Robot Builders Night Virtual for June 30th, 2026

https://www.youtube.com/watch?v=JfNQdcF-r4E

Club Business - Mark R. reminded the group about the upcoming workday and the "Moon Day" event. The next monthly meeting will feature a swap meet, show-and-tell, and pizza.

Presenters

Ray C - shared an update on his autonomous mower project utilizing ESP32 and Husqvarna motors. The remote-control mode is functioning well, but the autonomous mode is currently being debugged.
Mike W - discussed refurbishing his Jeep-style outdoor robot. He is remounting the electronics inside the cabin, upgrading the DC power subsystem, and planning transmission repairs. He also demonstrated LiDAR visualization in Rviz. The group discussed how mounting the RP LiDAR "backwards" (with the seam facing the back) helps prevent image distortion and scan discontinuities when the robot rotates. **Paul B** - shared progress on the Moberry project and presented a custom surge suppression circuit he designed to prevent high-voltage arcing when plugging in batteries. He successfully mounted an LC29H RTK GPS module on a Raspberry Pi, sharing how he configured the boot file to allow for serial data access.

Karim V - explained his use of a "ground grid" package for outdoor ground modeling, which helps identify ground planes and detect obstacles like drop-offs.

Doug P - demonstrated 3D-printed encoder caps and the group evaluated motor mounting compatibility with GoBuilda structural components. Doug P. and Mark D. recommended ASA and ABS over PLA or PETG for 3D printing outdoor robot parts, noting their superior heat resistance in hot climates.

Conclusions and Insights

- The meeting emphasized collaboration and the sharing of resources and techniques to enhance individual projects.
- Innovative techniques like backward lidar mounting and teleoperation with ESP32 were highlighted.
- The live streaming of maintenance procedures offers a model for transparency and education in the robotics community.

Referenced Links

- **Doug Paradis**:

    - Amazon Encoder
    - Chancs Motor Encoder
- **Mark Dombrowski**:
    - VoxelPLA