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

ROBOTICS DESIGN SYSTEM