

## ENCLOSURE SPECIFIC DATA

### Vertex

### Portable Auto-Acquisition Antenna

### Mount "KM"

Revision: 19 July 2012

#### 1.0 INTRODUCTION

##### 1.1 Appendix Organization

This appendix is provided as a supplement to the baseline RC4000 User's Manual which describes the PCB board stack that is common to all systems. Section 2 describes the mechanical aspects of the controller, while section 3 describes the electrical connections.

#### 2.0 MECHANICAL

##### 2.1 RC4000 Antenna Controller Chassis and Lid

The ACU is mechanized as an embedded controller. The PCB board stacks are located inside a weatherproof enclosure. Figure 1 shows the ACU.



Figure 1

The chassis of the RC4000 provides provisions to mount the enclosure that include #10-32 hardware on the bottom of the enclosure, as well as the sides. Figure 2 shows the enclosure drawings.

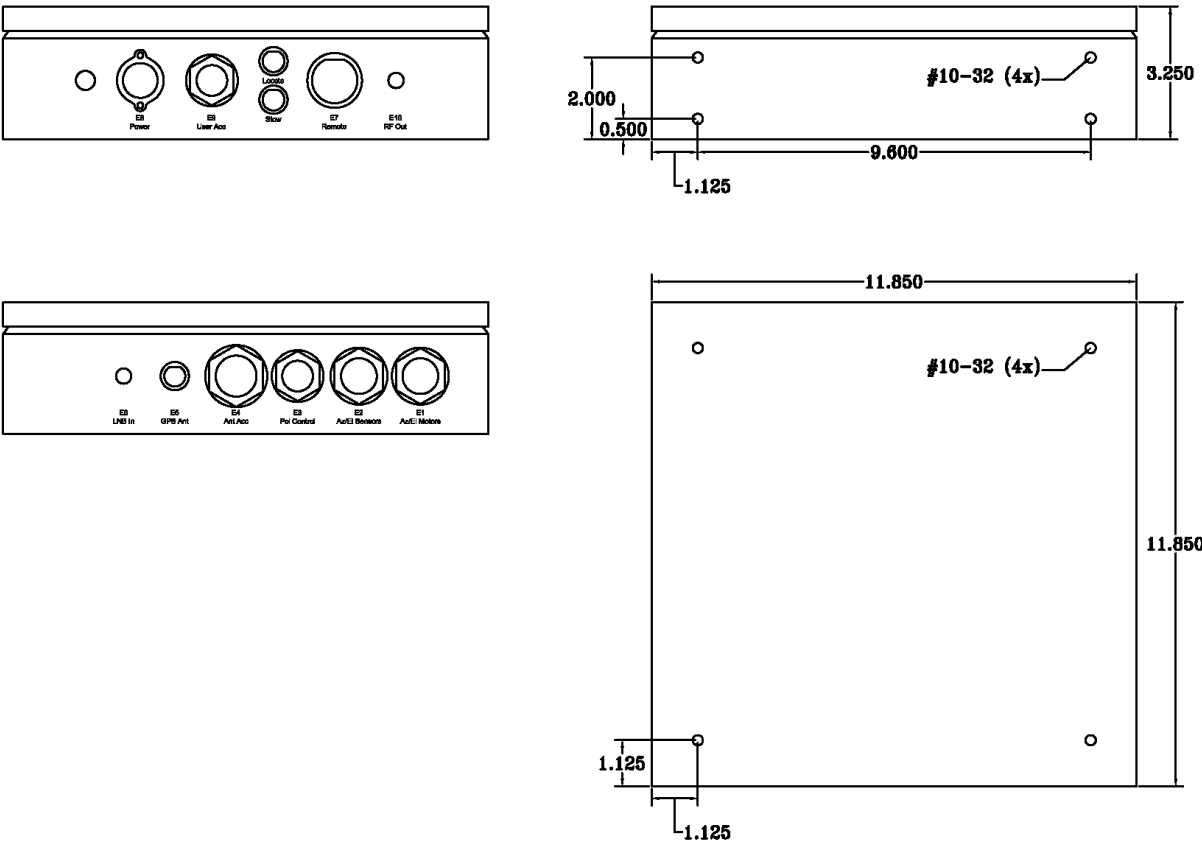


Figure 2

## 2.2 Torque for Lid Screws

This section describes the appropriate procedures and torque recommendations for installing the RC4000 Embedded controller lid in order to ensure that it is securely fastened and water-tight against moisture.

