# SWYFT ROBOTICS

# NI roboRIO JST Board User Guide

(JCB-0001)

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# Overview

## Introduction

The NI roboRIO JST Board is a connector board that converts the roboRIO headers on the roboRIO to JST connectors. The roboRIO JST Board features JST connectors which provide you with an easy way to wire a reliable connection that will stand up to FRC game play. For even faster wiring, you can pair the board with our pre-crimped [wires](#). There are also [connectors](#) available so you can crimp your own wires.

## Features

- Converts the roboRIO headers to JST connectors.

# Installation Instructions

## Mounting the NI roboRIO JST Board

1. Line up the pins on the roboRIO JST Board with the Weidemuller connectors.
2. Firmly press the pins into the Weidemuller connectors.
3. Pull up on the board to test the connection.

## Wiring the NI roboRIO JST Board

The roboRIO JST Board converts the roboRIO headers into JST connectors. This creates a system where you can easily and efficiently wire your control system.

## Using Pre-Crimped Wires

1. Following the diagram listed in the technical details section, insert a cable with a JST connector on one side into the desired port on the roboRIO JST Board.

## Crimping Your Own Wires

Note: For each wire that you need, follow the diagram in the technical details section.

1. Strip the ends of the wire 0.125".

2. Insert the bare wire into the terminal crimps.

3. Using a crimping tool, crimp the terminal crimps onto the wire.

4. Repeat for each of the cables needed.

5. Insert the cables into the connector needed.

6. Insert the connector into the port on the roboRIO JST Board by pushing down on the connector until you hear a click.

# Removal Instructions

## Removing the NI roboRIO JST Board

1. Disconnect all of the cables from the JST connectors on the NI roboRIO JST Board. The board should look how it was when it was originally installed.

2. Evenly pull upward on all corners of the roboRIO board.

For a demonstration on how to perform this task, visit this page in the "How To" section.

# Technical Details

## Diagram

← 2 Pin JST XH

← 3 Pin JST XH

← 4 Pin JST XH

←10 Pin JST XH

I²C

3.3V   SCL   SDA

RS-232

TXD
RXD

DIO

0
1
2
3
4
5
6
7
8
9

5V   S

RSL
S

POWER
STATUS
RADIO
COMM
MODE

RSL

SCLK
MOSI
MISO
3.3V
CS0
CS1
5V
CS2
CS3

S   5V

PWM

0
1
2
3
4
5
6
7
8
9

RELAY
0   1   2   3

ANALOG IN
0   1   2   3

FWD
REV

S
5V

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