POWERTOUCH Remote Control Systems

PowerTouchNine: 9 Channel Remote Control System - Series 919

SAVE THIS IN YOUR GLOVE COMPARTMENT

This Booklet Contains Your Owner's Manual, Installation Instructions, And Product Warranty. Save This With Your Purchase Receipt For Future Reference And Warranty Service.

PowerTouchNine Owner's Manual

The PowerTouchNine is a nine channel radio remote control system. The system consists of a receiver unit, and one or two oval transmitters. The PowerTouchNine can perform as a keyless entry system and as a controller for motors. The PowerTouchNine is a powerful and flexible remote control, with many options for controlling doors, locks, ramps, lifts, winches, hoists, and motors.

The transmitters have up to nine push button switches, labeled 1 through 9. These buttons are used to transmit nine different signals. There are extra outputs available to chirp the horn or operate a hydraulic pump. All of the relay output circuits are 15 amp, +12vdc or ground. Motors which require *reversal rest @ ground* circuits can be wired directly to the PowerTouchNine remote control receiver.

Ch / Btn	Suggested Function	Description	Relay Output
Ch 1 / Btn 1	Motor up or down or Door lock plus horn chirp	Momentary	+12v or GND
Ch 2 / Btn 2	Motor up or down	Momentary	+12v or GND
Ch 3 / Btn 3	Motor up or down or Door unlock plus courtesy light	Momentary	+12v or GND
Ch 4 / Btn 4	Motor up or down	Momentary	+12v or GND
Ch 5 / Btn 5	Motor up or down	Momentary	+12v or GND
Ch 6 / Btn 6	Motor up or down	Momentary	+12v or GND
Ch 7 / Btn 7	Motor up or down - Lights on/off	Momentary or Latching	+12v or GND
Ch 8 / Btn 8	Motor up or down - Lights on/off	Momentary or Latching	+12v or GND
Ch 9 / Btn 9	Motor up or down - Lights on/off	Momentary or Latching	+12v or GND

Features

•Any 2 channels can be selected to directly operate a motor which requires a reversal rest at ground circuit.

•All outputs are factory set as momentary. Three outputs can be programmed for latching applications. - Call the factory for this option

•A horn chirp is available on channel 1.

•An alarm activation / status signal is available on channel 1 and channel 3.

•An optional 20 second courtesy light is activated on channel 3.

•An optional relay can be programmed to operate a hydraulic pump.

•Custom software programming is available for special needs.

•Easy installation due to unique design.

Installation:

1. Review your requirements and select the device you want to operate, then identify the circuit and current required to operate the device. If the device is a motor, determine the convenient button operation and note the corresponding channel and relay output. (the striped wire)
2. Connect all of the output wires using the wiring table on page 3 and diagrams on pages 5 and 6.
3. Connect +12v logic power (J5-1) and logic ground (J5-4) wires. Do not use a +12v motor or relay power wire to supply +12 volt to logic +12v. This may cause a voltage dropout of the logic power when the motor turns on.
4. Connect both of the relay power +12v wires (J3-3 - relays 1- 4 and J3-4 - relays 5 - 8).
5. Connect any other wires such as, safety lock-out circuit, horn chirp, ignition, courtesy, or auxiliary relays.
6. Route the antenna wire as high as possible and as close to a window as possible. For best range, do not route antenna wire in an area that is surrounded by metal or tinted glass as metal blocks RF signals. Do not route antenna wire in a bundle of other wires, as this will cause RF interference and reduce range.

Range: The range of your remote control will be determined by the location of the vehicle, and electromagnetic environment of the vehicle (the presence of competing radio signals), as well as the position of the receiving antenna in the vehicle. Standard range is between **50** feet and **150** feet, under good conditions the range can exceed 200 feet*. An increase in range can be achieved by holding the top edge of the transmitter against your chin while transmitting. If both transmitters have short range, the problem could well be competing signals from radio transmitters nearby, which will likely be temporary. If the transmitter range becomes reduced, replace the transmitter battery using the following procedures.

a. Remove the small screws from the back of the transmitter and open the unit.
b. Remove old battery and replace with new 9v dc battery. Make sure battery cap is securely attached.
c. Replace back and tighten screws
d. Check transmitter function.

