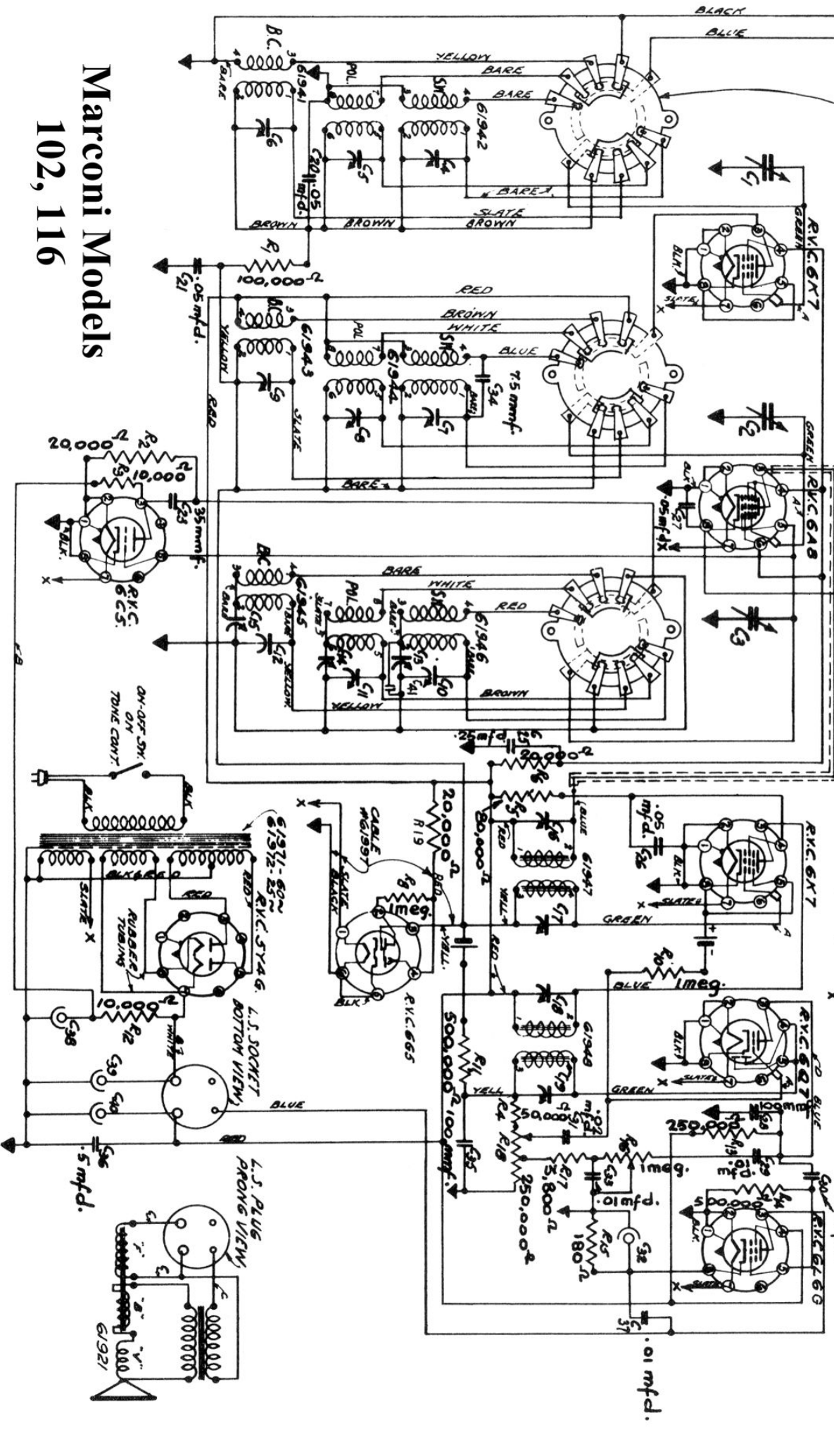
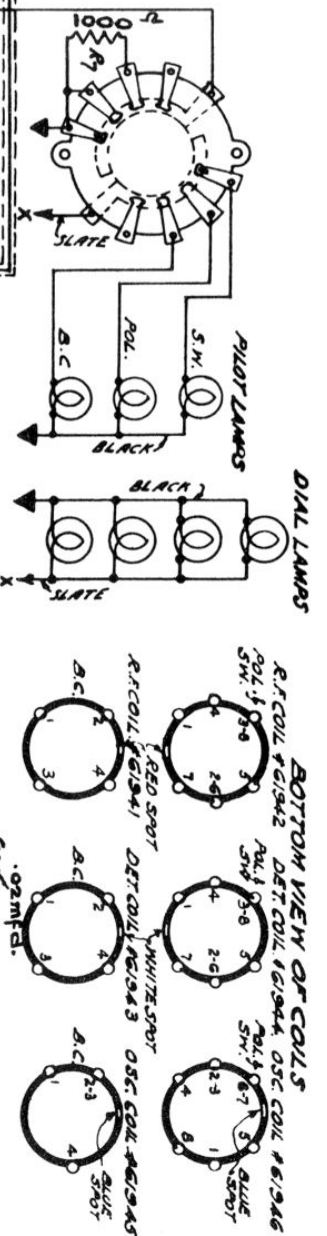


