

III Test Equipment

Required Test Equipment (or approved equivalent)

- |     |  |                                      |
|-----|--|--------------------------------------|
| 1.  | Digital Multimeter   | Fluke 77 or 87                       |
| 2.  | Audio Oscillator   | Krohn Hite 4300A or HP8903           |
| 3.  | AC Meter   | HP8903, HP400GL, or Tektronix AA501  |
| 4.  | Distortion Analyzer  | HP8903, Tektronix AA501(4) 50Ω loads |
| 5.  | Frequency Counter  | Phillips PM6666 or HP5386A           |
| 6.  | Spectrum Analyzer<br>with tracking generator                         | HP8591A                              |
| 7.  | IF Receiver  | Shure Modified P6R Design            |
| 8.  | Two RF Signal Generators   | Hewlett Packard 8657A                |
| 9.  | 50 ohm cable(RG-58/U),   | 2ft or less, BNC to BNC connector    |
| 11. | XLR-to-1/4in. cable  | Shure Part #: 90A8756/1              |
| 10. | RF Mixer(ZAD-1)  |                                      |
| 11. | Non-metallic slot-type screw driver. (Toray yellow adjuster #A-1810) |                                      |
| 12. | Non-metallic slot-type screw driver. (Toray red adjuster #A-0910)    |                                      |

IV Alignment Procedure

**PREFACE:** Connect a 50 ohm coaxial cable from antenna BNC jack J3 to a spectrum analyzer. If any part of the following alignment cannot be achieved, see Section X, "Service Evaluation and Troubleshooting".

**Initial Transmitter Settings**

1. Set Power Switch (SW2) to ON (in) when testing on the bench, OFF (out) when testing in the production fixture.
2. Set Stereo/Mono switch (SW1) to "Stereo" (down)
3. Set input level control (R202) full clockwise.
4. Set headphone volume control (R136) full clockwise.
5. Set voltage selector switch (SW4) for 115V(160mA fuse) when testing in the United States. Set (SW4) for 230V(80mA fuse) when testing in other countries, based on their AC power standard.
6. Apply AC power based on your country's AC power standard. Use a power line cord when bench testing. In production, apply +20V to TP222, and -20VDC to TP224.
7. Set input pad (SW3) for -10dB.
8. Set audio analyzer with a 30kHz low pass filter.
9. Attach XLR-to-1/4in. cable (90A8756) from "Left Loop OUT" to "Right/CH2 IN".

ISS Record of Changes Made

1.	Production Release 12/4/03		<b>CONFIDENTIAL</b> © 2003 – 2006 SHURE INCORPORATED <b>SHURE INCORPORATED.</b> 5800 TOUHY AVENUE NILES, IL 60714-4608 PHONE 847-600-2000 <i>Microphones-Electronic Components</i>
2.	ECO 82979: Updated II Circuit Description, IV Alignment procedure, added XII IF Receiver Modification for P7R-NF. JMM 04/30/04 5/20/04 CJW		Typed: C. Babarskas 11/25/03 S. Brumm, J. R. Haugland 2/11/08
3.	ECO 82960: Widened Regulator limits for 12V & 5V. JMM. 8/27/04		Checked: Y. Tang 11/25/03 J. R. Haugland 2/11/08
4.	ECO 100150. On Refer Drwg. 90-10603 was 90-8963-11. Deleted 90-8963-3. AMS		Approved: SMG 12-2-03 T. Liao 2/ /08

**MODEL : P7T-H3**

All frequencies listed below are in units of MHz.

Model H3	ROTARY SWITCH SW8 POSITION.	Group 1 SW7 UP	Group 2 SW7 DOWN
	0	524.200	553.800
	1	525.150	552.850
	2	526.825	551.175
	3	530.375	547.625
	4	531.000	547.000
	5	533.300	544.700
	6	538.150	539.850
	7	545.625	532.375
	8	546.925	531.075
	9	550.150	527.850
	A	551.625	535.025
	B	553.575	541.65
	C	537.325	536.350
	D	527.975	543.250
	E	540.675	551.125
	F	542.725	553.375

TABLE 1

ISS	Record of Changes Made	
1.	Production Release 12/4/03	<p><b>CONFIDENTIAL</b>                      © 2003 – 2006 SHURE INCORPORATED  <b>SHURE INCORPORATED.</b>                      5800 TOUHY AVENUE                      NILES, IL 60714-4608                      PHONE 847-600-2000  <i>Microphones-Electronic Components</i></p> <p>Typed: C. Babarskas 11/25/03                      S. Brumm, J. R. Haugland 2/11/08</p> <p>Checked: Y. Tang 11/25/03                      J. R. Haugland 2/11/08</p> <p>Approved: SMG 12-2-03                      T. Liao 2/ /08</p>
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**MODEL : P7T-L2**

All frequencies listed below are in units of MHz.

Model L2	ROTARY SWITCH SW8 POSITION.	Group 1 SW7 UP	Group 2 SW7 DOWN
	0	632.200	661.800
	1	633.150	660.850
	2	634.825	659.175
	3	638.375	655.625
	4	639.000	655.000
	5	641.300	652.700
	6	646.150	647.850
	7	653.625	640.375
	8	654.925	639.075
	9	658.150	635.850
	A	659.625	643.025
	B	661.575	649.65
	C	645.325	644.350
	D	635.975	651.250
	E	648.675	659.125
	F	650.725	661.375

TABLE 2

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1.	Production Release 12/4/03	<b>CONFIDENTIAL</b> © 2003 – 2006 SHURE INCORPORATED <b>SHURE INCORPORATED.</b> 5800 TOUHY AVENUE NILES, IL 60714-4608 PHONE 847-600-2000 <i>Microphones-Electronic Components</i>
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		Typed: C. Babarskas 11/25/03 S. Brumm, J. R. Haugland 2/11/08 Checked: Y. Tang 11/25/03 J. R. Haugland 2/11/08 Approved: SMG 12-2-03 T. Liao 2/ /08

<b>Model X1</b>		
<b>Rotary Switch</b>	<b>Group 1 SW7 UP</b>	<b>Group 2 SW7 Down</b>
0	944.125	951.875
1	945.275	950.725
2	946.675	949.325
3	948.525	947.475
4	950.625	945.375
5	951.425	944.575
6	944.175	944.250
7	944.975	945.050
8	945.600	945.675
9	946.625	946.700
A	947.325	947.400
B	948.575	948.650
C	949.325	949.400
D	950.275	950.350
E	950.950	951.025
F	951.800	951.875

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