The power supply circuitry is also located on the analog A2 PCB. The separate Power adapter/battery charger **PM8907/...** converts the line voltage into 15V DC. This voltage is used by the **BATTERY CHARGER** to charge a **NiCad BATTERY PACK (PM9086/001)**, if present.

The **POWER SUPPLY** section transforms the input voltage (line operated) or the battery voltage (battery operated) into the supply voltages for the various ScopeMeter circuits on A1 and A2.

Digital A1 PCB

The ScopeMeter is controlled by the **MICROPROCESSOR**, located on the digital A1 PCB. This microprocessor performs several control tasks, for example:

- Scanning the **KEYPAD** for user commands. The keypad is connected to the microprocessor via the **M-ASIC**.
- Communication with the outside world via the **OPTICALLY COUPLED RS-232-C TRANSCEIVER**. This section contains an Infrared LED (transmitter) and a phototransistor (receiver).
- Monitoring the battery voltage (**BATTERY SENSE CIRCUIT**).
- Controlling the Analog ASIC on the analog A2 PCB.
- Switching the power on or off (**POWER ON/OFF CIRCUIT**).
- Performing a proper RESET at power on (**RESET CIRCUIT**).
- Controlling the analog A2 circuits (via the **ANALOG CONTROL CIRCUIT**).
- Signal processing of acquired data. The microprocessor reads, calibrates and stores the acquired data.

The **DIGITAL ASIC** is the core of the ScopeMeter's digital circuitry. It provides:

- Timebase functions. For example: the ScopeMeter's ADC sampling signal is generated by the Digital ASIC.
- Trigger functions (in real-time sampling mode).
- Acquisition Control Logic (ACL). This function controls the acquisition according to trigger and acquisition modes. The Digital ASIC contains acquisition RAM for quick data storage.
- Min/Max mode.
- Decoding of the internal ASIC addresses and synchronization of Digital ASIC and microprocessor access to the acquisition RAM.
- Display control. The Digital ASIC generates the picture to be displayed on the LCD.

The picture, generated by the Digital ASIC is displayed on the **Liquid Crystal Display (LCD)**. The LCD is controlled by the **LCD ROW DRIVERS** and the **LCD COLUMN DRIVERS**. The **LCD SUPPLY** section provides for the voltages needed. ScopeMeter model 97 has a **BACKLIGHT CIRCUIT**, which can illuminate the LCD.

In the **MEMORY ASIC** (M_ASIC) a number of circuits are integrated:

- ADDRESS LATCH circuit
- MEMORY MANAGER, to control ROM and RAM
- KEYBOARD SCANNER
- BOOT CIRCUIT, to perform a correct startup
- LCD control circuits ODD/EVEN SELECTION and AB-MIX (RANDOMIZE)