VALVE SYMBOLS LOOKING AT BOTTOM OF SOCKETS
 NUMBERS ON COILS DENOTES START & FINISH
 1, 6, ODD. START - EVEN - FINISH.
 --- DENOTES SHIELDED LEAD.
 " CHASSIS

WAVE CHANGE SWITCH 6/1958
 SWITCHES SHOWN IN 5TH POSITION
 AS VIEWED WITH CHASSIS UPRIGHT
 DOWN & LOOKING TOWARD FRONT.



Marconi Models 102, 116

ALIGNMENT INSTRUCTIONS

In order to properly realign this receiver the radiofrician should have available an output meter and a well attenuated test oscillator capable of giving the following frequency fundamentals:—

- 462.5 K.C. for I.F. alignment.
- 1600 K.C. and 580 K.C. for broadcast band alignment.
- 5000 K.C. and 1800 K.C. for police band alignment.
- 16,000 K.C. and 6000 K.C. for short wave band alignment.

The manual volume control should always be kept at maximum, and the signal from the test oscillator should be kept as low as possible. In any case the signal should not be of sufficient strength to bring the automatic volume control into operation.

If a Cathode Ray Oscillograph is used instead of an output meter the vertical plates should be connected across the volume control (R18.). The alignment should produce a round top rather than a sharply peaked image.

ALIGNMENT OF INTERMEDIATE FREQUENCY TRANSFORMERS

- (1) Short oscillator section of tuning capacitor through a 0.1 mfd. capacitor.
- (2) Supply a modulated 462.5 K.C. signal from a test oscillator to the control grid cap of the 6A8 mixer tube leaving the grid connector in place.
- (3) Adjust in order C19, C18, C17, C16, for maximum output.

ALIGNMENT OF BROADCAST BAND

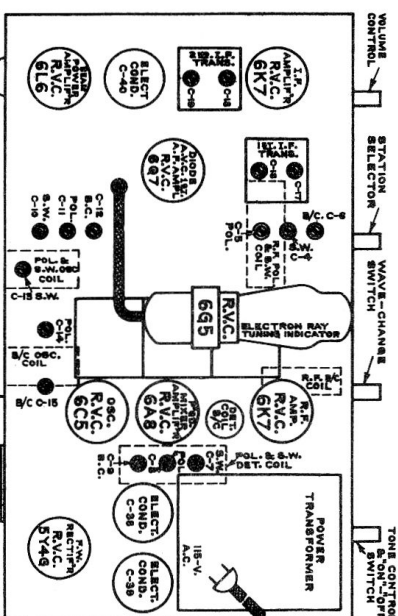
- (1) Turn wavechange switch to broadcast band, i.e., extreme left.
- (2) Set gang capacitor at maximum capacity (plates meshed).
- (3) Set dial pointer in a horizontal position, i.e., midway between the upper and lower scales.
- (4) Rotate tuning knob until pointer is at 1600 K.C.
- (5) Supply a 1600 K.C. signal from a test oscillator to the aerial and ground terminals.
- (6) Adjust broadcast oscillator trimmer C12 to tune in the 1600 K.C. signal.
- (7) Adjust R.F. trimmers C9 and C6 for maximum output.
- (8) Shift test oscillator to 580 K.C.
- (9) Rotate the tuning capacitor until the 580 K.C. signal is reached.
- (10) Adjust broadcast oscillator tracking capacitor C15 while rocking the gang capacitor to and fro past the signal until the combination of adjustments giving the greatest reading of the output meter is obtained.
- (11) Recheck at 1600 K.C.

