

NOTE:

Lights:

- UP (SW 4)
- Down (SW 5)
- Left (SW 6)
- Right (SW 7)
- Out of Range (LED)
- Interlock Encoder OK (LED)
- BRAKE on (LED)
- 2x16 Line LCD & Backlight

Motor:

Stepper or DC Motor

Encoders:

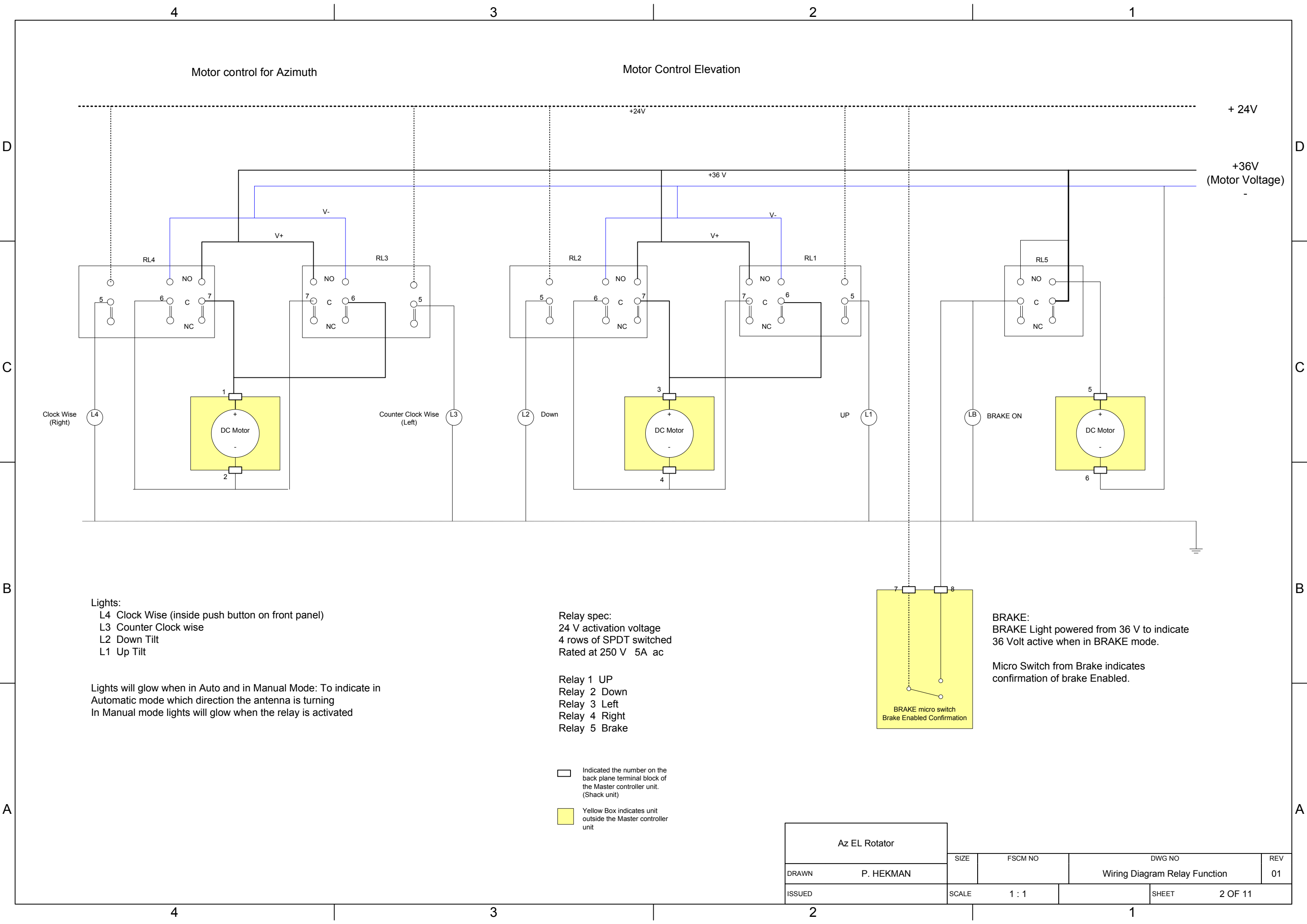
Absolute 10 Bit Encoder

