WIRELESS SET, BURNDEPT, BE 201

TECHNICAL HANDBOOK - INSPECTION STANDARDS

SUBJECT INDEX

INTRODUCTION

1. This regulation details the inspection standards to be observed when this equipment is being overhauled in REME workshops. It also contains condemnation limits for field inspections.

2. Departure from these standards will not be permitted unless authorized by the War Office or DEME of the overseas theatre concerned.

3. This regulation is divided into the following:-

(a) **Inspection schedule.** This details the standards to be observed when the equipment undergoes overhaul and the limits and tolerances quoted will be a guide to REME workshop personnel engaged in the repair of the equipment in the field.

(b) **Inspection in the field.** This section is for the use of examiners engaged in the inspection of equipment in the hands of the troops. The field inspection record lists the standards appropriate to a minimum number of tests considered necessary to ensure that the equipment still meets its overall field requirements.

(c) **Inspection after overhaul.** This section is for the use of examiners engaged in the inspection of equipment after overhaul and includes the base inspection record.

4. For more detailed information regarding the purpose and use of this regulation, reference should be made to Tels A 619.

INSPECTION SCHEDULE

Test equipment

5. The figures quoted in this schedule are based on measurements made with the following test equipment:-

Item	*Part No*	*Designation*
1	Z4/ZD 04302	Signal generator, No 18 or
2	Z4/ZD 00425	Signal generator, No 15
3	Z4/ZD 02674	Signal generator, No 12 or
4	Z4/ZD 00391	Signal generator, No 1, Mk 3
5	Z4/ZD 00657	Voltmeter, valve, No 3
6	Z4/ZD 00198	Oscillator, beat frequency, No 8
7	Z4/ZD 00661	Wattmeter, absorption, a.f., No 1
8	Z4/ZD 00207	Instrument, testing, Avometer, universal, 50-range, Mk 2
9	Z4/10S/831	Oscilloscope, type 13A
10	Z4/WY 1639	Shunt, d.c., 100A, No 1
11	X4/ZA 0204	Ammeter, h.f., 350mA, No 1

Table 1 - Test equipment

Conditions of test

6. *(a)* All tests, unless otherwise stated, will be made with a 12V input, measured at the p.s.u. input plug with the FLOAT CHARGE switch to NORMAL.

(b) Connection between the p.s.u. and wireless set will be made by means of the equipment Connector, 6 pt, No 62.

(c) Radio frequency tests, other than those of the intermediate frequency, will be made at 100Mc/s, 128Mc/s, 142Mc/s and 156Mc/s.

(d) All r.f. input voltages are quoted in terms of the open-circuit voltage from a source impedance of 75Ω. When using Signal generator, No 18, connected via Terminating unit, r.f., 2-way, the open-circuit voltage is given by the attenuator reading. When using Signal generator, No 15 the open-circuit voltage must be halved when reference is made to the attenuator dB/output voltage conversion chart, Tels Z 472, Fig 1007, for the purpose of obtaining the attenuator setting.

(e) The crystals used for specification tests will conform to those requirements detailed in Tels Z 681.

(f) The wattmeter, absorbtion will be set to 150Ω impedance for all a.f. measurements.

(g) The sender dummy aerial will consist of a 350mA thermocouple h.f. ammeter connected in series with a 75Ω,5W resistor between the aerial socket and earth, with one side of the ammeter connected to earth.

(h) The set will be switched on for at least 10 min before any measurements are made.

General condition

7. *(a)* The general condition will be in accordance with Tels A 779.

(b) All modifications, where applicable, have been carried out in accordance with Tels F 787 and the corresponding number(s) on the modification plate struck through.

(c) Workmanship and finish will be assessed by comparison with a pilot model produced by the workshop to the satisfaction of REME Technical Services.

POWER SUPPLY UNIT

Voltmeter calibration

8. Connect the Avometer across the p.s.u. meter and close the MAIN SWITCH. With the input to the p.s.u. adjusted to 12V, as indicated on the Avometer, the set meter will register 12V ±0.25V taking into account the meter correction as indicated on the front panel.

H.T. voltages

9. Connect the p.s.u. to the wireless set. With the equipment tuned and loaded on both send and receive the h.t. voltages, as measured at the p.s.u. output socket, will be as follows:-

Sender	295V ±15V
Receiver	235V +15V

Ripple voltage

10. Using the conditions detailed in para 9 the ripple voltage, as measured on a calibrated c.r.o. will not exceed 150mV and 100mV respectively for the sender and receiver.

