Jersey Wheels™ Most Frequent Asked Questions

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1: 2.7 Program Error codes

1.1 Failed Sensor Error Codes

On the Jersey Wheel's LED display, if there is a fault, an error code will be displayed here, see *Figure 1.1*.

Example

Figure 1.1

Error Codes	Description
Err 7	Wheel 1: Failed Sensor
Err 8	Wheel 2: Failed Sensor
Err 9	Wheel 3: Failed Sensor
Err 10	Wheel 4: Failed Sensor

Solutions for Errors 7-10

1.1.1 Check Harnesses

1.1.1.1 The Wheel Break Sensor's harness needs to be secured to the sensor.

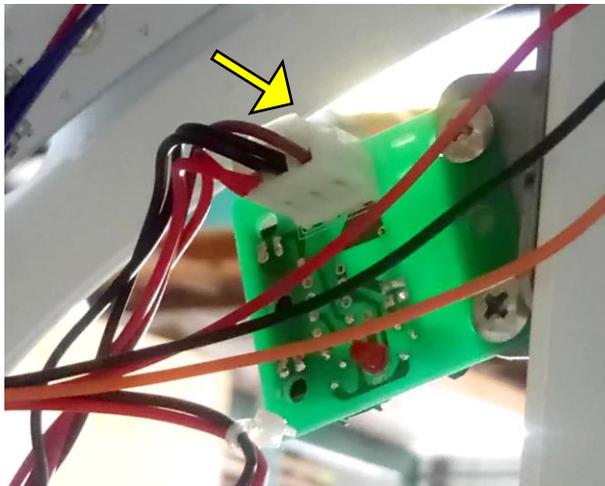
Figure 1.2

1.1.1.2 The IO harnesses need to be securely connected to the IO board. Especially CN9, which receives information from the master board.
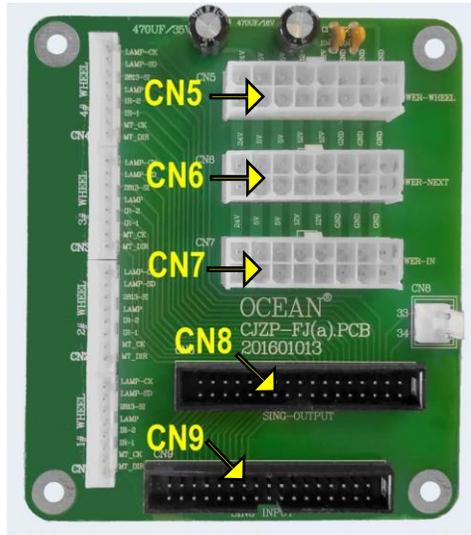

CN5
Receives / Connects Power from previous wheel or base

CN6
Power to Wheel (Present Wheel)

CN7
Sends power from present wheel to next IO board (goes to *CN5* of the next wheel) above.

CN8 *(Communication Ribbon Cable)*
Sends Data to next IO board of the next wheel above.

CN9 *(Communication Ribbon Cable)*
Receives Data from Motherboard / Previous IO board.

Figure 1.3

1.1.1.3 The INPUT connector on the main logic board is firmly seated in the 40-pin input connector.

CN1
Receives information from all wheel's sensors.

Figure 1.4

1.1.2 Checking Wheel Break Sensor.
Note: If the wheel does not complete its full sequence. It times out with an audible error, then indicates the error on the front LED display.

1.1.2.1 The simplest method is to replace the sensor with a known working sensor.
Note: if no extra sensor is available see solution below.

1.1.2.2. The Wheel Break Sensor requires to be grounded, which can be solved by ensure the physical ground from the bottom wheel is being transferred from the bottom wheel to the wheels above.

1.1.2.2.1 Turn off the game

1.1.2.2.2 Unbolt the ground and check to see if there is powder coat visible. If there is powder coat showing, the ground is insufficient.

