

These are your Installation instructions, please read them carefully before you assemble and mount your **TucsonEV-SE** to familiarize yourself with them.

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Disclaimer: This Assembly Instructions includes the latest information available at the time of printing. **TucsonEV** reserves the right to make changes to this Assembly Instructions and/or product without further notice. Changes or modifications to this product not completed by an authorized service provider will void the product warranty.

**WARNING** - This equipment employs switches, relays, etc, that can produce arcs or sparks and should be located 18 inches (457.2 mm) or more above the floor.

TucsonEV  
12800 W Big Valley St  
Tucson, AZ 85736  
Phone: 520-240-7493  
Email: EV@TucsonEV.com  
Website: www.TucsonEV.com

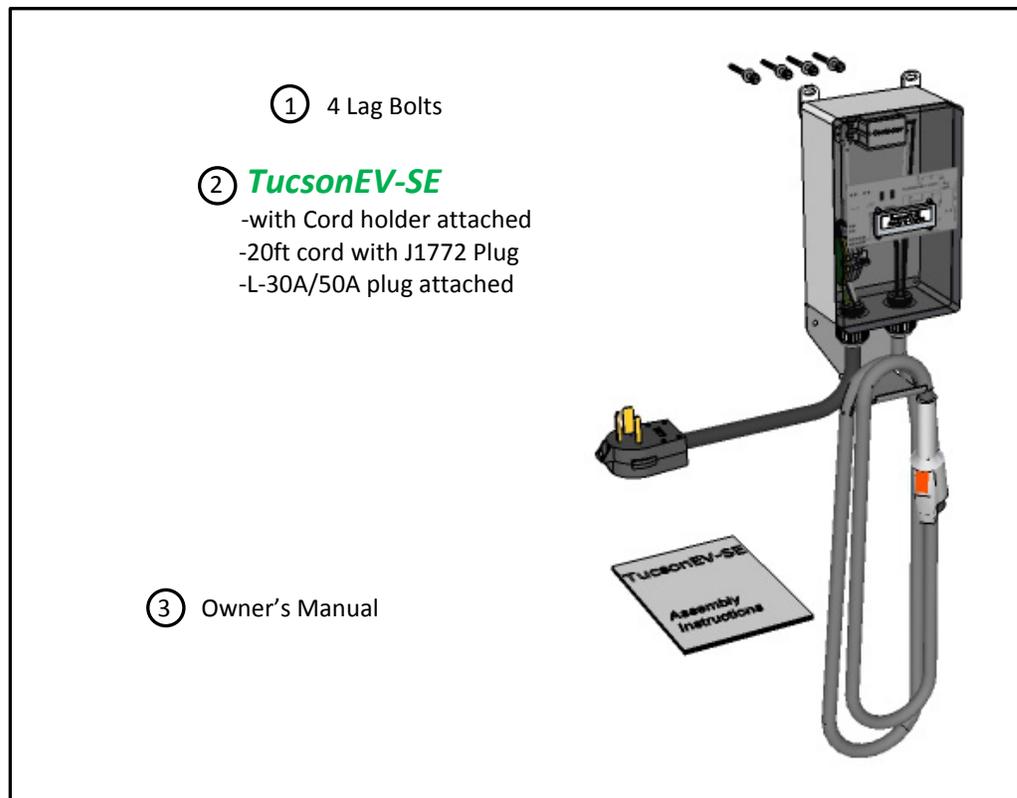


Owner - \_\_\_\_\_  
Serial Number - \_\_\_\_\_  
Purchase date - \_\_\_\_\_

## Contents -

The tools needed to install the **TucsonEV-SE** are –

- Pencil to mark location
- Standard Screwdriver
- Philips Screwdriver
- Electric Drill
- 1/8" Bit

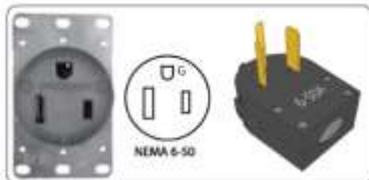


## ELECTRICAL REQUIREMENTS -

The **TucsonEV-SE** requires either a 240VAC split phase and neutral grounded, or a 208VAC 2 phase and neutral grounded 50 Amp dedicated circuit to maximize its charging ability. If you chose to install it on a dedicated circuit of lesser amperage, make sure you adjust the output amperage thru the LCD menu as per the instructions on page 4. This circuit must be routed directly from the power distribution panel to the **TucsonEV-SE** location so that the supplied plug from the **TucsonEV-SE** can be directly plugged into the dedicated receptacle.