Please observe the following steps with installing the controller lids:

1. Place the lid on the controller, making sure that it is square with the chassis.
2. Start threading all four screws and hand-tighten ONLY until the washers touch the lid. DO NOT OVERTIGHTEN.
3. Set the torque screwdriver to 2 in-lbs. and tighten the screws in a cross pattern.
4. Adjust the torque screwdriver to 4 in-lbs. and tighten the screws two turns at a time, repeating the cross pattern, until the torque is reached.
5. Set the torque screwdriver to 6 in-lbs. and tighten the screws two turns at a time, again repeating the cross pattern, until the torque is reached.

The above procedure has consistently resulted in securely fastened lids that are water tight against moisture.

### 2.3 RC4000 End Panels

The RC4000 end panels are where the connectors are located. The User Interface end panel contains connectors that the user may need to frequently have access to, such as the AC power, Ethernet, and buttons. The other end is the Antenna Interface end panel, which includes connectors that primarily go to the antenna itself, such as the motor and sensors connections.

Figure 3 shows both end panels, with the Antenna Interface on bottom and the User Interface on top.

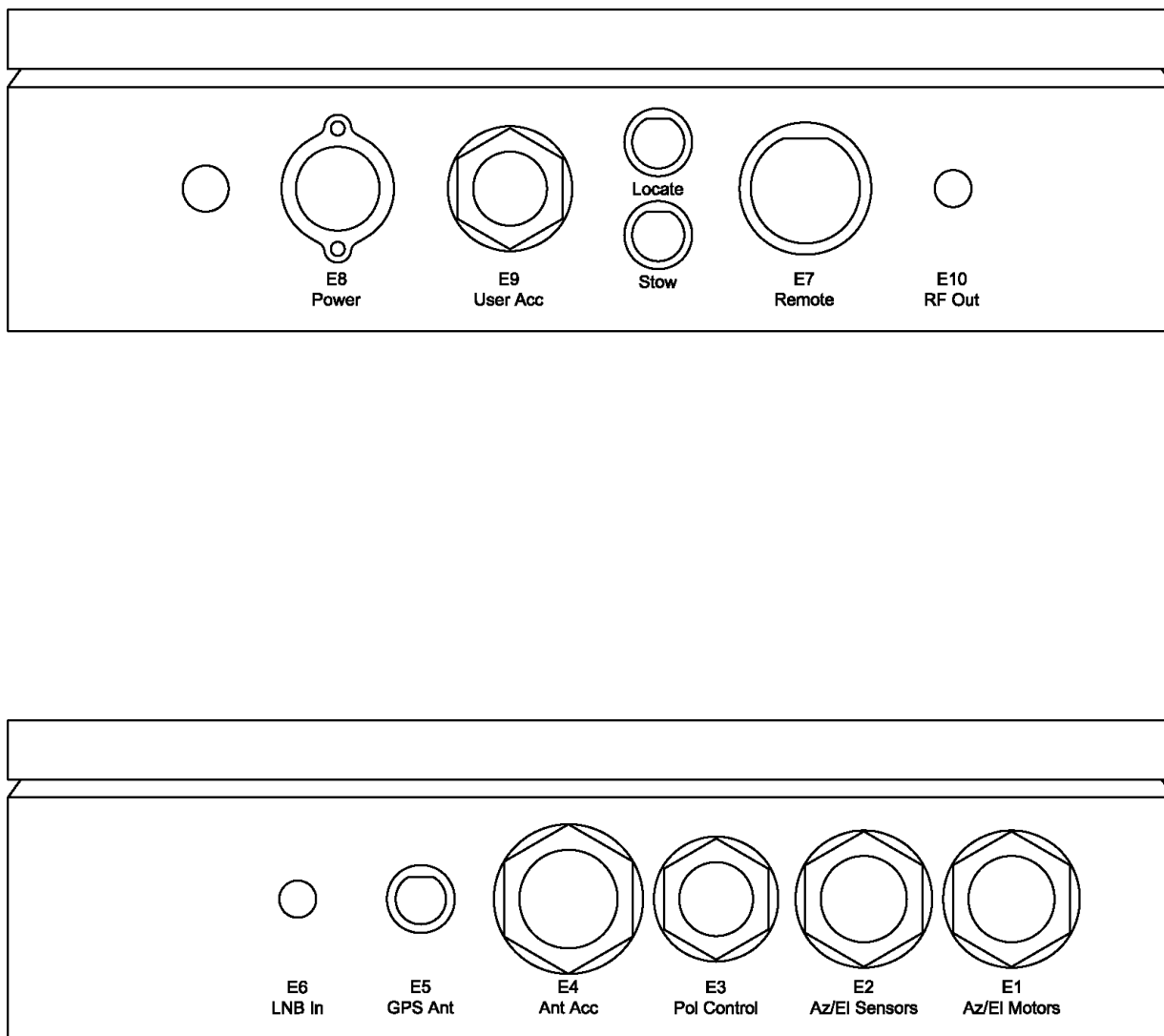


Figure 3

## 2.4 CONNECTORS

Table 1 provides a list of the external connectors on the enclosure end panels.

Ref Des	Part Number	Description
E1	Amphenol MS-3126E14-19P	Az/EI Motors
E2	Amphenol MS-3126E14-19S	Az/EI Sensors
E3	Amphenol MS-3126E12-10S	Pol Motor / Sensors
E4	Amphenol MS-3126E16-26P	Antenna Accessory
E5	Amphenol 122192	GPS In (TNC)
E6	Electronix 34-113	LNB In (F) (Type N Opt)
E7	Tyco 1738601-1	IP ** Must use environmentally sealed mating connector **
E8	Amphenol C016 20C003 100 12	AC Power In
E9	Amphenol MS-3126E12-10P	User Accessory
E10	Electronix 34-113	RF Out (F) (Type N Opt)

Table 1

## 3.0 ELECTRICAL

### 3.1 System Interface

Please refer to the main RC4000 User Manual to become familiar with specific capabilities and functionality of the RC4000 PCB board stack.

Figures 4 and 5 are provided to assist in interfacing to the RC4000. These diagrams list common equipment and how it connects to each connector on the enclosure.

