CHAPTER 3

OPTION SELECTION

Voltage output ranges are determined either by jumper installation at the output connector or by jumper placement as described in the following paragraphs. Also, the method of updating D/A outputs is programmable as described on the next page and in the Programming section of this manual.

OUTPUT RANGES

A quick and easy way to select output voltage ranges (either unipolar or bipolar) is to set jumpers S3 (D/A channel #0) and S2 (D/A channel #1). These jumpers are located at the upper left corner of the card when looking at the component side.

Placing those jumpers in the "-5V" position selects the 0 to 5V range output at pins 24 and 18 respectively, the -5V to +5V range output at pins 23 and 17 respectively, and the current output range at pins 25 and 19 respectively.

Placing S3 and S2 to the "-10V" position selects the 0 to 10V range output at pins 24 and 18 respectively and the -10V to +10V range output at pins 23 and 17 respectively.

(NOTE: If you select "none" for jumper selection in the setup program, you are referred to the preceding section for selecting output range at the output connector.)

An alternative way to select output ranges for each analog output channel is to place jumpers between pins on the mating half of the I/O connector. The various ranges are selected as follows:

RANGE		JUMPER BETWEEN PINS	OUTPUT PIN
0 to +5VDC	D/A #0	21 and 22	24
	D/A #1	15 and 16	18
0 to +10VDC	D/A #0	20 and 22	24
	D/A #1	14 and 16	18
+/-5VDC	D/A #0	21 and 22	23 *
	D/A #1	15 and 16	17 *
+/-10VDC	D/A #0	20 and 22	23 *
	D/A #1	14 and 16	17 *
4-20mA	D/A #0	21 and 22	25
	D/A #1	15 and 16	19

* Due to analog inversion in the bipolar output range, data coding is complementary offset binary. That is, zero digital corresponds to +full scale analog and 4095 digital corresponds to -full scale analog.

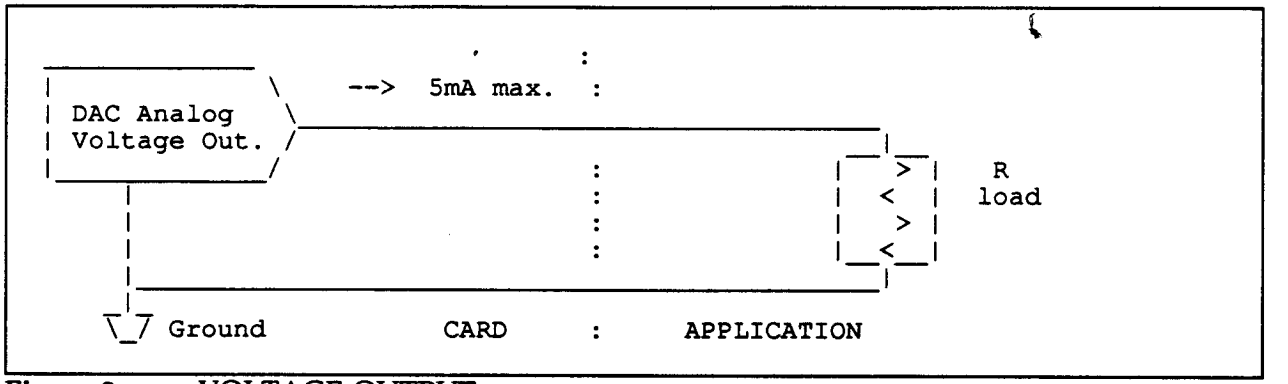

Figure 2 VOLTAGE OUTPUT

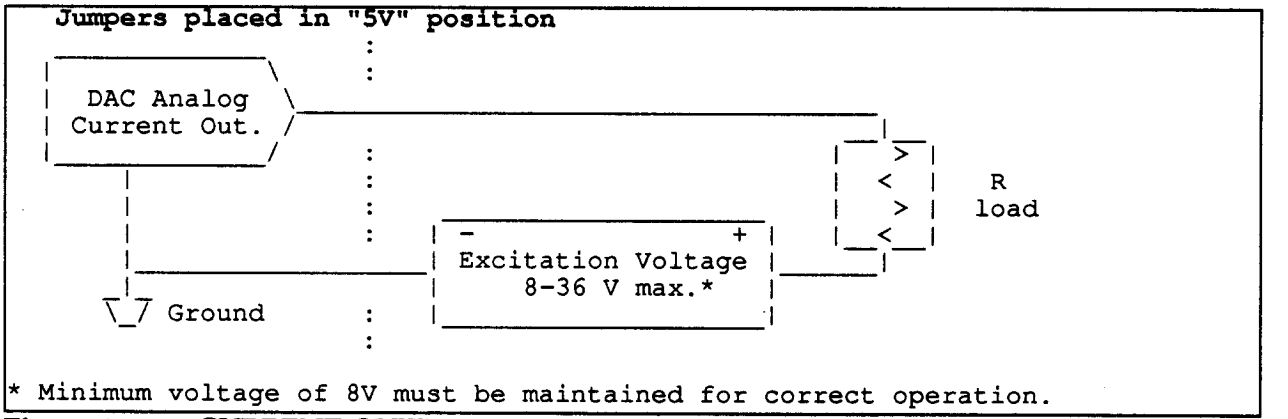

Figure 3 CURRENT OUTPUT

ANALOG OUTPUTS UPDATE

Analog outputs may be updated under program control in either of two ways:

(a) Each D/A output is updated when new data are written to its related high byte base address.

(b) The outputs of both D/A's may be updated simultaneously. This is done by first writing the low and high bytes for D/A 0 to base address +4 and base address +5 respectively and the low byte for D/A 1 to base address +6. Then, when the high byte for D/A 1 is written to base address +7, both D/A outputs are updated.

Refer to the Programming section of this manual for more detail.