GELOSO 4/102 SIGNAL SHIFTER....See p.22
March 1957 for details

Table of Values

Circuit complete of the K.W. " Vanguard "

C1-C19 = Incorporated in Geloso 4/102
C20 = 100 μμF silver mica, VFO feed
C20a = 15 μμF air-spaced
C21, C23 = .001 μF ceramic
C22 = 3/.001 μF on 6146 cathode points
C24, C25 = .005 μF, silver mica, 1000v.
C26 = .01 μF, 500v.
C27 = .002 μF, silver mica, 1000v.
C28 = 200 μμF, variable
C29 = 2/500 μμF, gang
C29a = 50 μμF, air-spaced
C30 = 100 μμF, ceramic
C31 = 0.1 μF
C32 = 25 μF, 12v. elect.
C33, C34 = 300 μμF, silver mica
C35, C36 = .01 μF
C37 = 25 μF, 25v. elect.
C38, C39 = .005 μF, 800v.
C40, C41 = 8 μF, 450v. elect.
C42, C43 = 2/32 μF, 450v. elect. in series
C44 = 32 μF, 450v. elect.
C45 = 8 μF, 500v. elect.

C46, C47 = .001 μF, silver mica, 500v.
C48-C58 = 500 μμF feed-through ceramic
R1, R2, R3, R7 = Incorporated in Geloso 4/102
R4 = 15,000 ohms, 3/4w.
R5 = 2,200 ohms, 3/4w.
R6 = 7,500 ohms, 5w., or 2/15,000 ohm 2w.
R8 = 3,300 ohms, 2w.
R9, R11 = 22,000 ohms, 2w.
R10 = 30,000 ohms, 3w.
R12 = 33,000 ohms, 1w.
R13 = 27,000 ohms, 2w.
R14, R15 = 68,000 ohms, 1w.
R16 = Meter shunt
R17 = 470 ohms, ½w.
R18 = 27,000 ohms, ½w.
R19 = 100 ohms, ½w.
R20, R30, R31 = 100,000 ohms, ½w.
R21 = 1 megohm, ½w.
R22 = 1,000 ohms, ½w.
R23 = 2.2 megohms, ½w.
R24, R27, R28 = 470,000 ohms, ½w.

R25 = 1 megohm pot'meter
R26 = 4,700 ohms, ½w.
R29 = 2,200 ohms, ½w.
R32, R33 = 220,000 ohms, ½w.
R34, R35 = 47,000 ohms, ½w.
R36, R37 = 470 ohms, 2w. or 250 ohms, 5w.
R38 = 22,000 ohms, 1w.
R39 = 47,000 ohms, 1w.
R40 = 4,700 ohms, 5w.
R41 = 33 ohms, 2w.
T1 = Mains, all LT's
T2 = Mod. HT
T3 = RF HT
T4 = Fixed-ratio mod. xformer
L1-L11 = Incorporated in Geloso 4/102
L12 = RF choke
L13 = Geloso tank coil
L14 = 3 Hy, 200 mA choke

L15 = 3 Hy, 120 mA choke
L16 = Harmonic rejector
L17 = Anti-parasitic choke
L18, L19 = Mains chokes
S1 = Geloso band switch, in 4/102
S2 = PA band-change
S3 = Send-receive switch
S4 = Meter function
S5 = Net-normal switch
S6 = P h o n e / C W change-over
S7 = Mains on-off
J1 = Mic. socket
J2 = Aerial socket
J3 = Receiver aerial (see text)
J4 = Receiver muting
J5 = Key socket
M1 = Meter

Circuit of the K.W. Vanguard is shown up above, and described in the article. The transmitter is designed for CW/phone operation on all bands 80 to 10 metres, with 25-30 watts of RF output. A full kit of parts is supplied to make up the complete assembly shown in the photographs.

Fig. 5. Circuit of the " Geloso " Signal Shifter, which consists essentially of an oscillator (6J5), isolating stage (6AU6) and buffer-doubler/amplifier (6V6, or 6L6 in the higher output version, Type 4/102). Circuit elements shown dotted are explained in the text. Either unit gives RF drive on five bands, 3.5 to 28 mc. (*Note—In this circuit the 470-ohm resistor connected to Point (1) should be marked R7*)

K.W. Vanguard
Voltage Chart

The following table of voltages have been observed during the testing of this transmitter using an Avo type Model 40 and can be used as a guidance in tracing faults. When using a meter with a higher internal resistance, recordings for valves 6 and 7 may be considerably higher. The readings were taken under normal A.M. loading conditions.

	Anode	Screen	Cathode
V1	150 V	-	-
V2	240 V	240 V	-
V3	370 – 410 V	370 – 410 V	-
V4	470 V	155 V	150 V *
V5	150 V		
V6	20 – 40 V ϕ	15 – 30 V ϕ	0.5
V7a	45 V ϕ		2 V
V7b	125V		125 V ξ
V8	420	350	28
V9	420	350	28
V10			480
V11			440

*C.W. key up position
ϕWill read higher with meter of higher O.P.V.
ξ1 V across R29