

## Midwest Radio Corp.

**Model:** Royale

**Chassis:**

**Year:** Pre October 1936

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

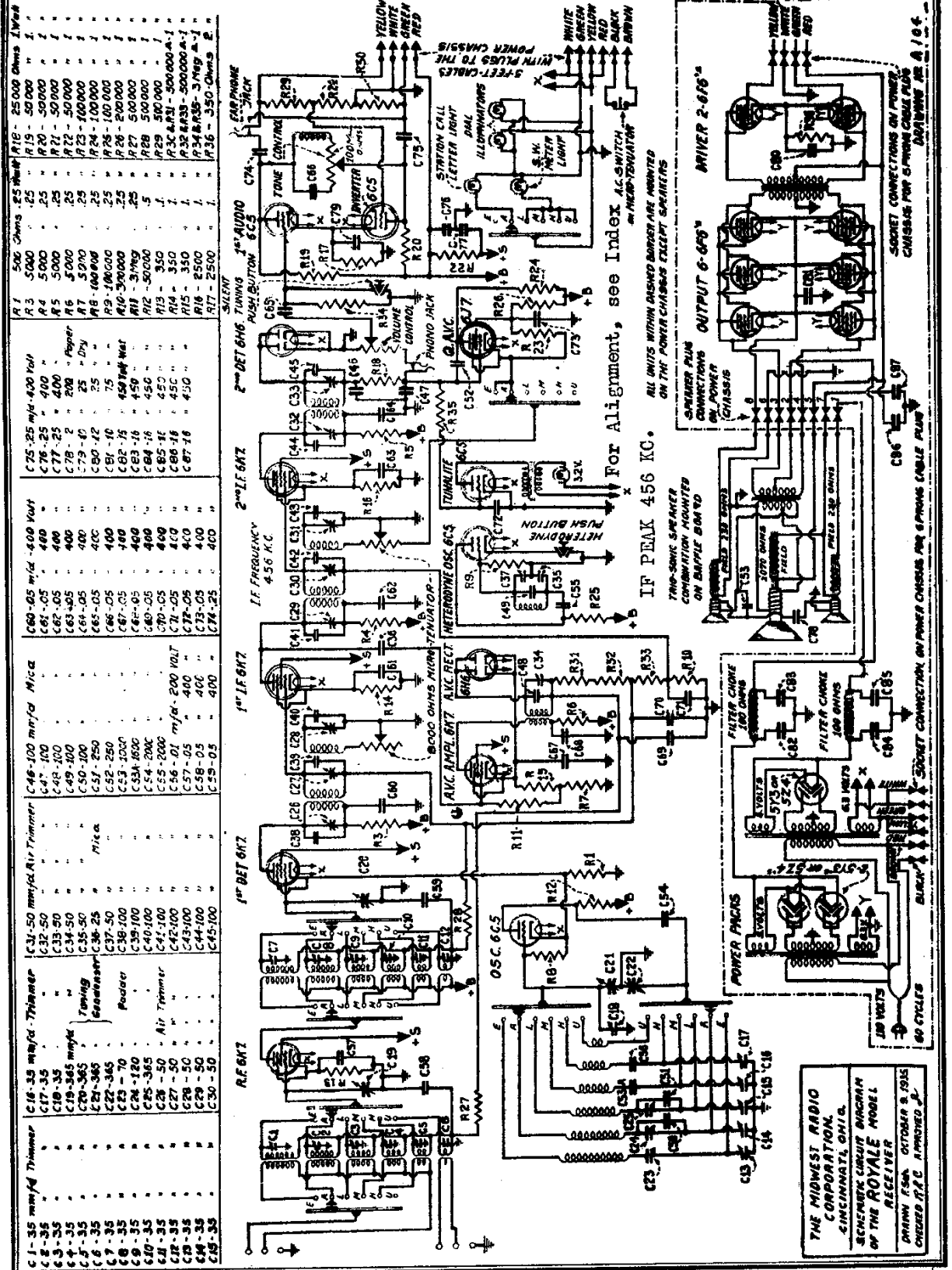
### Resources

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MODEL Royale Schematic



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THE MIDWEST RADIO CORPORATION, CINCINNATI, OHIO. SCHEMATIC CIRCUIT DIAGRAM OF THE ROYALE MODEL RECEIVER. DRAWN F.S.M. OCTOBER 9, 1935. CHECKED H.R.C. APPROVED J.P.

SECRET CONNECTIONS ON POWER CHASSIS FOR 6-SPRING CABLE PLUG DRAWING NO. 8194.

IF PEAK 456 KG.

For Alignment, see Index A.C. SWITCH on MECH-TUNER.

ALL UNITS WITHIN DASHED BORDER ARE MOUNTED ON THE POWER CHASSIS EXCEPT SILENCERS.

SECRET CONNECTION ON POWER CHASSIS FOR 6-SPRING CABLE PLUG

MODEL Royale  
MODEL 7-36  
MODEL 11-36  
MODEL 18-36  
Alignment

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INSTRUCTIONS FOR ALIGNING THE NUMBER 20-36 MODEL TUBE RECEIVER

A good signal generator with accurate frequency calibration and an output meter are required. An intermediate frequency of 456 k.c. is used.

