

## 3 CIRCUIT DESCRIPTIONS

### 3.1 INTRODUCTION TO CIRCUIT DESCRIPTION

#### 3.1.1 General

This chapter presents a layered description of the ScopeMeter circuitry. First the ScopeMeter's overall theory of operation is described, referring to the overall block diagram (section 3.2). The next section gives some information concerning the ScopeMeter's data acquisition. Then the circuits on both digital (A1) and analog (A2) printed circuit boards (PCB) are described. After a short introduction, a detailed circuit description is given for each circuit part.

The various circuit descriptions refer to the circuit diagrams in chapter 10.

*NOTE: The large digital (A1) and analog (A2) printed circuit board diagrams are provided as separate drawings. Whenever a signal line continues on another drawing, it is indicated by the following comment:*

*"FROM A1" ----> coming from the digital (A1) circuit (figure 10.2)*

*"TO A2a" ----> the signal continues on the first circuit diagram of the analog A2 PCB (figure 10.5)*

#### 3.1.2 Location of electrical parts

The item numbers of C..., R..., V..., N..., D... and K... have been divided into groups. These groups relate to the functional parts on the PCBs:

*Table 3.1 Location of electrical parts*

Item number	Functional part	PCB diagram	
		A1	A2
1200-1299	$\mu$ P, Digital ASIC and related circuitry	A1	A1
1300-1399	battery sense, RAM power, backlight	A1	A1
1400-1499	LCD and related circuitry	A1	A1
1500-1599	ON/OFF circuit	A1	A1
1600-1699	keypad	A1	A1
2100-2199	attenuator channel B	A2	A2a
2200-2299	attenuator channel A	A2	A2a
2300-2399	Analog ASIC and ADC	A2	A2a/b
2500-2599	battery charger and power supply	A2	A2c
2700-2799	EXternal input/output circuitry	A2	A2b
2800-2899	generator	A2	A2b
2900-2999	analog control circuitry	A2	A2a