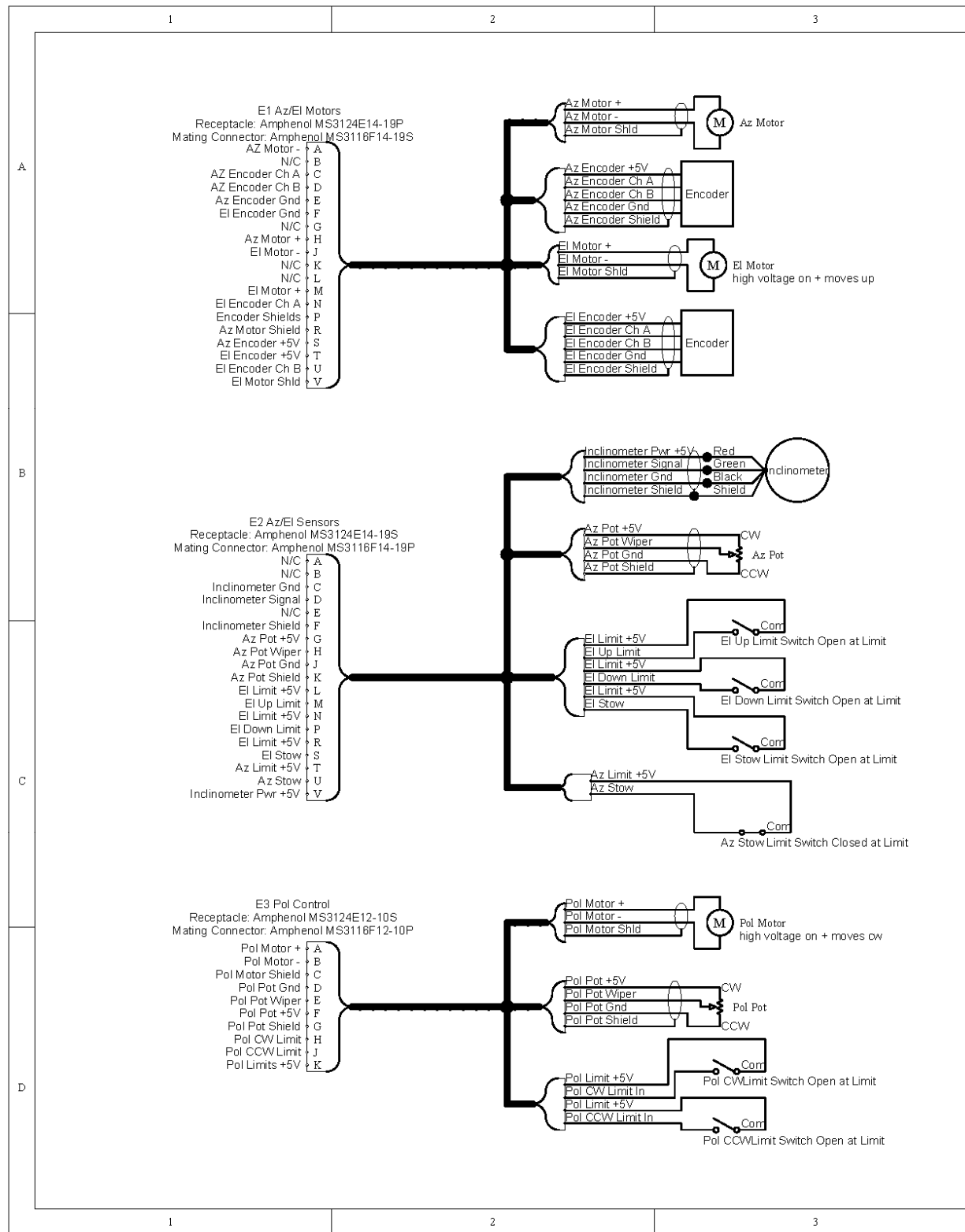


Figure 4

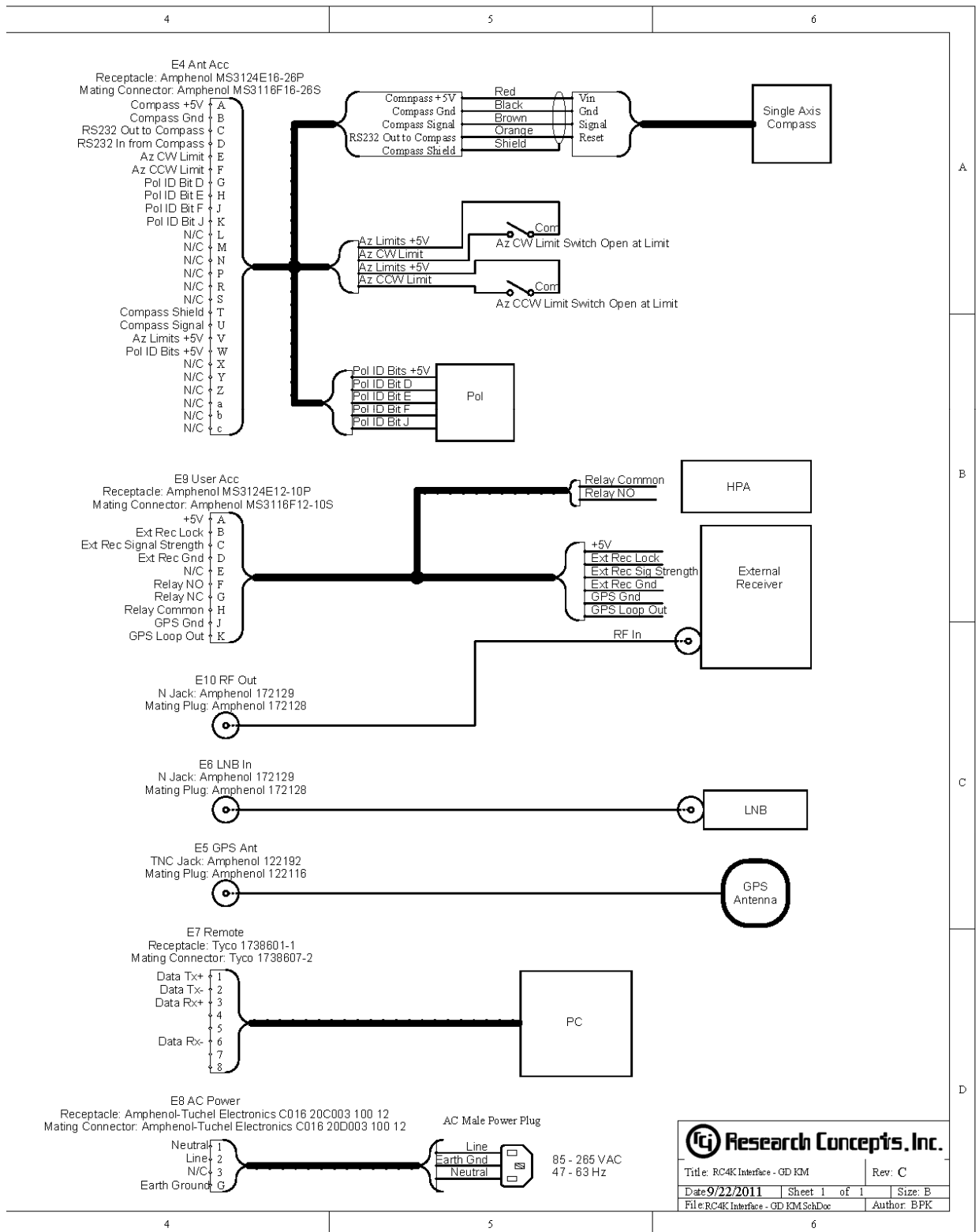


Figure 5

### 3.2 Internal Wiring

Figures 6 and 7 show the interconnections of the internal wiring of the enclosure.  
For a more detailed explanation of functions of individual pins, please refer to the main RC4000 User Manual.

