

Zenith Radio Corp.

Model: 7-S-28

Chassis:

Year: Pre October 1936

Power:

Circuit:

IF:

Tubes:

Bands:

Resources

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MODELS 6-S-27, 6-S-52
MODELS 7-M-91S, 7-M-91D
MODELS 7-S-28, 7-S-53
Alignment, Voltage

ZENITH RADIO CORP.

Models 7-M-91S and 7-M-91D. (Chassis No. 570S)

The sensitivity switch should be in the clockwise or sensitive position during adjustment. The output meter may be connected across the voice coil connections at the speaker socket.

"A" Connect the service oscillator to the control grid of the 6A8 tube and the chassis. Connect the output meter across the primary of the speaker transformer.

Set the service oscillator to 252.5 K.C. and adjust the trimmer on the I. F. transformer for the greatest output reading. These adjustments should be repeated several times using as weak an input signal as possible so as to obtain greater accuracy.

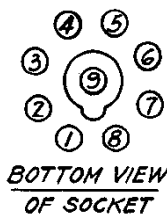
"B" Change the service oscillator lead from the grid of the 6A8 to the antenna connection. A male Delco Remmy connector may be used in making a connection to the antenna lead.

Set the service oscillator at 1400 K.C.

Rotate the gang condenser one and one fourth turns from the minimum setting. At the proper position eight teeth on the tuning gear will be visible past the gear bracket.

Adjust the oscillator, R.F. and antenna trimmers in that order to the point giving the greatest output. "C" Set the service oscillator at 600 K.C. and rotate the gang condenser to tune in this signal. Move the gang condenser to and fro past the signal meanwhile adjusting the oscillator paddler condenser until the combination of adjustments giving the greatest reading of the output meter is obtained.

"D" Repeat operation "B."



- (3) Set service oscillator and pointer to 21 megacycles (through hole in top of chassis) for correct dial reading.
 - (4) Recheck 6 megacycle adjustment.
 - (5) Set service oscillator and pointer to 1700 K. C. (Band A) and adjust broadcast trimmer (through hole in top of chassis) for correct dial reading.
 - (6) Set service oscillator at 600 K.C. Adjust broadcast paddler (through hole in top of chassis next to I.F. transformer), meanwhile rocking pointer to and fro past 600 K.C. on dial to combination giving greatest output.
 - (7) Readjust at 1700 K.C.
- Note: These adjustments affect each other slightly and the entire procedure should be repeated to secure maximum results.

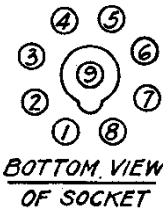
For other data see Index

Socket Voltages MODELS 6-S-27, 6-S-52
CHASSIS #5619

| TUBE | POSITION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------|----------------|---|-----------------|-----|-------------------|------|-------------------|---|------|---|
| 6A8 | 1st. Det. Osc. | 0 | 5 _{ac} | 225 | 70 | -1 | 190 | 0 | 0 | 0 |
| 6K7 | I. F. | 0 | 5 _{ac} | 225 | 70 | 0 | - | 0 | 0 | 0 |
| 6H6 | 2nd Det. | 0 | 5 _{ac} | -1 | -2.5 | -1 | - | 0 | -2.5 | - |
| 6K7 | 1st. Aud. | 0 | 5 _{ac} | 60 | 14 | -2.5 | - | 0 | -2.5 | 0 |
| 6F6 | PWR. | 0 | 5 _{ac} | 220 | 225 | -2.5 | - | 0 | -2.5 | - |
| 5Y3 | Rect. | 0 | 300 | - | 305 _{ac} | - | 305 _{ac} | - | 300 | - |

Line voltage 110.

Antenna and Ground disconnected.



All voltages measured from point indicated to ground, using a 1000 ohm per volt D.C. meter (unless marked otherwise).

Alignment

- (1) Balance I.F. transformers at 252.5 K.C. with test oscillator connected to control grid of 6A8 and ground.
- (2) Turn band switch to "C" Band. Connect test oscillator to antenna and ground leads and set for 15 megacycles. Adjust oscillator trimmer on gang condenser to secure correct dial reading.
- (3) Adjust detector trimmer (located on bracket on top of detector coil) for maximum output.
- (4) Turn band switch to "A" Band. Adjust oscillator trimmer (through hole in top of chassis next to oscillator) for correct dial reading at 1400 K.C. Also adjust preselector and detector trimmers on gang for maximum output.
- (5) Adjust oscillator paddler (next to oscillator section of gang through hole in top of chassis) while rocking pointer back and forth past 600 K.C. to the combination giving greatest output.
- (6) Recheck at 1400 K.C.
- (7) Repeat entire procedure.

SOCKET VOLTAGES 7-M-91S, 7-M-91D

| Tube | Position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|------|-----------------|---|-----|-----|-----|-----|-----|-----|-----|---|
| 6K7 | R.F. Amp. | 0 | 5.8 | 250 | 100 | 5.2 | - | 0 | 5.2 | 0 |
| 6A8 | 1st. Det. Osc. | 0 | 0 | 250 | 100 | -23 | 165 | 5.8 | 5.2 | 0 |
| 6K7 | I.F. Amp. | 0 | 5.8 | 240 | 100 | 6.7 | - | 0 | 6.7 | 0 |
| 6Q7 | 2nd Det. A.V.C. | 0 | 0 | 145 | -2 | -2 | - | 5.8 | 1.6 | 0 |
| 6C5 | Driver | 0 | 0 | 240 | 0 | 0 | - | 5.8 | 8.2 | - |
| 6N7 | Class B Power | 0 | 0 | 250 | 0 | 0 | 250 | 5.8 | 0 | - |
| 5X5 | RECT. | 0 | 0 | AC | - | AC | - | 5.8 | 250 | - |

Voltage at Battery 5V.

Voltage at Switch 58V.

Antenna disconnected.

All voltages measured with 1000 ohms per volt D.C. meter.

Total current consumption 8.2 Amperes.

Sensitivity at one watt output 1Mv.

Maximum power output 9 watts at 6 volts.

