



www.alltraxinc.com

Operators Manual SR



Alltrax Inc

1111 Cheney Creek Road, Grants Pass, OR 97527 Ph: 541-476-3565 Fax: 541-476-3566
Web Site: <http://www.alltraxinc.com>

Twitter: @AlltraxInc

©ALLTRAX INC 2016 - All Rights Reserved

Contact Alltrax:

Phone: 541-476-3565

Fax: 541-476-3566

Email:

Tech Support: helpdesk@alltraxinc.com

Orders: orders@alltraxinc.com

Shipping: shipping@alltraxinc.com

General Inquires: info@alltraxinc.com

Website:

<http://www.alltraxinc.com>

Facebook:

<http://www.facebook.com/AlltraxInc>

Twitter:

<http://www.twitter.com/Alltraxinc>

TABLE OF CONTENTS

WARNINGS	4
SR LAYOUT	6
SR SPECIFICATIONS	7
INSTALLATION	8
INSTALLATION DRAWINGS	14
PRE-1994 EZGO	15
1994 AND NEWER EZGO	16
1994 AND NEWER CLUB CAR	17
YAMAHA - G8, G9, G14, G16	18
GENERIC, SERIES WITH REVERSE	19
GENERIC, SERIES W/O REVERSE	20
CONTROLLER DIMENSIONS	21
FAN COVER (OPTIONAL)	22
USER (PERSONALITY) TAB	23
PROGRAMMING THE CONTROLLER	24
BLINK CODES	25
WARRANTY STATEMENT	27

WARNINGS



Safety Notes:

When working on electric vehicles, sudden unexpected events can occur, it's recommended to:

- Place the drive axle on jack stands—wheels off the floor.
- When working on wiring or batteries, always remove rings and watches.
- Use the proper safety equipment, eye protection, and insulated tools.
- Never connect a computer while the vehicle is being charged.
- Disconnect batteries before installing or working on the controller.
- Wear safety glasses.
- Because hydrogen can build up due to gassing from the batteries, work in a well ventilated area.
- Make sure the battery pack is fused.
- Do not clean the controller with a high PSI pressure washer.
- When cleaning batteries, take precautions to keep the battery acid from splashing on the controller.

Note:

It is the installer's responsibility to ensure the correct equipment (ie. wire, motor, solenoid, fuse etc) is installed in the car.

READ AND SAVE THESE INSTRUCTIONS

USABILITY STATEMENT

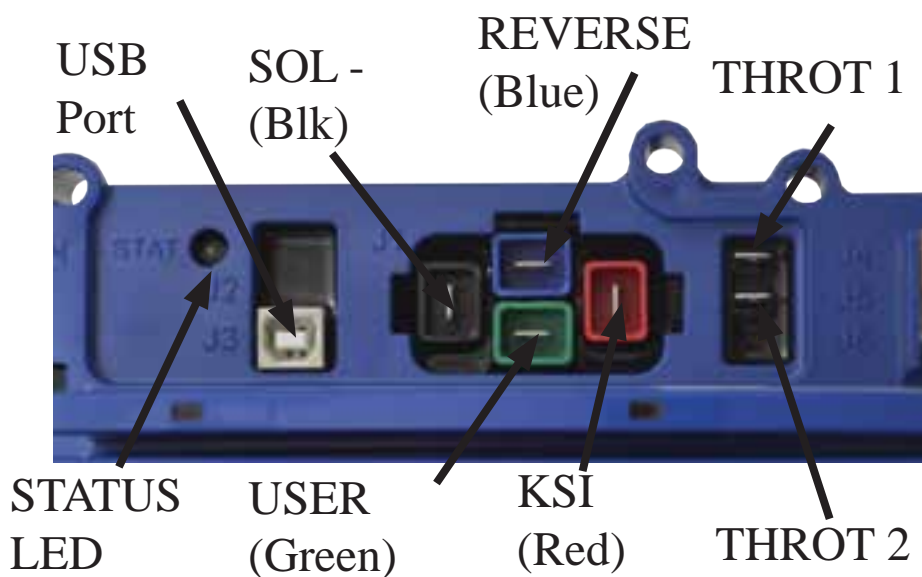
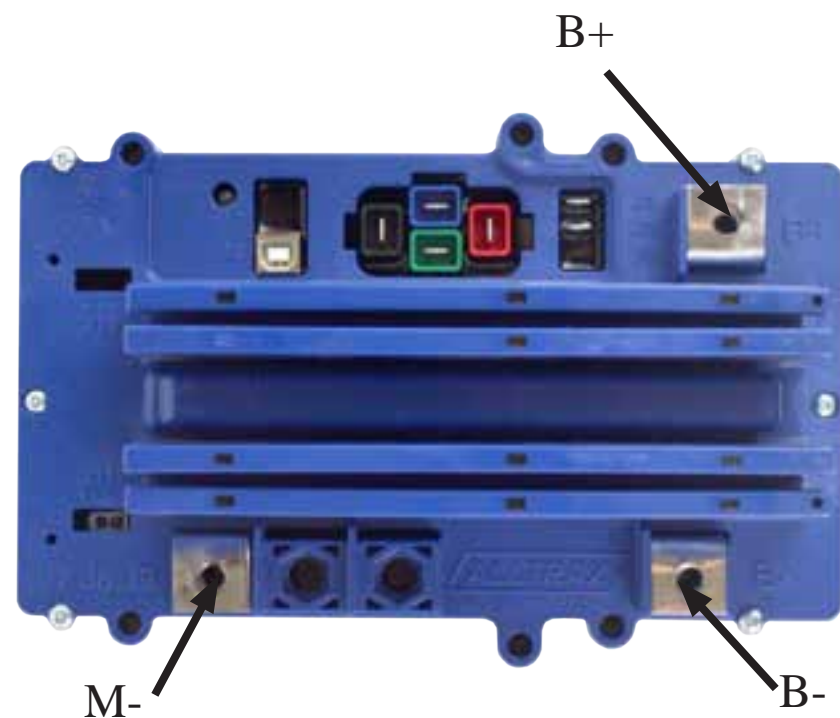


Alltrax Inc's lines of Series and Shunt Motor Controllers are intended for use with motors only. Any application or usage that does not meet these criteria **WILL NOT** be covered by warranty. Also, any requests for design assistance or technical support outside the scope of the product intended use may be denied. Alltrax assumes no liability for any damage or injury as a result of use of the motor controllers in a non-traction or process motor application.

WARNING: Use of this product for other than these specified uses may be highly dangerous and lead to serious injuries or death.

WARNING: The use of this product for the production of Plasma Assisted Hydrogen, Brown's Gas, HHO (H₂O Hydrogen Electrolysis) or any other type of gas is prohibited. Generation and storage of these gasses is extremely dangerous and poses a significant risk of explosion, fire, property damage and serious injury or death.

