

# NRL Bot Handling Guide

## *Principle of Bot fail-safe operation*

When a Bot is on and loses the signal from the remote, the Bot must immediately go into a full stop on all powered parts of the Bot. This means that the receiver on the Bot 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 Bot systems.

## *Safe Bot power up sequence*

1. Place the Bot in the secure test box.
  - a. At this time the Bot should have the main power switch in the off position and have all locks, guards, and shields in place.
2. Place the Bot in its starting or test position and remove any safety covers and guard(s)/shield(s) from the weapon(s).
  - a. The weapon positive lock (restraint) 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 Bot 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 Bot by turning on the Bot main power switch.
  - a. 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 Bot 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 Bot part.
  - a. If any Bot activation has been observed, the Bot main power switch should be turned to the off position and the Bot returned to the pit area for troubleshooting and repair.
7. Remove the positive lock (restraint) from the weapon.
8. Move all personnel from the test box or exhibition area and close test box/exhibition area doors.
9. Test the Bot 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 Bot main power switch should be turned off. All Bot locks, guards, and shields should be reinstalled before handling the Bot.

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## *Binding Instructions*

1. Plug the bind plug into the receivers 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.