DYNATRON Model TP43 'Escort'

General Description: The "Escort" Model TP43 is a nine-transistor battery operated portable radio receiver covering the V.H.F., Medium and Long Wavebands. A telescopic aerial is fitted for V.H.F. reception and provision is made for connecting an external aerial. (SKT1.) For normal portable use the internal Long and Medium Wave "Ferrite" bar aerial is selected by S2, but when this switch is depressed the alternative "Car" aerial coupling coils are brought into use and the "Ferrite" bar is disconnected. An earphone/external loudspeaker socket is provided (SKT2). The external loudspeaker should be of 25 ohms impedance.

Battery: 9-volt (PP9 or equivalent).

Wavebands: V.H.F.—87–108 MHz; Medium—185–570 metres (1620–525 kHz); Long—1100–2000 metres (270–150 kHz).

Chassis Removal: Remove battery connectors. Pull off tuning, volume and tone control knobs. Lift off dial scale and remove the two 4BA nuts and washers securing chassis. Unsolder lead to base of telescopic aerial and withdraw chassis to extent of aerial and phone socket leads.

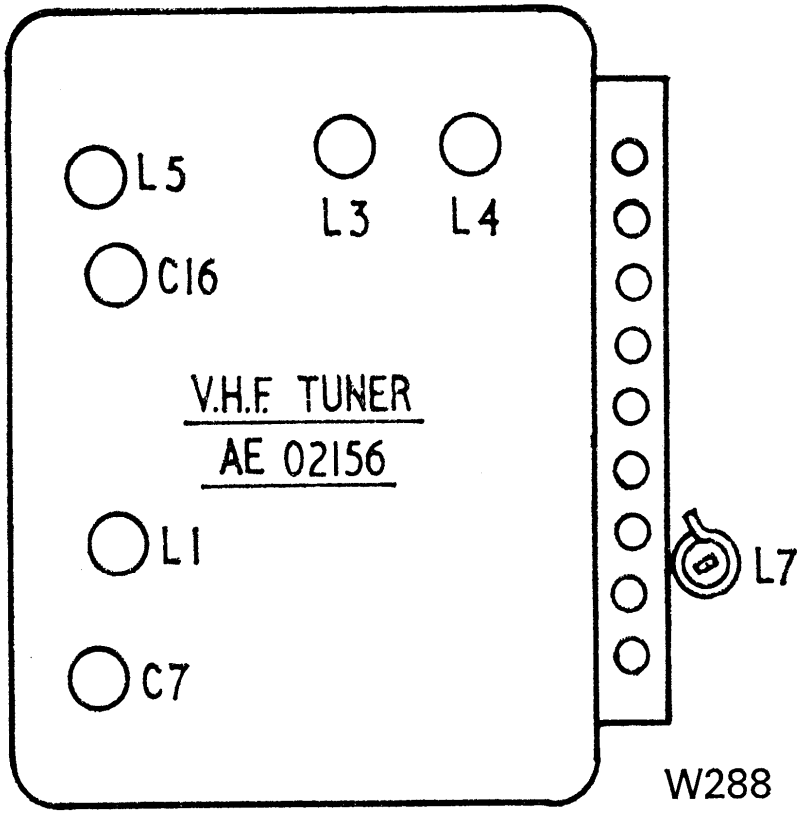
Adjustments

Quiescent Current—TR1 and TR2: Open TR2 collector connection and insert 10mA range meter. With volume at minimum adjust RV3 for 3mA indication. Remove meter, seal RV3 and reconnect TR2 collector.

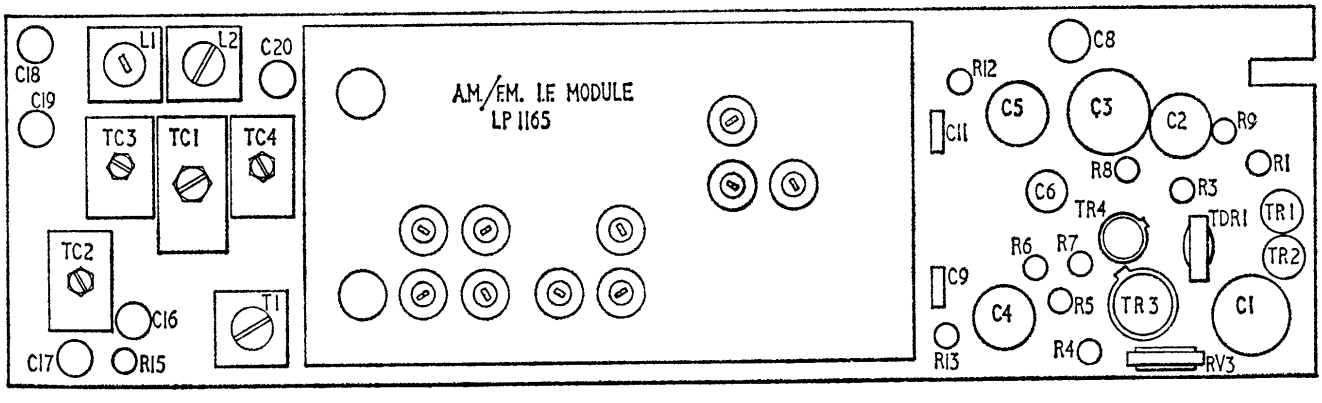
Alignment Procedure: The frequency changer and A.M. and F.M. I.F. amplifiers are contained in a pre-tuned module which will not require adjustment. In the event of a component failure including transistors, the module should be returned to Dynatron Service Department for replacement. When a replacement is fitted to a receiver the A.M. first I.F. transformer only (Red cores) should be peaked for optimum gain. *Only this adjustment should be made.*