SR LAYOUT



SR SPECIFICATIONS

Model	Peak (Amps)	2 Min (Amps)	5 Min (Amps)	Continuous (Amps)
SR48300	300/350 ¹	300 (1.5min)	230	210
SR48400	400/460 ¹	400	320	300
SR48500	500/575 ¹	500	420	380
SR48600	600/690 ¹	600	500	450
SR72300	300/350 ¹	300	250	220
SR72400	400/460 ¹	400 (1.5min)	300	270
SR72500	500/575 ¹	500	420	380

Note¹: The larger number represents the value when the "Peak Amp Mode" is enabled in the Alltrax Toolkit program.

All ratings are at 25°C with nominal rated voltages at 50% PWM. Actual currents are $\pm 5\%$ listed rating

Type: Series Motor Controller

Operating Frequency: 18kHz

Controller Voltage, KSI & Reverse:

SR48XXX 12-48V nom, 62V max

SR72XXX 12-72V nom, 90V max

Controller Operating Temp: -20°C to 75°C, shutdown @ 85°C

Environmental Operating Temp: -20°C to 50°C

Stand by Power (Power up): <1W nom, <8W Fan on

Stand by Current: <20mA

Relay Drive Current: 5A peak, 1A Cont.

KSI Peak In Rush: 60V = 9A, 30V = 4A, 9.5V = 2A

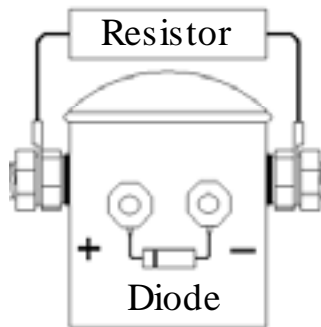
Throttles Supported: 0-5k, 5k-0, E-Z-GO ITS, Club Cart 5k-0 3 Wire (MCOR), 0-5v, Taylor Dunn 6v-10.5v, USB Throttle, Absolute Mode

Terminal Torque: Torque to 60-80 in.lb (5-7 ft/lb, 6.77-9.4Nm)

Mounting Bolt Torque: Torque bolts to 15-20 in.lb (1.25-1.75 ft.lb, 1.7-2.25nm)

INSTALLATION

Resistor & Diode Mounting



The diode across the coil terminals safely dissipates the energy when the coil is turned off. Installation Dependant, refer to applicable drawing.



Contactor Size	Diode	Diode Current
70A-200A Solenoid	1N4004	1A
400A-550A Solenoid	1N5408	3A
600A or larger Solenoid	MR754	6A

The resistor typically seen across the contactors big terminals pre-charges the filter capacitors in the controller. This minimizes arcing across the contactor terminals when closing.

Battery Voltage	Resistor
12-36V	220-250 Ohm 10W
48V	470 Ohm 10W
72V	1000 Ohm 10W



F/R Switch

The forward/reverse switch is an often overlooked part of the upgrade process. In a series motor, all of the motor current will pass through the F/R switch. An undersized F/R Switch is as bad as an undersized solenoid or small wire gauge.

For higher amperage controllers (>600A), it is suggested that a change-over contactor set up be used. These are large enough to handle the higher currents without over heating the contacts and they provide the user the ability to change direction by flipping a switch.

Controller Amperage	F/R Size
400A or less	Stock/HD
450A to 650A	Heavy Duty/Change-Over Contactor
650A or more	Change-Over Contactor



Change-over contactors are multiple contactors bound together that allow the user to change the polarity of the voltage going to the motor thus reversing direction. It works exactly the same as the manual F/R switch, except that it uses coil drive contactors. See the installation drawings for how to wire a change-over contactor.

Contactors (Solenoids)



The solenoid is the primary disconnect of the battery pack in the case of the an emergency. In order to be effective, the solenoid needs to be properly rated for the current that will be drawn from the batteries. It is VERY important that the solenoid be rated correctly. It is the only way to disconnect the batteries from the motor/controller loop in case of a failure. Too small of a solenoid increases the likelihood that the contacts will weld together and not be able open.

UNACCEPTABLE



Stock 70 AMP

Used with older ClubCars
vehicles

**DO NOT Use with
Alltrax Controller**

STANDARD DUTY

Flat lands with moderate speed and torque performance expectations.



Stock 100 AMP

Use with 300A controllers.

HEAVY DUTY

High performance, high speed, maximum torque, pulling loads, hilly terrain or Hunting Buggies.



Performance 200 AMP
(600amp Inrush) Use with 300
and 400 AMP Controllers



Heavy Duty 200 AMP
(800A surge) Use with 300 to
500 AMP Controllers



Heavy Duty 400 AMP
(1000A surge) Use with 500 and
600 AMP Controllers
Suggested types:
SW200
MZJ400 (Shown)

EXTREME DUTY



Extreme Duty 600A+ AMP
(1000A + surge) Use with 600
AMP or bigger Controllers.

Fuse

Any application where there is a battery pack, a fuse must be installed. A fuse will open the battery circuit and prevent any serious damage from occurring.

The fuse should be installed on or between the battery terminals. The main B+, B- or in-between 2 batteries is an acceptable location. The fuse must be rated for pack voltage and fault current.



Controller Amperage	Fuse Rating
400A or less	250A
450A to 650A	400A
650A or more	600A

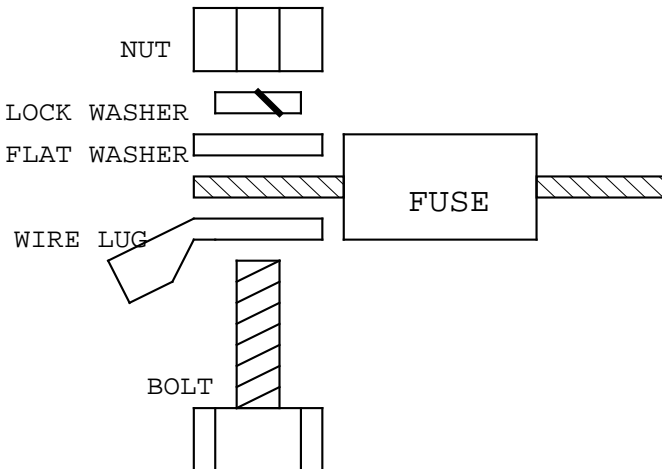


Diagram: Fuse terminal hardware

Wiring

Wiring and battery health in an electric vehicle are very important and overlooked during performance upgrades. Wiring size is important for safety and proper operation of the vehicle. Undersized wires will affect the performance of controllers and can overheat. Wires should be crimped with proper sized terminals and tools to provide a clean low resistance connection.

Controller	Min. Wire AWG Standard Duty	Min. Wire AWG Heavy Duty
300A	OEM -6 AWG	4 AWG
400A	4 AWG	4 AWG
500A	2 AWG	1/0 AWG
600A	1/0 AWG	2/0 AWG

Power Wiring

When running wiring for the vehicle care must be taken for proper wire routing. Power wiring should be of proper sizing and ran as low in the framework of the vehicle as practical. Lengths of power wire runs need to be kept short and pairs of wires from common circuits should be grouped together to reduce EMC emissions. Secure all power wiring to the vehicle framework.