*A receiver may be ordered with an external mounting antenna to boost the range to over 300 feet.

7. *REVERSAL-REST-AT-GROUND CIRCUITS (used when operating DC motors for door lock or windows):* In most cases the driver's door lock switch is considered the master switch and provides ground for the entire door lock system. To verify, test both ends of the cut door lock wire. The end that remains grounded is the end that goes to the master switch. If the driver's switch is not the master switch, then reverse the connections at each end of the wire cuts shown in the diagram. If connections are wrong, the fuse will blow.
8. The white wire in J5-6 is a +12v safety disable input and can be used to disable the 919 receiver. See figs 5.1, 5.2, 7.5, 7.6, and 7.7 to select a circuit which meets your vehicles specifications. You may want to disable the 919 remote control system when your vehicle is in gear if you have a handicap lift or front opening doors on your street rod.

WARNING: If wiring the PowerTouch to operate door openers or motors, install the safety disable circuit. Figures 7.2, 7.3, and 7.4.

Mounting: Mount the receiver in a dry location inside the vehicle or trunk. The engine compartment is not a good environment for the receiver due to dirt, dust and moisture. Mount the receiver a minimum of 4 feet from any motors. The magnetic field generated by 12vdc motors can decrease performance of the remote control. If the receiver is mounted inside a metal box or compartment, the antenna wire must be mounted outside the box or compartment.

<u>919 Series PowerTouch Specifications:</u>

FCC Approved
Frequency: 300 MHz
Range: 75 feet to 150 feet
Available codes: 20,000

Receiver:

Operating Voltage: 10 - 14 VDC
Standby Current: <10mA
max board operating current (5 relays energized): <300mA
max available current through relay contacts: 15 Amps

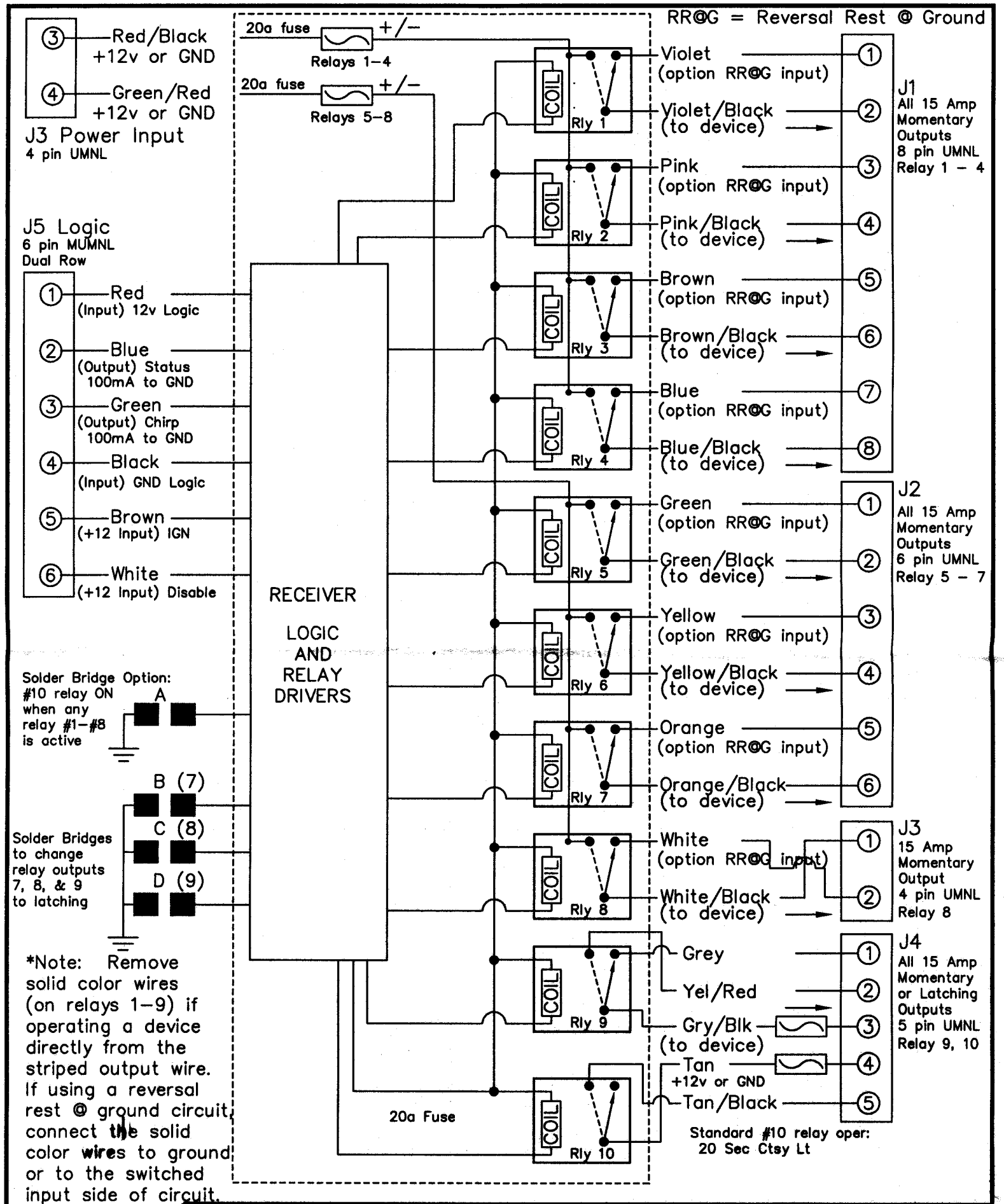
Transmitter:

