Failure to receive or poor receive

If during the preceding checks the receiver is found to be poor or inoperative, checks will have to be made to determine if the fault is in the AF, IF, mixer or RF stages, or, indeed, the power supply.

REMEMBER THAT THE VOLTAGES THAT EXIST IN THIS TRANSCEIVER CAN BE LETHAL, SO TAKE GREAT CARE, AND REMOVE THE MAINS PLUG FROM ITS SOCKET IF YOU NEED TO SOLDER COMPONENTS, ETC. SWITCHING THE TRANSCEIVER OFF AT THE FRONT PANEL IS *NOT* ENOUGH AS MAINS VOLTAGE IS STILL PRESENT WITHIN THE TRANSCEIVER AND POWER-SUPPLY CABINETS UNDER SWITCH-OFF CONDITIONS.

Assuming, first of all, that the receiver is totally dead, the following procedure should be adopted:

1. Switch on and observe that all valve heaters are glowing.
2. If not, switch off and check the heater of the offending valve or valves for continuity on the ohm range of the multimeter. (There should be only a few ohms across the heater pins.) If just V11 (VFO) and V10 (HF oscillator) are not glowing it is as well to remember that these two valves have their heaters supplied separately from all the other valves, and a check should be made on the supply voltages at the valve pins of the HF oscillator V10. (It is impossible to measure the heater voltage actually at the pins of V11 VFO as these are in the VFO compartment.) Replace any valves with open circuit heaters with new replacement valve(s). (See VFO footnote **Table 2**).
3. If, however, only a few valve heaters are glowing, and possibly very brightly, switch off immediately! Remove mains plug from socket! Now check the wiring to the multiway plug/socket from the power supply as these are rather prone to breakage, especially in the plug.

Table 2

Voltage checks. Receive condition. Control settings. LSB, Bandswitch, 3.5MHz. AF Gain, Midway. RF Gain Minimum. EXT MOX.

	PIN NUMBERS									
VALVE	1	2	3	4	5	6	7	8	9	NOTES
V20	+ 150				+ 150		0	—	—	IF voltage low or high check V20, R96, R100
V17	0	20	0	50Hz 6.3	50Hz 12.6	225.	240	1	70	IF voltage on Pin 2 low, check, V17,Ti T, Primary, R100, C151 IF voltage Pin 2 high check V17, R93, C125 IF voltage pin 9 low, check, V17, R92, C125 IF voltage pin 9 high, check, V17, R94, RV95 slider to chassis
V16	100	−.5	0	0	0	100	0	3.5	50Hz 6.3	IF voltage pin 1 or 6 low check voltage at V20, RFC9, R13
V15	175	0	A/C 2.6	A/C 6.3	6.3	135	−1	.6	A/C 12.6	IF voltage pin 6 high/low check V15, R82, R81, C109, C127
V14	0	−.3	A/C 12.6	A/C 6.3	4	—	−.43	—	—	IF voltage pin 5 low, RX gain will be low, check V14, R68, R69
V13	0	—	A/C 6.3	A/C 12.6	200	135	3.5	—	—	IF voltages high/low check V13, R70, R72, R71, C105, C104, IFT4
V12	0	—	A/C 6.3	A/C 12.6	215	3.0	—	—		IF voltages high/low check V12, R22, C22, C97, C98, R66, IFT5
V11	115	0	7.8	A/C 6.3	A/C 12.6	72	1.2	4.5	4.2	VFO See note below. But check V11 and voltage from V20
V10	Approx −2.5	0	A/C 6.3	0	220	0	170	—	—	IF voltages high/low check V10, R51, RFC7, R49, C71, C75, C193
V9	−1	1.2	A/C 6.3	A/C 12.6	235	52	0	—	—	IF voltages high/low check V9, R46, R47, R48, IFT2, C27, R28. Also V4 if pin 5 V9 low
V19	0	1.2	A/C 6.3	A/C 12.6	240	52	0	—	—	IF voltages high/low check V19, R114, R115, R116, R117, R221, C22, C134, C135, C136, Mech. filter
V6	.35	−23	.35	A/C 6.3	0	0	235	35*	0	*Voltage pin 8 depends on band selected. IF voltages high/low check R39, R40, R123, R36, APC1, R35, V6, C37
	Note: All voltages ± 10%									Note: All voltages within the VFO are difficult to measure and a 9 pin plug/valve holder with suitable test points on it and interposed between valve and VFO. If any resistors are found defective in the VFO it is best to replace them all.

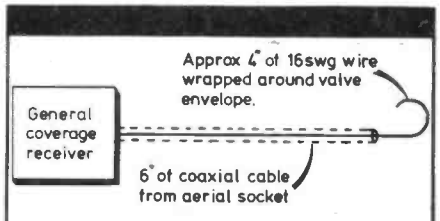

FIG. 4. Set up used to check for the presence of signals at various stages as listed in table 4. Remove screening can from valve before applying probe.

Assuming that all valve heaters are glowing and the receiver is still dead, look at the voltage stabiliser V20. This should be seen to glow a purple colour. If not, most probably either V20 is defective or no HT is being supplied from the PSU. Check leads/plugs/back to PSU and