Signal Wiring

Signal wires should be keep as short as practical. Care should be taken to protect the wires sharp edges and rubbing. Consider the use of split loom or braided wire sheathing. Fasten bundles securely to framework. Do not route the signal wires together in the same bundle with power wires. All safety interlocks (KSI, Footswitch, etc) need to be mechanical switches or electromechanical relay.

INSTALLATION DRAWINGS

See our Website more drawings:

Full Sized & Updated

Other OEM Drawings

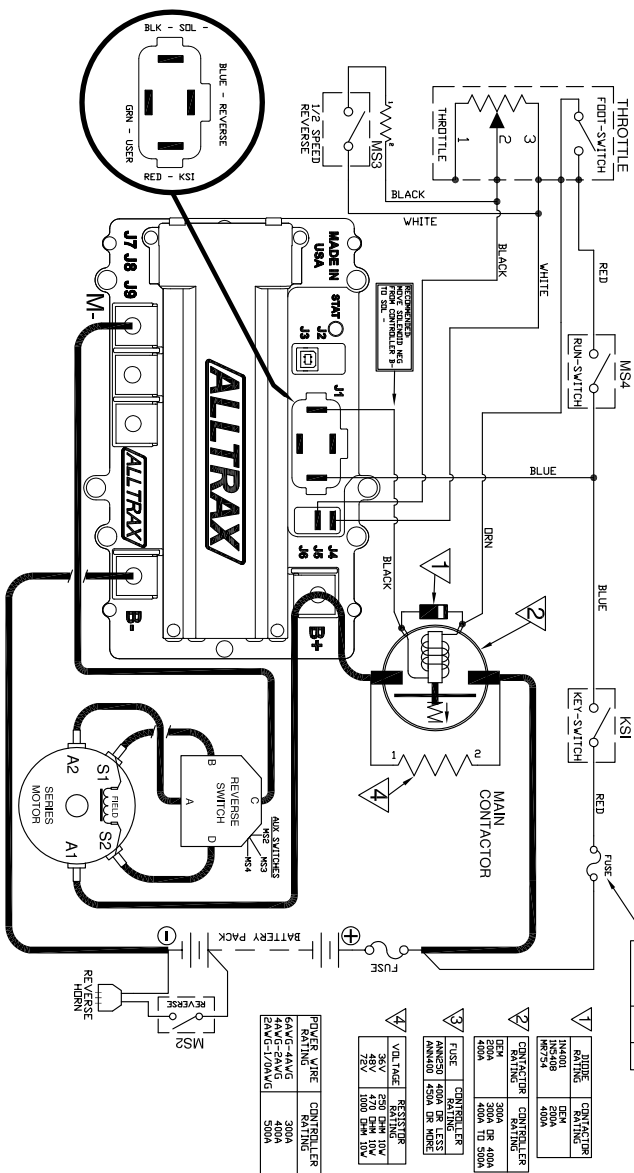
More Generic Wire Diagrams

Non Standard Throttle Wiring

PRE-1994 EZGO

SR to E-Z-GO TXT

YEAR: PRE-1994.5 -- 1204 REPLACEMENT



NOTES:

- FUSES REQUIRED FOR ALL INSTALLATIONS
- DIMMER REQUIRED ACROSS COLTS / RELAYS
- KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
- ASSUMES FOOTSWITCH IS OPEN WHEN THROTTLE OFF
- ALL TRAXX RECEIVES THE RIGHT TO CHANGE DOCUMENTATION WITHOUT NOTICE
- ALL TRAXX MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL, OR OTHER INFORMATION PROVIDED
- SEE OPERATORS MANUAL FOR MORE INFORMATION