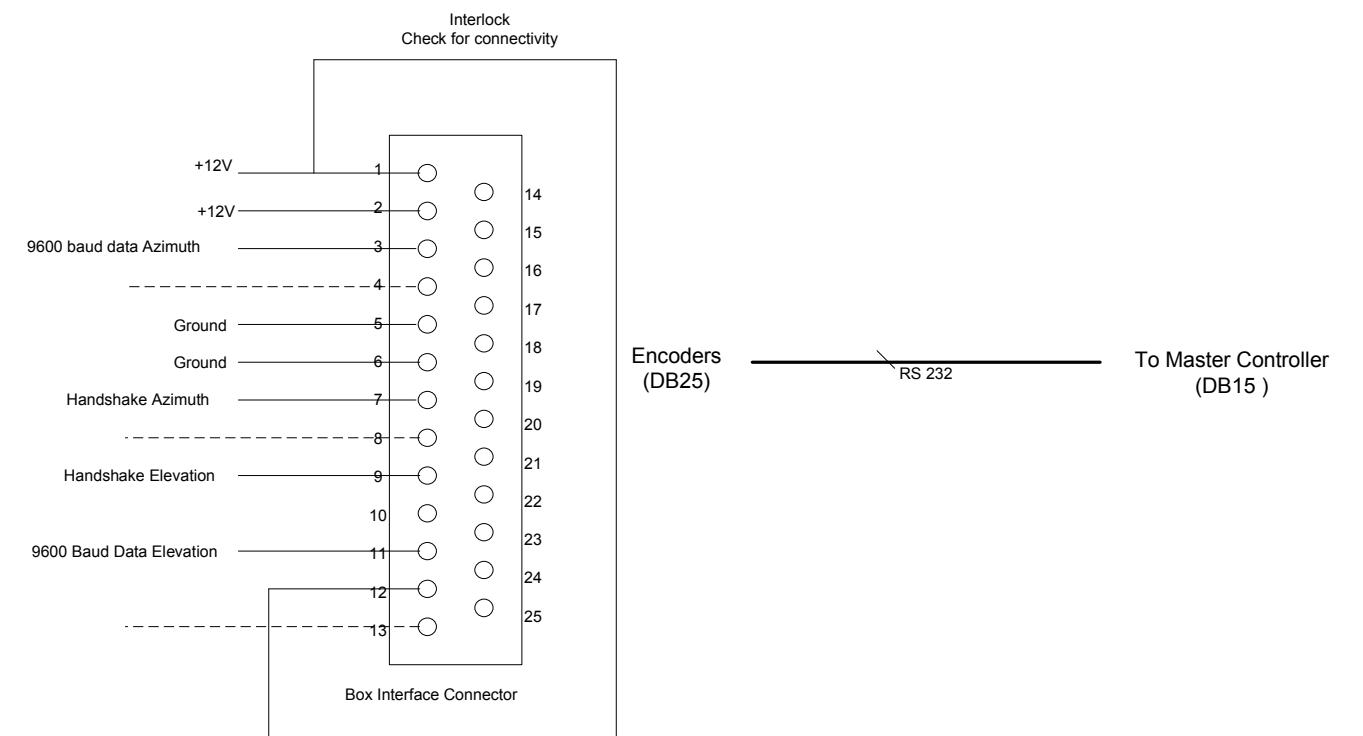
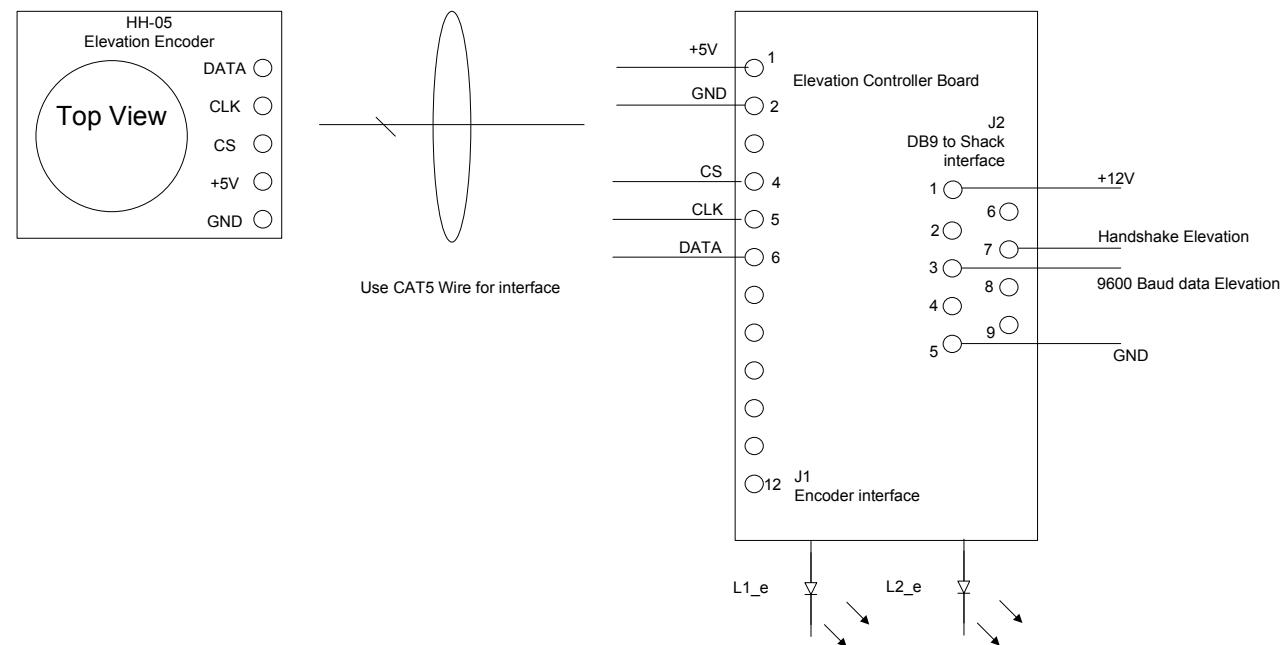
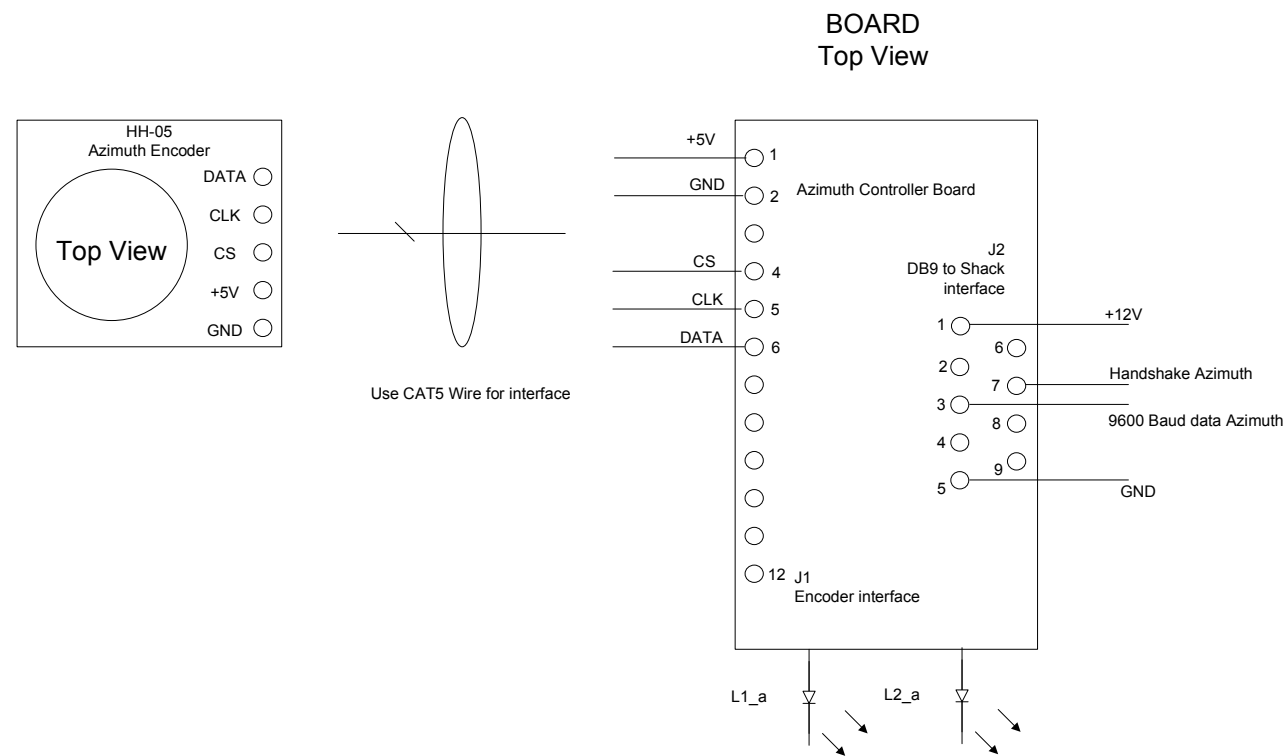
Brake Micro Switch:

When in BRAKE mode ON micro switch closes:

When in start up mode break must be released prior turning the antenna (Safety feature)

Az EL Rotator		SIZE	FSCM NO	DWG NO	REV
DRAWN P. HEKMAN				Functional Block Diagram	01
ISSUED		SCALE	1 : 1	SHEET	1 OF 11





NOTE:

8 Azimuth wiper of pot in if used

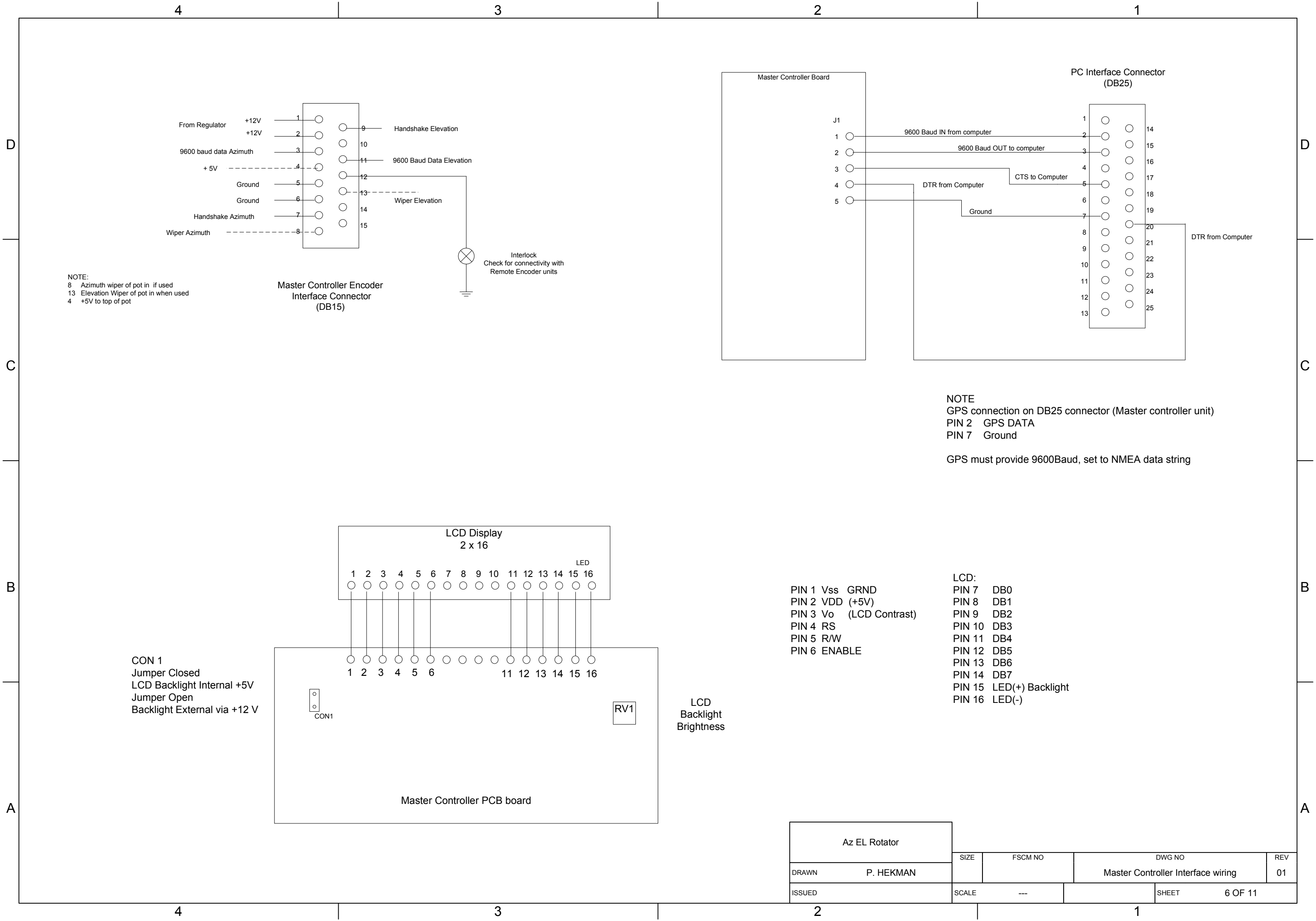
