Sec 40.558.1
1552

BELL SYSTEM PRACTICES
Toll Test Room Operation
Description and Operating Principles
of Systems and Equipment

SECTION E40.560.1
Issue 1, June, 1951
AT&TCo Standard

BELL SYSTEM PRACTICES
Radio Systems
General

SECTION R70.710.1
Issue 1, June, 1951
AT&TCo Standard

BELL SYSTEM PRACTICES
Central Office Maintenance
Apparatus Requirements
and Adjusting Procedures

SECTION A493.158
Issue 1, June, 1951
AT&TCo Standard

WESTERN ELECTRIC ELECTRON (VACUUM) TUBE TEST DATA

KS-15560 L1 HICKOK TUBE TESTER

1. GENERAL

1.01 Methods of making tests with a KS-15560 L1 Hickok tube tester are covered for the three series in the section numbered E40.560, R70.710, A702.658.

1.02 A new arrangement of the data is being tried with this issue namely to put these data into columns on an attached fan folded sheet which may be removed from the section and attached to the roll chart in the tester itself. Care should be exercised in the method of fastening this table to the existing chart since otherwise it may pull loose and cause trouble in the operation of the rolls. In order to reduce the amount of space and to provide a smooth surface at the junction, it is suggested that scotch tape be used on both the front and back of the joint between the new chart and the old. Since particles of the adhesive may cling to the surface of the scotch tape or may squeeze out around the edges and cause the tape to adhere to adjacent layers of paper when it is rolled, it is suggested that the surface of the scotch tape after it has been attached to the paper be well dusted with talcum powder or powdered chalk. Subsequently if there appears to be any tendency towards sticking, this powder should be used again.

Attached:
Table of Western Electric
Electron Tube Data

1.03 To secure the greatest utility with the tester it is suggested that the attached table be removed from the section and inserted in the tester as indicated in the preceding paragraph.

1.04 Column headings, column spacings and symbols used in the attached data table are similar to those on the roll chart with the exception of three additional symbols which have been used as follows:

(T) has been used to indicate tentative data.

@ has been used in place of the words "cathode activity limit" in order to conserve space in the table.

** indicates that the cathode activity switch should be operated to the TEST position and the filament switch should be set at 7.5 volts. With this arrangement no cathode activity test is made. Care should be exercised in making this test as the tube may be damaged if the cathode activity switch is operated to NORMAL with the filament switch set at 7.5 volts (normal heater voltage is 6.3 volts).

WESTERN ELECTRIC ELECTRON (VACUUM) TUBE TEST DATA
KS-15560L1 HICKOK TUBE TESTER
Section E40.560.1 (R70.710.1, A493,158); Issue 1, June 1951