Alignment (R.F. Section): Check pointer coincides with end of scale aperture when gang is closed. Align circuits as follows:

Medium Wave using Ferrite Rod Aerial: Inject signals from generator using

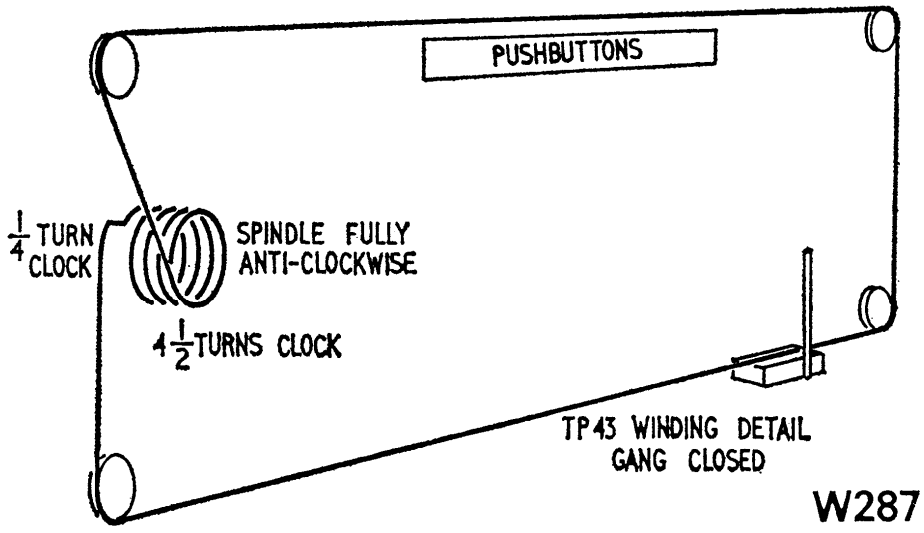


(W288) Alignment Points (V.H.F. Tuner)—Model TP43 'Escort'



W286

(W286) Component Layout and Alignment Points (Main Chassis)—Model TP43 'Escort'



(W287) DRIVE CORD—MODEL TP43 'ESCORT'

a coupling loop. 1. Close gang and adjust T1 core to receive 525kHz input signal. 2. Open gang and adjust TC2 to receive 1630kHz input signal 3. Set input signal to loop at 560kHz, tune receiver to signals and adjust L6 on rod for maximum output. 4. Set input signal to loop at 1500kHz, tune reciever and adjust TC3 for maximum output. 5. Repeat 3 and 4 for optimum results.

Long Wave using Ferrite Rod Aerial: 1. Switch to Long Wave and tune to 1600 metres on dial. 2. Set input signal to loop at 187kHz and tune TC1 for signal 3. Adjust LW3 on Ferrite rod for maximum output. 4. Check calibration and tracking on Medium Wave and Long Wave using known stations.