Operating voltage: 7 - 12 VDC
Batteries: 10,000 One Second Pulses
Number of buttons (channels): 9 maximum
*Use 9V alkaline batteries

Wire Table:

Output polarity on relays 1 - 4 is dependent upon power connector J3-3 input.
Output polarity on relays 5 - 8 is dependent upon power connector J3-4 input.
*Option input for reversal rest @ ground
**The #9 relay is an independent relay and it is not connected to any other relays #1 - #8. To use this relay in a reversal rest @ ground circuit, see drawing 919-9rly.

Conn/ Pin#	Wire Color	Wire Gauge	Input / Output	Description
J1-1	Violet	18	Input	# 1 Relay *
J1-2	Violet / Black	18	Output	# 1 Relay Output to device
J1-3	Pink	18	Input	# 2 Relay *
J1-4	Pink / Black	18	Output	# 2 Relay Output to device
J1-5	Brown	18	Input	# 3 Relay *
J1-6	Brown / Black	18	Output	# 3 Relay Output to device
J1-7	Blue	18	Input	# 4 Relay
J1-8	Blue / Black	18	Output	# 4 Relay Output to device
J2-1	Green	18	Input	# 5 Relay *
J2-2	Green / Black	18	Output	# 5 Relay Output to device
J2-3	Yellow	18	Input	# 6 Relay *
J2-4	Yellow / Black	18	Output	# 6 Relay Output to device
J2-5	Orange	18	Input	# 7 Relay *
J2-6	Orange / Black	18	Output	# 7 Relay Output to device
J3-1	White / Black	18	Input	# 8 Relay *
J3-2	White	18	Output	# 8 Relay Output to device
J3-3	Red / Black	18	Input (+)	Power - GND Fused (relays 1 - 4)
J3-4	Green / Red	18	Input (-)	Power - GND Fused (relays 5 - 8)
J4-1	Gray	18	N.C. Input	# 9 **Relay Output to device
J4-2	Yellow / Red	18	N.O. Output	# 9 **Power
J4-3	Gray / Black	18	Input (+) / (-)	# 9 **Relay Output to device-Fused
J4-4	Tan	18	Input (+) / (-)	# 10 Power - Fused
J4-5	Tan / Black	18	Output *	# 10 Option Relay
J5-1	Red	20	Input (+)	Logic +12v DC Battery
J5-2	Blue	20	Output (-)	Status signal for alarm
J5-3	Green	20	Output (-)	Chirp to Horn (100mA) (-) signal
J5-4	Black	20	Input (-)	Logic Ground
J5-5	Brown	20	Input (+)	Logic +12v DC ignition
J5-6	White	20	Input (+)	Disable signal to turn off module