1.1.2.2.3 Remove the coating to bare metal, then remount the ground and reboot the game.

1.1.3 Testing Wheel Break Sensor,

Note: A multimeter can determine if the Wheel Break Sensor is working properly. Figure 1.5 shows the back side of the sensor cable.
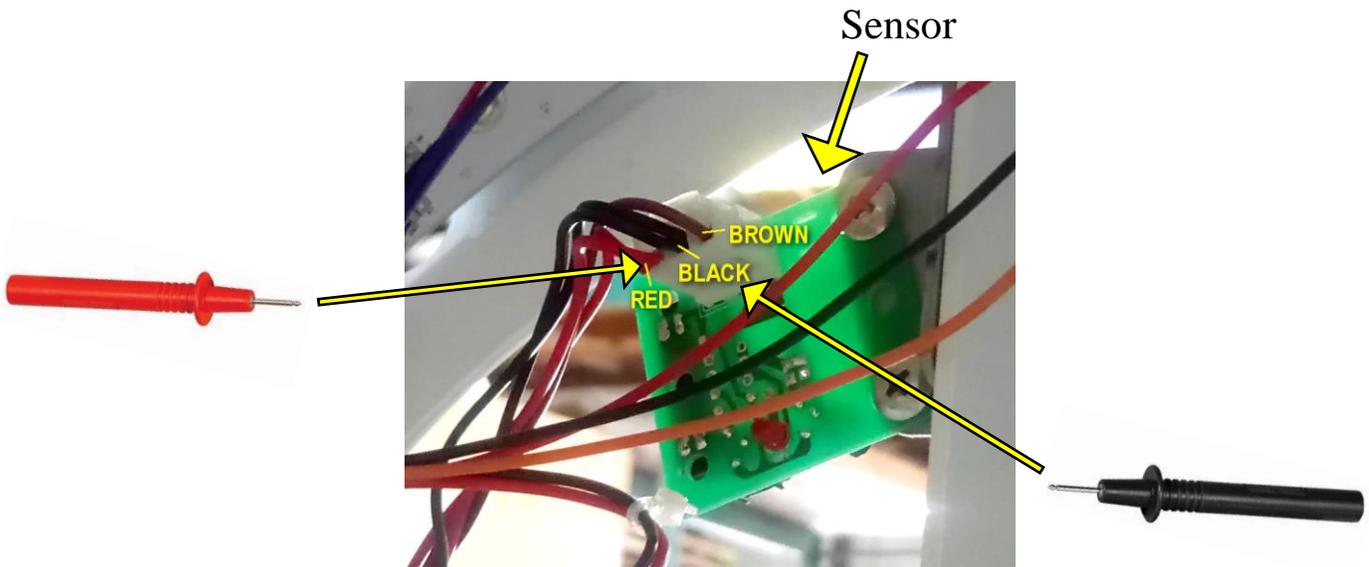
Sensor

Figure 1.5

1.1.3.1 Take the voltage between **Red** (red lead) and **Black** (black lead) as seen in *Figure 1.5*, this needs to read approximately 12 volts.

1.1.3.2 Take the voltage between **Brown** (red lead) and **Black** (black lead) as seen in *Figure 1.6*, this needs to read 5 volts

> 1.1.3.2.1 While the multimeter is hooked up, activate the sensor by breaking the invisible beam just like one of the breaks passes between the sensor, if the sensor is working the voltage will drop to zero. And when you remove whatever was used to make the break the multi-meter will show that it returned to 5 volts.
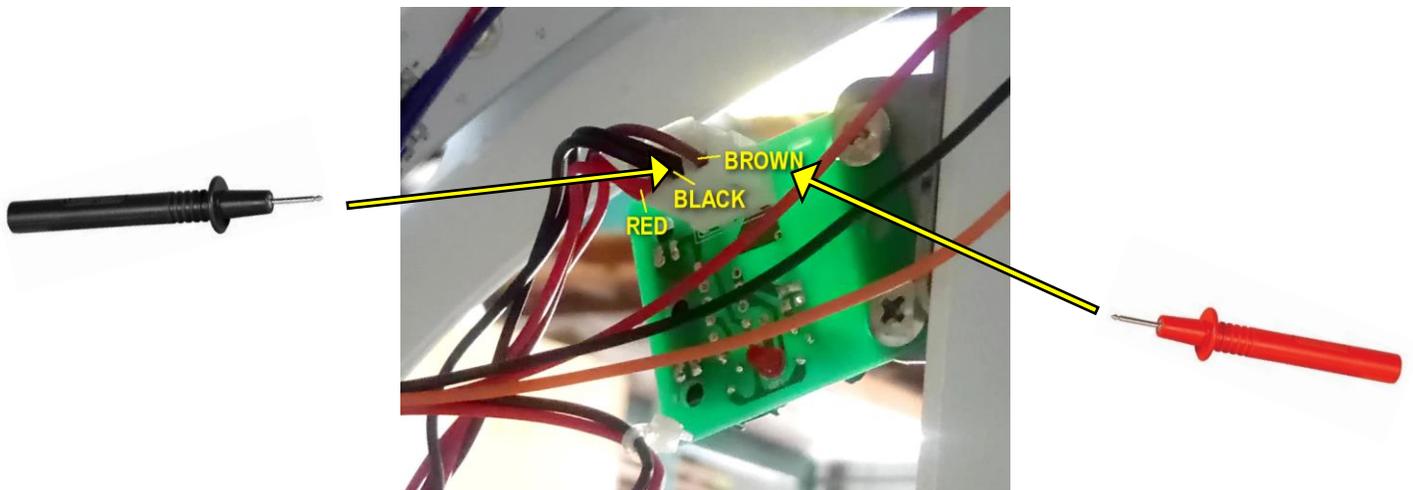

Figure 1.6

1.2 Wheel Position Error Codes

On the Jersey Wheel's LED display, if there is a fault, an error code can be seen on the LED displayed flashing here, seen *Figure 1.7 and 1.8*.