TUBE TYPE	FIL.	SELECTORS	BIAS VOLTS	MIC-SW SHUNT	PRESS	MIN. TRANS-COND.	NOTATIONS
101D (D86326)) (D92437))	4.3	JR3200-0	14	Hi-3	P4	800	@25% 944WEB Adap.
101F, J, L, M	4.3	JR3200-0	14	Hi-3	P4	850	@25% 944WEB Adap.
101FA	4.3	JR3200-0	13.5	Hi-3	P4	1050	@25% 944WEB Adap.
102D, E, G	2.0	JR3200-0	1	Lo-6	P4	350	@25% 944WEB Adap.
102F, L	2.0	JR3200-0	1	Lo-6	P4	350	@20% 944WEB Adap.
104D (D86327)	4.3	JR3200-0	25	Hi-3	P4	800	@25% 944WEB Adap.
205D, E, F,) D156734)	5.0	JR3200-0	2	Hi-3	P4	1450	@15% 978WEB Adap.
215A	1.1	JR3200-0	20	Hi-3	P4	275	@25% 972 Adapter
231D	3.0	JR3200-0	10	Hi-3	P4	400	@25%
239A	1.1	JR3200-0	15	Hi-3	P4	300	@25%
244A	2.0	JR3204-0	9	Hi-3	P4	650	@25%
245A)	2.0	JR0234-0	7.5	Hi-3	P1,P4#	400	Cap=G.@25% # Hold down P1& Press P4
247A	2.0	JR3204-0	6	Hi-3	P4	530	@25%
257A	3.0	JR0200-0	10	Hi-3	P4	400	Cap=G.@25%
259A, B)	2.0	JR0234-0	0.5	Lo-6	P1,P4#	840	Cap=G.@25% # Hold down P1& Press P4
262A, B	10.0	JR0203-0	6.5	Lo-6	P4	600	Cap=G.@25%
264B, C	1.5	JR3200-0	17	Hi-3	P4	375	@25%
271A	5.0	JR3204-0	4.5	Lo-6	P4	2300	@25%
272A	10.0	JR3204-0	15	Hi-3	P4	570	@25%
274A)	5.0	JR0300-0	0	SH-50	P3	*	Plate No. 1
)	5.0	JR0200-0	0	SH-50	P3	*	Plate No. 2
274B)	5.0	HR0600-0	0	SH-50	P3	*	Plate No. 1
)	5.0	HR0400-0	0	SH-50	P3	*	Plate No. 2
275A	5.0	JR3200-0	20	Hi-3	P4	1750	@25%
283A)	2.0	JR0234-0	0.5	Lo-6	P1,P4#	950	Cap=G.@25% # Hold down P1& Press P4
285A	2.0	JR0234-0	10	Hi-3	P4	700	Cap=G.@25%
286A)	2.0	JR0235-4	0.5	Lo-6	P1,P4#	1000	Cap=G.@25% # Hold down P1& Press P4
290A)	10.0	JR0235-4	0.5	Lo-6	P1,P4#	900	Cap=G.@25% # Hold down P1& Press P4
291A(	10.0	JR5436-2	15	Hi-3	P4	280	@30% Oscillator Section
(	10.0	JR0236-5	9	Hi-3	P4	900	Cap=G. Amplifier Section
)	10.0	JR0205-0	8	Lo-6	P4	500	Cap=G.@25%.Triode Sect.
292A)	10.0	JR0405-2	0	SH-21	P1	*	Diode No. 1
)	10.0	JR0305-2	0	SH-21	P1	*	Diode No. 2
293A	10.0	JR4235-0	10.5	Hi-3	P4	900	@25%
294A	10.0	JR0234-0	10.5	Hi-3	P4	900	Cap=G.@25%
300A, B	5.0	JR3200-0	15	Hi-6	P4	2900	@25%
)	2.0	JR0205-0	8	Lo-6	P4	500	Cap=G.@25%.Triode Sect.
303A)	2.0	JR0405-2	0	SH-21	P1	*	Diode No. 1
)	2.0	JR0305-2	0	SH-21	P1	*	Diode No. 2
307A(	5.0	JR3020-4	7	Hi-3	P4	2000	Cap=P.@30% G1. as Control Grid
(	5.0	JR4020-3	7	Hi-3	P4	900	Cap=P. G3 as Control Grid Observe for Min. Gm
309A)	10.0	JR0234-0	0.5	Lo-6	P1,P4#	800	Cap=G.@25% # Hold down P1& Press P4
310A, B	10.0	JR0235-4	3	Lo-6	P4	1400	Cap=G.@25%
311A, B	10.0	JR0234-0	15	Lo-6	P4	2200	Cap=G.@20%
328A	7.5	JR0235-4	3	Lo-6	P4	1400	Cap=G.@25%
329A	7.5	JR0234-0	15	Lo-6	P4	2200	Cap=G.@20%
336A	10.0	JR4235-0	3.5	Lo-6	P4	3500	@25%
337A	10.0	JR0235-4	3.5	Lo-6	P4	1250	Cap=G.@25%
348A	6.3	JR0347-5	3	Lo-6	P4	1400	Cap=G.@25%
349A	6.3	JR5347-0	3.5	Lo-6	P4	3500	@25%
350A	6.3	JR3024-0	6	Hi-15	P4	4800	Cap=P.@25%
350B	6.3	JR5347-0	6	Hi-15	P4	4800	@25%
351A)	6.3	JR0507-2	0	SH-70	P3	*	Plate No. 1
)		JR0307-2	0	SH-70	P3	*	Plate No. 2
)	10.0	JR0205-0	8	Lo-6	P4	500	Cap=G.@25%.Triode Sect.
352A)	10.0	JR0405-2	0	SH-21	P1	*	Diode No. 1
)	10.0	JR0305-2	0	SH-21	P1	*	Diode No. 2
367A	6.3	JV6147-0	4.5	Lo-15	P4	4500	@25%
373A	2.0	JR4760-3	3.1	Lo-6	P4	800	@25%
374A	3.0	JR4760-3	10	Hi-6	P4	1800	@25%
375A	20.0	JR5347-0	25	Lo-6	P4	1700	@20%
381A	6.3	HR0502-0	0	SH-55	P1	*	Diode Test
383A	6.3	HR4602-0	4.4	Lo-6	P4	1800	@30%
385A	6.3	HR5032-8	2.7	Lo-6	P4	1500	Cap=P.@30%
387A	6.3	HR5032-8	2.9	Lo-6	P4	2000	Cap=P.@30%
2C51/396A)	6.3	KR7608-2	0-Ø	Lo-6	P4	3400	Triode No. 1 @25% Ø240-ohm±5% Self Bias Res.
)	6.3	KR3402-8	0-Ø	Lo-6	P4	3400	Triode No. 2 @25% Ø240-ohm±5% Self Bias Res.
5603/398A	6.3	JR4760-3	10	Lo-6	P4	3750	@25%
399A	1.1	DX6210-0	0	Lo-6	P1,P4#	675	# Hold down P1& Press P4
400A)	1.1	DX8216-5	8.5	Hi-3	P4	400	G1.Test Short on 2 Observe for Min. Gm
)	1.1	DX6218-5	8.5	Hi-3	P4	200	G3.Test Short on 2 Observe for Min. Gm
5590/401A(	6.3	JR3562-0	2.7	Lo-6	P1,P4#	1300	@30% # Hold down P1& Press P4
6AK5/403A)	6.3	JR3562-0	0-Ø	Lo-6	P4	3100	@25% Ø330-ohm±5% Self Bias Res.
5591/403B)	6.3	JR3562-0	0-Ø	Lo-6	P4	3100	@25% Ø330-ohm±5% Self Bias Res.
404A	6.3	DZ1684-0	0-Ø	Lo-30	P4	8000	@25% Ø110-5-ohm Self Bias Res.
407A)	20	KV7608-2	0-Ø	Lo-6	P4	3400	Triode No. 1 @25% Ø240-ohm±5% Self Bias Res.
)	20	BV3402-8	0-Ø	Lo-6	P4	3400	Triode No. 2 @25% Ø240-ohm±5% Self Bias Res.
408A(T)(	20	JR3562-0	0-Ø	Lo-6	P4	3000	@25% Ø330-ohm±5% Self Bias Res.
6AS6/409A	6.3	JR3562-7	2.8	Lo-6	P4	2000	@25%
412A)	6.3	EV0907-3	0	SH-65	P3	*	Plate No. 1
)	6.3	EV0103-7	0	SH-65	P3	*	Plate No. 2
414A(6AJ5)(	6.3	JR3562-0	3.5	Lo-6	P1,P4#	1600	@25% # Hold down P1& Press P4
415A(6AS6)	6.3	JR3562-7	2.8	Lo-6	P4	2000	@25%
417A(T))	6.3	DZ5106-1	0-Ø	Lo-30	P4	14500	@25% Ø62-ohm±1% Self Bias Res.
418A(T)(	6.3	BW8254-0	0-Ø	Lo-30	P4	18000	@25% Ø27-ohm±1% Self Bias Res.
420A)	12.6	EV6807-3	0	Lo-6	P4	900	Triode No.1 @25%
)	12.6	EV3102-6	0	Lo-6	P4	900	Triode No.2 @25%
421A(T)(	**	JX4506-1	18	Hi-15	P4	6250	Section 1
(	**	JX2103-5	18	Hi-15	P4	6250	Section 2
422A)	5.	HR0600-0	0	SH-78	P3	*	Plate No. 1
)	5.	HR0400-0	0	SH-78	P3	*	Plate No. 2
429A(T)	20	BW8254-0	4	Lo-6	P4	3500	@25%
TS251)	50	JR5347-6	30	Hi-3	P4	870	@25%.Pentode Section