REVISIONS	DWG SCALE: NTS
-----------	----------------

REV.	ECO.	DATE	APVD	DRAWN	R CSUK	033116
A	033016	033016	PC	ENGR	D.Crockett	033116

	032217	032217	RC
B	032217	032217	RC

PROPRIETARY

THIS TECHNICAL DATA IS PROPRIETARY TO ALLIANT INC. AND SHALL NOT BE USED, REPRODUCED, REFINISHED, OR DISSEMINATED

					IN WHOLE OR PART WITHOUT WRITTEN PERMISSION OF ALLTRIA INC.
--	--	--	--	--	---

DO NOT SCALE DRAWING

ALLTRAX
1111 Cheney Creek Rd.
Grants Pass, OR 97527

PHONE(541) 476-3565

TITLE
SR to EZGO Pre-1994 Medalist
Wiring Diagram

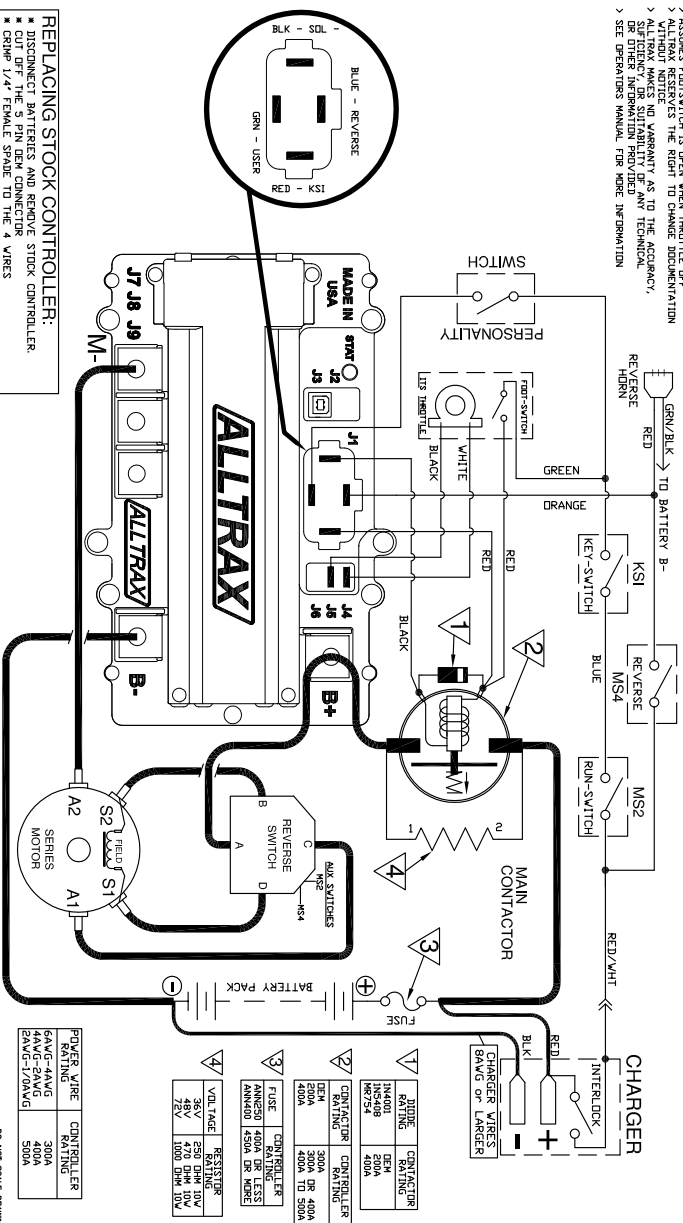
SIZE	DOCUMENT NO.	REV.
A	S DOC110-040	B

FILE: _DMC-SR-EZCO-PRE-1994-WIRE-01A SHEET 1 of 1

1994 AND NEWER EZGO

- FUSES REQUIRED FOR ALL INSTALLATIONS
- DIODE REQUIRED ACROSS COILS / BELAYS
- KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
- ASSUMES FIDUITY SWITCH IS OPEN WHEN THROTTLE OFF
- ALTALEX RESERVES THE RIGHT TO CHANGE DOCUMENTATION WITHOUT NOTICE
- ALTALEX MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL, OR OTHER INFORMATION PROVIDED
- SEE OPERATORS MANUAL FOR MORE INFORMATION

YEAR: 1994.5 TO PRESENT -- 1206 REPLACEMENT

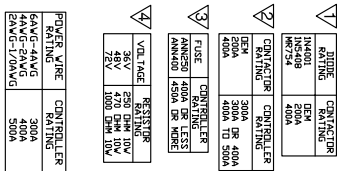


REPLACING STOCK CONTROLLER:

- DISCONNECT BATTERIES AND REMOVE STOCK CONTROLLER.
- CUT OFF THE 5 PIN DEW CONNECTOR.
- REMOVE 1/4" BLACK SPADE TO THE WIRES
- STRIP THE 1/4" BLACK SPADE FROM THE B-
- THAT GOES TO THE 5X10MM AND CRIMP 1/4" FEMALE SPADE
- CONNECT DEW RED WIRE TO THE RED TERMINAL ON CONTROLLER
- CONNECT DEW ORANGE WIRE TO BLUE TERMINAL ON CONTROLLER
- CONNECT DEW WHITE WIRE TO J4 ON CONTROLLER
- CONNECT DEW BLACK WIRE TO J5 ON CONTROLLER
- CONNECT BLACK WIRE FROM SOTEMOD TO BLACK TERMINAL ON CONTROLLER
- CONNECT LARGE WIRES TO CONTROLLER AS FOLLOWS:
 - RED TO: B+
 - BLK TO: B+
 - GRN TO: B-

[illegible]

SR to CLUB CAR DS
YEAR: 1995 TO PRESENT



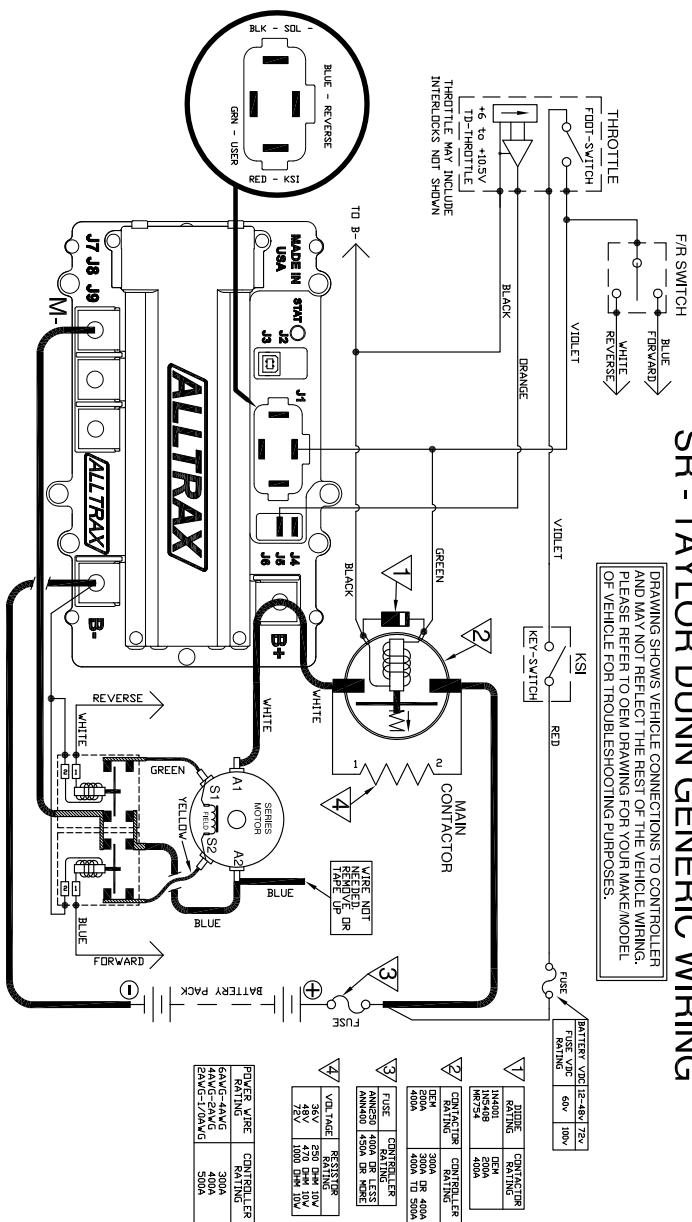
- | | |
|----------------|-------------------|
| DWG SCALE: NTS | |
| DRAWN | R CSUK 033116 |
| ENGR | D.Crockett 033116 |
- PROPRIETARY**
- THIS TECHNICAL DATA IS PROPRIETARY
 OF AND ALTIMAX INC.
 AND IS NOT TO BE REPRODUCED,
 REPRODUCED, RELEASED OR DISCLOSED
 IN WHOLE OR PART WITHOUT WRITTEN
 PERMISSION OF ALTIMAX INC.

PART NO.	DOC110-037

TAYLOR DUNN GENERIC WIRING

SR - TAYLOR DUNN GENERIC WIRING

DRAWING SHOWS VEHICLE CONNECTIONS TO CONTROLLED AND MAY NOT REFLECT THE REST OF THE VEHICLE WIRING. PLEASE REFER TO OEM DRAWING FOR YOUR MAKE/MODEL OF VEHICLE FOR TROUBLESHOOTING PURPOSES.



