



SWPA BotsIQ Robot Handling Guide

Principle of Bot fail-safe operation

When a robot is on and loses the signal from the remote, the robot must immediately go into a full stop on all powered parts of the robot. This means that the receiver on the robot should take all channels and set them to null command, or a no movement command. Any failure of the transmitter or loss of transmitted signal shall result in stoppage of motion of all robot systems.

Safe robot power up sequence

1. Place the robot in the secure test box or exhibition area.
At this time the robot should have the main power switch in the off position and have all locks, guards, and shields in place.
2. Place the robot in its starting or test position and remove the guard/shield from the weapon.
The weapon positive lock should still be in place at this time. The positive lock shall be a pin or other suitable means that will positively prevent any motion of a rotation, revolving, or otherwise moving weapon part or parts. The positive lock shall be of robust enough construction as to resist the full forces of the driving motors.
3. Make sure that the person handling the robot cannot come into contact with any weapon part.
4. Turn the remote transmitter power on while keeping all controls set to the no movement position.
5. Power up the robot by turning on the robot main power switch.
Upon power up the receiver starts looking for a signal from its bound transmitter. While doing so if it comes across an errant signal that closely matches the bound transmitter, then it could execute that signal. To minimize this possibility the transmitter should be on before the robot is powered up so there is a correct signal for the receiver to immediately find. Once bound the receiver will only use signals from the correctly bound transmitter.
6. Make certain that there has been no activation of any movable robot part.
If any robot activation has been observed, the robot main power switch should be turned to the off position and the robot returned to the pit area for troubleshooting and repair.
7. Remove the positive lock from the weapon.
8. Move all personnel from the test box and close test box doors.
9. Test the robot functionality by using the remote transmitter controls.
10. After completing any testing or demonstrations, the remote transmitter controls should be set to the no motion positions and the robot main power switch should be turned off. All robot locks, guards, and shields should be reinstalled before handling the robot.

Binding Instructions

1. Plug the bind plug into the receiver's BATT/BIND port.
2. Power up the receiver. The LED on the receiver will be flashing. Move the sticks and switches on the transmitter to the desired failsafe positions (low throttle and neutral control positions).
3. Pull and hold down the trainer switch on the transmitter while turning the transmitter on. Release the trainer switch once the LEDs on the front of the transmitter flash. The LED on the receiver will go solid amber and the system will connect after several seconds.
4. Remove the bind plug.

Note: Keep the bind plug with you in case of an issue and you want to be able to reconnect to your bot.