

FIG 1 SHOWS THE MODIFICATIONS REQUIRED TO THE FREQUENCY-GENERATING SIDE OF THE STANDARD GELOSO 4/102 UNIT FOR OPERATION ON 160 METRES. THE LEAD CONNECTING THE TOP END OF L1 IS TAKEN OFF S1a & REWIRED WITH THE ADDITIONAL ITEMS LA1 & SA1 TO THE CIRCUIT GIVEN HERE.

FIG 1

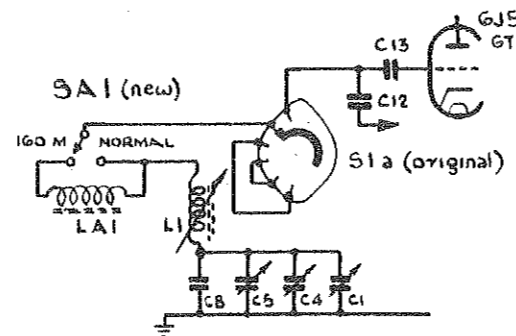


FIG 2 SHOWS THE MODIFICATIONS TO THE 'OUTPUT STAGE OF THE GELOSO 'SIGNAL SHIFTER'

FIG 2

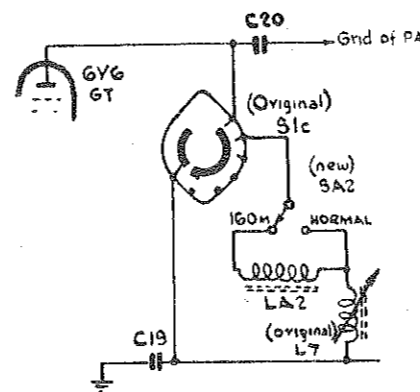
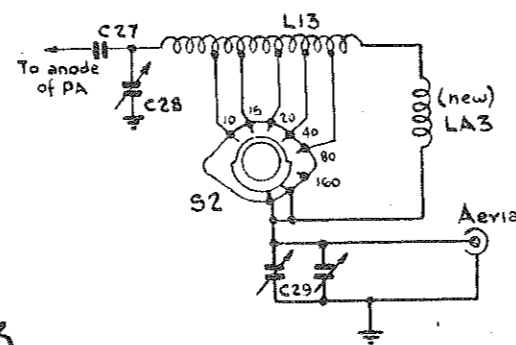


FIG 3 GIVES THE ALTERATIONS TO THE STANDARD GELOSO 50 WATT P.A. PI-COIL ASSEMBLY FOR OPERATION ON TOP BAND. THE COIL LA3 IS WIRED IN CIRCUIT AS SHOWN.

FIG 3



L13 IS A MODIFIED GELOSO 4/112 PI-COIL. WHEN SUPPLIED WITH A 'VALIANT' KIT, THE SWITCH WILL HAVE BEEN RE-WIRED. THAT IS, THE 11 METRE TAP ON THE COIL CUT OUT & THE 15 METRE TAP TRANSFERRED TO THIS POSITION ON THE SWITCH. THE 20 METRE TAP IS RE-WIRED TO WHAT WAS THE 15 METRE POSITION & SO ON, THUS LEAVING A SPARE SWITCH POSITION FOR 160 METRES.

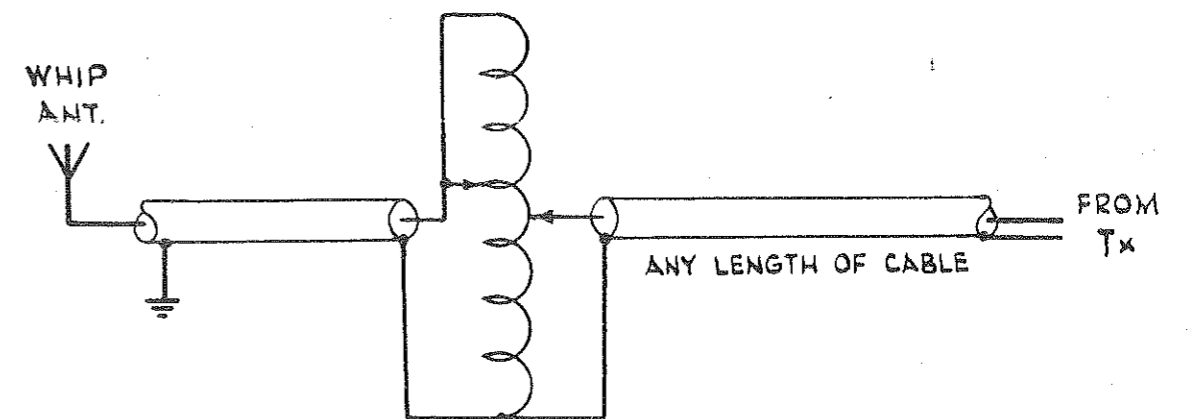
## INSTRUCTIONS FOR 160 METRE MODIFICATION TO 'VALIANT' TRANSMITTER.