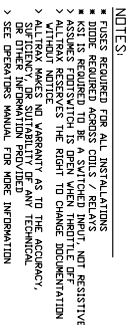
NOTES

- FUSES REQUIRED FOR ALL INSTALLATIONS
- DIMMER REQUIRED ACROSS COLTS / RELAYS
- KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
- ASSUMES FOOTSWITCH IS OPEN WHEN THROTTLE OFF
- ALL TRAXX RESERVES THE RIGHT TO CHANGE DOCUMENTATION WITHOUT NOTICE
- ALL TRAXX MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL, OR OTHER INFORMATION PROVIDED
- SEE OPERATIONS MANUAL FOR MORE INFORMATION

REVISIONS		DATE	BY	DESCRIPTION
REV.	ECO.	DATE	BY	DESCRIPTION
1	040517	040517	RC	
DWG. SCALE: NTS		DRAWN: R. SCAIK D00116		
CHECKED: D. COCKRETT D00116		DATE: 04/05/17		
THIS DOCUMENT IS THE PROPERTY OF TAYLOR DUNN LIMITED IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED ON THE DRAWING. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.				
TITLE: 1111 Cherry Creek Rd Drainage Plan PROJECT NO. 97322-00 PROJECTED: 5/15/2006				
PROJECT: SR to Taylor Dunn Generic Winding Diagram				
SIZE	DOCUMENT NO.	REVISION		
A	S	DOC110-046	B	
FILE: D:\MS-97322-00\46-DRAINAGE-WIND-DWG\DRN110-046.DWG				
SHEET: 1 of 1				

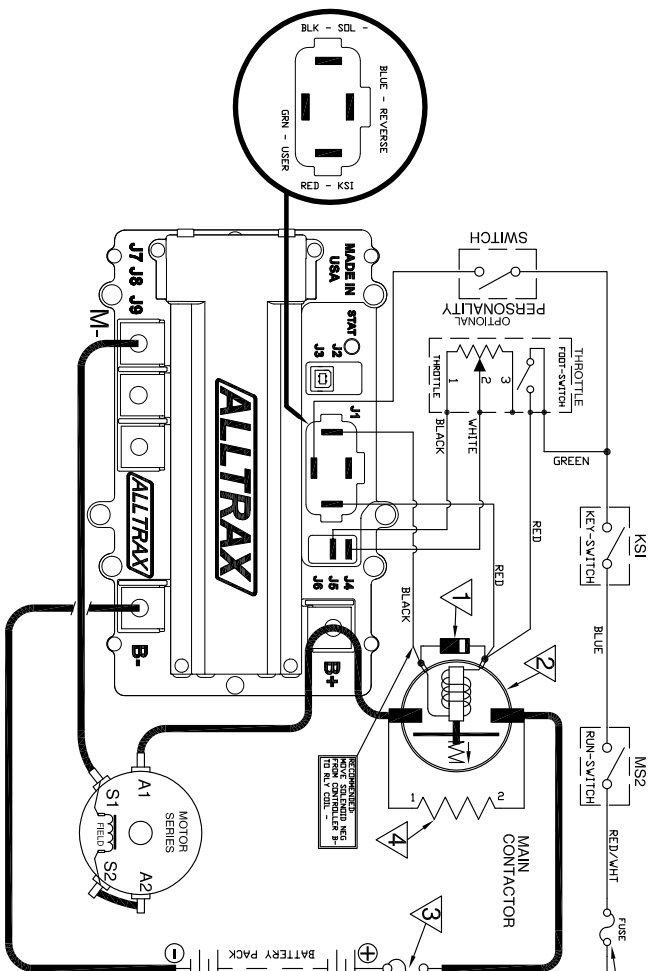
SR - GENERIC WIRING

WITH REVERSE

SR OPERATORS MANUAL

GENERIC, SERIES W/O REVERSE

SR - GENERIC WIRING
NO REVERSE



PART NO.	DOC110-038
----------	------------

[illegible]

DO NOT SCALE DRAWING

DIODE RATING	CONTACTOR RATING
IN4001	DEM
1N5408	200A
MR754	400A

2	
CONTACTOR RATING	CONTROLLER RATING
DEM	300A
200A	300A DR 400
400A	400A TO 500A

4	
VOLTAGE	RESISTOR RATING
36V	250 OHM 10W
48V	470 OHM 10W
72V	1000 OHM 10W

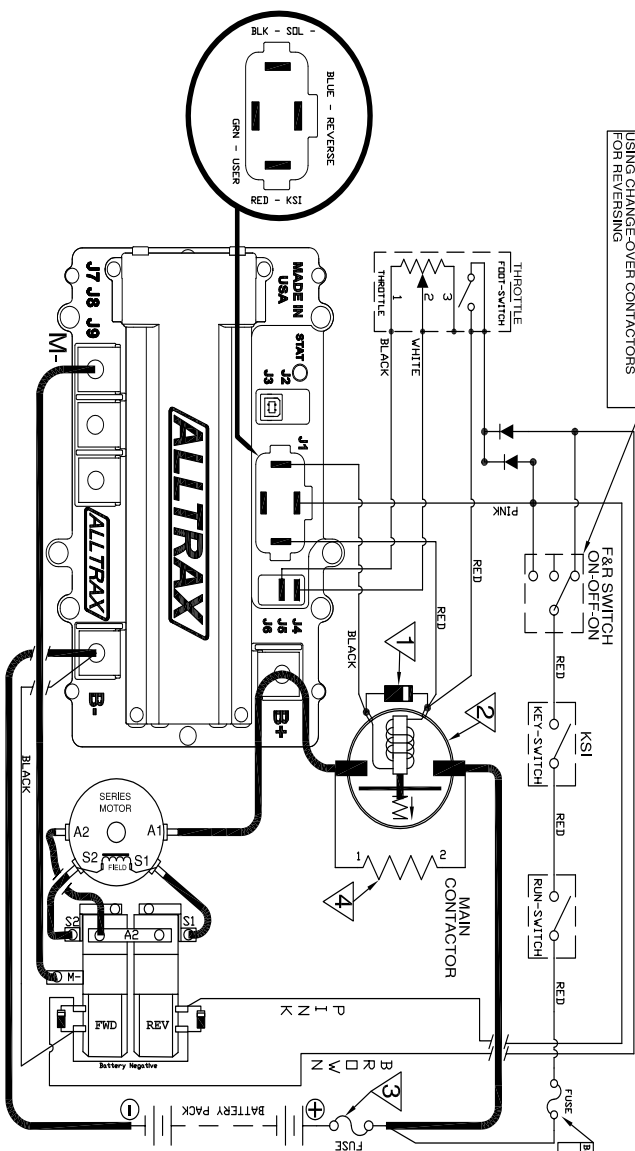
POWER WIRE RATING	CONTROL LETH RATING
6AWG-4AWG	300A
4AWG-2AWG	400A
2AWG-1/0AWG	500A

NOTES

- > FUSES REQUIRED FOR ALL INSTALLATIONS
- > DIODE REQUIRED ACROSS COILS / RELAYS
- > KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
- > ASSURES FIDUITY SWITCH IS OPEN WHEN THROTTLE OFF
- > ALTBAX RESERVES THE RIGHT TO CHANGE DOCUMENTATION WITHOUT NOTICE
- > ALTBAX MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL, OR OTHER INFORMATION PROVIDED
- > SEE OPERATORS MANUAL FOR MORE INFORMATION

SR - GENERIC SERIES WIRING WITH SW202 REVERSE

FAILURE TO USE AN ON-OFF-ON SWITCH
COULD DAMAGE THE CONTROLLER,
CONTACTOR AND/OR MOTOR WHEN
USING CHANGE-OVER CONTACTORS
FOR REVERSING



