ALIGNMENT PROCEDURE

EQUIPMENT

Signal Generator - modulated 400 cps
Output Meter - 15 Ohms Impedance
Generator Series Capacitor - ·1mF. Part No. 4006-005-03 for IFT alignment
- 8·2pF. Part No. 4008-012-01 for BROADCAST alignment.
IF Attenuator - Part No. 4121-014-01
Alignment Tools

(a) Chisel Point Type: Part No. 4121-005-01 for trimmer capacitor adjustment

(b) Flat Metal Blade Type: Part No. 4121-001-01 for IFT and Osc. shunt coil adjustment.

(c) Tuning Unit Iron Core Adjustor: Part No. 4121-008-01

(d) Alignment Gauge: Part No. 4121-023-02 for tuner 1000 Kc/s position.
Collector Current Meter Connection - Jack plug Part No. 7171-015-02.

CONDITIONS

NOTE. 1. Circuit board does not have to be removed from chassis for alignment purposes. If board is removed from its mounted position, the three lower screw contact pads must be connected to chassis for satisfactory operation.
NOTE. 2. All alignment operations are to be performed with the receiver functioning as a normal portable.

The receiver chassis has to be removed from can for alignment purposes.

1. Remove control knobs and unscrew knob from top of aerial. Do not push top rod downward after removing knob.

2. Remove two screws, escutcheon, "ON" indicator, dial reading and six inner screws from top of receiver.

3. Remove two screws, chrome base and eight inner screws from bottom of receiver.

4. Slide chassis out of cabinet. NOTE. It may be necessary to spring the lip of can beneath grille to provide adequate clearance for speaker gasket.

5. Remove speaker mount screws and disconnect clips from speaker terminals.

Volume Control - Maximum (fully clockwise)
Tone Control - Maximum treble (fully clockwise)
Output Level - 50 milliwatts, output meter reading with speaker voice coil disconnected.
Output Meter
Connection - To terminal clips on end of speaker leads
Supply Voltage -
and Connection - 9 Volt DC. — To plug on end of receiver battery leads.

INTERMEDIATE FREQUENCY TRANSFORMER ALIGNMENT

Turn tuning control until perm. tuner iron cores are out of the coil formers. Insert ·1mF capacitor in series with generator "hot" lead.

Oper. No.	Generator Connection	Generator Frequency	Instructions
1.	To test pin "E" (term 4 of 2nd I.F.T.)	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.	Repeat operations 1 & 2		
4.	To test pin "B"	455 Kc/s	Adjust iron core of 2nd IF trans. for max. output.
5.	To test pin "A" (mixer/osc base)	455 Kc/s	Adjust iron core of 1st IF trans. for max. output.

BROADCAST ALIGNMENT

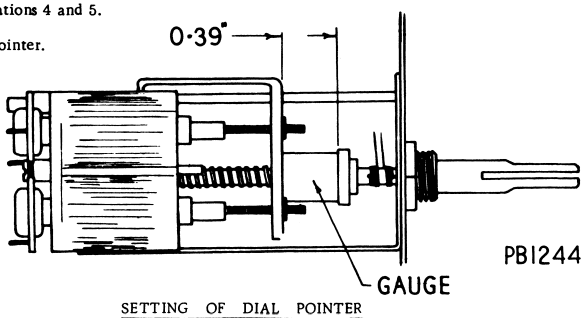
If the receiver logging is satisfactory the signal circuits may be aligned as follows.

1. Connect IF attenuator to test pins "C" and "D" (resistor to pin "C").
2. Raise top rod of aerial approximately 1" above chassis then connect 8·2pF capacitor to rod.
3. To 8·2 pF series capacitor. 1000 Kc/s Tune receiver to generator frequency. Adjust RF. and both aerial trimmer capacitors for max. output.