ALIGNMENT OF POLICE BAND

- (1) Turn wavechange switch to police band - centre position.
- (2) Rotate tuning knob until pointer is at 5000 K.C. marking on dial.
- (3) Supply a 5000 K.C. signal from test oscillator to the aerial and ground terminals.
- (4) Adjust police band oscillator trimmer C11 to tune in the 5000 K.C. signal.
- (5) Adjust police band R.F. trimmers C8 and C5 for maximum output.
- (6) Shift test oscillator to 1800 K.C.
- (7) Rotate tuning capacitor until 1800 K.C. signal is reached.
- (8) Adjust police band oscillator tracking capacitor C14 while rocking the gang capacitor to and fro past the signal until the combination of adjustments giving the greatest reading of the output meter is obtained.
- (9) Recheck 5000 K.C. alignment.

ALIGNMENT OF SHORT WAVE BAND

- (1) Turn wavechange switch to short wave band extreme right.
- (2) Rotate tuning knob until pointer is at 16 M.C. marking on dial.
- (3) Supply a 16 M.C. signal from test oscillator to aerial and ground terminals.
- (4) Adjust short wave oscillator trimmer C10 to tune in the 16 M.C. signal.
- (5) Adjust short wave R.F. trimmers C7 and C4 for maximum output.
- (6) Shift test oscillator to 6000 K.C.
- (7) Rotate tuning capacitor until 6000 K.C. signal is reached.
- (8) Adjust short wave oscillator tracking capacitor C13, while rocking the gang capacitor to and fro past the signal until the combination of adjustments giving the greatest reading of the output meter is obtained.
- (9) Recheck 16 M.C. alignment.



NOTE:—C-7, C-8, C-9 ARE R.F. TRIMMERS. C-10, C-11, C-12, C-13, C-14, C-15 ARE DET. TRIMMERS. C-16, C-17, C-18, C-19 ARE OSC. TRIMMERS. C-20, C-21, C-22, C-23, C-24, C-25 ARE TUNING CAPACITORS.

Voltage Chart Model 102

TUBE & FUNCTION	CAP	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8
6K7 R.F. Amp.	++ 0	0	260	95	0	-	6.3 AC	0
6A8 Mixer	++ 0	0	260	95	-26.5	95	6.3 AC	8.2
6C5 Oscillator	-	0	150	-	-26.5	-	6.3 AC	0
6K7 I.F. Amp.	++ 0	0	260	95	0	-	6.3 AC	0
6G7 Diode	++ 0	0	90	0	0	-	6.3 AC	0
6L6 Power	-	0	245	260	0	-	6.3 AC	13.5
5Y4G Rectifier	-	-	355 AC	-	355 AC	-	350	350

++ Control grid readings should not be taken except with a no-current volt-meter in order to avoid shorting the bias cells. All readings taken with 20,000 ohm per volt-meter, receiver on B.C. Band, Volume control at maximum, gang capacitor at maximum.

Voltage Chart Model 116

All readings taken with receiver on B.C. Band, Volume control at maximum, gang capacitor at maximum.

TUBE & FUNCTION	CAP	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8
6K7 R.F. Amp.	++	0	260	105	0	-	6.3 AC	0
6A8 Mixer	++	0	260	105	-11	105	6.3 AC	7.5
6C5 Oscillator	-	0	165	-	-11	-	6.3 AC	0
6K7 I.F. Amp.	++	0	260	100	0	-	6.3 AC	0
6G7 Diode	++	0	105	0	0	-	6.3 AC	0
6L6 Power	-	0	245	260	0	-	6.3 AC	13.5
5Y4G Rectifier	-	-	320 AC	-	320 AC	-	340	340

++ Control grid readings should not be taken except with a no-current volt-meter in order to avoid shorting the bias cells.

Marconi Models 102 & 116