A NEMA 6-30Amp /50Amp plug is supplied which can be configured as either a 30 Amp plug or a 50 Amp plug. It comes configured as a 50A plug. The **TucsonEV-SE** power plug should be plugged into a dedicated 6-50 Amp receptacle or a dedicated 6-30 Amp receptacle. The **TucsonEV-SE** has the 50A version configured and if you chose, you can change the plug to the 30A version with the included 30A leg.



In order to maximize your ability to charge your EV at 30 amps, you should install a 50 amp dedicated circuit for your **TucsonEV-SE**. If you configure the plug for 30 amps and install a 30 amp circuit you will only be able to charge at 24 amps since it has to be derated by 20% (UL code). Since the Amp setting nearest to 24 amps is the 20 Amp setting on the **TucsonEV-SE**, it

must be configured for 20 amps

The receptacle should be a NEMA 6-50 so that the supplied NEMA 6-50 Plug will plug into it. You can get the receptacle at your local hardware store or you can get it online at <http://www.stayonline.com/detail.aspx?id=8952>



TucsonEV supplies the NEMA 6-30A/50A plug. The 50A configuration is installed and you can change it to the 30A configuration with the included 30A leg. All you will need is a screwdriver to open the plug and change out the 50A leg for the 30A leg.

**IMPORTANT - Verify that the receptacle is close enough to the location where you are mounting the TucsonEV-SE.**

In order to use the **TucsonEV-SE** on a 120vac circuit, an adapter cord must be used. It is available from [www.TucsonEV.com](http://www.TucsonEV.com)

## CHOOSE A CONVIENT LOCATION –

Choose a location to install the **TucsonEV-SE**. All 4 of the mounting holes should be securely fastened into wood studs, masonry wall or equivalent support structure. It can also be installed on a 3/4" back board or 2x4's that connect two wooden studs. **Verify that the J1772 Cord will reach the charging port of your Electric Vehicle.**



The **TucsonEV-SE** is supplied with 4 lag bolts for stud mounting. Suitable fasteners may be needed for mounting in other types of materials such as concrete blocks.

The **TucsonEV-SE** box is 6" wide and 14" tall. It has 4 mounting holes, basically one in each corner, 2 at the top and 2 at the bottom on the metal plate. To securely mount the Box on the wall all 4 holes should be screwed/attached to 3/4" plywood/particle board, or 2x4's etc.

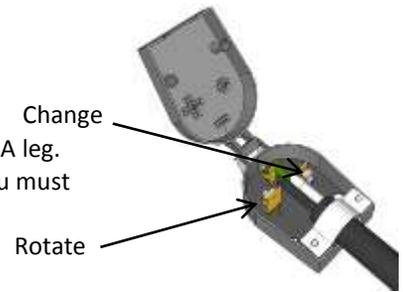
**Before you mount the TucsonEV-SE make sure that the 6-30A or 6-50A receptacle is close enough to the TucsonEV-SE so that the Unit can be plugged in.**

If you choose to mount the **TucsonEV-SE** on a board, it should be a 3/4" thick board that is at least 18" wide by 16" high or should be able to span 2 support 2x4 uprights if the wall is a sheetrock wall. Securely fasten the board to the 2x4 uprights and then fasten one side of the TucsonEV-SE thru the 3/4" board to one of the 2x4 upright studs. And then fasten the other side to the 3/4" board.

The bottom of the **TucsonEV-SE** should be mounted at least 18" above the floor. We suggest that you mount it so that the LCD is at eye level so that the messages can be easily read.