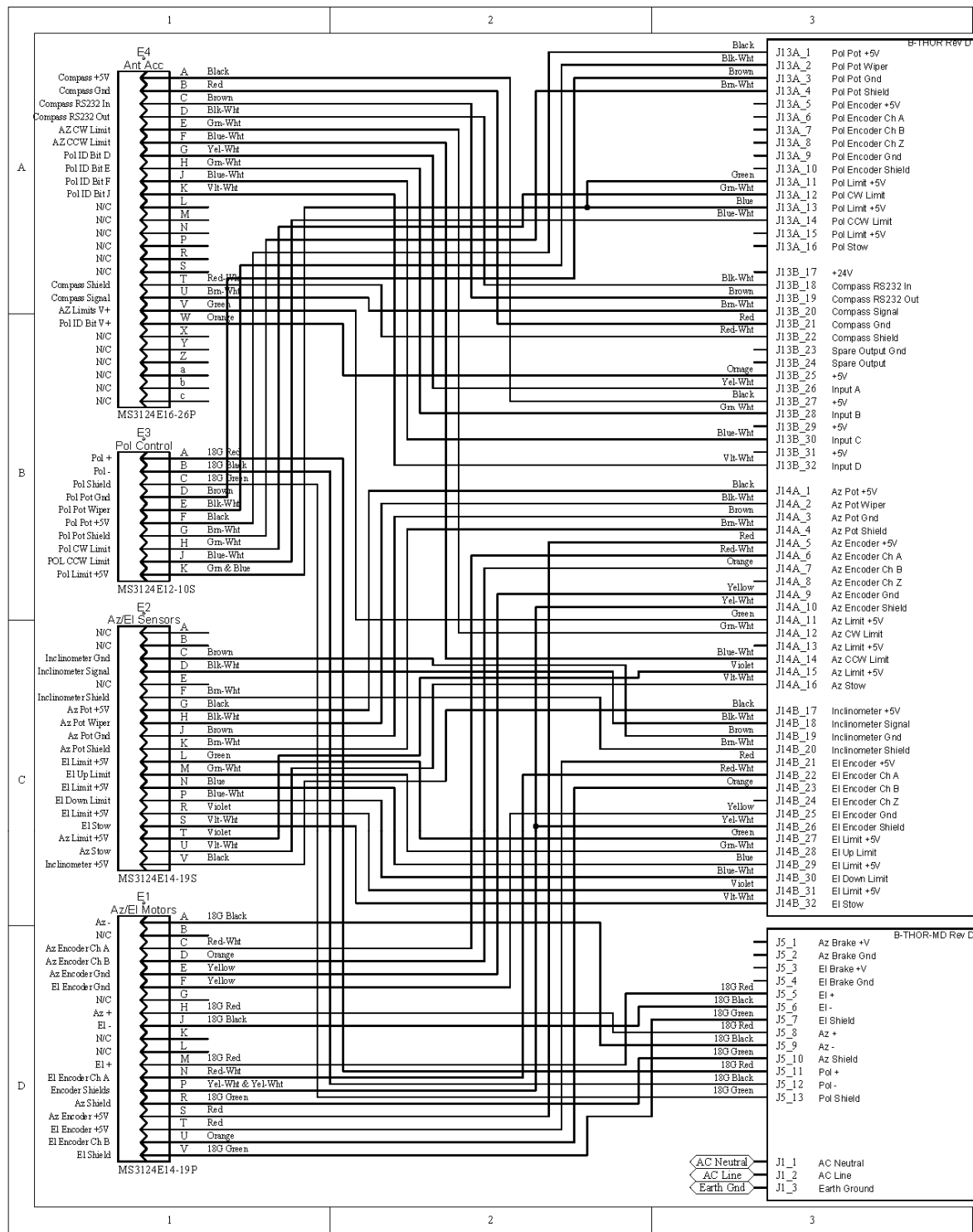


Figure 6



