

CIRCUIT BOARD PRINTED WIRING SIDE
 MODEL MDC 17 R

EQUIPMENT

Signal Generator - modulated 400 cps.
 Output Meter - 15 Ohms Impedance
 Generator Series Capacitor - .1uF Part No.4006-005-03 for I.F.alignment
 I.F. Attenuator - Part No.4121-014-01
 Dummy Aerial - 65pF Part No.4121-009-01
 Alignment Tools:

- (a) Flat Metal Blade Type; Part No.4121-001-01 for I.F.T. and Osc. shunt coil adjustment.
 (b) Hexagonal Socket Type; Part No.4121-028-02 for Osc. trimmer capacitor adjustment.
 (c) Alignment Gauge; Part No.4121-023-03 for tuner 100Kc/s. position.

Collector Current Meter Connection: Socket, Part No.4078-018-01

CONDITIONS

Remove screws and hinge top lid upward.
 Volume control - maximum, clockwise.
 Tone control - maximum, clockwise.
 Output Meter Connection - Socket, adjacent to battery lead entry.
 Output Level - 50 Milliwatts, speaker disconnected.
 Supply voltage - 13.0V D.C.
 Supply Connection - Set receiver polarity changeover switch to "-", negative to chassis position. Connect appropriate supply lead to chassis and the other lead to fuse holder connector.

INTERMEDIATE FREQUENCY TRANSFORMER ALIGNMENT

Turn tuning control until cores of tuner unit are out of coil windings. Insert .1uF capacitor in series with generator "hot" lead.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1	To test pin "A" (base of Mixer stage) and return lead to test pin "C"	455 Kc/s	Adjust iron core of 4th IF trans. for max. output.
2	As oper. 1	455 Kc/s	Adjust iron core of 3rd IF trans. for max. output.
3	As oper. 1	455 Kc/s	Adjust iron core of 2nd IF trans. for max. output.
4	As oper. 1	455 Kc/s	Adjust iron core of 1st IF trans. for max. output.
5	Repeat operation No.1 to 4 until max. output is obtained.		

BROADCAST ALIGNMENT

If the receiver logging is satisfactory the signal circuits may be aligned as detailed.

1	Connect IF. Attenuator to test pins "B" and "C" (resistor to pin "C")		
2	Aerial Lead-in Socket- 65pF dummy aerial in series	1000 Kc/s	Tune receiver to generator frequency. Adjust RF and both aerial trimmer capacitors for max. output.

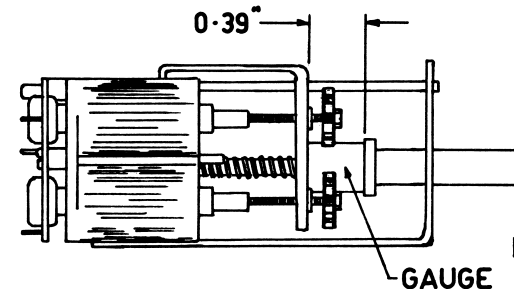
AERIAL TRIMMER ADJUSTMENT

IMPORTANT
 When the receiver has been installed in the vehicle and the aerial connected the aerial trimmer must be readjusted. Raise the aerial to half extended height. Adjust knob on passenger side of receiver for maximum output on a weak station near 1000Kc/s (approx. centre of dial). NOTE: If a fully retractable aerial is fitted pull the large outer rod upward against stop in aerial base.

