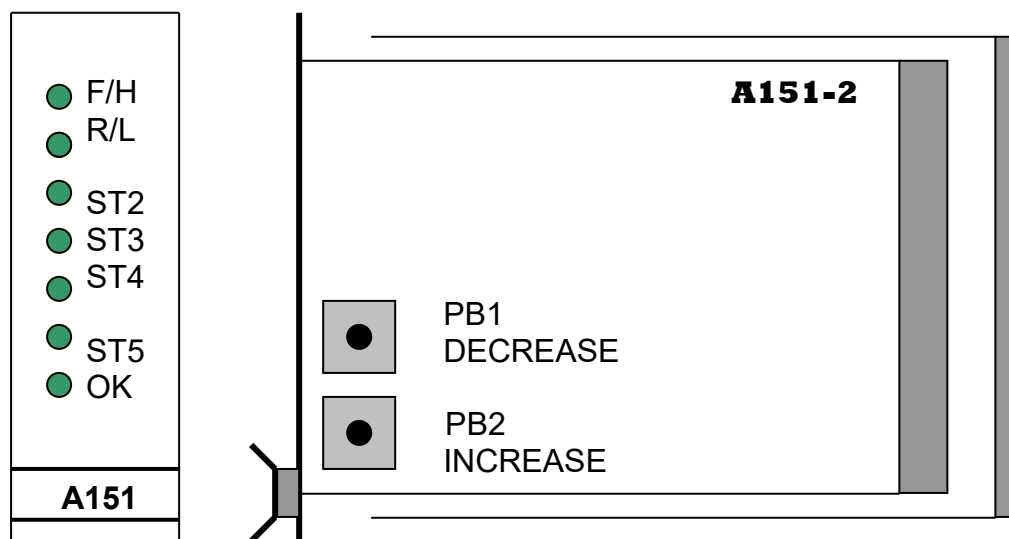
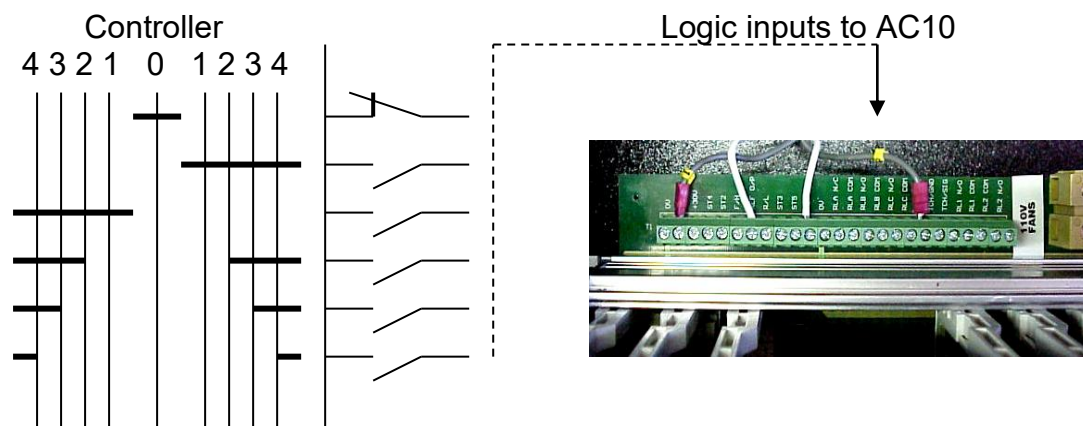


SC10 Primary Thyristor Control for Slip-ring Motors

A151 Reference Card

The **A151 Reference Card** converts the stepped inputs from an operators controller – normally 4 or five notch – to an analogue output speed reference for use by the A130 (Hoist) and A131 (Travel) Amplifiers.

Each step input has an analogue output value that is adjustable via buttons PB1 (DOWN speed) and PB2 (UP speed) and the digital display. The A151 card uses an 8-bit micro controller type PIC 16F873 with EEPROM.



LED's 1 – 5 indicate the direction and speed position of the master controller.

The OK LED will illuminate when the PIC has established that the inputs from the controller are valid. Zero speed input (neutral = 0) is valid, so the OK LED will normally be ON. The card will output zero speed (5V = zero speed) if the input sequence from the controller is not valid.



Controller inputs:

For each position of the controller, the PIC will output an analogue value from memory. The PIC output is amplified to 0 – 10 V by IC1 on the card.

The analogue output for each valid set of controller inputs, can be adjusted DOWN or UP by buttons PB1 and PB2. The adjustment is limited to a range above and below the current step (the step being adjusted). Once an adjustment is made, the new analogue value for the step is automatically loaded into the PIC's EEPROM.

Analogue Output Range:

The analogue output range falls between 0 and 10 V. Typical set speeds for 5-notch travel control are:

↑	F/H + ST5	10V	RATED FWD SPEED
	F/H + ST4	8V	75% FWD SPEED
	F/H + ST3	7V	50% FWD SPEED
	F/H + ST2	6V	25% FWD SPEED
	F/H + ST1	5.5V	10% FWD SPEED
	NEUTRAL	5V	ZERO SPEED
↓	R/L + ST1	4.5V	10% REV SPEED
	R/L + ST2	4V	25% REV SPEED
	R/L + ST3	3V	50% REV SPEED
	R/L + ST4	2V	75% REV SPEED
	R/L + ST5	0V	RATED REV SPEED