291A	10.0	JR5436-2	15	Hi-3	P4	280	@30% Oscillator Section
	10.0	JR0236-5	9	Hi-3	P4	900	Cap=G. Amplifier Section
	10.0	JR0205-0	8	Lo-6	P4	500	Cap=G.@25%.Triode Sect.
292A	10.0	JR0405-2	0	SH-21	P1	*	Diode No. 1
	10.0	JR0305-2	0	SH-21	P1	*	Diode No. 2
293A	10.0	JR4235-0	10.5	Hi-3	P4	900	@25%
294A	10.0	JR0234-0	10.5	Hi-3	P4	900	Cap=G.@25%
300A, B	5.0	JR3200-0	15	Hi-6	P4	2900	@25%
	2.0	JR0205-0	8	Lo-6	P4	500	Cap=G.@25%.Triode Sect.
303A	2.0	JR0405-2	0	SH-21	P1	*	Diode No. 1
	2.0	JR0305-2	0	SH-21	P1	*	Diode No. 2
307A	5.0	JR3020-4	7	Hi-3	P4	2000	Cap=P.@30% Gl. as Control Grid
	5.0	JR4020-3	7	Hi-3	P4	900	Cap=P. G3 as Control Grid Observe for Min. Cm
309A	10.0	JR0234-0	0.5	Lo-6	P1,P4#	800	Cap=G.@25% # Hold down P1& Press P4
310A, B	10.0	JR0235-4	3	Lo-6	P4	1400	Cap=G.@25%
311A, B	10.0	JR0234-0	15	Lo-6	P4	2200	Cap=G.@20%
328A	7.5	JR0235-4	3	Lo-6	P4	1400	Cap=G.@25%
329A	7.5	JR0234-0	15	Lo-6	P4	2200	Cap=G.@20%
336A	10.0	JR4235-0	3.5	Lo-6	P4	3500	@25%
337A	10.0	JR0235-4	3.5	Lo-6	P4	1250	Cap=G.@25%
339A	5.0	JR3020-4	8	Hi-6	P4	3000	Cap=P.@25%
347A	6.3	JR0407-0	6	Lo-6	P4	760	Cap=G.@25%

