

525-LINE WAVEFORM GENERATOR DRIVE UNITS GE1M/530

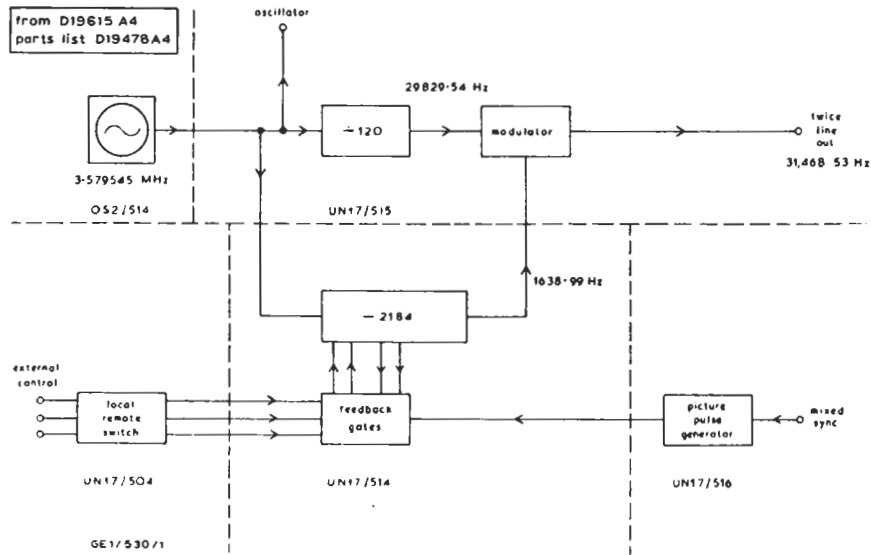


Fig. 1 Simplified Block Diagram of GE1/530

Introduction

The GE1M/530 provides a stable source of twice line frequency on the 525-line standard for driving an associated waveform generator. It follows a similar pattern to that described for the 625-line GE1/520² but uses an oscillator on the NTSC 525-line chrominance subcarrier frequency and the dividers have different ratios. Additionally, a field divider is not provided.

The GE1M/530 comprises the following units mounted in a PN3/23 chassis:

- Power Supplier PS2/36
- Oscillator (3.579545 MHz) OS2/514
- Control Unit UN17/504
- Variable Divider UN17/514
- Fixed Divider UN17/515
- Picture Unit UN17/516

Description

The phase of the twice-line-frequency output of the drive unit may be adjusted by local or remote control signals supplied via the Control Unit. With local control, the *Advance/Retard* key (mounted on the front panel) is used, giving an increase or decrease of the twice line frequency of one part in 5700, i.e., approximately ± 6 Hz. With remote control, advance and retard signals can be supplied from an automatic synchronising system⁴. Under

automatic control, the twice line frequency output is varied in two modes, the faster mode being the same as that provided by the manual control. The slower mode, which requires an input of mixed syncs to the Drive Unit, advances or retards the phase of the output signal by 0.165° (approximately) once per picture period. The corresponding change of waveform timing is 14 ns.

The frequencies and division ratios involved under normal conditions are shown on the simplified block diagram Fig. 1. A complete block diagram is given in Fig. 2 on page 3.

Maintenance

Routine maintenance is not required by the Drive Unit and the preset adjustments should not be disturbed. If realignment becomes necessary, reference should be made to the Designs Department Specification¹ or the unit should be returned to Equipment Department for service.

References

1. Designs Department Specification 10.21(67).
2. 625-line Waveform Generator Drive Unit GE1M/520, Technical Instructions and D. D. Technical Memorandum 10.7.(67).
3. Fundamentals of Switching Circuits, Instruction G.1.
4. Picture Source Synchronising, Instruction V.1.

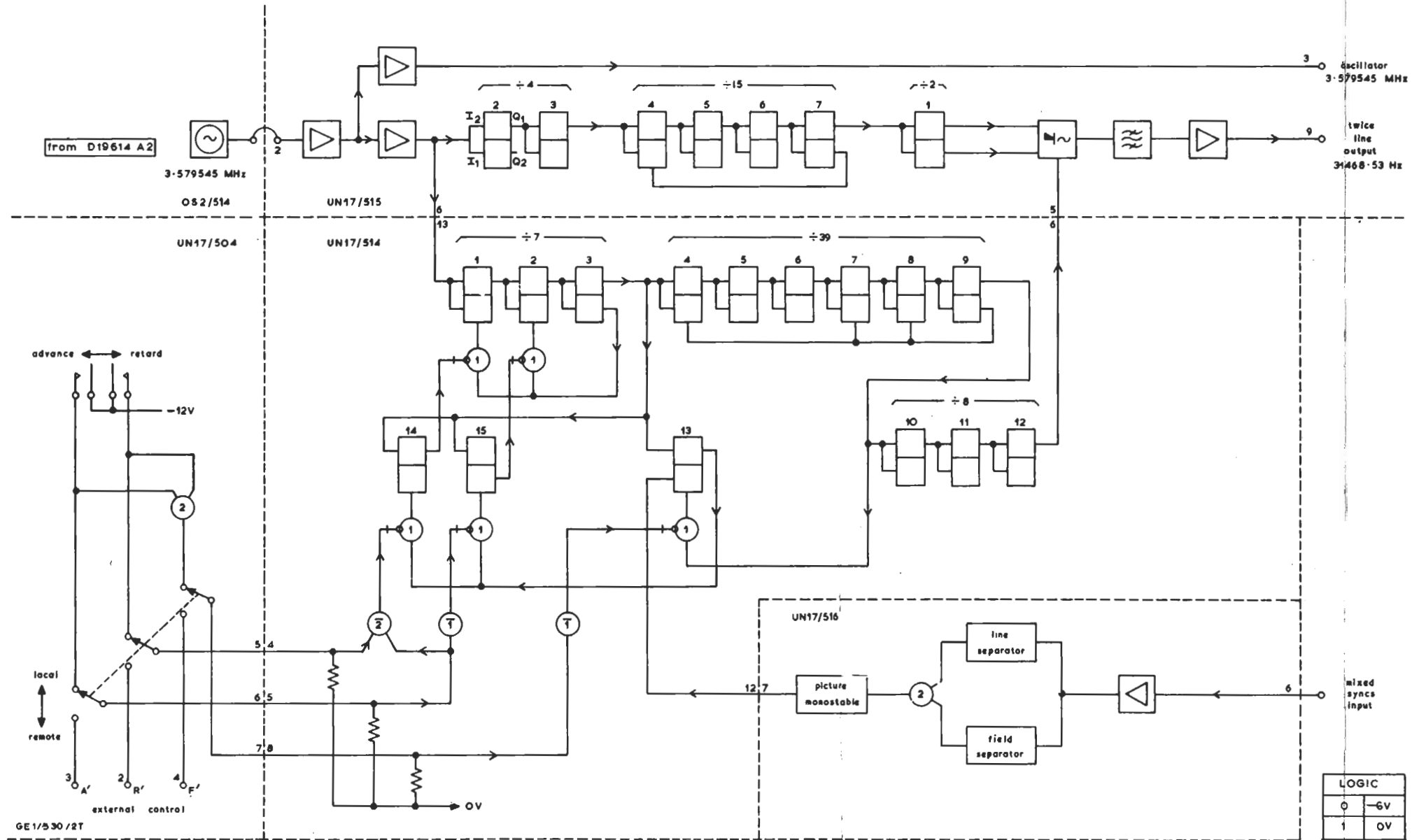


Fig. 2 Block Diagram of GE1/530