

CHAPTER 5

TECHNICAL DESCRIPTION

INTRODUCTION

- 1 The Transceiver Units comprise the following main units:
 - (1) A modulator unit.
 - (2) 60MHz logarithmic receiver CTX-A356.
 - (3) RF head and magnetron.
 - (4) Power Unit.

FUNCTIONAL DESCRIPTIONS

MODULATOR

- 2 The modulator is a line type with resonant charging from a stabilised line voltage, driving a 25kW rated magnetron via a pulse transformer.
- 3 Pre-pulse and jitter facilities and two separate sync. pulse outputs are provided.
- 4 The Modulator Unit contains two main circuits which are:
 - (1) Modulator Control.
 - (2) Modulator.

Modulator Control Circuit (Figure 1)

- 5 The modulator control circuit monitors the PULSE LENGTH, STANDBY and MUTE control signals from the display, and senses the AZIMUTH pulses which indicate Antenna rotation. The circuit generates modulator triggers.
- 6 Three LEDs, labelled +27V, TX READY and TUNE, and an antenna motor relay which may be activated when Switch S4 is closed, are mounted on the PCB.
- 7 Power supplies of +15V, +27V, +24V and +8.5V are supplied from the Power Unit. Supplies for other areas of the transmitter are generated on the PCB.