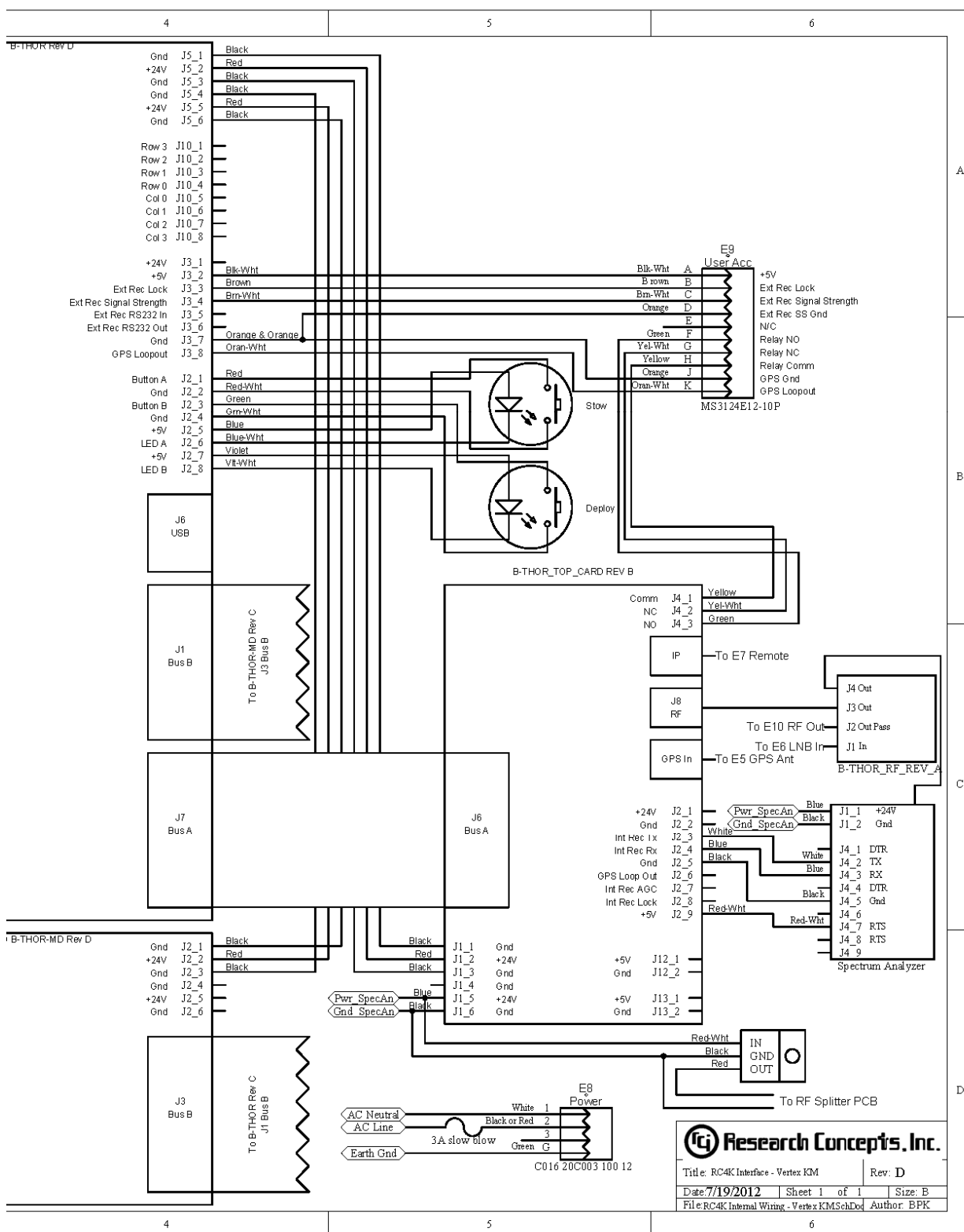


Figure 7