Float charge

11. With inputs of 16.2V and 13.5V to the p.s.u. and the equipment tuned on both send and receive, the l.t. voltage measured at the wireless set input plug, with the FLOAT CHARGE switch on, will not exceed 13.5V with the first input and will be not less than 10V with the second input.

Current consumption

12. The input current will not exceed the following:-

(a) Receiver tuned to any channel under signal receive condition with sender heaters on: 6.5A.

(b) Sender tuned to any channel with dummy aerial connected and sender loaded: 13.5A.

Send/receive time delay

13. Adjust the equipment for normal operation.

(a) The time delay from 'finish of sending' to 'ready to receive' will not exceed 0.5 sec.

(b) The time delay from receive to send will not exceed 1.5 sec.

RECEIVER

Audio response

14. Connect the signal generator, modulated 30% at 1kc/s, to the grid of the last i.f. valve. Set the a.f. gain control to maximum and adjust the signal generator frequency and output for 1mW a.f. output.

(a) Keeping the depth of modulation constant adjust the modulation frequency for maximum a.f. output on the wattmeter. The frequency at which peak output is obtained will be between 700 and 1200c/s. (Note this frequency as f1).

(b) Set the modulation frequency to f1 and adjust the signal generator output for 1mW a.f. output. With the modulation frequency set in turn to 500 and 3500c/s the a.f. output will not be less than 350μW.

(c) With the modulation set to any frequency below 100c/s and above 10kc/s the a.f. output will not exceed 160 and 60μW respectively.

I.F. sensitivity

15. Remove the circuit wiring from pin 6 (grid) of the mixer valve (V7) and apply an open-circuit voltage of 20μV, modulated 30% at 1kc/s, between grid and earth. Adjust the signal generator frequency for maximum a.f. output. (Note the peak frequency as f2). The a.f. output will exceed 1mW.

I.F. bandwidth

16. With conditions of test as detailed in para 15, adjust the RECEIVER GAIN control for 1mW a.f. output. Increase the signal generator output to 40μV and detune either side of resonance (f2) until 1mW a.f. output is again obtained.

(a) The total bandwidth recorded will not exceed 70kc/s or be less than 50kc/s with the mean of the two extreme frequencies within 10kc/s of the nominal i.f. frequency (9.720Mc/s).

(b) Repeat the above with the signal generator output set to 2mV. The half bandwidth will not exceed 200kc/s.

Receiver calibration

17. Insert the appropriate receiver crystal calculated to give those final frequencies detailed in para 6(c). Connect the signal generator to the aerial socket and tune both the signal generator and the receiver for maximum a.f. output at each of the receive channels in turn. The RECEIVER TUNE dial calibration will be within 1.5% of the nominal channel frequency.

Overall r.f. sensitivity

18. *(a)* Using the test conditions detailed in para 17, apply an open-circuit voltage of 5μV, modulated 30% at 1kc/s, at 100Mc/s and 156Mc/s in turn to the aerial socket. Adjust both signal generator and RECEIVER TUNE dial for maximum a.f. output. The a.f. output will exceed 1mW in each case.

(b) Repeat sub-para (a) with the equipment switched to 128Mc/s and 142Mc/s in turn and the signal generator output increased to 6.5μV. The a.f. output will exceed 1mW in each case.

(c) Reduce the supply voltage to 10.8V as measured at the p.s.u. input plug. Repeat the tests detailed in sub-para (a) and (b) above. With an input of 6 and 9μV respectively for sub-para (a) and (b) the a.f. output will exceed 1mW.

Signal-to-noise ratio

19. *(a)* Apply an open-circuit voltage of 5μV at 100Mc/s, modulated 30% at 1kc/s and adjust both signal generator frequency and RECEIVER TUNE CONTROL for maximum a.f. output. Adjust the a.f. output to 1mW using the RECEIVER GAIN control. With the signal generator modulation switched off the a.f. output will not exceed 10μW.

(b) Repeat sub-para (a) at the remaining channel frequencies (128, 142 and 156Mc/s) with the signal generator output increased to 10μV. With the modulation switched off the a.f. output will not exceed 10μW.

Second channel

20. *(a)* With the input conditions as required for sub-para 19(a) adjust the a.f. output to 1mW. Retune the signal generator to the second channel frequency ie channel frequency minus 19.44Mc/s. The input required for an a.f. output of 1mW will exceed 500μV (ie 40dB above 5μV).

(b) Switch the receiver to 156Mc/s and repeat sub-para (a) above. The input required at the second channel frequency for 1mW a.f. output will exceed 28μV (ie 15dB above 5μV).