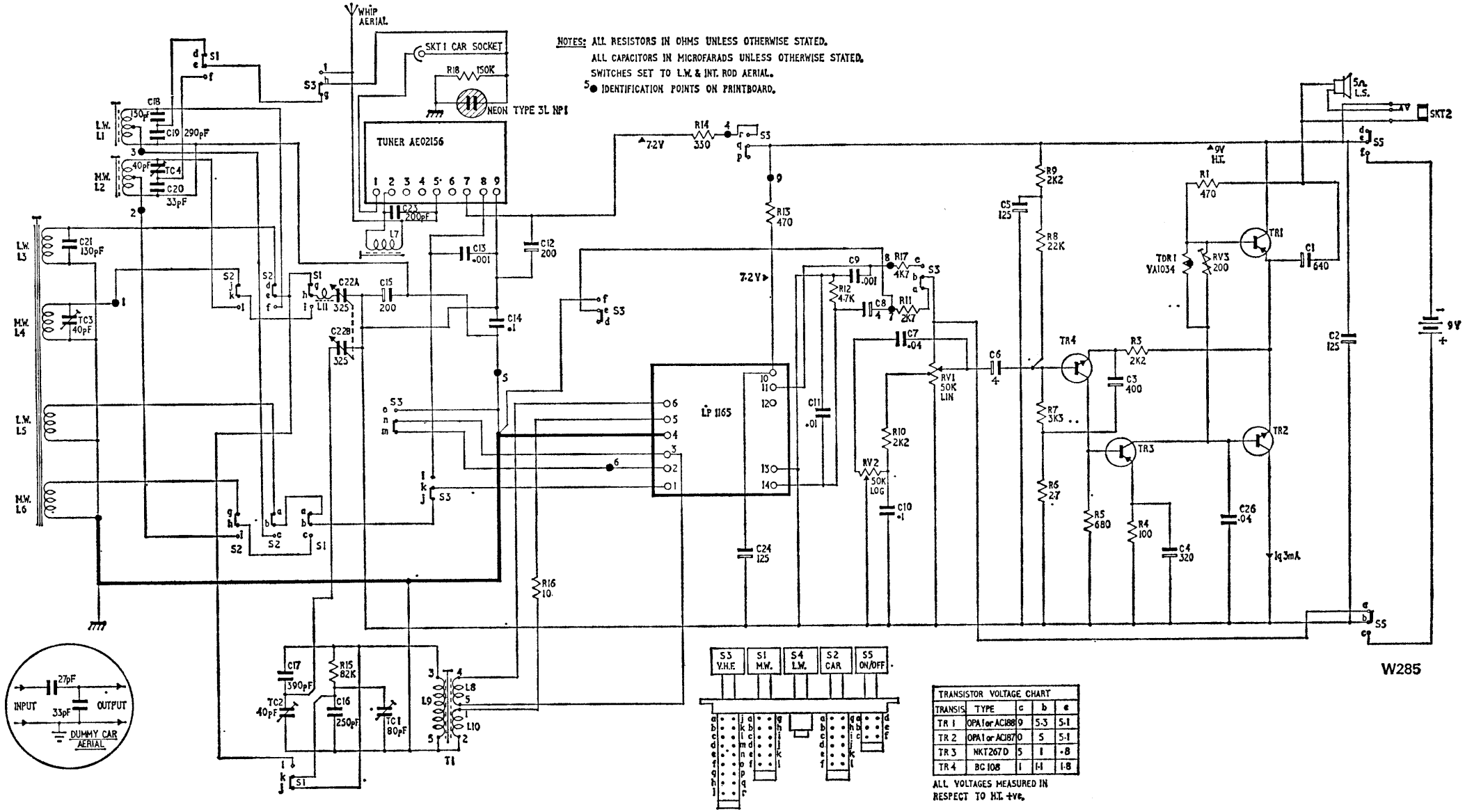
Medium Wave using Car Aerial Coils: Inject signals from generator using a dummy aerial (as shown on circuit diagram) into car aerial socket. 1. Depress "M.W." and "Car" push-buttons. 2. Set input signal to 560kHz and tune to signal. Adjust L2 for maximum output. 3. Set input signal to 1500kHz and tune to signal. Adjust TC4 for maximum output. 4. Repeat 2 and 3 for optimum results.

Long Wave using Car Aerial Coils: 1. Switch to L.W. and feed in 187 kHz and tune to signal. 2. Adjust L1 to give maximum output.

Note: M.W. trimmer TC4 may need adjustment for optimum performance on a particular car aerial installation if cable capacitance is high. In this case, tune a station at H.F. end of band, and tune TC4 for maximum signal.

Alignment (V.H.F./F.M. Section): *V.H.F. Calibration*: 1. Set pointer to 88 MHz and inject 88 MHz signal from generator (with 22·5 kHz deviation) into aerial socket. 2. Adjust L5 for signal. 3. Set generator to 108 MHz and tune set to H.F. end of scale. Adjust C16 for signal. 4. Repeat 2 and 3 until tracking correct.

V.H.F. R.F. Alignment: 1. Set generator to 90 MHz and tune receiver to signal. 2. Adjust C7 for maximum audio output.



TRANSISTOR VOLTAGE CHART				
TRANSIS.	TYPE	c	b	e
TR 1	OPA1 or AC188	9	5·3	5·1
TR 2	OPA1 or AC187	0	5	5·1
TR 3	NKT267D	5	1	·8
TR 4	BC 108	1	1·1	1·8

ALL VOLTAGES MEASURED IN RESPECT TO H.T. +ve.

(W285) Circuit Diagram—Model TP43 'Escort'