NOTES:

- > FUSES REQUIRED FOR ALL INSTALLATIONS
- > DIODE REQUIRED ACROSS CHILTs / RELAYS
- > KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
- > ASSUMES FWD/REV IS OPEN WHEN NEUTRAL OR STOP
- > FORWARD REVERSES THE MOTOR TO CHANGE DIRECTION
- > WITHOUT NOTICE
- > ALTRAX MAKES NO WARRANTY AS TO THE ACCURACY,
COMPLETENESS, SUFFICIENCY, OR TECHNICAL
OR OTHER INFORMATION PROVIDED

REVISIONS				DWG SCALE: NTS	
REV.	ECO.	DATE	AP/VD	BY/IN	DATE
A	101117	122917	WH	BRN	122917
				THIS DOCUMENT IS THE PROPERTY OF ALTRAX. IT IS TO BE USED FOR THE PURPOSES OF THE PROJECT ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION OF ALTRAX INC.	
				ALTRAX 1111 Cheney Creek Rd, Greeley, CO 80639	
				Phone: (957) 470-3565	
				Fax: (957) 470-3566	
				E-Mail: sales@altrax.com	
				Web: www.altrax.com	
				File: (DWG) SR - GENERIC SERIES - REV - SW202 - D11 SHEET 1 of 1	

PART NO.	D00C110-048
----------	-------------

BATTERY VOLT	12-48V/12V
FUSE VAC	60V
RATING	100V

DIODE	CONTRACTOR
1N4001	1N4001
RATING	400A

CONTRACTOR	CONTRACTOR
300A	300A
400A	400A
400A TO 500A	400A TO 500A

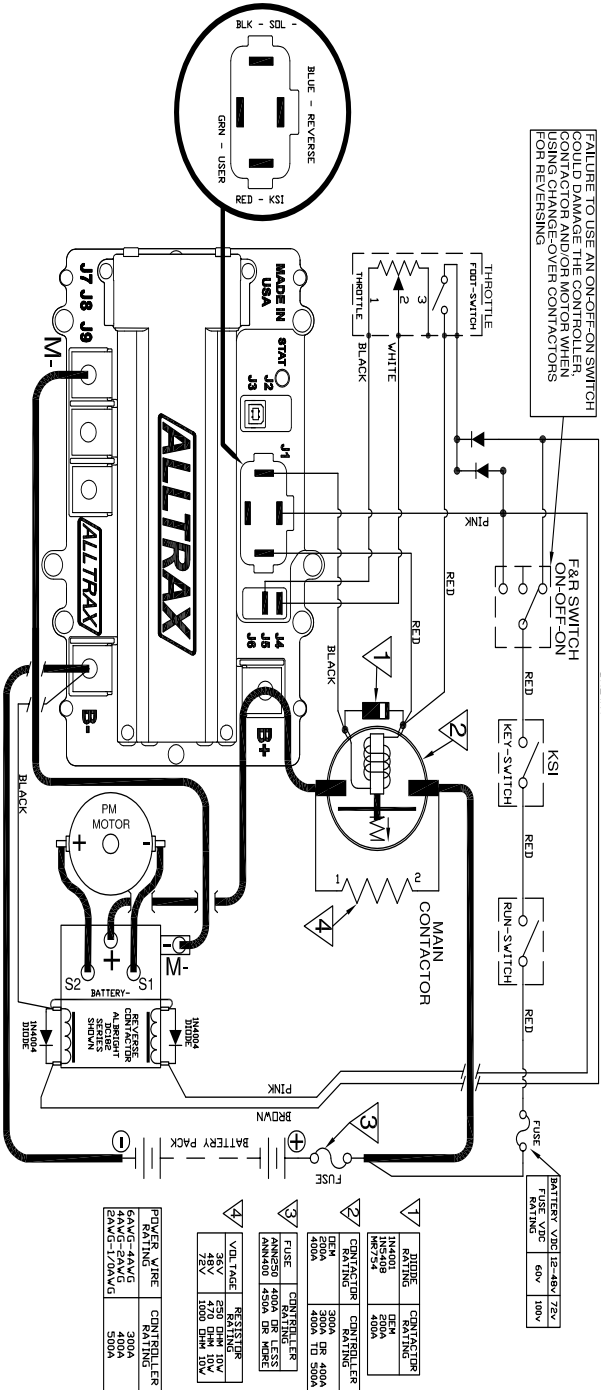
FUSE	CONTRACTOR
ANN400	ANN400
450A	450A
OR MORE	OR MORE

VOLTAGE	RESISTOR
36V	470 OHM 10W
48V	100 OHM 10W

POWER WIRE	CONTROLLER
6AWG-4AWG	300A
2AWG-2AWG	400A
6AWG 1/2-6AWG	500A

**SR - GENERIC PERMANENT MAGNET WIRING
WITH REVERSE**

PART NO.	DOC110-043
----------	------------



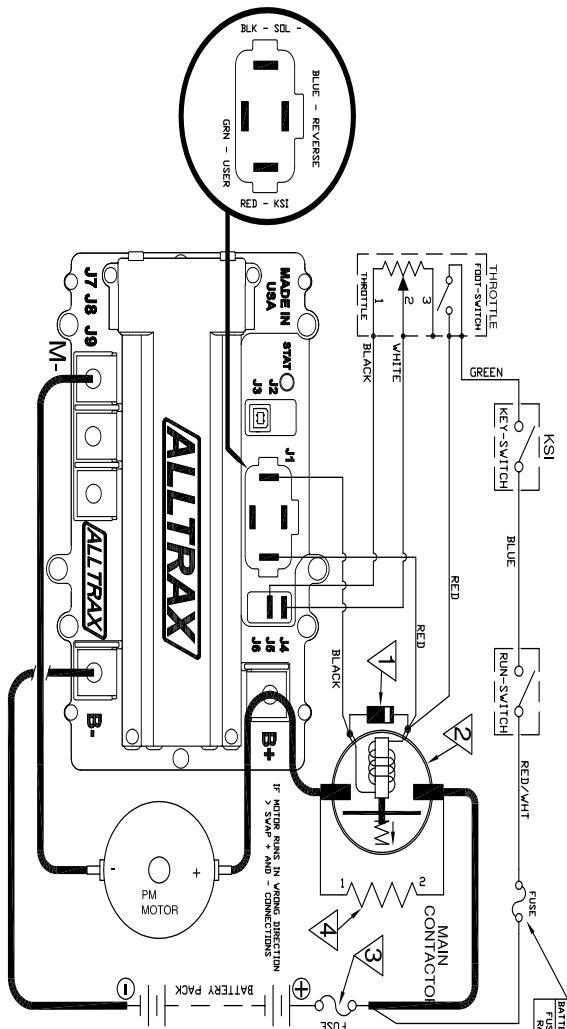
- NOTES:
- FIRES REQUIRED FOR ALL INSTALLATIONS
 - DIMIDE REQUIRED ADDRESS COILS / RELAYS
 - KSI IS REQUIRED TO BE A SWITCHED INPUT, NOT RESISTIVE
 - ASSUMES FOOTSWITCH IS OPEN WHEN THROTTLE OFF
 - ALLTRAX RESERVES THE RIGHT TO CHANGE DOCUMENTATION
 - ALTHOUGH MODICE AND VARIABILITY AS TO THE ACCURACY, SUFFICIENCY, OR SUITABILITY OF ANY TECHNICAL, OR OTHER INFORMATION PROVIDED
 - SEE OPERATORS MANUAL FOR MORE INFORMATION

