



CarouselUSA

Standard Turntable Controller **User Manual**



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1. Introduction

A. Scope

This manual provides a technical description and instructions for the installation, operation, and maintenance of the *Carousel USA Standard Controller SC1*.

B. Features

The *Carousel USA Residential Turntable* is designed with special features to fulfill system operation requirements as follows:

- Use of industrial grade UL listed components for longevity and safety
- High precision variable frequency drive to provide power to the motor

2. Being prepared on the day of installation

As an OEM, Carousel USA is responsible for the installation of our equipment only and cannot perform electrical work during our installation process.

SC1 Installations require ONE conduit running from the control enclosure into the turntable pit.

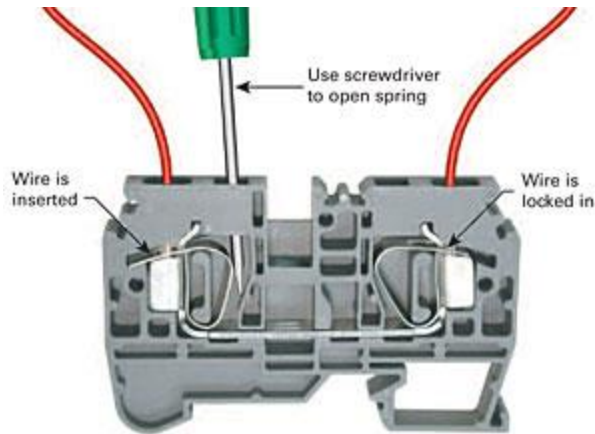
1. One conduit will be used to carry motor power.

A. Required: Have an electrician on site during the day of installation

An electrician is required during the day of installation.

They are responsible for the following tasks:

1. Mounting the SC1 enclosure to the wall.
2. Provide incoming power into control box, including penetration of enclosure.
Many installations are unique, but typically this incoming power requirement is Single phase 220V + neutral line with 8A supply.
3. Size and supply motor power wire. Typical installation uses no more than 2hp motor. The motor power 3Φ 220V is supplied from the VFD.
4. Fish the power wire from the enclosure to the turntable motor.
5. Land the power wires onto the terminal blocks or VFD.
6. Land the power wires onto the motor ensuring that the motor is wired for the appropriate voltage operation.
7. The SD1 enclosure uses spring clamp terminal blocks. These require the use of a small flathead screwdriver to land the motor power wires. See the illustration below.



B. General

The controller is shipped in a case. Please do not unpack crates prior to installers' arrival. Make note of any damage that may have occurred during transit, and contact Carousel USA immediately if the damage looks significant enough to have affected the contents of the crate. The crates are marked with the correct individual weights, and one of the cases *will require the use of a forklift to unload and move*. Please place the crates as close to the assembly site as possible.

3. Operation/Safety Instructions

CAUTION: Prior to any Operation of the Turntable, make sure that no person or equipment is inside the Turntable rotation area.

The residential turntable is designed for ease of use. Only a few cautions exist regarding operating the turntable.

1. Fully move the vehicle up onto the turntable platform, ensuring that all supports are completely on the turntable surface.
2. Place any vehicles in "Park", with parking brake applied.
3. Ensure that all people and pets are clear of interference with the vehicle and turntable surfaces.

Never allow riders!

4. SC1 External Layout

The electronic equipment that drives the standard turn table system is mounted in a light gray powder coated steel enclosure.