Automatic volume control

21. Apply an open-circuit voltage of 10μV, modulated 30% at 1kc/s, at each of the channel frequencies in turn. Adjust both signal generator and receiver for maximum a.f. output and set the a.f. output to 1mW. With the output from the signal generator varied between 10μV and 100mV the a.f. output will not exceed 316mW.

I.F. breakthrough

22. With the equipment switched to 100Mc/s set the signal generator output to 5μV, modulated 30% at 1kc/s and adjust the RECEIVER GAIN control for 1mW a.f. output. Leaving the receiver controls unaltered reset the signal generator to the peak i.f. (para 15) and increase the output voltage to 500μV. The a.f. output will not exceed 1mW.

SENDER

Power output

23. *(a)* Connect the dummy aerial between the aerial socket and earth and insert the appropriate sender crystals (para 6(c)). Switch to send and adjust the SENDER TUNE, DRIVE ADJUST and AE TRIM controls for maximum r.f. output at each of the channel frequencies in turn. The unmodulated r.f. output will exceed 220mA (ie 4W).

(b) With the l.t. input reduced to 10.8V repeat the above test at all channel frequencies. The unmodulated r.f. output will exceed 190mA (ie 3W).

Calibration

24. With the equipment tuned for maximum r.f. output, as detailed in para 23(a), the SENDER TUNE calibration error will not exceed 2% of the nominal channel frequency at all channel settings.

Microphone sensitivity

25. *(a)* Connect the b.f.o. to the microphone sockets via the attenuator detailed in Fig 1. Switch to send and adjust the sender controls for maximum r.f. output at 100Mc/s. With the modulation frequency set to 1kc/s, the input required for an increase of 13% aerial current (75% modulation) will not exceed 6mV (ie 3V on the b.f.o. 5V scale).

(b) Repeat the above for the remaining channels.

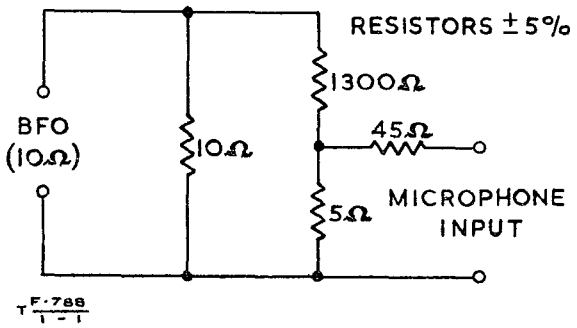

Fig 1 - B.F.O. attenuator

Sidetone

26. Using the conditions of test as detailed in para 25, adjust the input to the microphone sockets to 5mV (ie 2.5V on the b.f.o. 5V scale). With the equipment tuned in turn to 100 and 156Mc/s the sidetone output, as measured at the phone sockets, will exceed 500μW.

Modulation response

27. With the test procedure detailed in para 25 connect the valve voltmeter, in series with a 0.5μF, 500V d.c. capacitor between the secondary of TR3 and earth (Tels F 782 Fig 1001). Adjust the input to the microphone sockets, at 1kc/s, to give a reading of 100V as indicated on the valve voltmeter. Set the modulation frequency to 300 and 3500c/s in turn. The a.f. output will be within the limits detailed in Table 2.

Frequency	*Min*	*Max*
300c/s	63V	158V
3500c/s	67V	150V

Table 2 - Modulation response

Distortion

28. Replace the valve voltmeter with a c.r.o. and adjust the input from the b.f.o. until 75% modulation is obtained. Keeping the depth of modulation constant vary the modulation frequency between 300 and 3500c/s. There will be no appreciable distortion of the modulated waveform as viewed on the c.r.o.

Mechanical stability

29. *(a)* Switch the equipment to send and adjust the controls for maximum r.f. output at 156Mc/s. Applying end thrust to the sender controls will not cause the r.f. output to vary.

(b) Connect the signal generator to the receiver and tune for maximum response at 156Mc/s. Applying end thrust to the receiver controls will not cause the a.f. output to vary.

Acoustic stability

30. Set the equipment for normal operation. There will be no sign of acoustic feedback due to microphony under maximum gain conditions.

INSPECTION IN THE FIELD

Introduction

31. *(a)* This part of the regulation is to be used when inspecting equipment in the hands of the troops. The field inspection record lists condemnation limits beyond which the equipment cannot be expected to carry out its task efficiently.