407A	20	KV7608-2	0-Ø	Lo-6	P4	3400	Ø210-ohm±5%Self Bias Res.
	20	BV3402-8	0-Ø	Lo-6	P4	3400	Triode No. 2 @25% Ø240-ohm±5%Self Bias Res.
408A(T)	20	JR3562-0	0-Ø	Lo-6	P4	3000	@25% Ø330-ohm±5%Self Bias Res.
6AS6/409A	6.3	JR3562-7	2.8	Lo-6	P4	2000	@25%
412A	6.3	EV0907-3	0	SH-65	P3	*	Plate No. 1
	6.3	EV0103-7	0	SH-65	P3	*	Plate No. 2
414A(6AJ5)	6.3	JR3562-0	3.5	Lo-6	P1,P4#	1600	@25% # Hold down P1& Press P4
415A(6AS6)	6.3	JR3562-7	2.8	Lo-6	P4	2000	@25%
417A(T)	6.3	DZ5106-1	0-Ø	Lo-30	P4	14500	@25% Ø62-ohm±1%Self Bias Res.
418A(T)	6.3	BW8254-0	0-Ø	Lo-30	P4	18000	@25% Ø27-ohm±1%Self Bias Res.
420A	12.6	EV6807-3	0	Lo-6	P4	900	Triode No.1 @25%
	12.6	EV3102-6	0	Lo-6	P4	900	Triode No.2 @25%
421A(T)	**	JX4506-1	18	Hi-15	P4	6250	Section 1
	**	JX2103-5	18	Hi-15	P4	6250	Section 2
422A	5.	HR0600-0	0	SH-78	P3	*	Plate No. 1
	5.	HR0400-0	0	SH-78	P3	*	Plate No. 2
429A(T)	20	BW8254-0	4	Lo-6	P4	3600	@25%
TS251	50	JR5347-6	30	Hi-3	P4	870	@25%.Pentode Section
	50	JR0602-3	0	SH-80	P3	*	Rectifier Section

* A star or asterisk in the MIN TRANSCON. column indicates that the MICROMHOS switch should be set on SHUNT and tube should be tested with respect to RECTIFIERS & DIODES - OK index mark on meter scale.

\# This symbol in the PRESS column requires holding down the P1 button before and during the depressing of the P4 (GM switch) button for a reading.

(T) Tentative data.

@ This symbol stands for "cathode activity limit."

‡ This symbol in BIAS VOLTS column indicates BIAS VOLTS is initial-16 set at maximum on 50V range. Then operate P2 or P3 as specified and reduce BIAS VOLTS with BIAS ADJUST control until the tube strikes. Tube is OK if reading equals or exceeds RECTIFIERS & DIODES OK mark at BIAS VOLTS striking point specified under NOTATIONS.

Ø This symbol in BIAS VOLTS column with zero (0) BIAS VOLTS listed indicates a self bias resistor of the value given under NOTATIONS is required. Less tolerance in resistances is advantageous.

** Operate CATH. ACT. switch to TEST position and set FILAMENT switch at 7.5V. No cathode activity test is made.

STOP

STOP

12) 500
84
60

6CG7
6DR7