Common Problems and Solutions

**Pasco-Ray Programming Guide**

**Team RUSH 27 LabVIEW**

**Matt Pasco**

**Michael Ray**

**Common Problem and Solutions**

**Table of Contents**

1. Table of Contents
2. Check List
3. E-Stop
4. Redeploying Code
5. Rebooting the Radio
6. Rebooting the Radio Continued
7. Reimaging the cRIO

**Check List:**

* Is the robot on?
  + Is the battery full?
  + Is the Power Distribution board powered on?
* Is the cRIO connected?
  + Ethernet and Power?
  + cRIO IP set to 10.0.27.2
* Is the Router/Camera connected?
  + Ethernet, power, on AP mode?
  + Is the camera set to 10.0.27.11
  + Is the Router set to 10.0.27.6
  + IP address set to 10.0.27.X?
  + Are you connected to 27?
  + Password:27WPAKEY
* Are your motors plugged in?
  + Victors/ Jags PWM and Power?
  + Do the Lights turn on when joysticks moved
* Is the Robot enabled?
  + Are the Joysticks plugged in?
    - Go to setup and I/O to see if you’re reading

**Did you E-Stop it?**

* Power off Robot
* Close the Driver Station(application)
* Power on Robot
* Wait until connected then redeploy(unless you have built and deployed it)
* Reopen the Driver Station reconnect
* Go through Check-List

**Redeploying Code**

* DISABLE ROBOT
* In LabVIEW go to Robot Main
  + Hit the red stop sign
* On the Driver Station(application)
  + go to Diagnostics
  + Hit Reboot cRIO
  + Wait for Communications light to turn green
* Go to Robot Main and redeploy code

**Rebooting Radio**

* Power Router
* Hardwire(connect via Ethernet) router to any computer
* Set Router Mode to Bridge on back of router
* Wait for orange “Tri-force” Light start to blink
* Hold reset button for 10 seconds
  + Orange light stops blinking
* Wait for orange “Tri-force” Light start to blink
* Switch Router Mode to AP on back of Router
* Remove Ethernet connected to computer
* Set that computer address to 192.168.0.**51**
  + My Network settings
  + Wireless Network Adapter Settings
  + Properties
  + Internet Computer Protocol V4 (IPV4)
  + IPV4 Properties
  + Set IP address
  + Set Subnet mask to 255.255.0
* Connect to wireless connection “dlink”
* In your search bar of Internet Explorer/Firefox/Google Chrome, type 192.168.0.**50**
* You should be on the “D-Link” Wireless Setting Webpage
  + Username: Admin
  + Password: (Blank)
* Go to Wireless Network Settings
  + Enable Wireless: Yes
  + Wireless Network Name: 27
  + 802.11 Band: 2.4GHz
  + 802.11 Mode: Mixed 802.11n, 802.11g and 802.11b
  + Enable Auto Channel Scan: NO
  + Wireless Channel: 1
  + Transmission Rate: Best(automatic)
  + Channel Width: 20 MHz
  + Visibility Status: Visible
* Wireless Security Mode
  + WPA-Personal
* WPA
  + WPA Mode: WPA2 Only
  + Cipher Type: AES
  + Group Key Interval: (Use default of 1800)
* Pre-Shared Key
  + Passphrase: 27WPAKEY
* Save Settings
* Close out of browser
* Set Computer IP to 10.0.27.x (any number not being used)
  + We suggest 9 or 10
* Connect to wireless network “ 27”

**Reimaging the cRIO**

* Connect to the cRIO
  + Set IP to 10.0.27.x
  + Connect via LAN
* Open the cRIO Imaging tool
  + Make sure Device Name is “TeamRUSH”
  + Select LabVIEW
    - Check Always run deployed code at start up
  + Check “Format Controller”
  + cRIO Switches
    - Leave Default
  + Make Sure to enter your Team ID
  + Press “Apply”

**Setting up Axis Camera**

* Plug into ethernet
* Between camera and computer
* Set computer 192.168.0.11
* Hold the back reset button while plugging in the power
* wait until yellow lights turn on
* Wait for green
* Run axis camera
* username: FRC
* password: FRC