V1
EF 94

V2
EL 821

V3
EZ 81

EL 821

47K
1W

150K

40-40
MFD.
450 V

MAINS
SWITCH

BLK

200-250V
50 C/S

BLK

20MFD.
250V.

PILOT

EF 94 EZ 81

100K

330

115V-10W
LAMP

47

FULL SCALE
OUTPUT VOLTAGE

10V 3V 1V ·3V ·1V ·03V ·01V ·003V

600

OSCILLATOR
CONTROL

20MFD.
250V.

5000
15W.

INT.
LOAD
560

OUTPUT

1600 1600

1600 1100 1100 750

ATTENUATOR

LOAD
SWITCH

2400 390 1600 1600

1100 1100 1100

C1

R1 R1

R2 R2

C2

5000
OUTPUT
CONTROL

4700

10K
METER
CONTROL

+2000

200
μA

10K 10K

(In accordance with our policy of keeping abreast with technical development, we reserve the right to alter this circuit wherever desirable).

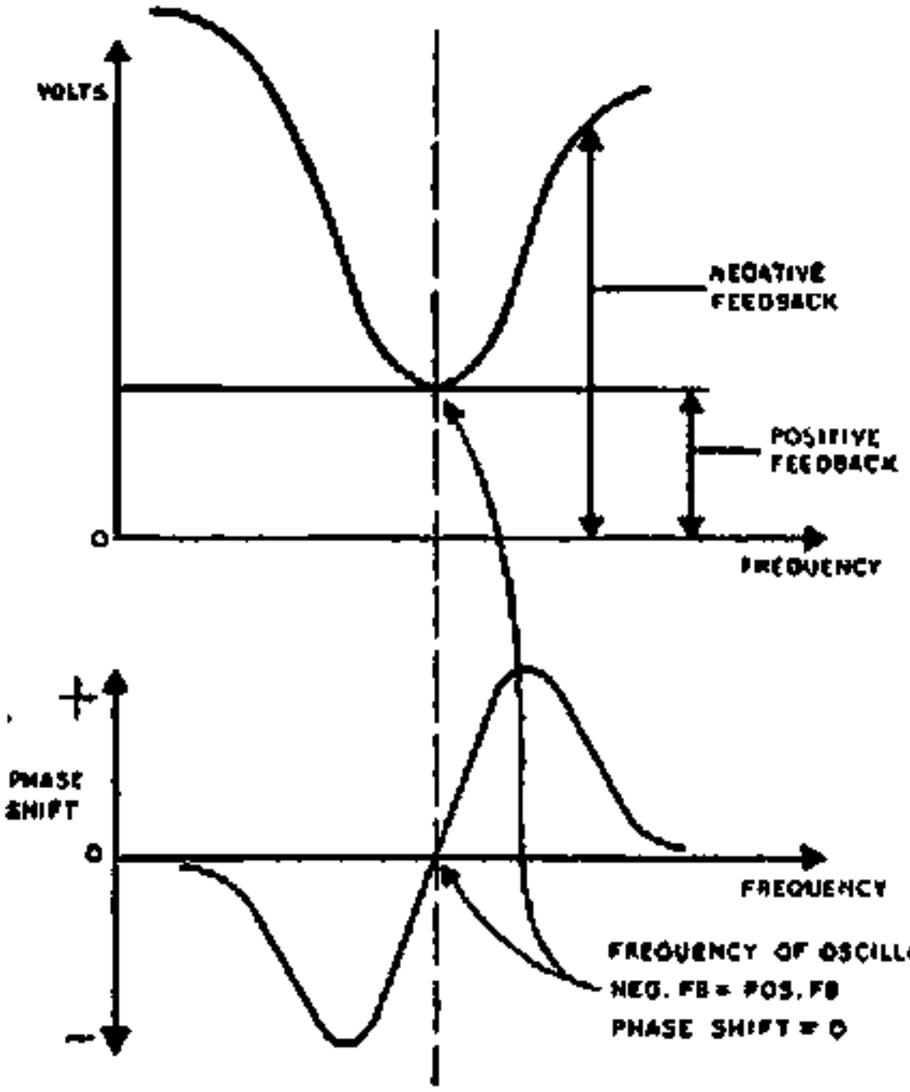
## CIRCUIT DESCRIPTION (*continued*)

The frequency is controlled by the multiplier switch, the 0–10 and 0–100 c/s selector switches. 1% precision resistors are used in conjunction with the 0–100 c/s switch and 2% capacitors on the multiplier switch.

The **Attenuator** reduces the output voltage from the EL821 cathode-follower, through a continuously variable 5KΩ output control and then through a step-attenuator. The attenuator system is designed for 600Ω output on the ranges from .003 to 1 volt and for high-impedance output at the 3 and 10 V. positions. The 600Ω positions may be terminated by an internal load for high impedance work or this load may be disconnected when an external 600Ω load is used. In the 3 and 10 volt positions the internal load is automatically disconnected. The attenuator operates in steps of 10dB.

The **Metering** circuit measures the voltage taken from the output control. A portion of this voltage, determined by the meter control, is rectified by a half-bridge using crystal diodes. Non-linearity of the diodes at low signal level is compensated by a third diode across the meter. The meter has three calibrated scales :—0–10 volts, 0–3 volts and—10 to +2 dB. When the instrument is operated with the proper termination, the meter and attenuator will indicate the output level at the terminals.

**FEEDBACK CURVE**




**PHASE SHIFT CURVE**

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