NAME TOUCHTRONICS, INC. v

ELKHART, INDIANA
PH: 219–294–2570 – FX: 219–293–1611

TITLE 9 Channel Remote Control Wiring Diagrams

Page –4–

DWG DATE	DWG #	REV #	REV DATE
12.09.97	9chnnl1	B	03.16.98

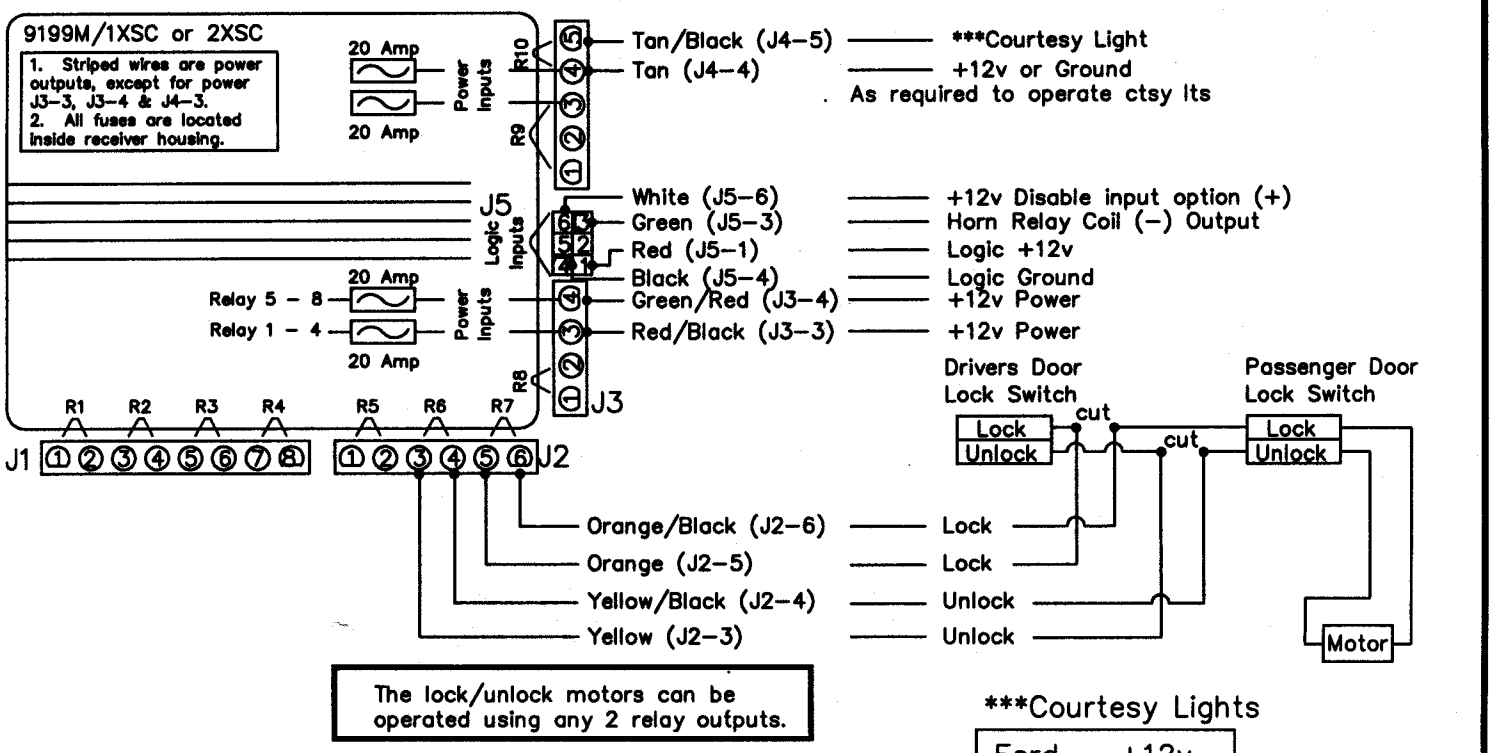
Fig 5.1

Reversal Rest @ Ground Circuit

Most Ford & Chrysler vehicles and some GM trucks

Lock/Unlock: Reversal Rest @ Ground

See figures 7.5, 7.6, & 7.7 for Door Lock / Unlock and Window Circuits



The lock/unlock motors can be operated using any 2 relay outputs.