- (1) Set the signal generator to 456 k.c. and connect it from the mixer grid to ground.
(2) Connect the output meter from the plate of the output tube to positive B, or from the plates of one pair of tubes to the plates of the other pair of tubes.
(3) Being a weak signal approximately 20 micro-volts, align the I.F. transformers to maximum output of approximately 100 micro-volts. Align the A.V.C. transformer for maximum output. Repeat using weaker signal strengths for the I.F. and stronger peak is assured.
(4) This completes the alignment of the I.F. amplifier. Insert the antenna lead between the signal generator and mixer grid lead between antenna and ground.
(5) Set the wave change switch to the "B" band.
(6) Adjust the "B" band oscillator trimmer to maximum gain, then adjust the "B" band R.F. and the "B" band mixer trimmers for maximum gain.
(7) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "B" band.
(8) Set the wave change switch to the "A" band.
(9) Adjust the "A" band oscillator trimmer to maximum gain, then adjust the "A" band R.F. and the "A" band mixer trimmers for maximum gain.
(10) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "A" band.
(11) Set the wave change switch to 1.6 m.c. and rotate the receiver dial to 560 k.c.
(12) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "M" band.
(13) Set the signal generator to 1450 k.c.
(14) Adjust the "M" band oscillator trimmer to maximum gain, then adjust the "M" band R.F. and the "M" band mixer trimmers for maximum gain.
(15) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect that of the other. This completes the alignment of the "M" band.
(16) Set the wave change switch to the "W" band.
(17) Adjust the "W" band oscillator trimmer to maximum gain, then adjust the "W" band R.F. and the "W" band mixer trimmers for maximum gain.
(18) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect that of the other. This completes the alignment of the "W" band.

INSTRUCTIONS FOR ALIGNING THE NUMBER 20-36 MODEL TUBE RECEIVER

A good signal generator with accurate frequency calibration and an output meter are required. An intermediate frequency of 456 k.c. is used.

- (1) Set the signal generator to 456 k.c. and connect it from the mixer grid to ground.
(2) Connect the output meter from the plate of the output tube to positive B, or from the plates of one pair of tubes to the plates of the other pair of tubes.
(3) Being a weak signal approximately 20 micro-volts, align the I.F. transformers to maximum output. Repeat using weaker signal strengths for the I.F. and stronger peak is assured.
(4) This completes the alignment of the I.F. amplifier. Insert the antenna lead between antenna and ground.
(5) Set the wave change switch to the "B" band.
(6) Adjust the "B" band oscillator trimmer to maximum gain, then adjust the "B" band R.F. and the "B" band mixer trimmers for maximum gain.
(7) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "B" band.
(8) Set the wave change switch to the "A" band.
(9) Adjust the "A" band oscillator trimmer to maximum gain, then adjust the "A" band R.F. and the "A" band mixer trimmers for maximum gain.
(10) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect that of the other. This completes the alignment of the "A" band.
(11) Set the wave change switch to 1.6 m.c. and rotate the receiver dial to 560 k.c.
(12) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "M" band.
(13) Set the signal generator to 1450 k.c.
(14) Adjust the "M" band oscillator trimmer to maximum gain, then adjust the "M" band R.F. and the "M" band mixer trimmers for maximum gain.
(15) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect that of the other. This completes the alignment of the "M" band.
(16) Set the wave change switch to the "W" band.
(17) Adjust the "W" band oscillator trimmer to maximum gain, then adjust the "W" band R.F. and the "W" band mixer trimmers for maximum gain.
(18) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect that of the other. This completes the alignment of the "W" band.

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(4) Using a moderately weak signal, approximately 40 micro-volts, align the three I.F. transformers to maximum output.
(5) Keep decreasing the oscillator input and readjusting for maximum gain.
This completes the alignment of the I.F. amplifier. Insert the antenna lead between antenna and ground.
(1) Set the wave change switch to the "B" band.
(2) Set the signal generator to 456 k.c.
(3) Adjust the "B" band oscillator trimmer to maximum gain, then adjust the "B" band R.F. and the "B" band mixer trimmers for maximum gain.
(4) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "B" band.
(5) Set the wave change switch to the "A" band.
(6) Adjust the "A" band oscillator trimmer to maximum gain, then adjust the "A" band R.F. and the "A" band mixer trimmers for maximum gain.
(7) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "A" band.
(8) Set the signal generator to 1450 k.c.
(9) Adjust the "M" band oscillator trimmer to maximum gain, then adjust the "M" band R.F. and the "M" band mixer trimmers for maximum gain.
(10) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "M" band.
(11) Set the wave change switch to the "W" band.
(12) Adjust the "W" band oscillator trimmer to maximum gain, then adjust the "W" band R.F. and the "W" band mixer trimmers for maximum gain.
(13) Repeat the adjustment of trimmers and padders until the adjustment of one does not affect the adjustment of the other. This completes the alignment of the "W" band.

This completes the alignment of the "B" band.

This completes the alignment of the "A" band.

This completes the alignment of the "M" band.

This completes the alignment of the "W" band.

This completes the alignment of the "B" band.

This completes the alignment of the "A" band.

This completes the alignment of the "M" band.

This completes the alignment of the "W" band.

This completes the alignment of the "B" band.

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This completes the alignment of the "M" band.

This completes the alignment of the "W" band.

This completes the alignment of the "B" band.

This completes the alignment of the "A" band.

This completes the alignment of the "M" band.

This completes the alignment of the "W" band.

This completes the alignment of the "B" band.

This completes the alignment of the "A" band.