQUENCY PULSING SUPPLY J98608

ALARM ROUTINE

1. GENERAL

1.01 This section outlines the procedure to be followed when responding to an alarm at the multifrequency pulsing supply equipment J98608 (SD-95086-01).

1.02 This section is reissued to make improvements in procedures.

1.03 The alarms covered are:

(A) Switching Battery Alarm

(B) Plate Battery or Voltage Alarm

(C) Alarm for Ground on Output Leads

(D) Current Alarm

1.04 Because of the importance of the equipment affected and the possibility of causing delays on multifrequency pulsing circuits, these alarms should receive prompt attention and any trouble which causes the alarms should be cleared immediately.

2. METHOD

(A) Switching Battery Alarm

2.01 If, in response to a major alarm, a B OFF (red) alarm lamp is lighted, it indicates failure of a fuse from battery A, B, D or E or the opening of a circuit through relays B1 to B5.

2.02 Operate the B ALM (battery alarm) key to silence the alarm. The operation of the key lights the B ALM lamp.

2.03 Observe the BA and BA1 relays. If the BA relay is operated the trouble is in the circuit through relays B1 and B2 or in the circuit through relays B3 and B4. If the BA1 relay is released, the trouble is in the circuit through relay B5.

2.04 Observe the fuses in the circuit in trouble and if operated, the cause should be eliminated and the fuse replaced.

2.05 If the fuses are satisfactory, inspect the wiring to the relay windings and eliminate the cause of the trouble.

2.06 After the trouble has been cleared, restore the B ALM key to normal.

(B) Plate Battery or Voltage Alarm

2.07 If, in response to a major alarm, a VOLT (red) alarm lamp is lighted, it indicates failure of either the 48V G or H battery or the 130V plate battery, trouble with the F1 or F2 condenser or an abnormal change in output voltage of one or more oscillators.

2.08 Operate the SW (switch) key, associated with the lighted VOLT lamp, to silence the alarm.

2.09 Observe the voltmeter relays and if a relay is operated, the output voltage of one of the corresponding pair of oscillators is outside its limits. If no voltmeter relay is operated, observe the PL and PL1 relays. If the PL relay is released, the trouble is in the plate battery supply or in the G or H 48 volt battery supply or in the vacuum tube plate or cathode circuits. If the PL1 relay is operated, the trouble is in the F1 or F2 condenser or is caused by a ground in the cathode circuit.

Output Voltage

2.10 Adjust the voltage of the oscillator in trouble by changing the connection to taps on the L coil. If this does not correct the voltage, remove the vacuum tube and have it checked. If the tube is in proper condition restore it to the circuit and replace the varistor unit.

> Note: A defective tube will usually give a low output voltage, while a defective or open circuited varistor will usually give a high voltage. Defects in the tuning inductance L and condenser A will usually cause a change in output frequency as well as amplitude.

2.11 After the voltage has been adjusted, reset the voltmeter relay pointer and restore the SW key to normal.

Plate Battery or Condensers

2.12 If the PL relay is released, observe the plate battery fuses and if operated, remove the cause and replace the fuse.

2.13 If the PL1 relay is operated, inspect the F1 and F2 condensers for a short circuit and inspect the cathode circuit for

a trouble ground. Remove trouble found in wiring or replace the condensers.

→ 2.14 After the trouble has been cleared,
→ restore the SW key to normal.

(C) Alarm for Ground on Output Leads

→ 2.15 If, in response to a major alarm, a GRD (red) alarm lamp is lighted, it indicates a ground on one or more of the oscillator output leads. Operate the G ALM key. The operation of this key lights the G ALM (white) lamp, disconnects the major alarm signal and connects a buzzer which will be heard as long as the trouble is present or until the BUZ (buzzer) key is operated.

2.16 Operate the SW key associated with the lighted GRD lamp. If the GRD lamp remains lighted, the trouble is on the supply circuit side of the transfer relays. If the GRD lamp is extinguished and the GRD lamp, associated with the other oscillator circuit, lights, the trouble is on the switchboard or sender side of the transfer relays.

2.17 Restore the SW key to normal.

2.18 The trouble can usually be isolated by opening straps on the terminal strip used for strapping the leads from the frequency mixing output transformer.

2.19 After the trouble has been cleared restore the G ALM key to normal.

(D) Current Alarm

→ 2.20 If, in response to a major alarm, the SHORT (red) alarm lamp is lighted, it indicates the short circuiting or crossing of an output pair. A
→ flashing KP, 0 to 9 or ST lamp will indi-
→ cate the pair of leads in trouble. Operate the SH ALM (short alarm) key. The operation of this key lights the SH ALM lamp, disconnects the major alarm signal and connects a buzzer which will be heard as long as the trouble is present or until the BUZ key is operated.

2.21 Operate the SW key. If the SHORT lamp remains lighted, the trouble is on the supply circuit side of the transfer relays. If the SHORT lamp is extinguished and the SHORT lamp associated with the other oscillator circuit lights, the trouble is on the switchboard or sender side of the transfer relays. Restore the SW key to normal.

2.22 The trouble can usually be isolated by opening straps on the distributing terminal strips at the top of the bay.

2.23 After the trouble has been corrected, restore the SH ALM key to normal.

3. REPORTS

3.01 The required report of these alarms should be entered on the proper form.