

## 60 AND 120 IPM INTERRUPTER CIRCUITS ALARM ROUTINE NO. 5 CROSSBAR OFFICES

### 1. GENERAL

1.01 This section covers the procedure to be followed in response to 60 or 120 IPM interrupter circuit minor and major alarms in No. 5 crossbar offices.

1.02 Whenever a connecting circuit associated with an interrupter circuit demands ground and tone interruptions and a trouble condition occurs that results in a failure of the interrupter circuit to provide interruptions of a proper time interval, a minor alarm is brought in and control of the pulse repeating relays (F and T) is automatically transferred to the mate interrupter. Whenever these trouble conditions occur in both interrupters of a pair, the supply of ground and tone interruptions to the connecting circuits is stopped in both interrupters and a major alarm is brought in. A major alarm is also brought in whenever a false ground is detected in the operating circuit of the F and T relays or on one of the FL leads to the connecting circuits. Under these conditions no transfer takes place.

1.03 When a minor alarm is brought in the AL (alarm) lamp associated with the interrupter on which the failure occurs lights, and the white aisle pilot lamp lights to indicate the aisle in which the interrupter causing the alarm is located.

1.04 When a major alarm is brought in, the AL lamp associated with the interrupter on which failure occurs lights and the red aisle pilot lamp lights to indicate the aisle in which the interrupter causing the alarm is located.

1.05 All alarms are locked in and may be released by operation of the AR key on the interrupter which brought in the alarm.

### 2. METHOD

#### Minor Alarms

2.01 If in response to a minor alarm, a lighted AL lamp is found on an interrupter, momentarily operate the AR key to retire the audible alarm and extinguish the associated lighted lamps.

2.02 Immediately operate the TR key to transfer control of the pulse repeating (F and T) relays to the mate interrupter. The trouble may have been due to failure of the operating circuit for the T1 and T2 vacuum tubes or failure of the operating circuit for the F and T relays.

2.03 If it is noted that the T1, T2, F and T relays operate and release properly when under control of the regular interrupter, the trouble is probably due to improper setting of the bias adjustment of the T1 and T2 tubes or aging of the tubes. The interrupter may be started by blocking operated its ST relay.

2.04 If the trouble is in the F and T relay circuit, take the associated connecting circuits out of service until such time as the trouble is cleared.

#### Major Alarms

2.05 If in response to a major alarm, a lighted AL lamp is found on an interrupter, observe on the interrupter associated with the lamp which of relays G, GF, and AL are operated and then momentarily operate the AR key to retire the alarm and extinguish the associated lighted lamps.

2.06 If lighted AL lamps and operated AL relays are found on both interrupters of a pair, momentarily operate the AR key on each interrupter of the pair. If the alarm persists, take out of service all the connecting circuits associated with these interrupters.

2.07 If the G and GF relays were operated, the trouble is probably due to a false ground in the operating circuit for the F and T relays. In this case take the associated connecting circuits out of service.

2.08 If the G relay was operated but the GF was not operated and the GT relay remains operated, the trouble is probably due to a false ground on one of the FL leads to the connecting circuits associated with the interrupter. Insulate the F relay contacts associated with the grounded FL lead and take out of service the connecting circuits associated with

**SECTION 218-237-301**

the grounded FL lead. After the trouble has been cleared, remove the insulators from the F relay contacts and restore the connecting circuits to service.

**3. REPORTS**

3.01 The required record for these alarms should be entered on the proper form.