## Installation Steps-

- 1) If you decide on the 30A configuration, make the change now using the supplied 30A leg. Open the plug and change out the white wire 50A leg with the supplied 30A leg. You must also rotate the pin attached to the black wire 90 degrees.
- 2) **Ensure that the 20ft J1772 Cord can reach the charging port on your EV with ease.**
- 3) Install the appropriate receptacle, wiring and upstream dedicated 30A or 50A circuit breaker.
- 4) **Verify that the Receptacle and TucsonEV-SE are close enough to plug into the receptacle so that the Plug can actually be plugged into the receptacle. Do not plug the power cord into the receptacle yet.**
- 5) Place the TucsonEV-SE box on the wall in the location you want it. Use the level to ensure that the box is Level. Take the pencil and mark the hole locations in the 2 top Mounting Tabs. One of the Mounting Tabs should be in line with a 2x4 stud or cross piece.
- 6) Take an electric drill and with a 1/8" bit, drill a pilot hole on the marks you've just made into the mounting surface.
- 7) Place the top mounting tabs of the **TucsonEV-SE** box over the pilot holes and using 2 of the lag screws supplied, screw it into place.



- 8) Using the 2 holes in the metal cord holder on the bottom as a guide, drill 2 pilot holes, and screw in the 2 remaining lag bolts.
- 9) Tighten the bolts as necessary to make sure the **TucsonEV-SE** box is securely fastened to the wall.
- 10) Coil the 20 ft J1772 cord on the metal cord holder, letting the J1772 Plug hang down.
- 11) Plug in the power cord and follow the directions in the Operating Manual.

Remember that the **TucsonEV-SE** is also portable and can be plugged into any outlet with an appropriate Adapter Cord.

If you have any problems, re-read the Assembly Instructions to correct them. If the problems persist, please contact [www.TucsonEV.com](http://www.TucsonEV.com)

DO NOT REMOVE THE CLEAR COVER - doing so will void the warranty.

Thank you,

**TucsonEV.com**

## Operating Instructions –

You can now plug your TucsonEV-SE into the receptacle; it will go thru a power on test to make sure all the connections are correct and safe.

TucsonEV-SE  
Power on Test

Will alternate with

TucsonEV-SE  
TESTING

A couple times until

TucsonEV-SE  
Unit Test OK

Appears and you hear 3 short beeps,

TucsonEV-SE  
Ready to Charge

Now you have to set the amps that you wish to charge your EV with. **DO NOT EXCEED THE CAPABILITY OF YOUR EV's CHARGER.** When the TucsonEV-SE is plugged into 120vac, the automatic default is 15A.

The button to change the amps is on the bottom of the unit, between the power cord and J1772 cord. Press it for approx 5 seconds and another menu appears on the LCD. It flashes on and off, if you don't press the button within the next 5 seconds, the menu closes and it goes back to the Ready to charge screen.

Current rate L1: 15A  
Press btn to change

Press the button again to change it

Current rate L2: 20A  
Press btn to change

Press the button again to change it

Current rate L2: 30A  
Press btn to change

When you've reached your required amps, don't press the button and in about 5 seconds it will revert to the Ready to charge screen. The current charge rate is retained in memory and so there is no need to change it unless you charge a different car with a lower or higher amperage charger.

Now you can plug the J1772 Plug into the J1772 charging port on your Electric Vehicle. The LCD should read

TucsonEV-SE  
Ready to Charge

Insert the J1772 Plug into the J1772 Charging port of your Electric Vehicle, you should see

TucsonEV-SE  
Car connected

And then a few seconds later will appear

Charging @ L1: 15A  
Time Charging 00:00

or

Charging @ L2: 20A  
Time Charging 00:00

or

Charging @ L2: 30A  
Time Charging 00:00

When the car has finished charging

Car Charged 30A  
Charged for 00:00

will alternate with

Car Charged 30A  
Charged for 00:00

For 5 min and it will return to 'Ready to charge'

If the car has been unplugged,

Car disconnected  
Will reset in 5 min

Will flash alternately with

Car disconnected  
Will reset in 5 min

After 5 minutes the TucsonEV-SE will reset and

TucsonEV-SE  
Ready to Charge xxA

Will appear

If a ground fault should happen

Ground Fault  
Retesting

will flash with

Ground Fault  
Retesting

It will retry 4 times at 15 minute intervals, if the ground fault persists

This screen will appear

TucsonEV-SE  
Do Master Reset

If this appears do a Master Reset by unplugging the unit, waiting a minute and plugging it back in

TucsonEV-SE  
Ready to charge XXA

And the ready to charge screen will appear.

If it does not, then please get in contact with TucsonEV.