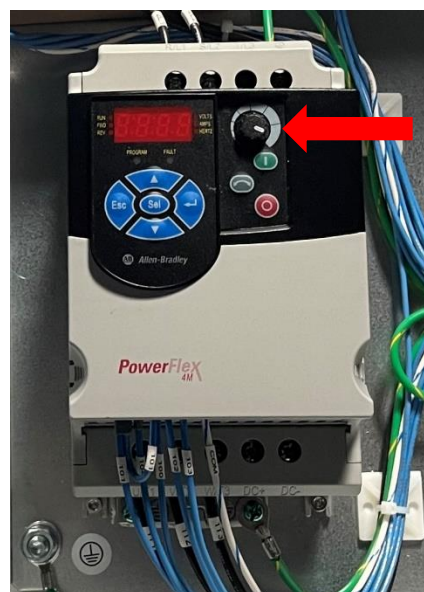
A. Basic Operation

i. Rotating Turntable

Use the **CCW/CW** switch on the control panel, or the CCW/CW buttons on the remote controller to move the turntable as desired.

ii. Adjusting Turntable Speed

Turntable rotation speed can be adjusted via the potentiometer knob on the integral keypad of the AC motor drive, or VFD, located inside the control panel.



B. Front Panel Interface

iii. Lockable Disconnect

The SCB enclosure features a disconnect switch with multiple features.

- When it is set to the ON position, the panel is powered up and the enclosure cannot be opened.
- Or if set to the off position, the switch features a tab that can be pulled out which prevents the enclosure from opening. A padlock can be inserted through the tab to prevent users from activating the switch as well. If the tab is pushed back in the enclosure can be opened freely.
- **CAUTION, the following to be performed by authorized personnel only:** To circumvent this mechanical interlock and power up the system with the door open (Often necessary when troubleshooting), turn the system off, open the enclosure then use fingers or a tool to carefully switch the oval shaped disconnect on.

iv. Power Indicator

Illuminates when control panel is powered.

v. Fault Indicator

Illuminates when there is a fault in the system.

The red light illuminates to indicate that the VFD has experienced a fault. This may range from insignificant to a severe problem. Contact Carousel USA if a fault is persistent and prevents proper use of the equipment. Resetting a fault is covered in the troubleshooting section.

vi. CW/CCW Switch

The jog is a momentary spring-to-center 3-position selector switch. When in the center position, the switch is off. If rotated to the CW or CCW position, the table will accelerate to a preset jog speed then decelerate to a stop when the switch is released.

5. SC1 Internal Layout

A. Opening the enclosure



Turn Off Main Power

WARNING

OPENING THE CONTROL BOX EXPOSES LIVE WIRING. ANY WORK PERFORMED INSIDE THE CONTROL BOX IS DONE AT THE USER'S OWN RISK. TO PREVENT ELECTRICAL SHOCK USE CAUTION WHENEVER WORKING NEAR EXPOSED WIRING OR CONNECTIONS.



Open control panel using coin, key, or screwdriver.



Manually turn power supply on inside control box.

6. Remote Controller

The following functions will be available on the remote controller:



- i. CCW**
Rotates turntable counterclockwise. The table will continue rotating until the CCW button is pressed again or the STOP button is pressed.
- ii. STOP**
Stops turntable.
- iii. CW**
Rotates turntable clockwise. The table will continue rotating until the CW button is pressed again or the STOP button is pressed.

7. Troubleshooting

A. *The enclosure door does not close.*

There is an interlock system on the disconnect switch. Turn both the disconnect inside of the enclosure and the red handle/yellow background switch on the front panel to the OFF position. Check that the enclosure lock (operated with a coin or large flathead screwdriver is not interfering. Close the door and press down to fully close the enclosure before you engage the lock and disconnect.

B. *The "Fault" light is illuminated.*

There is an active fault on the VFD. Open the enclosure, take note of the error code displayed on the red display and press the red button on the VFD to attempt to clear the fault. A VFD fault may be inconsequential or indicative of a major problem. Call Carousel USA if the problem persists.

C. *The remote does not work*

Usually, non-functioning remotes are a result of **weak** or **dead batteries** in the remote control. A remote with healthy batteries will have an indicator light that is bright green. A remote with weak batteries will still have a rapidly blinking green light, however the color will be weak in strength/color. A weak remote will not transmit signals properly. Replace batteries accordingly.

D. *Clearing Fault Codes*

To clear Fault Codes press red circle button on the integral keypad of VFD.