1. MOUNT BUSH IN SIDE PANEL FOR EXTRA WAVE-CHANGE SWITCH
2. MOUNT WAVE-CHANGE SWITCH ON BRACKET & SECURE BRACKET TO CHASSIS BY MEANS OF P.K. SCREWS (SEE PHOTOGRAPH)
3. MOUNT 160 METRE V.F.O. COIL. (CARE MUST BE TAKEN IN CLEANING OFF ENAMEL NOT TO BREAK THE WIRE - USE FINE EMERY PAPER)
4. MOUNT GY6 GT ANODE COIL FOR 160 METRES BY MEANS OF 2-P.K. SCREWS IN POSITION BEHIND P.A. GRID TRIMMER.
5. WIRE AS CIRCUIT DIAGRAM.
6. MOUNT THE 160 METRE P.A. COIL HORIZONTALLY BEHIND G14G BY MEANS OF 2-ANGLE FEET SECURED TO SIDE PANEL. CONNECT THE 160 METRE P.A. COIL BETWEEN THE WIRE AT THE 80 METRE END OF THE PI COIL & THE SWITCH ROTOR.

## SUGGESTED METHOD FOR FEEDING MOBILE WHIP ON 160 METRES.

UNLESS POWER INPUT IS MAINTAINED AT 10 WATTS OR LESS, IT IS ADVISABLE TO FEED A MOBILE WHIP THROUGH AN AERIAL TUNING UNIT.

A VARIABLE INDUCTANCE OF 40-60 TURNS (GOV<sup>T</sup> SURPLUS) IS MOST USEFUL & SHOULD BE WIRED AS FOLLOWS:-

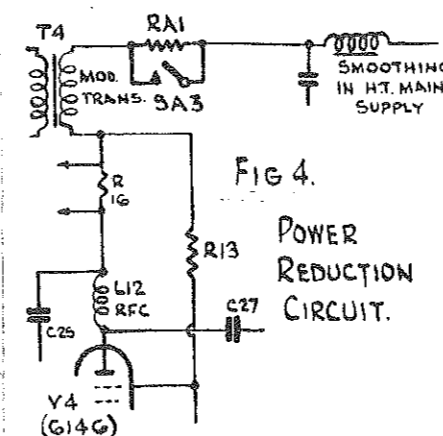


VARY INDUCTANCE TOGETHER WITH POSITION OF TAP FOR MAXIMUM RADIATED POWER

FIG 4 SHOWS THE METHOD OF REDUCING P.A. INPUT WHEN THE 'VALIANT' IS OPERATED ON 160 METRES. THE RESISTOR R11 IS SO PROPORTIONED THAT, WITH THE MODULATION TRANSFORMER SECONDARY, IT PRODUCES THE CORRECT MODULATION/P.A. LOAD WHEN THE R.F. STAGE IS RUN AT 10 WATTS INPUT.

SWITCH SA3 HAS TO CARRY FULL DC PLUS MODULATING VOLTAGE, SO SHOULD BE SELECTED ACCORDINGLY; THE RESISTOR R11 SHOULD BE MOUNTED CLEAR.

FOR H.T. VOLTS IN THE REGION OF 450-480V, R11 SHOULD BE A 3.5K $\Omega$ , 10WATT WIRE WOUND RESISTOR.



SIDE OF THE STANDARD GELOSO 4/102 UNIT FOR OPERATION ON 160 METRES. THE LEAD CONNECTING THE TOP END OF LI IS TAKEN OFF SA2 & REWIRED WITH THE ADDITIONAL ITEMS LA1 & SA1 TO THE CIRCUIT GIVEN HERE.

FIG. 1.

