FIXED DIVIDER UNIT UN17/515

Introduction

The UN17/515 accepts a sine waveform at 525-line colour subcarrier frequency[1] (3·579545 MHz) and a rectangular waveform[2] at a nominal frequency of 1639 Hz. It provides a sine-wave and a rectangular-wave output at colour subcarrier frequency and a sine-wave output at twice-line frequency[3].

The UN17/515 is constructed on a CH1/26A chassis with index peg positions 5 and 39.

Circuit Description

The circuit diagram is given in Fig. 1. The input sine wave signal is amplified by TR9/TR10 and passed to a variable gain output amplifier TR11/TR12 and to a Schmitt trigger stage TR13/TR14. The Schmitt trigger provides a rectangular-wave output at subcarrier frequency and also drives an internal frequency-divider circuit. The divider is built up from seven Bistable Units UN9/528 which are arranged in three groups having division ratios of 4, 15 and 2; these divide the frequency by 120 to produce a signal at 29829·5 Hz. The output of the final Bistable Unit is balanced and drives one input of a balanced modulator. The second input to the modulator is the 1639-Hz signal. The modulator is followed by filters to reject the difference frequency and to accept the sum frequency, 31468·5 Hz (i.e., twice line frequency) which is then fed to the output via two emitter followers.

Maintenance

Routine maintenance or adjustment are not required.

References

1. Oscillator OS2/514.
2. Variable Divider Unit UN17/514.
3. Waveform Generator Drive Unit GE1M/530.

AIB 11/67

See page 3 for Fig. 1

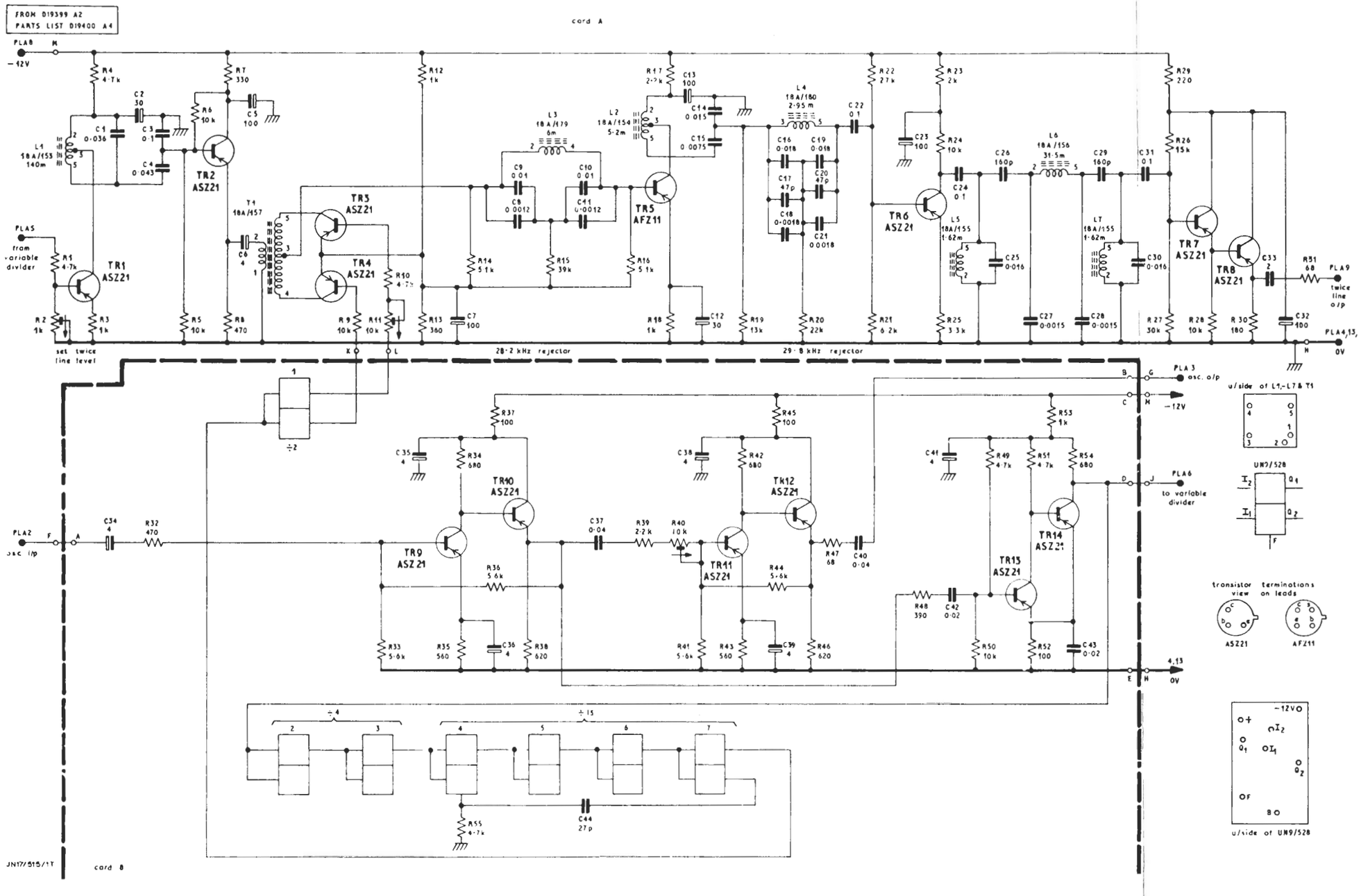

Fig. 1 Circuit of Fixed Divider Unit UN17/515