

SECTION 27

COLOUR NOISE WEIGHTING NETWORK NE3/503

The NE3/503 is a 75-ohm band-pass filter with an amplitude-frequency response, given in Fig. 27.1, that includes a symmetrical weighting characteristic.

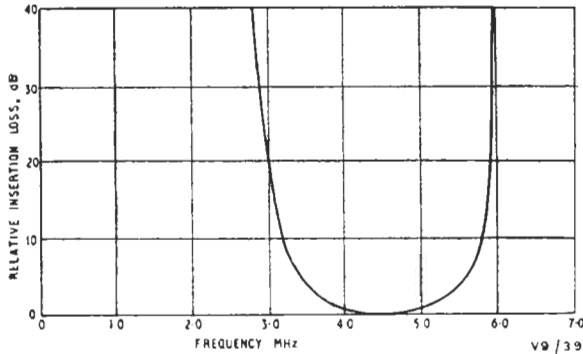


Fig. 27.1 Weighting Characteristic Used in the NE3/503

Low-frequency noise is subjectively more objectionable than high-frequency noise at the same level. Weighting characteristics are used to allow for this effect in making objective measurements. The process of colour encoding and decoding translates frequencies in the region of the sub-carrier frequency into low frequencies. There is a need therefore for a network which gives the same weighting characteristic to noise components within 1 MHz of the subcarrier frequency as is given to noise components at frequencies up to 1 MHz by a United Kingdom monochrome noise weighting network.

The NE3/503 should be used in conjunction with a Random Noise Measuring Set ME1/502 (described in Instruction V.3) with the weighting network in the ME1/502 switched off. If an ME1/502 is not available the NE3/503 may be used with an oscilloscope if a factor of 17 dB is subtracted from the measured quasi-peak-to-peak value of the noise.

The NE3/503, whose circuit is given in Fig. 27.2, is constructed in a Post Office type copper filter box.

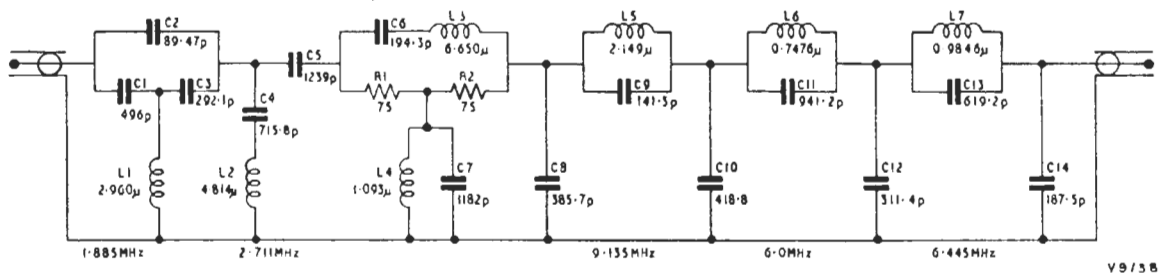


Fig. 27.2 Circuit of the NE3/503