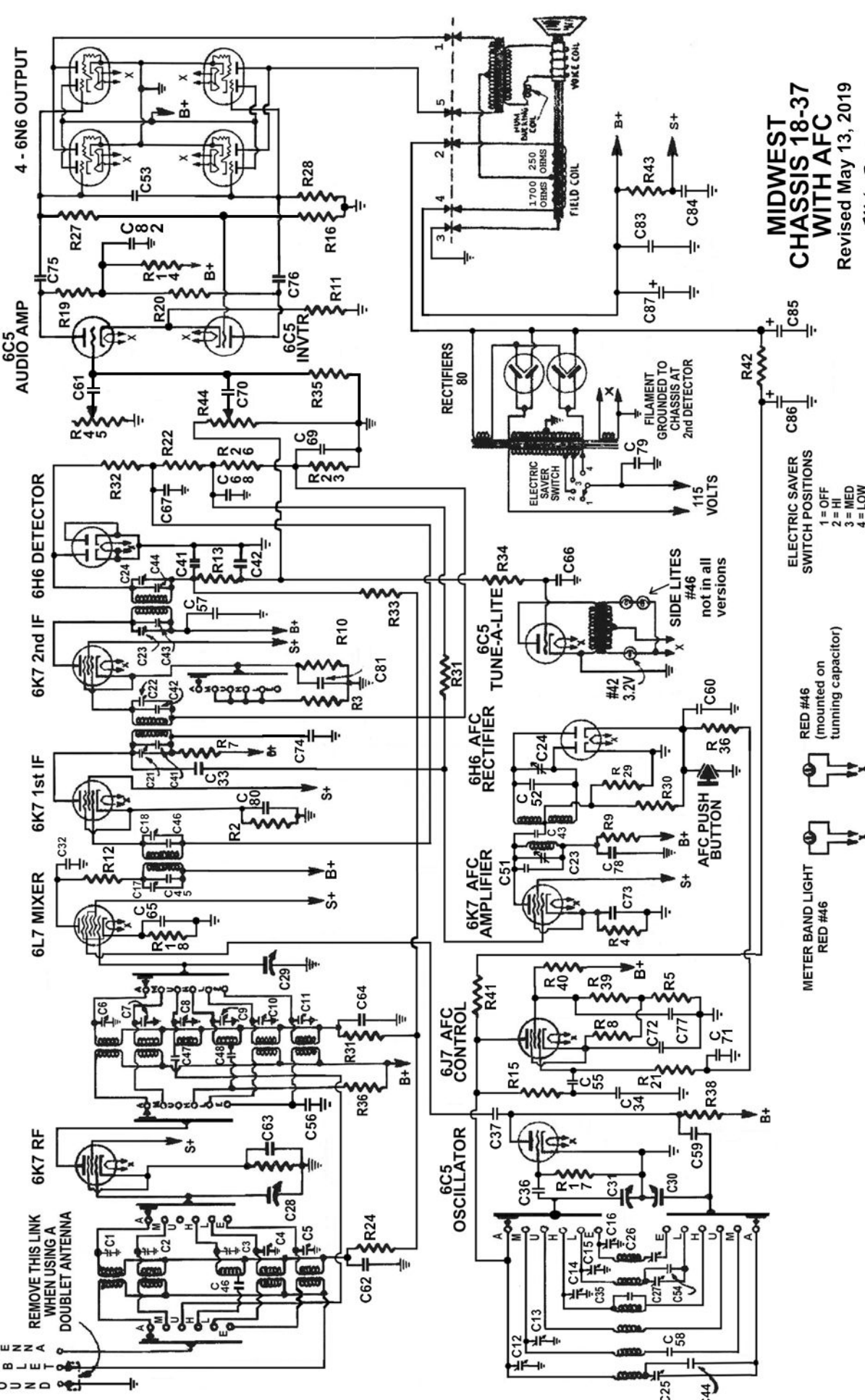
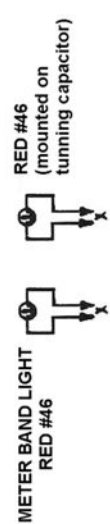