Example

Figure 1.7

Figure 1.8

Error Codes	Description
Err 11	Wheel 1: Position Failure
Err 12	Wheel 2: Position Failure
Err 13	Wheel 3: Position Failure
Err 14	Wheel 4: Position Failure

Solution B (Errors 11-14)

1.2.1 Ensure the Wheel Break Sensor's harness is firmly secured to the sensor see *Figure 1.2*.

1.2.2 Ensure all the harnesses are firmly secured to the IO board seen in *Figure 1.3*.

1.2.3 Ensure the INPUT connector on the main logic board is firmly seated in the 40-pin input connector as seem in *Figure 1.4*.

1.2.4 The Wheel Sensor's Breaks need to pass through the sensor just like it is shown in *Figure 1.9*.
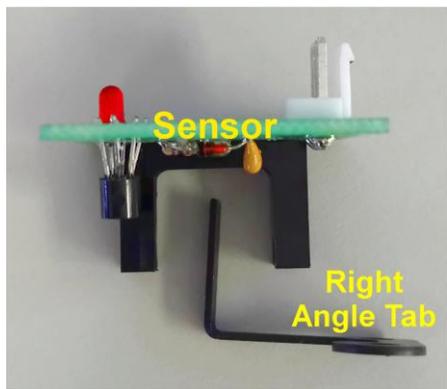

Figure 1.9

1.2.5 The belt tension must not be too tight, nor too loose.

Figure 1.10

Figure 1.11

Note: The deflection should be around ¾-inch.

1.2.6 Look for any play in the wheel's pulley. The pulley should not show any movement horizontally. If there is, it will need to be adjusted.

    1.2.6.1 Remove the Pulley cover with a #2 Phillips screwdriver.

Figure 1.12

    1.2.6.2 Loosen the bolts with 5mm Allen that hold the pulley in place, shown in *Figure 1.13*.
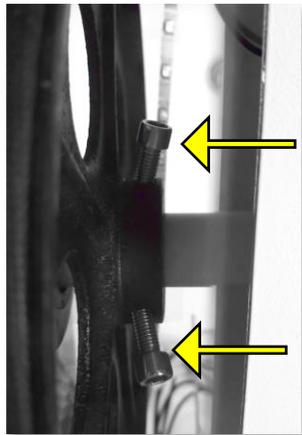

Figure 1.13

    1.2.6.3 Remove the first Nut with a ½-inch wrench as shown in *Figure 1.14*.

    1.2.6.4 Then back the second bolt back until the nut covers the threads, as illustrated in *Figure 1.15*.
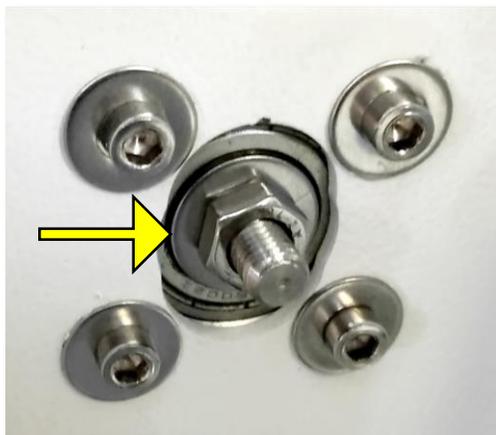

Figure 1.14

Figure 1.15

1.2.6.5 Hold the pulley and bracket (*Figure 1.16*) at the same time and pound the nut with a hammer until the gasket and the axle is flush as seen in *Figure 1.17.* and then tighten the pulley (*Figure 1.13)* and nuts (*Figure 1.17)*.
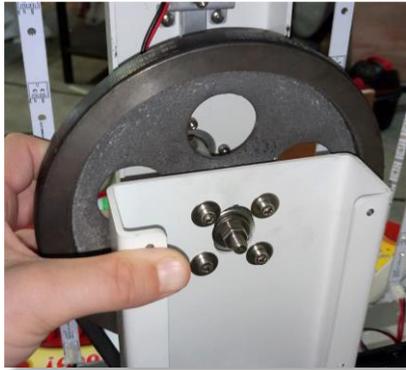

Figure 1.16

Figure 1.17

1.2.6.5 Reinstall the pulley cover.

1.3 Ticket Failure Error Codes

On the Jersey Wheel's Front LED display, if there is a ticket failure, the error code will flash.