13 Elevation Wiper of pot in when used

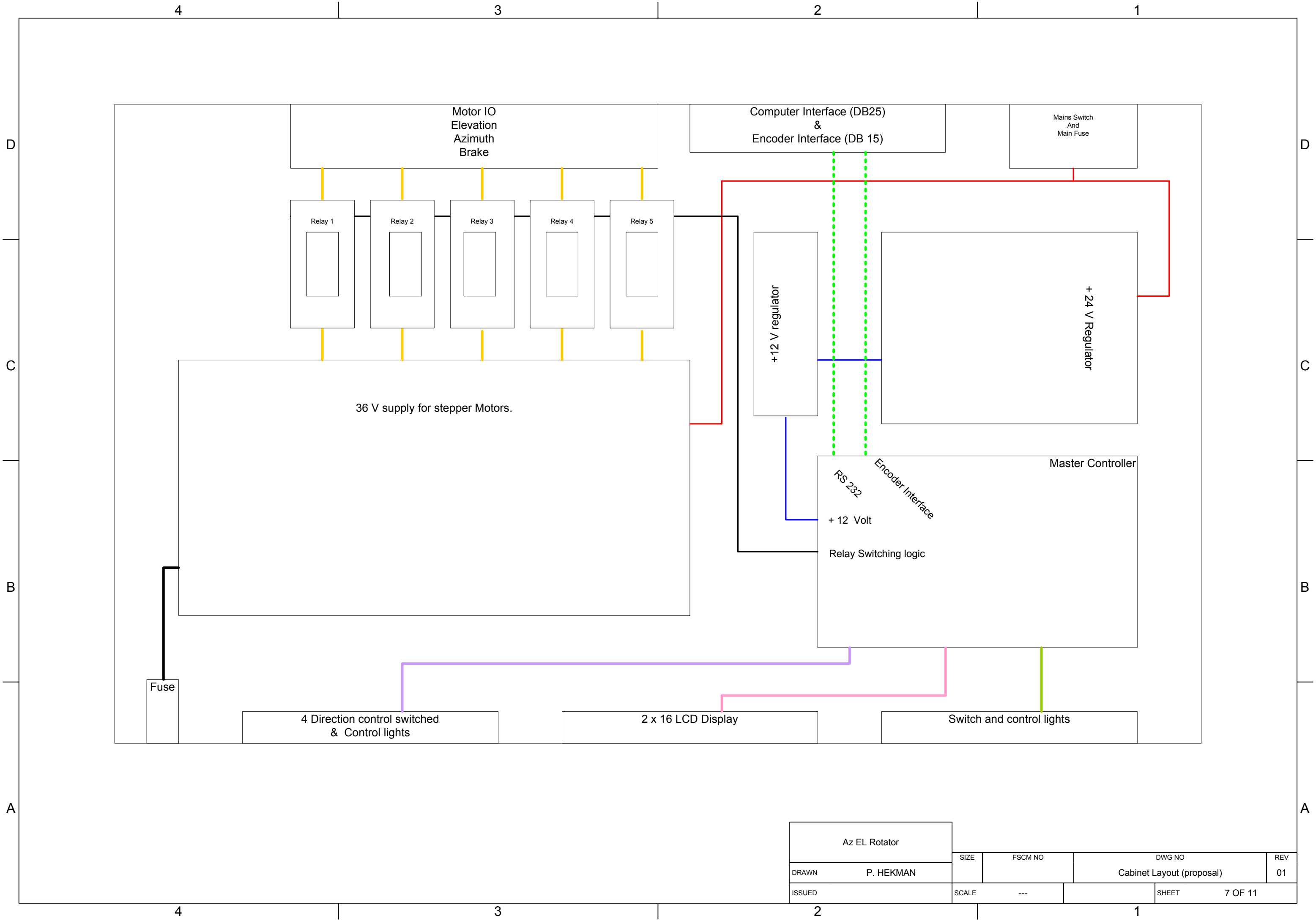
4 +5V to top of pot

1 & 12 Interlock Check interconnectivity

LEDS are circuit board mounted.

Az EL Rotator					
		SIZE	FSCM NO	DWG NO	REV
DRAWN P. HEKMAN				Wiring Diagram Encoders	01
ISSUED		SCALE 1 : 1		SHEET 4 OF 11	