MIDWEST CHASSIS 18-37 WITH AFC

Revised May 13, 2019
Mike Simpson



- ELECTRIC SAVER SWITCH POSITIONS**
- 1 = OFF
 - 2 = HI
 - 3 = MED
 - 4 = LOW



A
D
G
O
U
N
D

REMOVE THIS LINK WHEN USING A DOUBLET ANTENNA

6C5 AUDIO AMP

6C5 OSCILLATOR

6K7 RF

6L7 MIXER

6K7 1st IF

6K7 2nd IF

6H6 DETECTOR

6K7 AFC AMPLIFIER

6H6 RECTIFIER

6C5 TUNE-A-LITE

6C5 INVERTER

6J7 AFC CONTROL

RECTIFIERS

6N6 OUTPUT

1700 250 OHMS OHRMS

FIELD COIL

WAKE COIL

ELECTRIC SAVER SWITCH

115 VOLTS

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CONDENSERS

| | | | | | | |
|-----|----------------|-----|------------|-----|--------|------|
| C1 | 35MMFD TRIMMER | C9 | 1E TRIMMER | C37 | 50MHF | MICA |
| C2 | | C10 | | C38 | 100MHF | |
| C3 | | C11 | | C39 | | |
| C4 | | C12 | | C40 | | |
| C5 | | C13 | | C41 | | |
| C6 | | C14 | | C42 | | |
| C7 | | C15 | | C43 | | |
| C8 | | C16 | | C44 | 150MHF | |
| C9 | | C17 | | C45 | 200MHF | |
| C10 | | C18 | | C46 | | |
| C11 | | C19 | | C47 | | |
| C12 | | C20 | | C48 | | |
| C13 | | C21 | | C49 | | |
| C14 | | C22 | | C50 | | |
| C15 | | C23 | | C51 | | |
| C16 | | C24 | | C52 | | |
| C17 | | C25 | | C53 | 25MHF | |
| C18 | | C26 | | C54 | 50MHF | |
| C19 | | C27 | | | | |
| C20 | | C28 | | | | |
| C21 | | C29 | | | | |
| C22 | | C30 | | | | |
| C23 | | C31 | | | | |
| C24 | | C32 | | | | |
| C25 | | C33 | | | | |
| C26 | | C34 | | | | |
| C27 | | C35 | | | | |
| C28 | | C36 | | | | |

| | | | | | |
|-----|---------|---------|-----|--------|---------|
| C35 | 500MHF | MICA | C73 | 0.5MHF | 200VOLT |
| C36 | 2000MHF | | C74 | | 400VOLT |
| C37 | | | C75 | | |
| C38 | | | C76 | | |
| C39 | | | C77 | | |
| C40 | 3000MHF | | C78 | | |
| C41 | .02MHF | 200VOLT | C79 | | |
| C42 | .03MHF | | C80 | | |
| C43 | | | C81 | | |
| C44 | | | C82 | | |
| C45 | | | C83 | | |
| C46 | | | C84 | | |
| C47 | | | C85 | | |
| C48 | | | C86 | | |
| C49 | | | C87 | | |
| C50 | | | | | |

RESISTORS

| | | | | | |
|-----|-------------|-----------|-----|------------|---------|
| R1 | 350 OHM | WIDEWOUND | R19 | 100000 OHM | 25 WATT |
| R2 | | | R20 | | |
| R3 | | | R21 | | |
| R4 | | | R22 | 200000 OHM | |
| R5 | 390 OHM ±3% | 25 WATT | R23 | | |
| R6 | 500 OHM | 25 WATT | R24 | 500000 OHM | |
| R7 | | | R25 | | |
| R8 | | | R26 | | |
| R9 | | | R27 | | |
| R10 | 1000 OHM | | R28 | | |
| R11 | | | R29 | | |
| R12 | 5000 OHM | | R30 | | |
| R13 | 25,000 OHM | | R31 | 1 MEGOHM | |
| R14 | | | R32 | | |
| R15 | | | R33 | 3 MEGOHM | |
| R16 | 40,000 OHM | | R34 | | |
| R17 | 50,000 OHM | | R35 | | |
| R18 | 80,000 OHM | | R36 | | |

| | | |
|-----|-------------|--------------|
| R37 | 25,000 OHM | .5 WATT |
| R38 | 50,000 OHM | .5 WATT |
| R39 | 15,000 OHM | 1 WATT |
| R40 | 15,000 OHM | 1 WATT |
| R41 | 500,000 OHM | |
| R42 | | |
| R43 | 500,000 OHM | VOLUME CONT. |
| R44 | 500,000 OHM | TONE CONT. |

