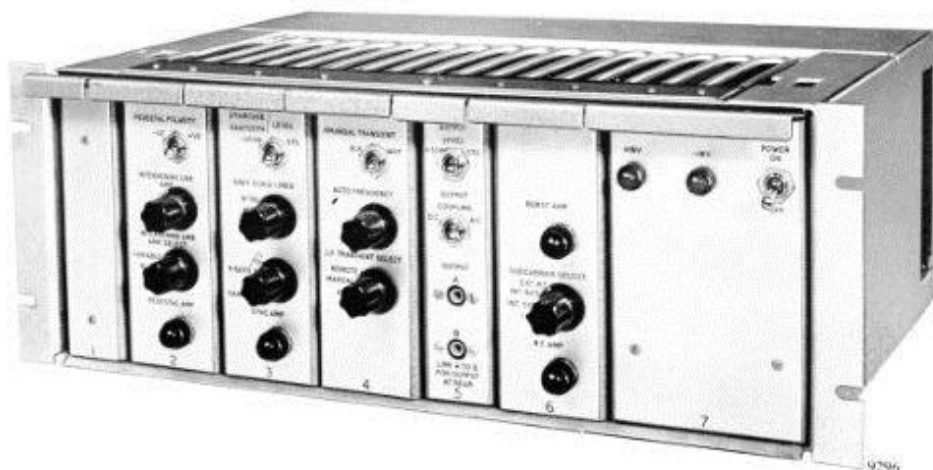




Grey Scale Generator Type BD 938



THIS is a new and improved generator for producing an electronic grey scale. The composite 'staircase' waveform can have 5, 7 or 10 risers. A sine wave can be superimposed, and the waveform can be switched to produce the C.M.T.T test signal number 3 and the L.R.E signal for differential phase and gain measurements.

The unit can also be used as a black and white generator for low-frequency transient tests.

FACILITIES

Stepped grey scale for setting up and testing the overall contrast characteristic of picture monitors, television links and amplifiers.

Stepped grey scale with superimposed sine wave of either 1 Mc/s or sub-carrier frequency for differential gain and phase measurements.

Internally generated sub-carrier frequency and a sub-carrier burst gate are provided. Steps or sawtooth can have positive or negative pedestal.

Operation from a.c. mains or batteries.

Black/white generator with variable rate of switching between black and white 0.1 c/s to 100 c/s.

CONSTRUCTION

The unit is built in a modular form comprising six modules which plug into a common frame 7 in. (18 cm) in height. The

frame in turn fits into a standard 19 in. (48 cm) rack cabinet. In the case of mobile applications a carrying case is provided into which the standard rack-mounting unit can be inserted. In the mobile edition, provision is made to bring the output socket on to the front panel when access to the back is restricted. The finish is standard Marconi grey oyster-hammer enamel.

The modules plug into a 'mother' board, and the output of the mother board is in turn taken to connectors on the back panel.

Data Summary

INPUTS

Mains supply: 100-125 V and 200-250 V in 5 V steps, 50 or 60 c/s.

Batteries supply: 2 independent 24 V batteries. Voltage range, 21.8 V-29 V.

Mixed synchronizing and blanking pulses: 525 or 625-line system. Nominally 2 V p-p negative; inputs in the range 1.6 V-8 V p-p can be accepted. High-impedance bridging inputs or 75 Ω . Input protected against accidental connection to mains.

Sub-carrier frequency or external frequency of 1-5 Mc/s:

Continuous h.f. sine waves 2 V p-p nominal amplitude.

High-impedance bridging input or 75 Ω .

Burst gating pulses: Nominal 2 V p-p negative. High-impedance bridging input or 75 Ω .

OUTPUTS

Composite waveform at standard level 1 V peak to peak. Staircase or sawtooth preset to standard level 0.7 V p-p.

Intervening line adjustment variable from zero level to standard level of 0.7 V p-p.

Sub-carrier varies from zero to standard level of 0.28 V p-p.

Sub-carrier on steps or on sawtooth from zero to standard level of 0.14 V p-p.

Staircase or sawtooth pedestal of variable amplitude from -0.47 V p-p to -0.23 V p-p.

Sync. amplitude variable from zero level to 0.6 V p-p.

All levels may be raised +3 dB by a common switch.

PERFORMANCE

Differential gain: 0.1%.

Differential phase: 0.2° at sub-carrier frequency.

Internal sub-carriers: 3.5795 Mc/s (± 100 c/s), 20°C to 40°C.

4.4297 Mc/s (± 150 c/s), 20°C to 45°C.

Tilt on steps: 1% of peak-white.

Output impedance: 75 Ω ($\pm 3\%$) to 5 Mc/s.

Synchronizing and blanking rise times: 0.2-0.25 μ s.

Marconi

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