MOBILE MANIPULATION

RE2 IMITATIVE CONTROLLER

As robotic systems become more dexterous, so does the need for a controller that can keep pace with ever-evolving technology. RE2’s Imitative Controller provides an intuitive and easy-to-learn method of control for any dexterous robot, such as our own two-arm robot, the Highly Dexterous Manipulation System (HDMS).

Based on the design of “puppet controllers,” the Imitative Controller allows users to move a scaled model of the robot’s manipulators. This essentially establishes a leader-follower teleoperation between the controller and the robot, providing users with fast and efficient time to proficiency.

In fact, numerous IC expositions and training exercises have demonstrated that in less than one minute, new users are trained sufficiently to control a highly dexterous manipulation system, and proficiency with the system is achieved in less than one hour.

SPECIFICATIONS

- **Degrees of Freedom**: 5 or 7 per arm, custom configurations possible
- **Communication**: Standard USB
- **Portability**: Unit is easily disassembled and stowed in rugged protective case (excluding stand)
- **Power**: Standard AC or DC adapters available
FEATURES & BENEFITS

KEY FEATURES:
- Provides full operator control of the manipulator
- Provides full operator control of the robot itself, as well as cameras and sensors
- Intuitive, one-to-one mapping of the Imitative Controller to the manipulation system’s DOF (exclusive of continuous roll joints)
- Auxiliary control and enable buttons allow for comfortable use, including torso tilt, continuous wrist roll and gripper open/close

BENEFITS:
- Intuitive and coordinated control over each joint in the manipulator, allowing for full control and position accuracy
- Immediate physical confirmation of the robot’s specific positions and orientations
- Practical design uses natural arm and hand motions, allowing user’s hands to remain in similar position to robot’s end effectors for intuitive control
- Joint limits match those of the robot, allowing operators to utilize full dexterity of the robot
- Provides control of the robot from a safe, stand-off distance, whether the user is several feet or several miles away