

3.4.8 BATTERY CHARGER

- Introduction

See figure 3.18.

The battery charger consists of a switched mode power supply and some auxiliary circuitry. Whenever the ScopeMeter is connected to the line voltage (via the separate power adapter/battery charger PM8907), the instrument switches over to line voltage operation automatically. If a NiCd battery pack is installed, the ScopeMeter will charge this if line voltage is present. Special circuitry prevents discharge of the batteries when the instrument is not being used.

- Detailed circuit description

See figure 3.18 and circuit diagram A2c (figure 10.7).

HF Filter

The input voltage (between 8V and 20V) first passes HF FILTER Z2501 and is used to drive a flyback converter.

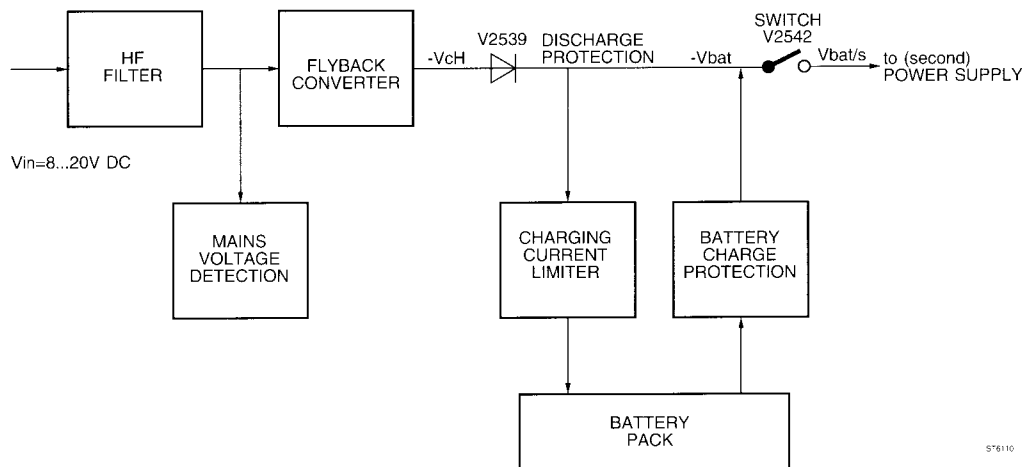


Figure 3.18 Schematic diagram battery charger

Line voltage detection

When the ScopeMeter is operated on line voltage, transistor V2521 will be driven by the (filtered) input voltage. The signal MAINVOLTHT will become "low" to indicate that the instrument is operated from the line voltage. The related signal MAINS-D (connector X1201, pin 5) is connected to the microprocessor analog input 19. When the signal MAINS-D is "high", the microprocessor will not switch off the ScopeMeter, as in battery operated mode.