
Assignment Set 04 (Tasks & Due Dates)

Chris

- Design and construct a Relay Processor Board via **BASIC Stamp**.
- Complete assembly of the pulse width converter kit (mount heat sink) [Tues 3/18/03]
- Continue to draft the RV Power System & Bus [Thurs 2/20/03]
- Complete RC car construction [Tues 3/18/03]

Jill

- Design and construct a Temperature Sensor processor board via **BASIC Stamp**
- Continue development of LabView Interface for RV control [Tues, 2/25/03].

Guillermo

- Test RDF attenuator [Tues 2/25/03]
- Complete RC car construction [Tues 3/18/03]
- Prepare vehicle layout design & present in class [Tues 3/18/03]

Art

- Develop/Implement **BASIC Stamp** CanSat TNC system.
- Construct waveguide antenna(s) [Tues 3/18/03]
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Instructor

- Complete case for SBC electronics. [Tues 3/18/03]
- Make case for GPS/Compass/BS microcontrollers.
- Plan for Simulation Test #1 sometime in late March.

Rover SBC I/O Modes

Serial Data Ports:

1. GPS
2. Servo Controller
 - i. Servo 1: Steering (Left/Right)
 - ii. Servo 2: Camera Rotator
 - iii. Servo 3: Payload Arm 1
 - iv. Servo 4: Payload Arm 2
 - v. Input 1: Temperature (CPU Case)
 - vi. Input 2: Temperature (ATV Transmitter Case)
 - vii. Input 3: Temperature (Main Drive Motor)
 - viii. Input 4: Temperature (Main Drive Battery Pack)
 - ix. Input 5: Temperature (External)
3. BASIC Stamp
 - i. Output 1: (Relay) SPDT Forward/Reverse select
 - ii. Output 2: (Relay) CPU Fan On/Off
 - iii. Output 3: (Relay) ATV On/Off
 - iv. Output 4: (Relay) Payload Arm & Camera servos On/Off (if this cannot be achieved with servo controller)
 - v. Output 5: (Audio) Horn (Piezo buzzer)
 - vi. Output 6: (Relay) CPU reset
 - vii. Voltage: 12V ATV System Battery
 - viii. Voltage: 7.2V Main Propulsion Battery
 - ix. Voltage: 5V Aux Power Battery
 - x. Current: 12V ATV System Battery
 - xi. Current: 7.2V Main Propulsion Battery
 - xii. Current: 5V Aux Power Battery
4. Compass