BROADCAST ALIGNMENT

When iron cores of tuning unit coil assy. have been replaced or if station logging is outside limits.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	Connect IF. attenuator to test pins "B" and "C" (resistor to pin "C")		
2.	Turn perm. tuner against high frequency end of travel stop. Set all iron cores so that adjusting wheels of cores are against tuner frame.		
3.	To aerial lead-in Socket. 65pF. dummy aerial series	1625 Kc/s	Adjust Osc. RF and both aerial trimmer capacitors for max. output.
4.	Refer diagram. Place the 1000 Kc/s alignment gauge Part No.4121-023-03 or alternatively a flat piece of metal 0.39" wide between the core carriage and loose collar. Gently turn tuning spindle until gauge is located squarely between collar and carriage.		
5.	As oper. 3.	1000 Kc/s	With tuner set in position detailed adjust Osc.RF. and both aerial iron cores for maximum output.
6.	As oper. 3.	600 Kc/s	Rock tuning control through signal. adjust Osc. shunt coil iron core for max. output.
7.	Turn tuning control to low freq. end of travel (iron cores full in). Tune signal generator to receiver. The low freq. tuning limit should be between 505 and 525 Kc/s.		
8.	Repeat operations 4 and 5.		
9.	Align dial pointer.		

SETTING OF DIAL POINTER

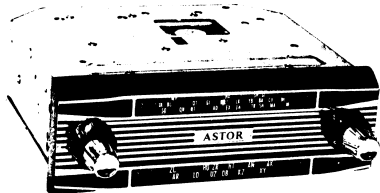
Disconnect the IF attenuator.
 Disconnect the generator cable from dummy aerial then connect 20 ft. of aerial wire to the dummy aerial terminal.

Accurately tune the receiver to a station marked on the dial near 1000 Kc/s.

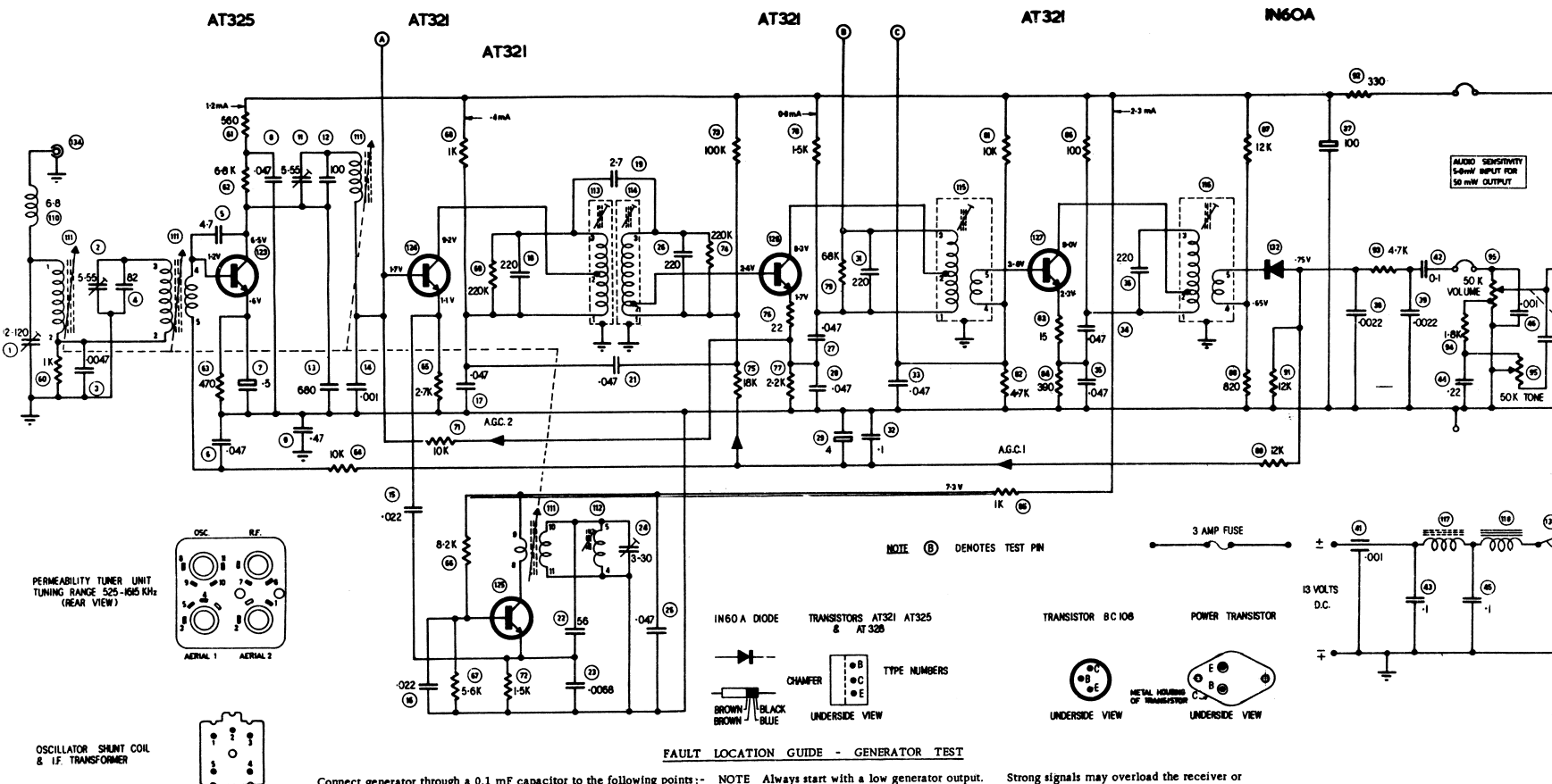
Slip dial pointer carriage assy. along guide rail until the centre of the pointer coincides with centre of the tuned station call sign.