BROADCAST ALIGNMENT

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

Oper. No.	Gener. Connection	Generator Frequency	Instructions
1.	Connect IF. attenuator to test pins "C" and "D" (resistor to pin "C").		
2.	Turn perm. tuner against high frequency end of travel stop. Set all iron cores so that not less than 3/8" of adjusting shafts protrude forward of front face of core carriage.		
3.	Raise top rode of aerial approx. 1". Connect 8·2pF capacitor in series to rod.	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. 4121-023-01 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 510 and 528 Kc/s.		
8.	Repeat operations 4 and 5.		
9.	Align dial pointer.		

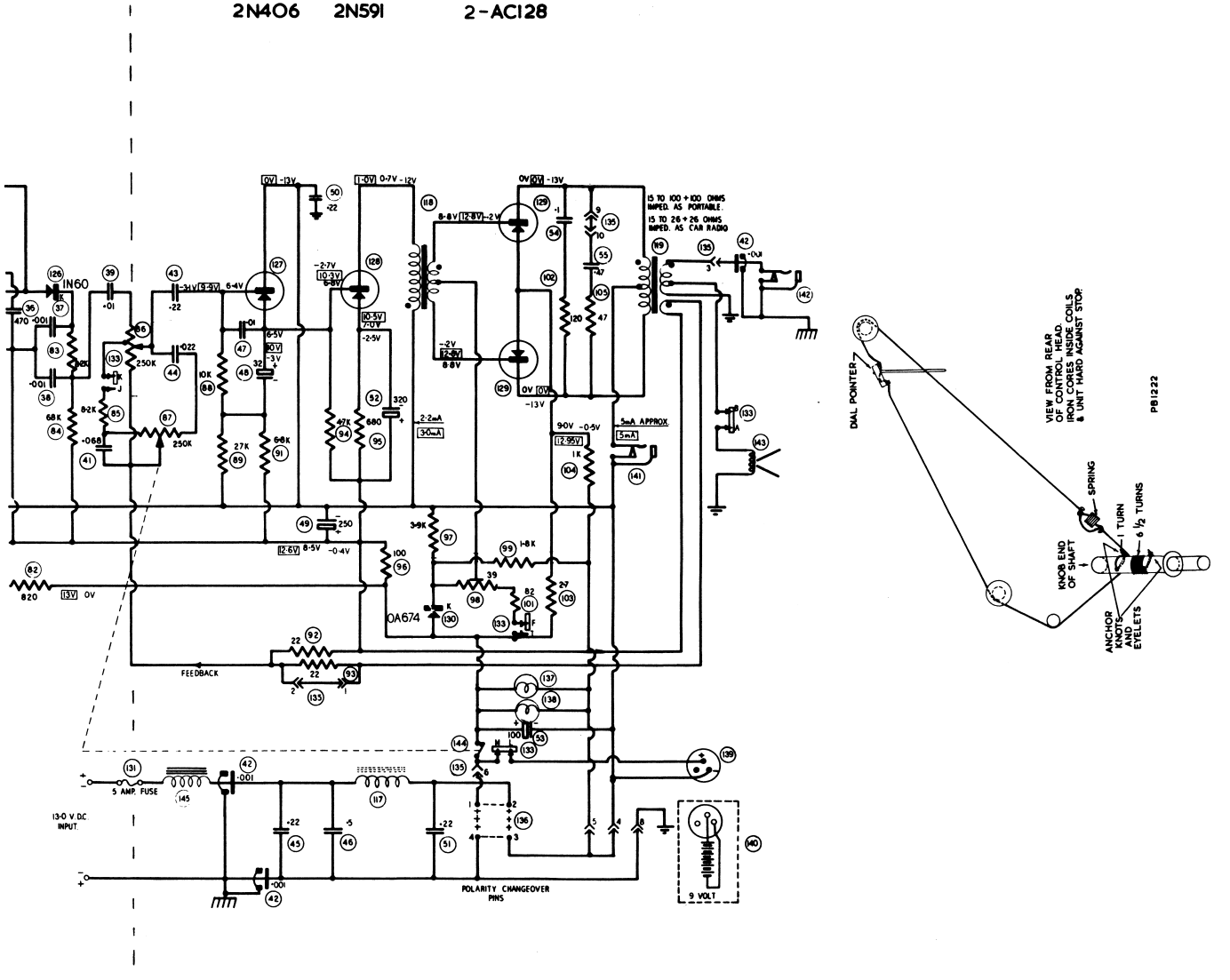


SETTING OF DIAL POINTER

Disconnect the IF attenuator.
Disconnect 8.2pF series capacitor and raise rod aerial to full extent. Accurately tune receiver to a station marked on 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.