[illegible]

DO NOT SCALE DRAWING

Permanent Magnet no Reverse

SR - GENERIC WIRING PERMENANT MAGNET WITH NO REVERSE



POWER WIRE	CONTRACTOR
6AWG-4AWG	300A
4AWG-2AWG	400A
2AWG-1/2AWG	500A

VOLTAGE	RESISTANCE
24V	250 OHM
48V	500 OHM
72V	1000 OHM

FUSE	CONTRACTOR
1/2" ANS10	400A OR LESS
3/4" ANS10	450A OR MORE

CONTRACTOR	CONTRACTOR
1/2" ANS10	300A
3/4" ANS10	400A
1" ANS10	500A

BATTERY VOLTAGE	FUSE VOLTAGE
12V	60V
48V	100V
72V	100V

NOTES:

- FUSES REQUIRED FOR ALL INSTALLATIONS
- FUSES REQUIRED ACROSS COILS RELAYS
- FUSES REQUIRED FOR ALL CIRCUITS
- ASSUMES FOOTSWITCH IS OPEN WHEN THROTTLE OFF
- WITHOUT NOTICE
- ALTRAX MAKES NO WARRANTY AS TO THE ACCURACY, OR OTHER INFORMATION PROVIDED
- SEE OPERATORS MANUAL FOR MORE INFORMATION

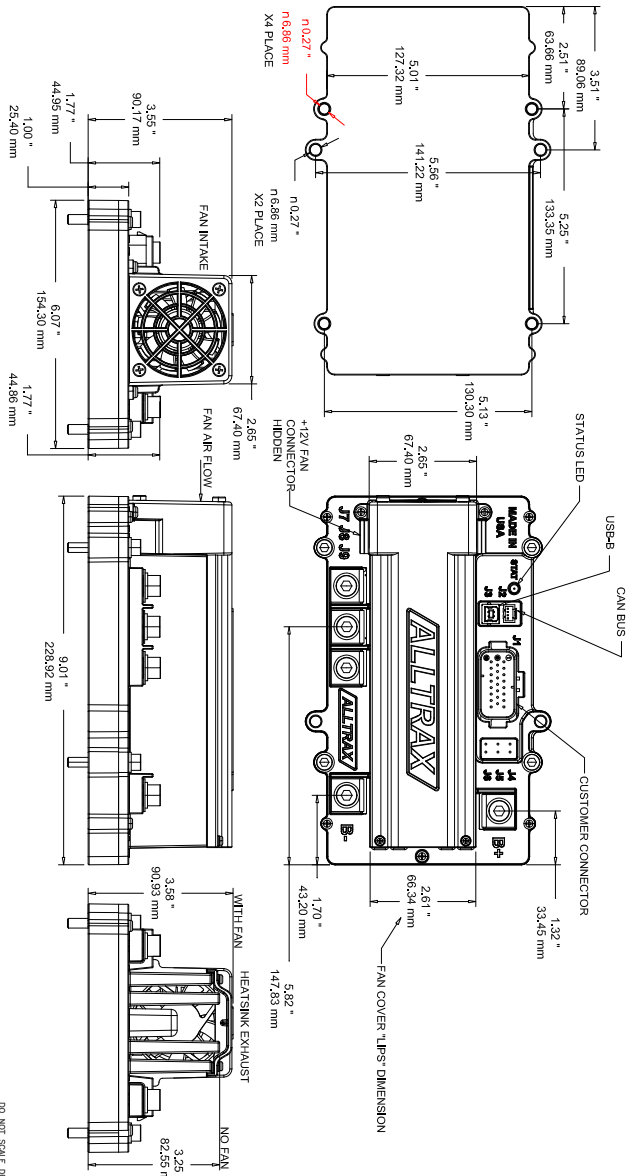
REV.	ECO.	DATE	APPRO.	DWG. SCALE	NTS
A	032016	032016	RC	1/2" ANS10	400A
B	032217	032217	RC	1/2" ANS10	400A

TITLE	FILE	DOC	NO.	REV.
SR to Generic PM No Reverse Wiring Diagram	1111 Cherry Creek Rd. Phoenix, AZ 85027	1111-0044	1044	B

CONTROLLER DIMENSIONS

Note: Customer and Power Connectors vary depending on controller model. For sizing and mounting reference only.

CONTROLLER DIMENSIONS

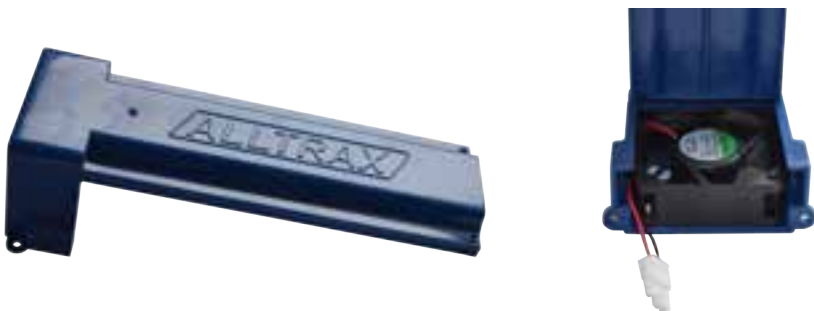


DIMENSIONS:
US INCHES
[METRIC]

REVISIONS				DWG SCALE: NTS			
REV.	ECO.	DATE	AP'D	DESIGN	REVISION	DATE	AP'D
A	120814	021615	RC	DESIGN	111114		
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED: 111114			
				TITLED:			

FAN COVER (OPTIONAL)

The XCT family of controllers also includes an optional Fan Cover. This cover comes standard on the 500A & 600A controllers.

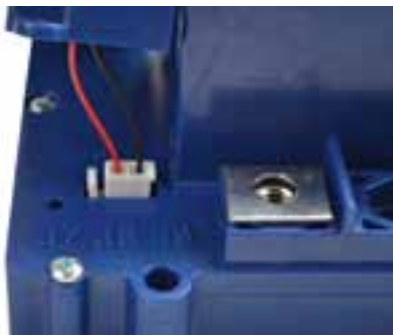


Installation:

1) Plug Fan Cover into controller fan port. (See picture)

2) Fasten cover down with the four (4) supplied screws.

Note: Make sure wires are tucked out of the way and are not being pinched by the cover.