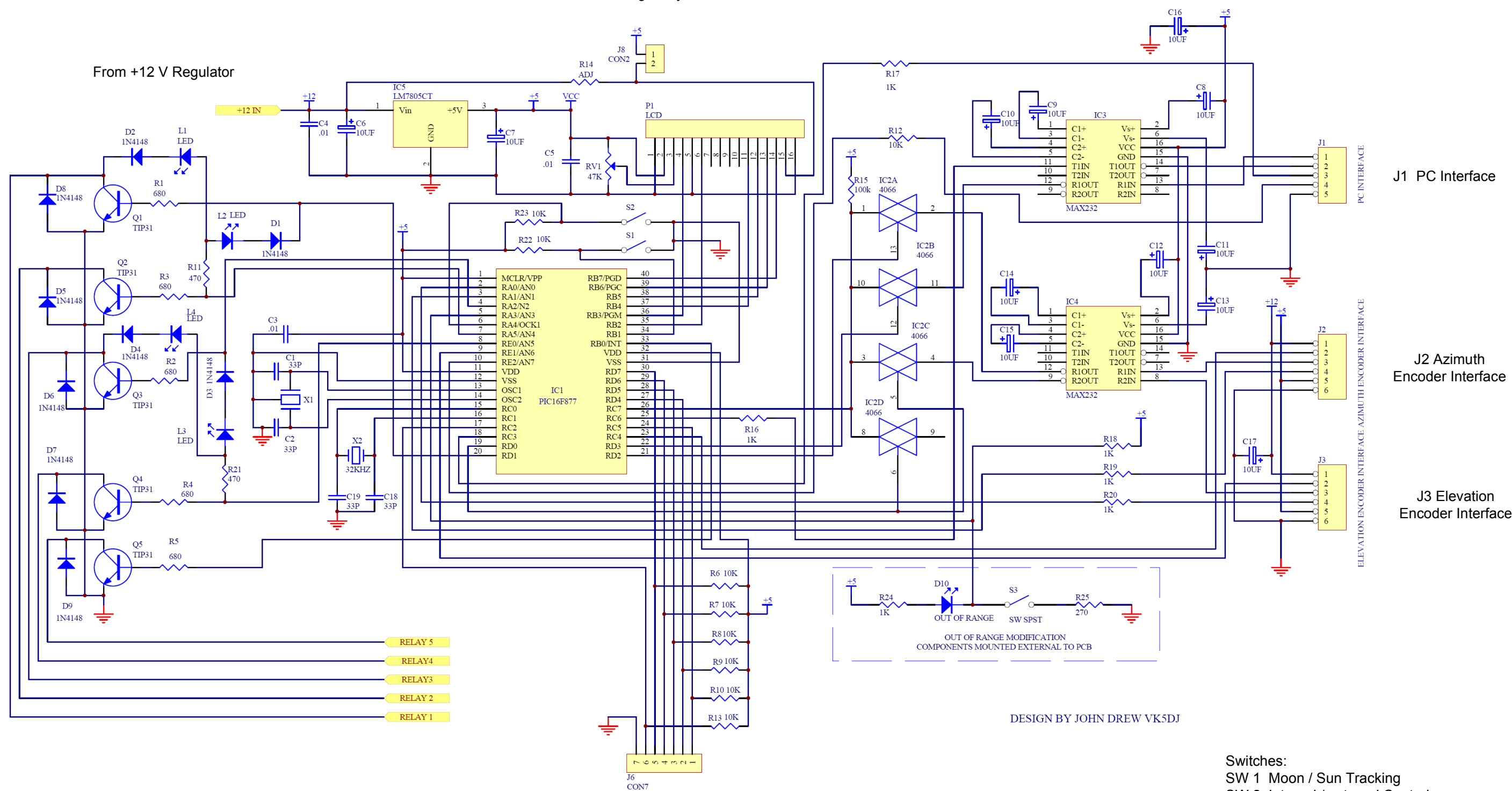


Az EL Rotator		SIZE	FSCM NO	DWG NO		REV
				Cabinet Layout (proposal)		
DRAWN P. HEKMAN						01
ISSUED		SCALE	---		SHEET	7 OF 11

J8 Jumper (Backlight LCD)