ALL TESTS MADE WITH NO SIGNAL INPUT

| TYPE | POSITION | PLATE VOLTS | SCREEN VOLTS | SUPP. VOLTS | CATHODE VOLTS | FIL. VOLTS |
|------|--------------|-------------|--------------|-------------|---------------|------------|
| 6K7 | R.F. | 210 | 40 | 0.8 | 0.8 | 6.5 |
| 6L7 | Mixer | 210 | 40 | 1.0 | 1.0 | 6.5 |
| 6C5 | Osc. | 95 | --- | --- | 0 | 6.5 |
| 6K7 | 1st I.F. | 210 | 40 | 1.2 | 1.2 | 6.5 |
| 6K7 | 2nd I.F. | 210 | 40 | 2.0 | 1.0 to 2.0 | 6.5 |
| 6K7 | AFC AMP. | 210 | 40 | 1.0 | 1.0 | 6.5 |
| 6H6 | 2nd Det. | 0 | --- | --- | --- | 6.5 |
| 6H6 | A.F.C. Rect. | 0 | --- | --- | --- | 6.5 |
| 6C5 | Tunelite | AC | --- | --- | 0 | 6.5 |
| 6J7 | Control | 160 | 90 | 4.0 | 4.0 | 6.5 |
| 6C5 | 1st Audio | 60 | --- | --- | 2.5 | 6.5 |
| 6C5 | Inverter | 60 | --- | --- | 2.5 | 6.5 |
| 6N6 | Output | 300 | 210 | --- | 0 | 6.5 |
| 6N6 | Output | 300 | 210 | --- | 0 | 6.5 |
| 6N6 | Output | 300 | 210 | --- | 0 | 6.5 |
| 6N6 | Output | 300 | 210 | --- | 0 | 6.5 |
| 80 | Rectifier | 280AC | --- | --- | --- | 5.0 |
| 90 | Rectifier | 280AC | --- | --- | --- | 5.0 |

* 1.0 Volt Bias When On "M", "U" and "H" bands.