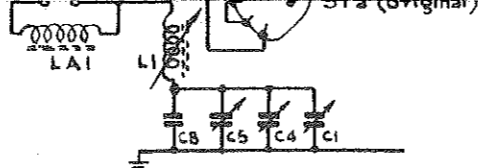


FIG 2 SHOWS THE MODIFICATIONS TO THE OUTPUT STAGE OF THE GELOSO 'SIGNAL SHIFTER'

FIG 2

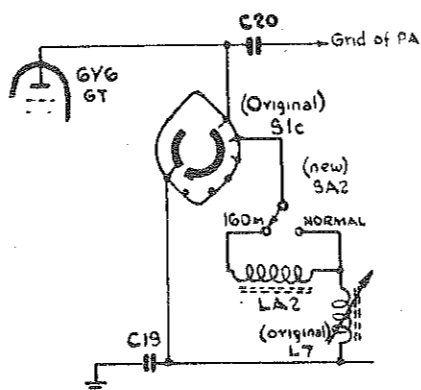
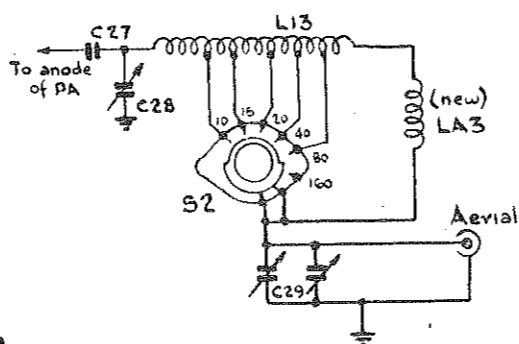


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FIG 3.



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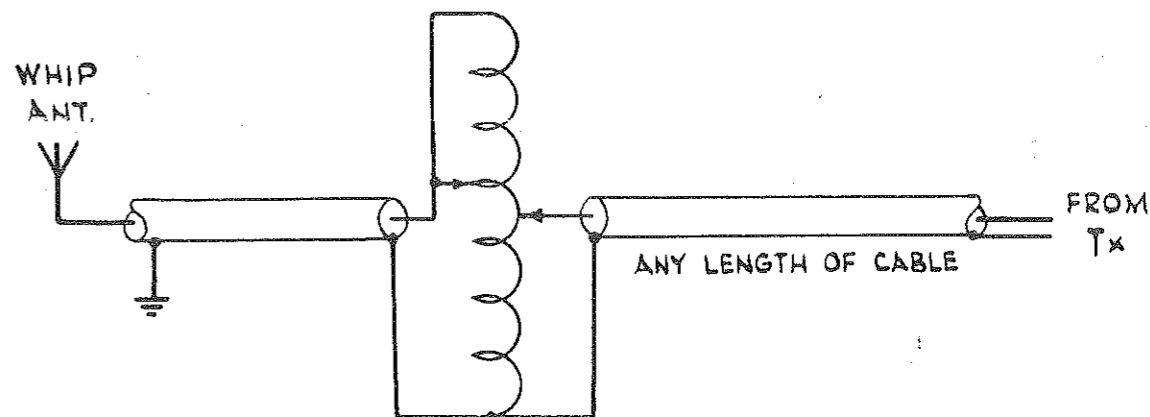
CHASSIS BY MEANS OF P.K. SCREWS (SEE PHOTOGRAPH)

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SUGGESTED METHOD FOR FEEDING MOBILE WHIP ON 160 METRES.

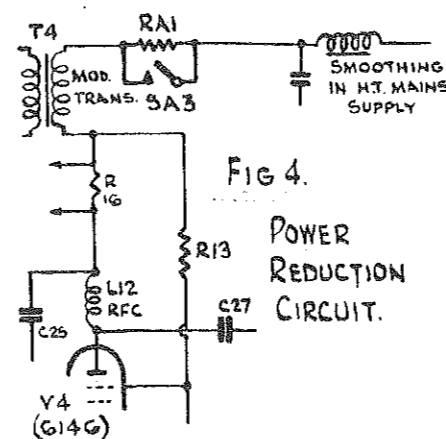
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VARY INDUCTANCE TOGETHER WITH POSITION OF TAP FOR MAXIMUM RADIATED POWER

FIG 4 SHOWS THE METHOD OF REDUCING P.A. INPUT WHEN THE 'VALIANT' IS OPERATED ON 160 METRES. THE RESISTOR RA1 IS SO PROPORTIONED THAT, WITH THE MODULATION TRANSFORMER SECONDARY, IT PRODUCES THE CORRECT MODULATION/P.A. LOAD WHEN THE R.F. STAGE IS RUN AT 10 WATTS INPUT. SWITCH SA3 HAS TO CARRY FULL DC PLUS MODULATING VOLTAGE, SO SHOULD BE SELECTED ACCORDINGLY; THE RESISTOR RA1 SHOULD BE MOUNTED CLEAR. FOR H.T. VOLTS IN THE REGION OF 450-480V, RA1 SHOULD BE A 3.5KΩ, 10WATT WIRE WOUND RESISTOR.



THE K.W. 'VALIANT' TRANSMITTER.

- 160 METRE MODIFICATION. -