RV1 Backlight adjust

From +12 V Regulator

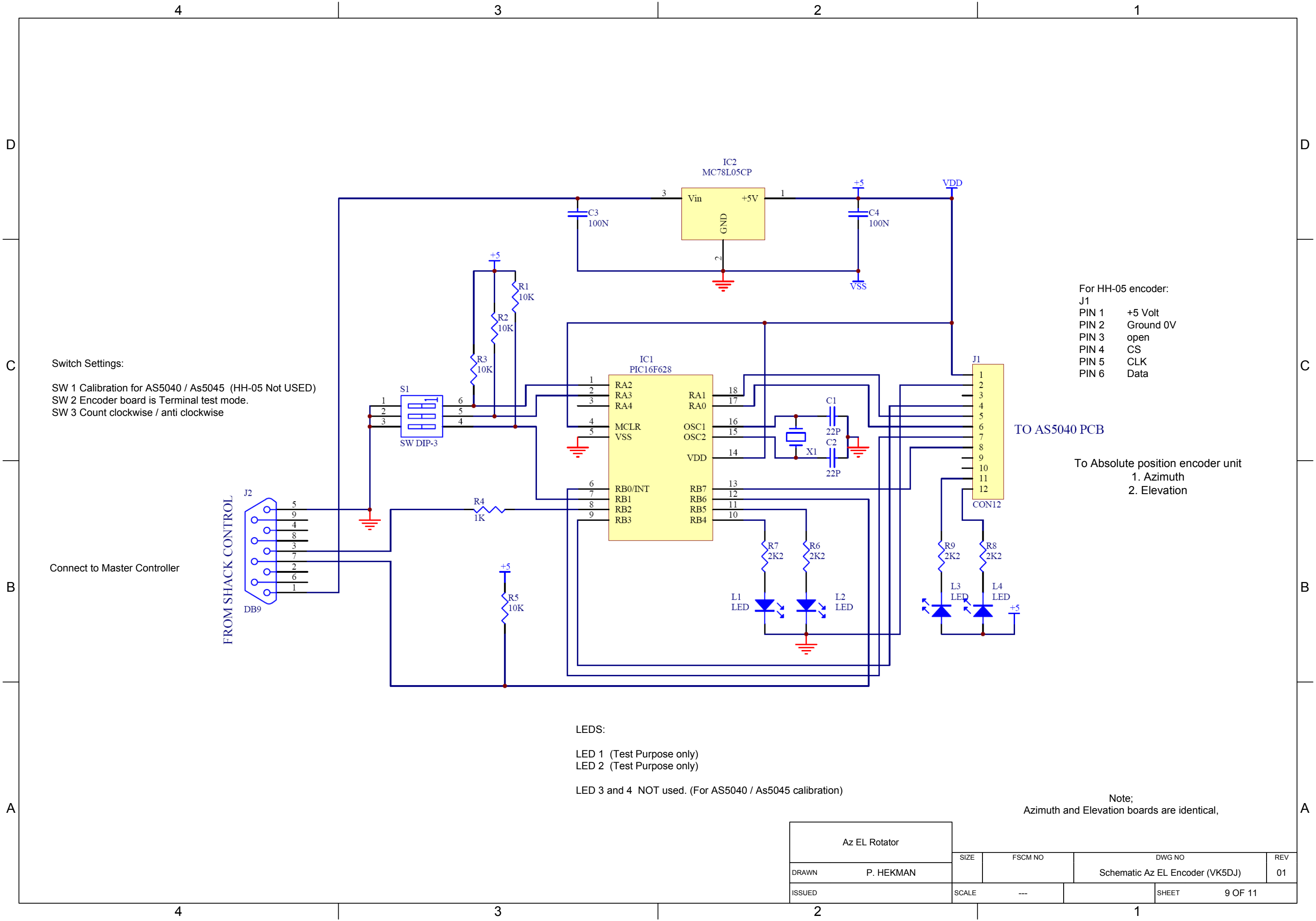


Relay 1 UP
Relay 2 Down
Relay 3 Left
Relay 4 Right
Relay 5 Brake

J6
Switch (active to ground)
1. Auto / Manual Control
2. Right Turn
3. Left Turn
4. UP Tilt
5. Down Tilt
6. Park / Brake

Switches:
SW 1 Moon / Sun Tracking
SW 2 Internal / external Control
SW 3 Calibrate / Mode

Az EL Rotator		SIZE	FSCM NO	DWG NO	REV
DRAWN	P. HEKMAN			Schematic Master Controller (VK5DJ)	01
ISSUED		SCALE	---	SHEET	8 OF 11



Switch Settings:
SW 1 Calibration for AS5040 / As5045 (HH-05 Not USED)
SW 2 Encoder board is Terminal test mode.
SW 3 Count clockwise / anti clockwise

For HH-05 encoder:
J1
PIN 1 +5 Volt
PIN 2 Ground 0V
PIN 3 open
PIN 4 CS
PIN 5 CLK
PIN 6 Data

TO AS5040 PCB

To Absolute position encoder unit
1. Azimuth
2. Elevation

LEDS:
LED 1 (Test Purpose only)