LIVE VOLTAGE 115 VOLTS A.C. 60 CYCLES

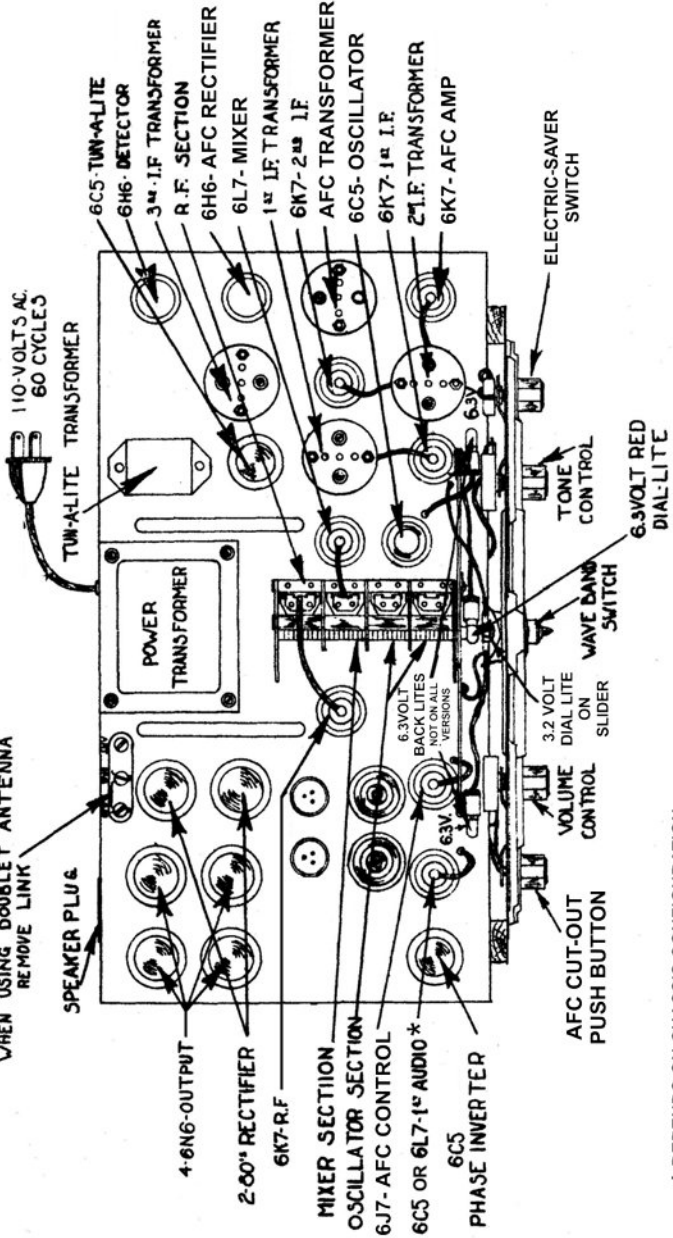
1000 ohm per volt meter used on all D.C. measurements from ground. Voltage plus or minus 15% depending upon line voltage.

MIDWEST CHASSIS 18-37 with AFC PARTS LIST AND VOLTAGES

January 20, 2012

Mike Simpson

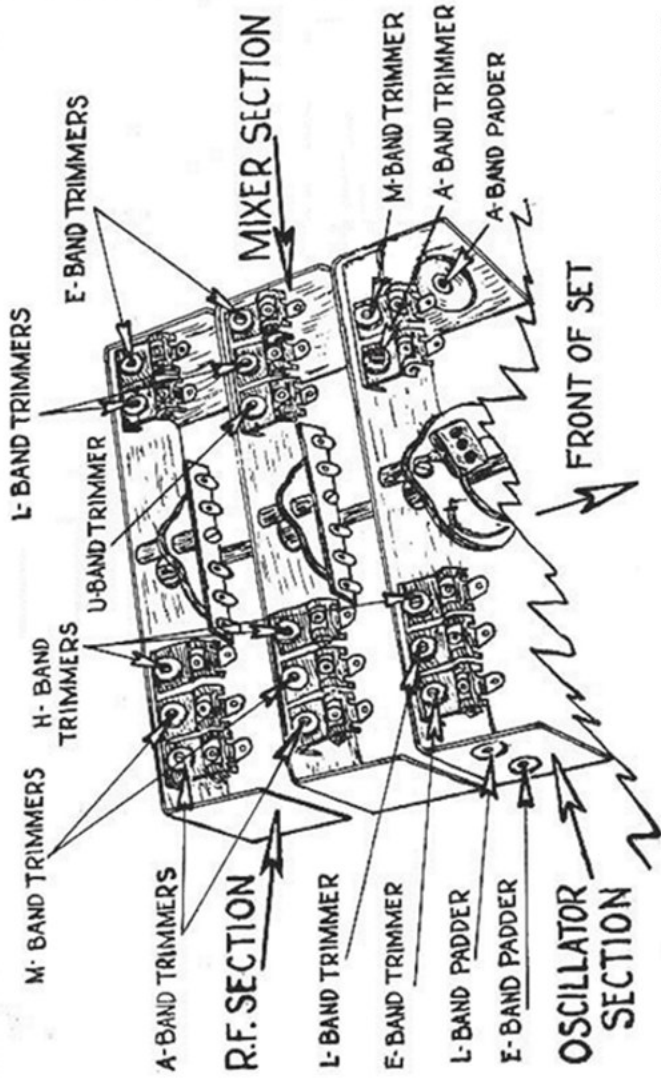
NOTE ~
WHEN USING DOUBLET ANTENNA
REMOVE LINK



* DEPENDS ON CHASSIS CONFIGURATION.
TUBES ARE NOT INTERCHANGABLE.

