

Deluxe Robot II Owner's Manual

Contents

- Base Tractor unit with Super Grip tracks installed
- 100' robot cable
- Joystick Control Box with 12' cable
- Power supply cable
- Video cable with BNC to RCA adapter
- 13" color monitor with VCR
- Spray Lance with 360 degree spray tip
- Air Motor with mounting brackets(4) and three way differential
- Adapter and extended shaft with Strap Head for rotary cleaning
- 75' air line hose
- Light bulbs, fuses and assorted fasteners, hex key set
- Long fork extension
- Short fork extension
- Tool platform extension rod
- Tool Platform with pivot
- Four pairs of assorted brushes
- Smooth Tracks
- Four wheel assemblies
- Two Industrial cases
- Power supply Box

Joy Stick Control Box

The joystick control box operates all the motion of the robot unit. It is connected to the power supply box by the 12' cable that comes out of the joystick box.

The joystick controls the motion of the robot by moving the stick forward, backward, left and right. The motion of the robot is fully proportional, meaning that the more the joystick is moved in any one direction, the faster the robot will move in that direction.

The lamp intensity control knob is also located on the joystick box. Turning the control knob in the clockwise direction increases the intensity or brightness of the lamps. There are two lamps facing forward and two lamps facing the rear of the robot. Depending on the position of the camera selection switch, the lamps are activated in conjunction with the camera that is on at the time.

The camera control switch is located on the joystick box and changes which camera is on during robot operation. Moving the control switch changes the camera activation from the forward camera to the rear camera.

Power Supply Box

The power supply box connects all the electrical connections for the robot unit and the monitor/VCR. It contains the following:

- Female receptacle for the robot cable that connects to the back of the robot
- Male receptacle that connects to the joystick cable
- Video BNC receptacle where the video cable is attached that then goes to the monitor/VCR
- Two one Amp fuses that are labeled for the engines(drive motors)
- One four Amp fuse for the lights
- One .5 Amp fuse for the cameras
- Recessed male three-prong receptacle for the power supply cable.
- On-Off switch that powers the entire system
- One Four Amp power fuse

Compressed Air Supply

Please note: The amount of compressed air supplied (cfm) and pressure (psi) can greatly affect air cleaning attachments and overall effectiveness. Forward air blowing assemblies or multiple whip systems consume a considerable amount of air.

The air motor supplied with these systems consumes approximately 7-9 cfm of air at 90 psi.

Caution: Compressors should be equipped with air and moisture filters to protect air lines and air tool accessories.

Air Motor Maintenance

Lack of or an excessive amount of lubrication will affect the performance and life of this tool. Every 8 hours of operation apply several drops of spindle oil in air inlet. Every 160 hours of operation lubricate gearing. Pack bearings, coat shafts and lubricant gears with NLGI #1 “EP” grease.

Air supply requirements:

Air pressure 90 psi (6.2 bar)

Air filtration 50 micron

Operation

- Remove robot components and robot from cases. Typically the monitor is not removed from the case.
- Attach joystick control cable to the power supply box. Attach to the male receptacle marked REMOTE.
- Attach 100' robot cable to the power supply box using the end that will attach to the female receptacle. Turn the cable end slightly until the fitting starts onto the receptacle; push in gently while turning the outer end of the cable fitting clockwise. You will feel the cable lock into position. **DO NOT FORCE THE CABLE INTO THE RECEPTACLE.** It will go in quite easily.
- Attach other end of cable into the end of the robot unit in a similar manner.
- Attach the camera connector to the rear of the robot unit, gently pushing the fitting onto the receptacle and screwing down the two securing screws hand tight only.
- Attach the video cable to the power supply box and then to the Color Monitor. Plug the RCA male end style plug into the VIDEO receptacle on the monitor.
- Be sure that the main power switch is in the off position before plugging in the power cord to the power source. The off position is noted on the box in the O position.
- Attach the power supply cable to the power supply box and then the power source.
- Turning the power on switch to the on position provides power to all parts of the robot system.

Cleaning Attachments

- Select which tool support fork will be appropriate for the size of ducting to be cleaned.
- Insert the fork into the guide tubes mounted on either side of the robot.
- The guide tubes are adjusted up and down manually and are locked into position by the screws on the sides of the ends of the tubes.
- The tool-mounting fork is adjusted in and out of the guide tubes manually and is locked into position using the screws on top of the guide tubes. These up and down and in and out adjustments will position the tool platform that attaches to the end of the fork units.
- The air powered brush motor assembly is attached to the tool platform using four mounting bolts. The motor assembly has two operating modes: First – the three way gear assembly is attached to the motor assembly using two or four mounting screws. There is a inch set screw

on top of the adapter housing that when removed gives access to the set screw that secures the gear head onto the motor shaft. The outer revolving shafts are used to mount the appropriate sizes of brushes supplied with the system. (Brushes are in pairs for the use in square or rectangular ducts) Second – Remove the three way gear assembly by accessing the set screw that holds the unit onto the motor shaft and then remove the screws that hold the gear head onto the adapter housing. Take the rotary split collar shaft that has the Strap Head mounted on it and slide it onto the end of the motor shaft that is seen inside the adapter housing. Secure it in place with the set screw that is under the larger _ inch cover screw.

- The spraying wand is attached to the pivot tool platform using two screws. Detach the air motor assembly by removing the four bolts. There are two center holes in the tool platform that allows the spray/air wand tool brackets to be mounted to the tool platform.
- Other air tools can be adapted to the brackets used to hold the spray wand.
- Height adjustment for the air tools and the spraying/air attachments is accomplished by positioning of the guide tubes and fork assemblies as previously mentioned.

Monitor Operation

Once all connections are made with the components of the robot system, the monitor must be plugged into a power source. With the video cable installed and the power turned on to the monitor, there may be an instructional screen come up on the monitor. In this case press the MENU button on the remote. The monitor will then be set for viewing the camera input. If there is not a picture from the camera, be sure that the monitor channel position is on AUX by changing the up or down position of the channel selector.