5. Diagnostics Information: refer to the following chart for Joystick and Cortex LED patterns and meanings.

Joystick [5]	Robot	VEXnet	Game	
		Medium (yellow)		Initialize - Looking for PC or Tether Mate
		Blip (yellow)		Startup - Looking for USB Key
		Fast (yellow)		Linking - Searching for VEXnet Mate
		Fast (green)		Linked
		Slow (green / yellow)		Linked - Data quality reduced
		Slow (green / red)		Linked - Poor Data quality reduced
		Solid (green)		Tethered to Mate or PC
		Slow (red) single blink		Fault: Lost Link - Searching for VEXnet Mate
		Slow (green)		Downloading User Code [1]

Note 1: Does not apply to ROBOTC User Code Downloads

Joystick [5]	Robot [1]	VEXnet	Game	
	(red)			Main Battery = **Dead** (<5.5v) or CORTEX Off [2]
	(yellow)			Main Battery = **Low** (<6.5v) [2]
	(green)			Main Battery = **Good**
	Solid			All Good: Both Joysticks connected
	Solid + 1 Blink			All Good: Tx1 Joystick connected
	Fast			Autonomous only mode
	Fast (red) [3]			Fault: Low Backup Battery (0v-8v)
	Slow (red)			Fault: User Microprocessor Issue

Note 1: Robot LED only work when Linked

Note 2: Lowest CORTEX battery color latched at Joystick and CORTEX

Note 3: No Backup Battery only indicated if competition cable is connected.

Joystick [5]	Robot	VEXnet	Game	
			Off	No Competition connection
			Solid (green)	Driver [4]
			Fast (green)	Autonomous
			Fast (yellow)	Disabled

Note 4 : Game LED Driver Indicator is only used when the competition cable is connected.

Joystick [5]	Robot	VEXnet	Game	
(red)				Joystick Battery = **Dead** (<5.5v)
(yellow)				Joystick Battery = **Low** (<6.5v)
(green)				Joystick Battery = **Good**
Fast				Two Joysticks in use
Solid				One Joystick in use

Note 5 : Joystick LED only on Joystick.

Update Utility Tool Indicators

Joystick [5]	Robot	VEXnet	Game	
		Solid (green)		Tether to PC
	Slow (green)		Flickering (green)	Bootload Mode - Ready to update firmware
	Slow (green)	Slow (red)	Flickering (green)	Downloading Master Code

Other Indicators

Joystick [5]	Robot	VEXnet	Game	
(red)	(red)	(red)	(red)	Flash on all 3 indicates a Reset
		Slow (red) double blink		NO VEXnet Key detected
	Slow (red) double blink			Invaild ID in the CORTEX
Slow (red) double blink				Invaild ID in the Joystick

Robot, VEXnet, and Game LED's
show the same data [2]