Check dial logging and if necessary readjust pointer carriage.

A8 Astor MD-C17R



TUNING RANGE : 525-1615 Kc/s approx.
POWER OUTPUT : 2 Watts.
OUTPUT IMPEDANCE : 15 ohms.
CURRENT CONSUMPTION: 720mA. approx. - includes dial lamps.



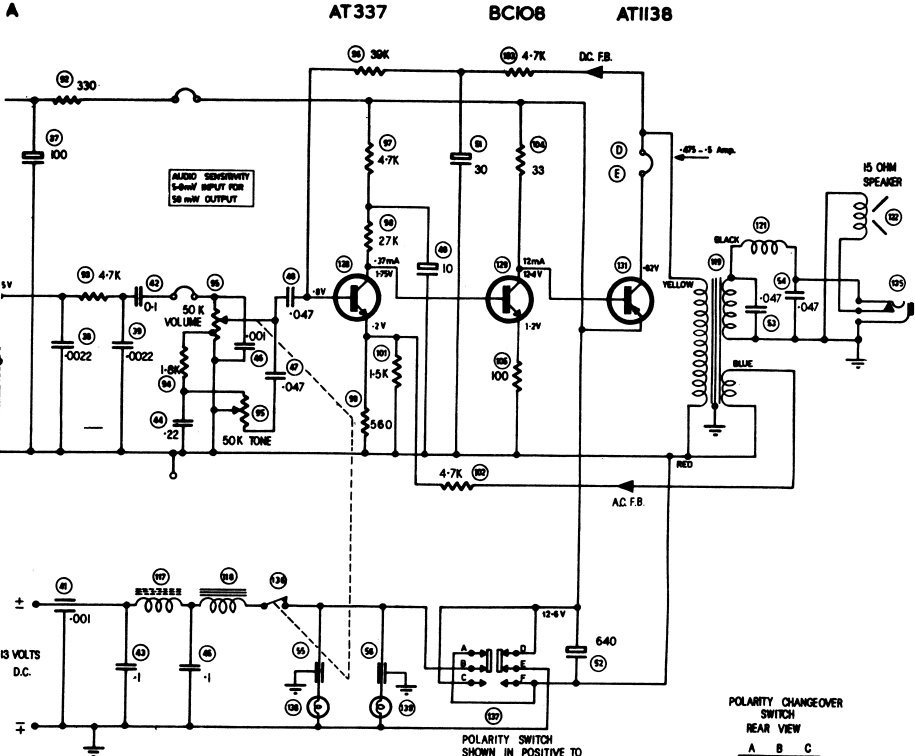
Connect generator through a 0.1 mF capacitor to the following points:- NOTE Always start with a low generator output. Strong signals may overload the receiver or cause the AGC to function.

