

**MX1/509 U.H.F. MIXER AND FILTER**

**Introduction**

The MX1/509 is a u.h.f. mixer and filter unit designed for use with the MD1/502 or MD1M/507 Wide Band Sound and Vision Modulators. It consists of a diode mixer MX1/508, coupled to an FL2/533 or FL2/534 band pass filter by an AT4/509A matching pad. An OS2/511 local oscillator is normally used with the mixer.

The unit is mounted in a CH1/12A chassis with index pegs 28 and 31. A suffix letter A to D added to the code indicates the position of the u.h.f. outlet on the front panel (A - Band IV, B - Band V) or back panel (C - Band IV, D - Band V). A block diagram is given in Fig. 1.

**General Specification**

Input Frequency Range	30 MHz to 39 MHz
Output Level at sync tips (negative modulation)	15 mV r.m.s. flat to within 0.5 db over band
Matching Pad Loss	3 dB
Conversion Loss	12 dB approx.
Local Oscillator Input	1 V p-p across 50 ohms
Output Impedance	50 ohms

**General Description**

The mixer consists of a 3-dB directional coupler with diode mixing and is a broad-band device. Adjustment and maintenance are not required.

The band pass filter removes unwanted signals from the output.

**Reference**

1. Designs Department Specification No.4.54(69)

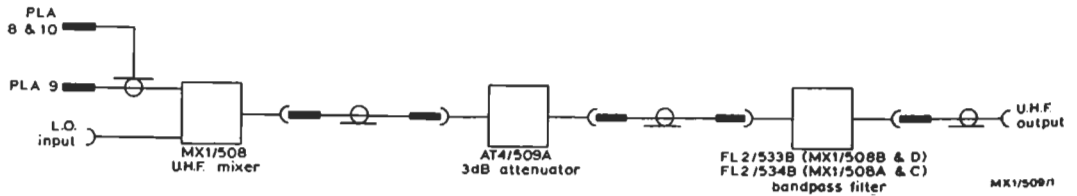


Fig. 1 Circuit of the U.H.F. Mixer and Filter MX1/509