# SECTION 20

## NON-LINEARITY TEST SIGNAL GENERATORS GE4/520 SERIES

### Introduction

The GE4/520 generates test signals for the full range of video non-linearity distortion measurements (see Instruction V.1). It produces a switchable test signal (described below), C.R.O. trigger pulses and a reference colour subcarrier signal. It operates on both the 405-line and 625-line standards. For synchronising purposes it can accept feeds of mixed sync pulses, mixed blanking pulses, burst-gating pulses and colour subcarrier signal. The GE4/520 comprises the following units:

| *Unit* | *Instruction* |
|---|---|
| Luminance Non-linearity Test Signal Generator GE4/525 | V.10 |
| Chrominance Non-linearity Test Signal Generator GE4/526 | V.10 |
| Power Supplier PS2/48 or PS2/13F | G.2 |

The GE4M/520P and GE4M/520AP are constructed in a CH1/33 nesting box for portable use; the GE4L/520 and the GE4L/520A are intended for mounting in one half of a PN3/23 framework.

The GE4M/520AP and GE4L/520A are monochrome non-linearity test signal generators which do not include a chrominance generator GE4/526.

### Test Signal

The waveform shown in Fig. 20.1 illustrates one of the possible variations in the switchable output test signal of the GE4/520. The main variations are described below.

*Sync Pulses*

Sync pulses in the test signal can be free-running with no field signal (*Free*), locked to the incoming sync pulses but with no field signal (*Sync*) or are the processed incoming sync pulses with the full field signal (*Mixed*).

*Luminance Signal*

A five-step staircase waveform can be on all lines (*Step*), one line in four (*CCIR*) or on no lines at all (*Bump*). A positive or negative pedestal can be added to lines carrying the staircase waveform (*Pedestal*). The remaining lines can be either at blanking level or at white level (*Bar*). This bar may be switched on and off automatically at 10 second intervals (*Auto*).

*Chrominance Signal*

A blanked subcarrier signal can be superimposed on every line (*All Lines*) or on just the lines carrying the staircase waveform (*CCIR*). The colour reference burst is switchable and these subcarrier signals can be derived either from an internal oscillator or from an external source.

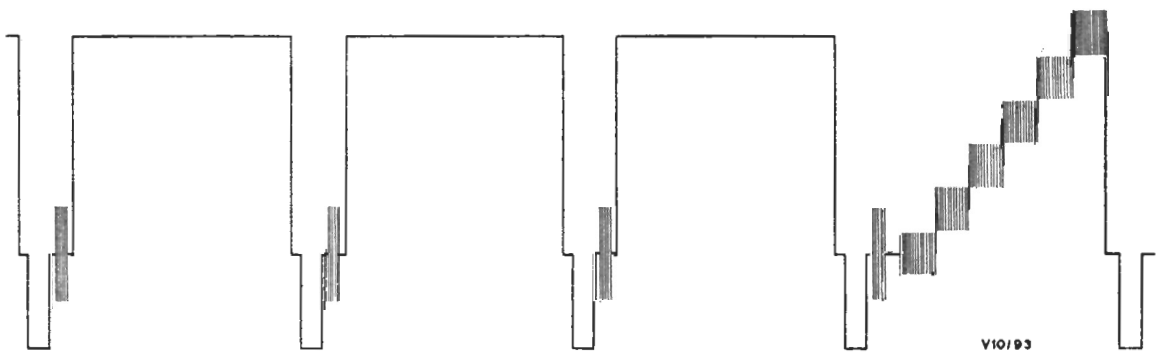


*Fig. 20.1 Typical Non-linearity Test Signal*

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