LED 2 (Test Purpose only)
LED 3 and 4 NOT used. (For AS5040 / As5045 calibration)

Note;
Azimuth and Elevation boards are identical,

Az EL Rotator		SIZE	FSCM NO	DWG NO	REV
DRAWN	P. HEKMAN			Schematic Az EL Encoder (VK5DJ)	01
ISSUED		SCALE	---	SHEET	9 OF 11

D

C

B

A

D

C

B

A

PCB Top View

CON2 Jumper
(LCD Brightness)

To LED's

SWITCH
1 and 2

To 2x16 LCD Display

4000 (mil)

4675 (mil)

+ 12 Volt & GND

To Relay Switches
(Coil voltage)
REL 1 UP
REL 2 DOWN
REL 3 LEFT
REL 4 RIGHT
REL 5 BRAKE

Switch 3
(Note: see modification in
Schematic page)
LCD Backlight Intensity control
(RV 1)

To PC
(RS 232)
Header 5

To Azimuth Encoder
Header 6

To Control Switches
CON7

To Elevation Encoder
Header 6

Az EL Rotator						
DRAWN P. HEKMAN		SIZE	FSCM NO	DWG NO		REV
				Master Controller PCB component Layout		01
ISSUED		SCALE	---		SHEET	10 OF 11