(b) Using these condemnation limits as the standard, examiners should classify the equipment in accordance with the latest ACI. When the equipment is serviceable but barely satisfies the minimum standard in the field inspection record the symbol '0' must be used to indicate that the equipment should be kept under observation with the facilities available to the unit concerned. If facilities are not available to the unit the equipment may have to be downgraded. In borderline cases, and particularly where quantitative measurements are not given, the final assessment must be based on the examiner's experience and judgement using this standard as a guide.

(c) Endeavour has been made in the field inspection record to include, without further amplification, all necessary information in order to test the electrical performance.

Conditions of test

32. The conditions of test will be in accordance with para 6 of the Inspection schedule except that the standard test frequencies will be 128 and 156Mc/s only.

33. When the equipment contains crystals, fitted by the unit, the resultant r.f. frequencies may be used, providing a correction is made to the input/output quantities. An assessment of the amount of correction can be made by reference to the Inspection schedule. In all cases, the crystals used should be in accordance with Tels Z 681.

Test equipment

34. Items 1 or 2, 7, 8, 10 and 11 in Table 1 is the test equipment considered necessary to carry out the tests detailed in the field inspection record. Alternative test equipment may be used providing the facilities and accuracies are equal to or better than the equipments listed in Table 1.

General condition

35. *(a)* Paintwork will be free from cracking, chipping or flaking, panel legends and signwriting will be easily legible.

(b) All connectors will be intact, plug pins straight, clean and a good fit in their respective sockets.

(c) Cases will be undamaged but dents and distortion may be allowed provided such damage does not affect the entry, operation and weatherproofing of the equipment.

(d) Slow motion dials and drives will be free from slip and operate smoothly.

(e) Meter and dial glasses will be clean, undamaged and secure.

(f) Rubber gaskets and connectors will be free from splits or perishing.

(g) Switches will be clean and will have a positive action both mechanically and electrically.

(h) Valve screens and retainers will be fitted and effectively hold the valves in position.

(j) The rotary convertor shock absorbing mounting will function correctly.

(k) All remaining items and components will be secure and free from damage.

(l) The whole equipment will be free from rust, damp, dust and corrosion.

(m) Modification and Miscellaneous instructions where applicable have been carried out in accordance with Tels F 787 and F 789.

Field inspection record

36. In the following particulars paragraph numbers refer to the Inspection schedule and other preceding text.

Item	Test	Specification limits Min	Max	Unit	Result
1.	**General condition (para 35)**				
(a)	Paintwork will be free from cracking, chipping or flaking, panel legends and sign writing will be easily legible	-	-	-	
(b)	Cases will be undamaged apart from shallow dents and slight distortion provided it does not affect entry, operation and weather-proofing	-	-	-	
(c)	Connectors, plugs and sockets will be in satisfactory condition	-	-	-	
(d)	Slow motion dials and drives will be free from slip and operate smoothly	-	-	-	
(e)	Meter and dial glasses will be clean, undamaged and secure	-	-	-	
(f)	Rubber gaskets and connectors will be free from splits or perishing	-	-	-	
(g)	Switches will be clean and will have a positive action both mechanically and electrically	-	-	-	
(h)	Valve screens and retainers will be fitted and effectively hold the valves in position	-	-	-	
(j)	Rotary convertor mountings are undamaged and will function correctly	-	-	-	
(k)	All components will be secure and free from damage	-	-	-	
(l)	All parts will be free from rust, dust, damp and corrosion	-	-	-	
(m)	Modification and Miscellaneous instructions where applicable have been carried out and those outstanding noted	-	-	-	
2.	**Voltmeter calibration (para 8)**				
	12V input to p.s.u. plug. Meter reading taking into account the panel correction figure will be within	11.75	12.25	V	
3.	**H.T. voltages (para 9)**				
	12V input, set loaded				
(a)	Sender h.t.	280	310	V	
(b)	Receiver h.t.	220	250	V	
4.	**Float charge (para 11)**				
	FLOAT CHARGE switch on				
(a)	16.2V input to p.s.u. Input at set plug	-	13.5	V	
(b)	13.5V input to p.s.u. Input at set plug	10	-	V	
5.	**Current consumption (para 12)**				
	12V input to p.s.u.				
(a)	Receiver 'on' plus sender heaters	-	6.5	A	
(b)	Sender 'on' and loaded into dummy aerial	-	13.5	A	
6.	**Send/receive time delay (para 13)**				
	Time from finish of send to ready to receive	-	0.5	sec	
7.	**Calibration (para 17)**				
	Inject signal to aerial and tune for maximum a.f. output at 128 and 156Mc/s in turn. Dial error	-	2	%	
8.	**Overall sensitivity (para 18)**				
(a)	Inject a 6μV signal mod 30% at 1kc/s, at 156Mc/s to aerial socket. A.F. output will exceed	1	-	mW	
(b)	Inject a 8μV signal at 128Mc/s. A.F. output will exceed	1	-	mW	
9.	**Signal-to-noise ratio (para 19)**				
	Input signal as for item 8(a). A.F. output adjusted to 1mW Modulation 'off'. A.F. output	-	15	μW	