No.	VOLUME CONTROL	CHECK POINT	SIG. GEN. FREQ.	SIGNAL STRENGTH
1.	Set at minimum	Each output transistor base	Audio	Adjust generator to provide a low signal
2.	"	Audio driver transistor base	"	Increase in level of check No. 1.
3.	"	Audio amp. transistor base	"	Increase in level of check No. 2.
4.	Set at maximum	Top of volume control	"	Same level as check No. 3.
5.	"	Detector input	455 Kc/s	Adjust generator to provide a low signal
6.	"	2nd IF transistor base	"	Increase in level of check No. 5.
7.	"	1st IF transistor base	"	Increase in level of check No. 6.
8.	"	Osc/mix transistor base	"	Increase in level of check No. 7.
9.	"	Osc/mix transistor base	Sig. Freq.	Adjust generator to provide a low signal
10.	"	RF transistor base	"	Increase in level of check No. 9.
11.	"	Dummy aerial	"	Small decrease in level of check No. 10.

A jack socket is provided on the driving side rear corner of the receiver.

If the particular installation requires the fitting of an external speaker, any 15 ohm impedance speaker may be used.

Connecting of the speaker lead via a jack plug, Part No.7177-015-01 automatically disconnects the internal speaker.



ALL VOLTAGES MEASURED BETWEEN POINTS INDICATED AND CHASSIS WITH A D.C. VACUUM TUBE VOLTMETER.

NUMBERS ASSIGNED TO TERMINALS OF COILS AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT BE FOUND ON THE UNIT.

MODEL MDC17R

MANUAL

8 TRANSISTOR DUAL POLARITY

POLARITY CHANGE-OVER SWITCH REAR VIEW



DRAWN	DATE	CHECKED	APPROVED	DATE
A.J.W.	2.2.68	D. W.	G.M.	2.7.5.68

A8 Astor MD-C17R

C17R-1

REPLACEMENT OF OUTPUT TRANSISTOR

When refitting or replacing an output transistor check that the mount position and faces are clean and free from dust, grit or metal particles.

Smear a thin film of silicon compound, P/No. 1036-001-09, on both sides of the mica washer, also mount face of transistor and chassis.

Fit the insulating ferrules to the screw holes in chassis then fit mica washer and transistor. Fasten the transistor securely with two screws and nuts.

MEASUREMENT AND ADJUSTMENT OF OUTPUT TRANSISTOR COLLECTOR CURRENT

EQUIPMENT: Current Meter: 0-1 Amp. D.C. terminated with the lead and socket assy. P/No. 4078-018-01, positive terminal to red sleeve.
Supply Source: 13.0V DC.

CONDITIONS: Receiver polarity switch set at "-" chassis position
Connect positive supply lead to receiver battery lead. Connect negative to chassis.

No signal applied to aerial socket.

Volume control: minimum position.

Remove link from test pins "D" and "E" and connect meter leads to these pins. Socket connector with red sleeving is to be connected to test pin "D".

- 1 Switch receiver "ON" and allow to stabilize for at least two minutes.
- 2 Meter readings will vary with temperature. The following table shows permissible current ranges.

TEMPERATURE

COLLECTOR CURRENT

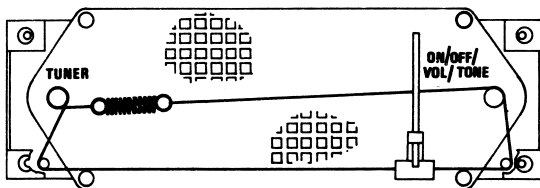
MIN. mA. MAX. mA.

Less than 60°F	-	475	-	500
60° - 80°F	-	465	-	490
Greater than 80°F	-	455	-	480

NOTE 1 It is essential that the supply voltage be maintained at 13.0V when measuring output stage current.

NOTE 2 If current reading is too low, resistor No.101 on circuit board may be cut off.

If current reading is too high, a 1000 ohm resistor may be wired across resistor No.101.



**VIEW FROM FRONT.
IRON CORES OUT OF COILS
AND UNIT HARD AGAINST
STOP.**

