WATERLOO ROCKETRY

Remote Launch Control System Setup

For UXO CF5

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Remote Launch Control System Setup Procedure

Contents

This document contains the following:

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Required Items

Things you'll need to perform this procedure

1. ☐ Client Side Box (yellow pelican case)
2. ☐ Tower Side Box (silver briefcase thing)
3. ☐ Three (3) Lithium Polymer 12V batteries
4. ☐ Multimeter (for troubleshooting)
5. ☐ Electrically actuated valve for inside setup

Inside Setup

Do what you can inside to keep yourself from frostbite as much as possible.

1. ☐ Put two LiPo batteries in tower side box, in the white 3d printed battery holders.
2. ☐ Make sure the actuator switch is off (big black one with a 1 and 0 painted on it), clicked to "0".
3. ☐ Plug in both batteries. Lights on arduino should light up, relays should click.
4. ☐ Wire electric valve into the connector labelled fill on the tower side box.
5. ☐ Turn on actuator switch (the black one on the tower side box):
6.   ☐ If remote valve previously wasn't closed, it should now close. If not, go to troubleshooting guide.
7. ☐ Put battery in client side box. It plugs into the deans connector underneath the cutout, and isn't secured to anything.
8. ☐ Turn on client side box (flip power switch).
9.   ☐ Confirm that LCD lights up.
10. ☐ Turn keyswitch 90 degrees clockwise.
11.   ☐ Confirm that missile switches light up.
12. ☐ Flip **Fill** missile switch
13.   ☐ Confirm that Electrically actuated valve turns to open
14. ☐ Unflip **Fill** missile switch
15.   ☐ Confirm that Electrically actuated valve turns to close
16. ☐ Disconnect electrically actuated valve from RFV relay board

   End inside checks

Outside setup

1 ☐ Find a good spot to put the tower side box. Put the tower side box there

2 ☐ Connect remote fill valve to the connector labelled Fill on the tower side box

3 ☐ Connect remote vent valve to the connector labelled Vent on the tower side box

4 ☐ Connect injector valve to the connector labelled Disconnect on the tower side box

5 ☐ Perform "Outside Checks" Procedure

6 ☐ Disconnect both LiPos in tower side box to conserve power

7 ☐ Turn off client side box to conserve power

End of setup procedure

Outside Checks

Perform during outside setup procedure and again immediately before test

1 ☐ Turn on client side box (Ensure LCD lights up)

2 ☐ Turn key switch (Ensure missile switches light up)

3 ☐ Turn on tower side box actuator switch

4 ☐ Confirm that all three electrically actuated valves are closed

5 ☐ Flip **Fill** missile switch

6 ☐ Confirm that remote fill valve opened

7 ☐ Un-flip **Fill** switch

8 ☐ Confirm that remote fill valve closed

9 ☐ Flip **Tank Vent** missile switch

10 ☐ Confirm that remote vent valve opened

11 ☐ Un-flip **Tank Vent** switch

12 ☐ Confirm that remote vent valve closed

13 ☐ Flip **Disconnect** missile switch

14 ☐ Confirm that injector valve opened

15 ☐ Un-flip **Disconnect** switch

16 ☐ Confirm that injector valve closed

End of Checks procedure