Item	Test	Specification limits Min	Max	Unit	Result
10.	**Second channel ratio (para 20)**				
	Input signal as for item 8(a). A.F. output adjusted to 1mW. Tune signal generator to the second channel frequency, ie 156Mc/s -19.44Mc/s. Increase signal generator output until 1mW a.f. output is again obtained. Signal input level	20	-	μV	
11.	**A.V.C. (para 21)**				
	Input 10μV, mod 30% at 1kc/s, at 128 and 156Mc/s. A.F. output adjusted to 1mW. Input increased to 100mV. A.F. output	-	316	mW	
12.	**Power output (para 23)**				
	Connect a 350mA h.f. ammeter and a 70Ω resistor in series between aerial socket and earth. Switch to send and adjust controls for maximum r.f. output at 128 and 156Mc/s in turn. Output	200	-	mA	
13.	**Calibration (para 24)**				
	With sender tuned for maximum r.f. output as in item 12. Dial error at 128 and 156Mc/s	-	2	%	
14.	**Modulation and sidetone (para 26 and 27)**				
	With the sender tuned as in item 12 speak or whistle into the microphone. Note that the aerial current increases by approx 10% and that sidetone can be heard distinctly	-	-	-	
15.	**Mechanical stability (para 29)**				
	Set the equipment to receive and send in turn as in items 8 and 12. The application of end thrust to the tuning controls will not cause the output to vary	-	-	-	
16.	**Acoustic stability (para 30)**				
	Set the equipment for normal operating conditions. There will be no sign of instability under maximum gain conditions	-	-	-	

INSPECTION AFTER OVERHAUL

Base inspection record

37. In the following particulars paragraph numbers refer to the Inspection schedule.

Item	Test	Specification limits Min	Max	Unit	Result
1.	**General condition (para 7)**				
(a)	Mechanical condition will be in accordance with Tels A 779	-	-	-	
(b)	Modification and Miscellaneous instructions where applicable have been carried out and those outstanding noted	-	-	-	
(c)	Workmanship and finish will conform to the pilot model	-	-	-	
2.	**Voltmeter calibration (para 8)**				
	12V at meter terminals. Meter reading	11.75	12.25	V	
3.	**H.T. voltages (para 9)**				
	12V input, set loaded - Sender	280	310	V	
	Receiver	220	250	V	