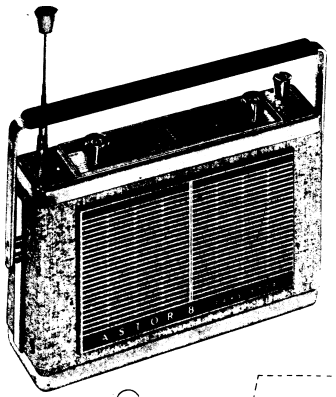
AERIAL MATCHING CONTROL ADJUSTMENT - Gutter Mount Aerial.
Connect plug on end of lead from gutter mount aerial to socket on side of receiver can. Push in-built telescopic aerial downward into receiver.
Remove chrome base from receiver and move battery out of battery box. Tune receiver to a weak station near 1000 Kc/s (approx. center of dial). Adjust trimmer (screw driver slot in battery box), for maximum output.

AERIAL MATCHING CONTROL ADJUSTMENT - Cowl Mount or Fully Retractable Aerial.
With receiver operating as a car radio, raise aerial to half extended height and tuned to a weak station near 1000 Kc/s (approx. center of dial). Adjust knob on passenger side of panel housing (cradle) for maximum output.


2N406 2N591 2-AC128
IN60
OA674
FEEDBACK
5 AMP. FUSE
13-0 V. D.C. INPUT.
POLARITY CHANGEOVER PINS
9 VOLT
15 TO 100 + 100 OHMS IMPED. AS PORTABLE.
15 TO 26 + 26 OHMS IMPED. AS CAR RADIO
DIAL POINTER
VIEW FROM REAR OF CONTROL SHAFT. IRON CORES INSIDE COILS. ▲ UNIT HARD AGAINST STOP.
SPRING
1 TURN
6 ½ TURNS
KNOB END OF SHAFT
ANCHOR KNOTS AND EYELETS
PB1222

A82.a

ASTOR MODEL P4C



AT17 2N412 2N410-E 2N410-B

MANUAL PERM. TUNER UNIT
REAR VIEW

AER.2 OSC. AER.1 R.F.

COLOUR DOT
TO CIRCUIT NO. 98
TO CIRCUIT NO. 97
OA674 UNDERSIDE VIEW
ALTERNATIVE 3 LEAD VERSION OF OA674
TRANSISTORS UNDERSIDE VIEW

OSC. SHUNT COIL & I.F. TRANSFORMER
UNDERSIDE VIEW
I.F. 455 Kc/s

IN60 DIODE
BROWN BLUE BLACK BLACK

NUMBERS VIEWED FROM REAR OF 10 PIN SOCKET
PORTABLE SOCKET
CRADLE PLUG
CONTACT PIN VIEW VIEWED FROM OPENING OF CRADLE (PLUG AT BOTTOM)

CHANGE-OVER SWITCH (SHOWN IN PORTABLE POS.)
SPRING END OF SWITCH

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

IMPORTANT:- REFER TO SERVICE DATA P4C-1 FOR INSTRUCTIONS BEFORE ADJUSTING COLLECTOR CURRENT OF AC128'S

WARNING:-POLARITY PLUG MUST BE CORRECTLY INSERTED ONTO POLARITY PINS BEFORE CRADLE IS CONNECTED TO BATTERY.

MODEL P4C

MANUAL TUNING.
9 VOLT PORTABLE OPERATION.
12 VOLT POSITIVE OR NEGATIVE TO CHASSIS CAR RADIO OPERATION.

NOTE:
DENOTES PORTABLE GROUND
DENOTES CRADLE GROUND
DENOTES PLUG & SOCKET CONNECTIONS
DENOTES TEST PINS.

9 AMP. FUSE
13·0 V.D.C. INPUT