MIDWEST CHASSIS 18-37 with AFC

January 20, 2012
Mike Simpson



MIDWEST CHASSIS
18-37 with AFC

January 20, 2012

Mike Simpson

INSTRUCTIONS FOR ALIGNING THE MIDWEST 18-37 A.F.C.
RECEIVER AND A.F.C. REGAL (1937)

A good signal generator with accurate frequency calibration, and output meter, and a 0-10 DC milliammeter are required. An intermediate frequency of 456 kc is used.

- (1) Remove grid cap from mixer tube. Set the signal generator to 456 kc and connect it from the mixer grid to ground.
- (2) Remove the oscillator tube from the receiver.
- (3) 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.
- (4) Using as weak a signal as will give a definite reading on the output meter, align the I.F. transformer for maximum output.
- (5) Decrease the input signal and realign.
- (6) Connect the 0-10 milliammeter in series with the cathode of the 637 A.F.C. control tube.
- (7) Turn off A.F.C. by pressing push button. If meter kicks up or down adjust plate trimmer for maximum deflection, either up or down, from the false zero. If no kick is noted turn diode trimmer slightly (about 1/8 turn) and proceed as above.
- (8) Adjust diode trimmer for false zero.
- (9) Flip A.F.C. off and on noting reading of milliammeter. If meter kicks up or down the diode trimmer is not properly aligned. This adjustment is very critical and must be done very carefully if the A.F.C. is to function properly.
- (10) This completes the alignment of the I.F. Amplifier.

Insert the oscillator tube. Connect the signal generator between antenna and ground. Connect the mixer lead to grid of mixer tube. Turn off A.F.C. by depressing push button.

- (1) Set the wave change switch to the "B" band.
- (2) Set signal generator and dial to 340 kc.
- (3) Adjust "B" oscillator trimmer to peak and adjust R.F. and mixer trimmers for maximum gain.

- (4) Reset signal generator and dial to 185 kc.
 - (5) Adjust "B" padder for peak.
 - (6) Repeat adjustment of oscillator trimmer and padder until loop does not effect the other.
- This completes the alignment on the "B" band.
- (1) Set wave change switch to "A" band.
 - (2) Set signal generator and dial to 1490 kc.
 - (3) Adjust "A" oscillator trimmer for peak and adjust R.F. and mixer trimmers for maximum gain.
 - (4) Reset signal generator and dial to 550 kc.
 - (5) Adjust "A" padder for peak.
 - (6) Repeat adjustment of oscillator trimmer and padder until loop does not effect the other.
- This completes alignment of the "A" band.
- (1) Set wave change switch to "W" band.
 - (2) Set signal generator and dial to 4 mc.
 - (3) Adjust "W" oscillator trimmer for peak and adjust R.F. and mixer trimmers for maximum gain.
 - (4) Reset signal generator and dial to 1.8 mc.
 - (5) Adjust "W" padder for peak.
 - (6) Repeat adjustment of "W" oscillator trimmer and padder until loop does not effect the other.

This completes the alignment of the "W" band.

- (1) Set wave change switch to "M" band.
 - (2) Set signal generator and dial to 11.5 mc.
 - (3) Adjust "M" oscillator trimmers for maximum gain.
 - (4) Repeat adjustment of "M" band.
 - (1) Set wave change switch to "H" band.
 - (2) Set signal generator and dial to 26 mc.
 - (3) Adjust "H" oscillator trimmer to fundamental peak and adjust R.F. and mixer trimmers for maximum gain.
- This completes the alignment of the "H" band.
- (1) Set wave change switch to "U" band.
 - (2) Set signal generator and dial to 60 mc.
 - (3) Turn dial generator to 60 mc.
 - (4) Adjust "U" mixer trimmer for maximum gain.
- This completes the alignment of the receiver.

MIDWEST CHASSIS 18-37 with AFC

Alignment Instructions

January 20, 1942

W.C. Simpson