USER (PERSONALITY) TAB

Alltrax SR controllers come equipped with a User Input tab to switch between 2 different personality profiles. The User Mode can be activated by a simple toggle switch (see drawings for wiring). User personality profile are programmed via the Alltrax Toolkit software.

Adjustable settings include:

- Max Motor Amps
- Max Battery Amps
- Max Forward Motor Speed
- Max Reverse Motor Speed
- Throttle Rate
- Peak Amp Mode

Visit our website for more information on programming the controller including the Alltrax Toolkit Manual (DOC113-002) and instructional videos.



PROGRAMMING THE CONTROLLER

Controllers ordered for stock configurations are pre-programmed from Alltrax and it is not necessary to re-program unless the customer has specific needs. If the controller does need to be programmed it can be done via a USB A to B cable and the Alltrax Toolkit program. Visit our website for more information on programming the controller including the Alltrax Toolkit Manual (DOC113-002) and instructional videos.

Settings Screen



The cable to is the USB-A to B. This is the most common USB printer style cable available.

Controller Info Tab



Throttle Screen



Monitor Screen



BLINK CODES

The throttle code blinks on controller power up and alarm codes blink when the alarm happens. All alarms are self clearing so when the alarm event is over, the controller resumes normal operation, except for the Short Circuit alarm that needs a power off cycle to clear the alarm.

Throttle codes:

1 Green LED Flash	=	0-5k throttle
2 Green LED Flash	=	5K-0 throttle
3 Green LED Flash	=	0-5V throttle
4 Green LED Flash	=	EZGO ITS throttle
5 Green LED Flash	=	0-1k Yamaha throttle
6 Green LED Flash	=	6 to 10.5 Taylor Dunn throttle
7 Green LED Flash	=	Club Car 5k-0 3 wire throttle
8 Green LED Flash	=	Reserved
9 Green LED Flash	=	Pump
10 Green LED Flash	=	USB Throttle
11 Green LED Flash	=	Absolute Throttle

Normal Display Status:

Solid Green Light	=	Controller Ready to Run
Solid Red Light	=	Controller in programming mode
Solid Yellow Light	=	Throttle is wide open and the controller is <u>NOT</u> in Current Limit
Blinking Yellow Light	=	Throttle is wide open, but the controller is in Current Limit

Error Codes:

SR error codes are different than the AXE/DCX alarm codes in that they will flash Green and Red, instead of just Red.

1 Green and 1 Red LED Flash	=	Short Circuit
1 Green and 2 Red LED Flash	=	Battery Under Voltage
1 Green and 3 Red LED Flash	=	Battery Over Voltage
1 Green and 4 Red LED Flash	=	M- Over temperature
1 Green and 5 Red LED Flash	=	Bus Bar Over temperature
1 Green and 6 Red LED Flash	=	Pre-charge Failure
2 Green and 1 Red LED Flash	=	Under Temp
2 Green and 2 Red LED Flash	=	Not Used
2 Green and 3 Red LED Flash	=	High Throttle Over range
2 Green and 4 Red LED Flash	=	High Throttle Under range
2 Green and 5 Red LED Flash	=	Low Throttle Over range
2 Green and 6 Red LED Flash	=	Low Throttle Under range
3 Green and 1 Red LED Flash	=	Uncalibrated throttle
3 Green and 2 Red LED Flash	=	Bad Variable Set Loaded

Error Code Definitions:

- **Short Circuit/Output Fault:**
Controller detected a short circuit or other fault on the output circuit. Check wiring.
- **Battery Under Voltage:**
B+ Voltage lower than Low Voltage Battery Setting. Check pack voltage or program settings.
- **Battery Over Voltage:**
B+ Voltage Higher than Over Voltage Battery Setting. Check pack voltage or program settings
- **Over temperature:**
Busbar temperature exceeds 85°C. Let controller cool and/or add fan.
- **Motor Field Failure:**
Controller detected a short in the field circuit. Check motor resistance and or replace field wires.
- **Pre-charge Failure:**
B+ voltage and KSI voltage differ by more than 5v. Stuck solenoid.
- **Under Temp:**
Busbar Temperature reads less than -20°C
- **High Throttle Over range & High Throttle Under range:**
High Side of throttle signal is outside of acceptable window for that throttle type. Check and/or replace throttle. Change throttle type to correct throttle installed on car.
- **Low Throttle Over range & Low Throttle Under range:**
Low Side of throttle signal is outside of acceptable window for that throttle type. Check and/or replace throttle. Change throttle type to correct throttle installed on car.
- **Uncalibrated throttle:**
Throttle boundaries not found. In Toolkit program, select another throttle then re-select correct throttle type.
- **Bad Variable Set Loaded:**
Alltrax loaded variable data is missing or corrupted. Contact Alltrax.

WARRANTY STATEMENT

Alltrax, Inc., (hereafter Alltrax) warrants that the product purchased is free from defects in materials or workmanship for a period of 2 years from the date of manufacture. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs, improper installation, submersion, alterations or use contrary to any instructions provided by Alltrax in verbal or written form.

In the event you should need warranty repair, contact Alltrax at (541) 476-3565 to receive warranty service authorization instructions for returning the defective product to Alltrax for evaluation. Products or parts shipped by customer to Alltrax must be sent postage paid and packaged appropriately for safe shipment. Alltrax is not responsible for customer products received without warranty service authorization and may be rejected.

Alltrax reserves the right to repair or replace merchandise at its option at no cost to the customer, except for shipping costs of sending the defect item to Alltrax. Replacement shall mean furnishing the customer with a new equivalent product to the defective item. Alltrax also reserves the right to make changes to any of its products or specifications without notice.

Alltrax assumes no liability for applications assistance or customer product design. Customers shall be responsible for evaluating the appropriateness of the use of any Alltrax product in any application. Customers shall provide adequate design and operating safeguards that are in compliance with standard practices of other similar applications or any standards of any governing agency.

THIS IS ALLTRAX INC.'S, SOLE WARRANTY.

NO REPRESENTATIVE EMPLOYEE, DISTRIBUTOR OR DEALER OF ALLTRAX HAS THE AUTHORITY TO MAKE OR IMPLY ANY WARRANTY, REPRESENTATION, PROMISE OR AGREEMENT, WHICH IN ANY WAY VARIES THE TERMS OF THIS LIMITED WARRANTY.

ALLTRAX PRODUCTS SOLD TO CUSTOMER ARE INTENDED TO BE USED ONLY IN THE APPLICATION SPECIFIED BY THE CUSTOMER TO ALLTRAX. ANY OTHER USE RENDERS THE LIMITED WARRANTY EXPRESSED HEREIN AND ALL IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED.

DISCLAIMER OF IMPLIED WARRANTIES

ALLTRAX, INC., SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OR MISUSE OF OUR PRODUCTS.

EXCEPT SPECIFICALLY PROVIDED HEREIN, THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HOWEVER, SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE PRECEDING EXCLUSION MAY NOT APPLY TO YOU.

