VERTICAL APERTURE CORRECTOR
EP1M/512

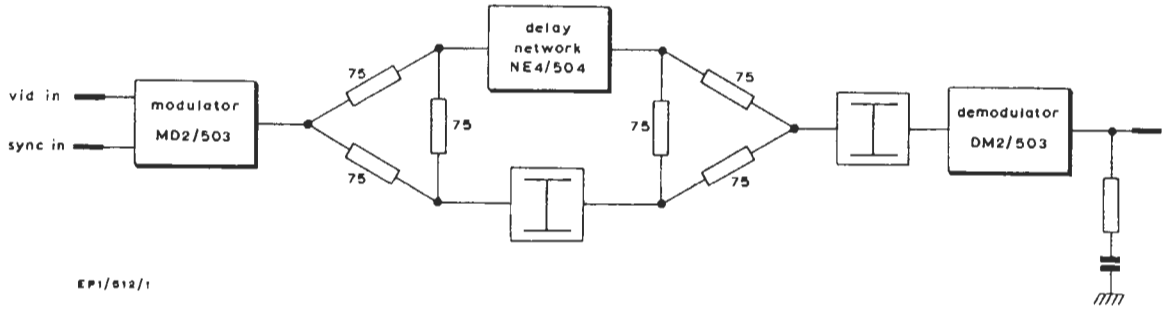

Fig. 1. Block Diagram of the EP1/512

Introduction

The EP1M/512 is a single line-standard vertical aperture corrector giving up to 6 dB of correction. The line-standard can be changed by changing a Quartz Delay Line NE4/504. This corrector, which is not suitable for a colour signal, comprises the following units mounted from left to right in a panel PN3/23:

Modulator MD2/503.
Quartz Delay Line NE4/504.
Demodulator DM2/502.
Power Supplier PS2/13K.
Power Supplier PS1/16.

General Description

A block diagram of the EP1M/512, given in Fig. 1, should be compared with the block diagram of a *Type One* single-delay corrector given in Fig. 1.4 in Instruction V.1, Part 3.

Inversion, required in this type of corrector, is carried out by adjusting the delay through the NE4/504 to be precisely an odd number of half cycles at the 30-MHz vision carrier frequency. Fig. 2 shows how this inversion occurs. The attenuator between the input and the output of the NE4/504 is thus used as a signal path in both directions.

The attenuator at the input of the DM2/502 compensates for the loss inherent in this type of corrector because the 1H component of the output signal is the sum of the direct signal and the 1H component of the correction signal.

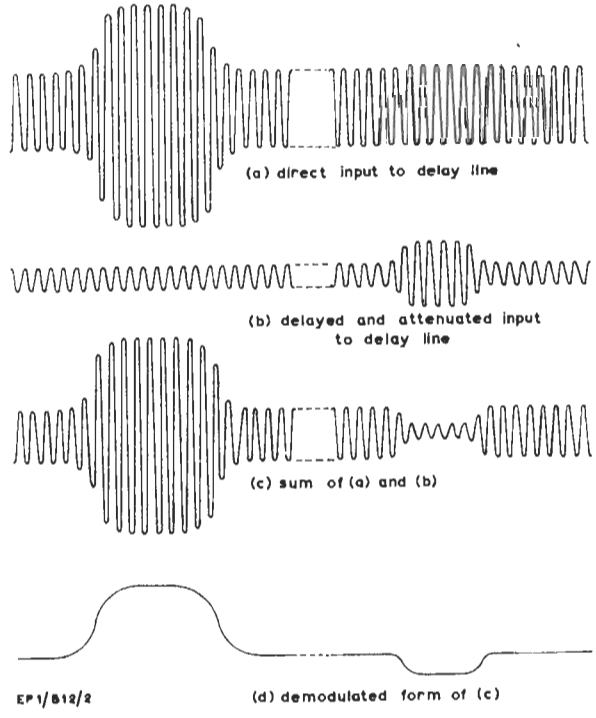

Fig. 2. Illustrating Signal Inversion by Delay

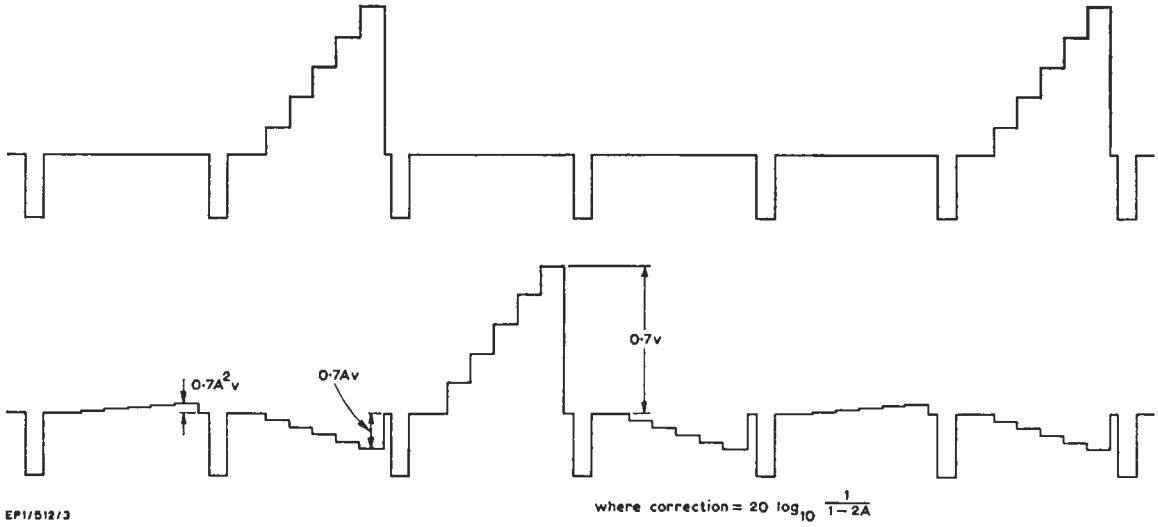

Fig. 3. Output Waveform of the EP1/512 with Test-signal Input

Test Procedure

1. Switch on and allow to warm up for at least two hours.
2. Feed a pulse-and-bar test signal to the corrector.
   Adjust the *Set Modulation* control on the MD2/503 so that the carrier level during a sync pulse is one quarter of the carrier level during the remainder of the blanking period.
3. Adjust the *Video Gain* control on the DM2/502 to give a 1-volt p-p output signal across 75 ohms.
4. Check that k_{2T} and k_{pb} are both better than 1 per cent.
5. Feed a CCIR waveform with bar off to the corrector.
   The output waveform should take the form shown in Fig. 3.
6. Adjust the oscilloscope to display all the line waveforms superimposed and check that any timing errors are less than 30 ns.

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