Item	Test	Specification limits Min	Max	Unit	Result
4.	**Ripple voltage (para 10)**				
	Calibrated c.r.o. across h.t. Sender	-	150	mV	
	Receiver	-	100	mV	
5.	**Float charge (para 11)**				
(a)	16.2V input to p.s.u. Input at set plug	-	13.5	V	
(b)	13.5V input to p.s.u. Input at set plug	10	-	V	
6.	**Current consumption (para 12)**				
(a)	12V input, receiver, with sender heaters on	-	6.5	A	
(b)	12V input, sender loaded	-	13.5	A	
7.	**Send/receive time delay (para 13)**				
(a)	Send to receive delay	-	0.5	sec	
(b)	Receive to send delay	-	1.5	sec	
8.	**Audio response (para 14)**				
(a)	Set audio output to 1mW at the peak a.f. frequency. f1	700	1200	c/s	
(b)	Output between 500 and 3500c/s	350	-	μW	
(c)	Output below 100c/s	-	160	μW	
(d)	Output above 10kc/s	-	60	μW	
9.	**I.F. sensitivity (para 15)**				
	20μV, mod 30% at 1kc/s input to grid of V7. Output	1	-	mW	
10.	**I.F. bandwidth (para 16)**				
(a)	Input as in item 9, output 1mW. Bandwidth at -6dB	50	70	kc/s	
(b)	Symmetry at -6dB	-	10	kc/s	
(c)	Input 2mV, output 1mW. Half bandwidth at -40dB	-	200	kc/s	
11.	**Calibration (para 17)**				
	Dial error at 100, 128, 142 and 156Mc/s	-	1.5	%	
12.	**Overall r.f. sensitivity (para 18)**				
(a)	Input to aerial 5μV, mod 30% at 1kc/s. Output at 100 and 156Mc/s	1	-	mW	
(b)	Input to aerial 6.5μV, mod 30% at 1kc/s. Output at 128 and 142Mc/s	1	-	mW	
(c)	P.S.U. input 10.8V. Input required for 1mW a.f. output at 100 and 156Mc/s	-	6	μV	
(d)	P.S.U. input 10.8V. Input required for 1mW a.f. output at 128 and 142Mc/s	-	9	μV	
13.	**Signal-to-noise ratio (para 19)**				
(a)	Input 5μV, mod 30% at 1kc/s. Output 1mW a.f. at 100Mc/s Modulation off. Output	-	10	μW	
(b)	Repeat (a) at 128, 142 and 156Mc/s. Input 10μV, output	-	10	μW	
14.	**Second channel ratio (para 20)**				
	Input 5μV, mod 30% at 1kc/s, at 100 and 156Mc/s. Output 1mW a.f.				
(a)	Input at 100Mc/s -19.44Mc/s (second channel) for 1mW a.f. output	500	-	μV	
(b)	Input at 156Mc/s -19.44Mc/s (second channel) for 1mW a.f. output	28	-	μV	
15.	**A.V.C. (para 21)**				
	Input 10μV, mod 30% at 1kc/s, at each channel. Output 1mW a.f.				
(a)	Increase input to 100mV. Output at 100Mc/s	-	316	mW	
(b)	Increase input to 100mV. Output at 128Mc/s	-	316	mW	
(c)	Increase input to 100mV. Output at 142Mc/s	-	316	mW	
(d)	Increase input to 100mV. Output at 156Mc/s	-	316	mW	

Item	Test	Specification limits Min	Max	Unit	Result
16.	**I.F. breakthrough (para 22)**				
	Input 5μV, mod 30% at 1kc/s, at 100Mc/s. Output 1mW a.f. With 500μV, mod 30% at 1kc/s input at peak i.f., output	-	1	mW	
17.	**Power output (para 23)**				
(a)	12V input to p.s.u. Unmodulated r.f. output at 100Mc/s	220	-	mA	
(b)	Unmodulated r.f. output at 128Mc/s	220	-	mA	
(c)	Unmodulated r.f. output at 142Mc/s	220	-	mA	
(d)	Unmodulated r.f. output at 156Mc/s	220	-	mA	
18.	**Power output (para 23)**				
(a)	10.8V input to p.s.u. Unmodulated r.f. output at 100Mc/s	190	-	mA	
(b)	Unmodulated r.f. output at 128Mc/s	190	-	mA	
(c)	Unmodulated r.f. output at 142Mc/s	190	-	mA	
(d)	Unmodulated r.f. output at 156Mc/s	190	-	mA	
19.	**Calibration (para 24)**				
	Calibration error at 100, 128, 142 and 156Mc/s	-	2	%	
20.	**Modulation (para 25)**				
	Input to microphone socket for 13% increase in aerial current at 100Mc/s	-	6	mV	
	Input to microphone socket for 13% increase in aerial current at 128Mc/s	-	6	mV	
	Input to microphone socket for 13% increase in aerial current at 142Mc/s	-	6	mV	
	Input to microphone socket for 13% increase in aerial current at 156Mc/s	-	6	mV	
21.	**Sidetone (para 26)**				
	5mV input at 1kc/s to microphone socket. Sidetone output with set tuned to 100Mc/s	0.5	-	mW	
	Sidetone output with set tuned to 156Mc/s	0.5	-	mW	
22.	**Modulation response (para 27)**				
	Input from b.f.o. at 1kc/s for valve voltmeter reading of 100V	-	-	-	
(a)	Output at 300c/s	63	158	V	
(b)	Output at 3500c/s	67	150	V	
23.	**Distortion (para 28)**				
	With a c.r.o. connected across the modulation transformer and the carrier modulated to 75% depth, there will be no appreciable distortion when the modulating frequency is varied between 300 and 3500c/s	-	-	-	
24.	**Mechanical stability (para 29)**				
	Set the equipment to receive and send in turn as in items 12 and 17. The application of end thrust to the tuning controls will not cause the output to vary.	-	-	-	
25.	**Acoustic stability (para 30)**				
	Set the equipment for normal operating conditions. There will be no sign of instability under maximum gain conditions.	-	-	-	

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END