Example

Figure 1.7

Figure 1.8

Error Codes	Description	Solution
Err 15	Left Ticket Failure	Replace Missing Tickets
Err 16	Right Ticket Failure	Replace Missing Tickets

2: Version 2.9 Error Codes

2.1 General Function Errors
Game will not function with the following errors.

Error Code	Problem	Solution
Err1	Error Wheel #1	Indicates a failed sensor on wheel #1.
Err2	Error Wheel #2	Indicates a failed sensor on wheel #2.
Err3	Error Wheel #3	Indicates a failed sensor on wheel #3.
Err4	Error Wheel #4	Indicates a failed sensor on wheel #4.

2.2 Motor Belt Errors
Game will still function properly with the following errors. However, the game will not score properly. These will only be shown on start-up during initialization.

Error Code	Problem	Solution
BLT1	Belt Wheel #1	Indicates the motor belt for wheel #1 is either too loose or too tight, adjust as necessary.
BLT2	Belt Wheel #2	Indicates the motor belt for wheel #2 is either too loose or too tight, adjust as necessary.
BLT3	Belt Wheel #3	Indicates the motor belt for wheel #3 is either too loose or too tight, adjust as necessary.
BLT4	Belt Wheel #4	Indicates the motor belt for wheel #4 is either too loose or too tight, adjust as necessary.

Proper Deflection of the Wheel's Belt

Figure 2.1

Figure 2.2

Note: The deflection should be around ¾-inch.

2.3 Sensor Break or Home Break Error
Game will still function properly with the following errors. However, the game will not score properly. These will only be shown on start-up during initialization.

Error Code	Problem	Solution
Pin1	Pin (Break) Wheel #1	Indicates that either the home position break or another break is not being read on wheel #1. Check the location of the break and or check the sensor.
Pin2	Pin (Break) Wheel #2	Indicates that either the home position break or another break is not being read on wheel #2. Check the location of the break and or check the sensor.
Pin3	Pin (Break) Wheel #3	Indicates that either the home position break or another break is not being read on wheel #3. Check the location of the break and or check the sensor.
Pin4	Pin (Break) Wheel #4	Indicates that either the home position break or another break is not being read on wheel #4. Check the location of the break and or check the sensor.

3: Adjusting the Pointer

3.1 Adjusting the Pointer Assembly

3.1.1 Access the wheel by removing the back panel. You will need a #2 Phillips Screwdriver to loosen the four screws to easily lift the back panel off the game.

Figure 1.1

3.1.2 In the center beam of the wheel locate the pointer assembly, which is illustrated in *Figure 1.2*. Loosen the mounting bolts and push the assembly up to allow adequate space for the wheel to spin freely and still allow the pointer to strike the pegs.
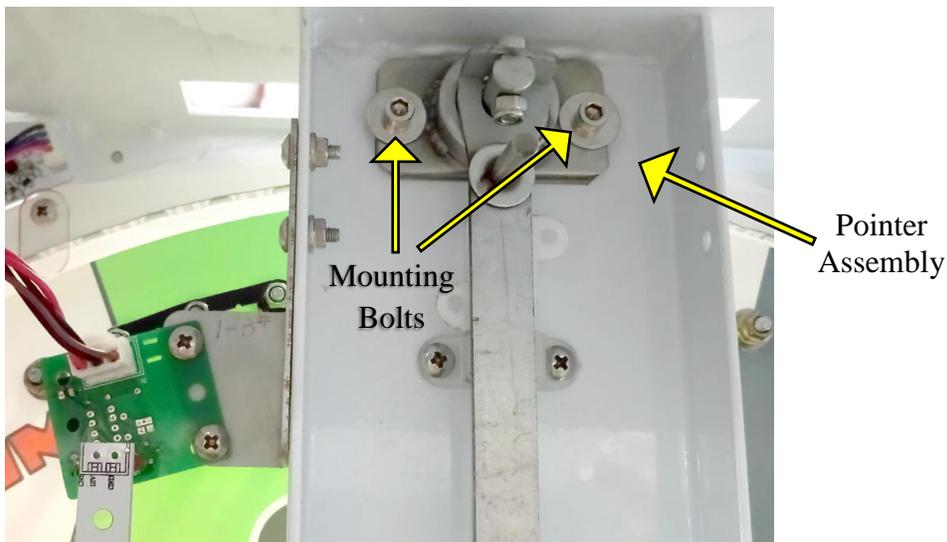

Figure 1.2

3.1.3 The **Pointer** placement needs to be close to half the distance of the diameter of the peg. This will also give adequate spacing for the wheel to spin freely.

Figure 1.5

Revision	Date of Revision	Description of Revision	Approved by
A	September 22, 2017	1.0	Joshua Peacock