***Courtesy Lights

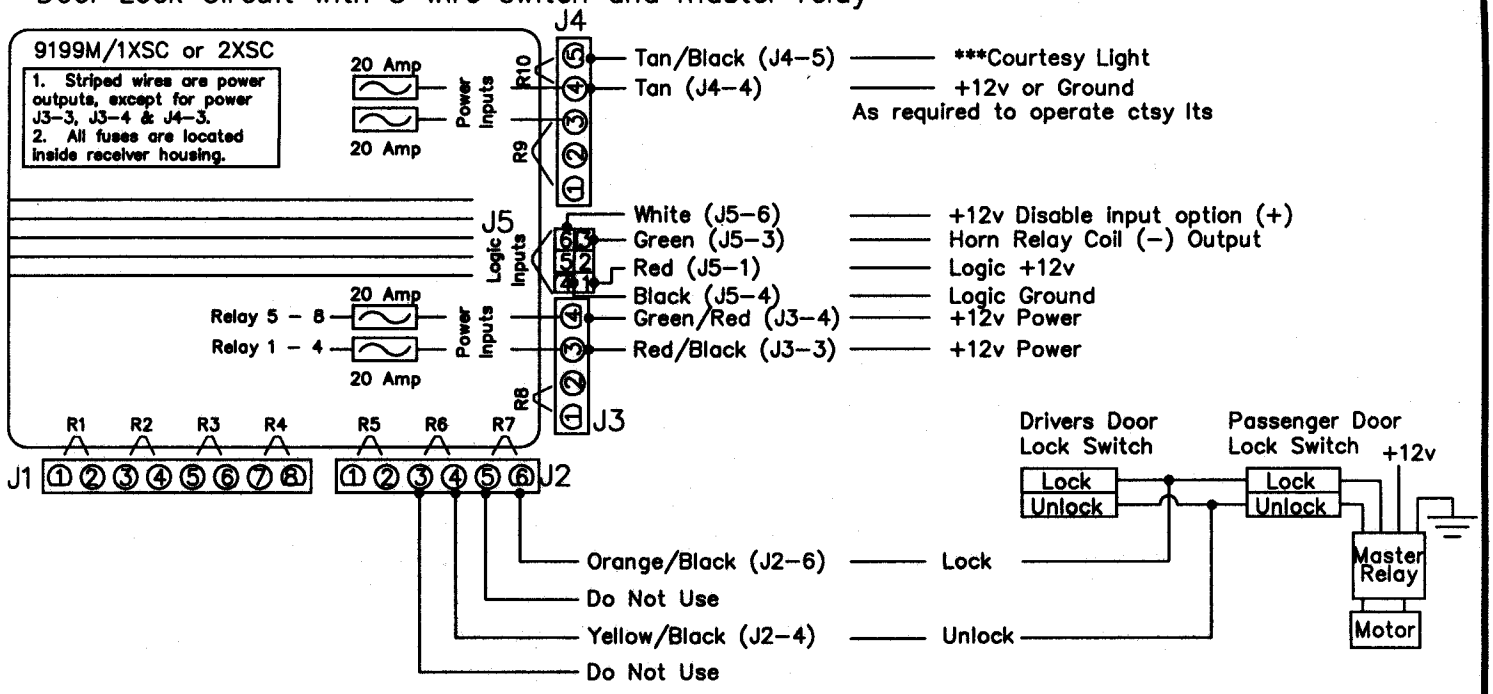
Ford – +12v
GM – GND
Chrysler – GND

Fig 5.2 Master Relay Circuit

Positive Pulse – Most GM vehicles

Negative Pulse – Most foreign vehicles and Ford Explorer

Door Lock Circuit with 3 wire switch and master relay



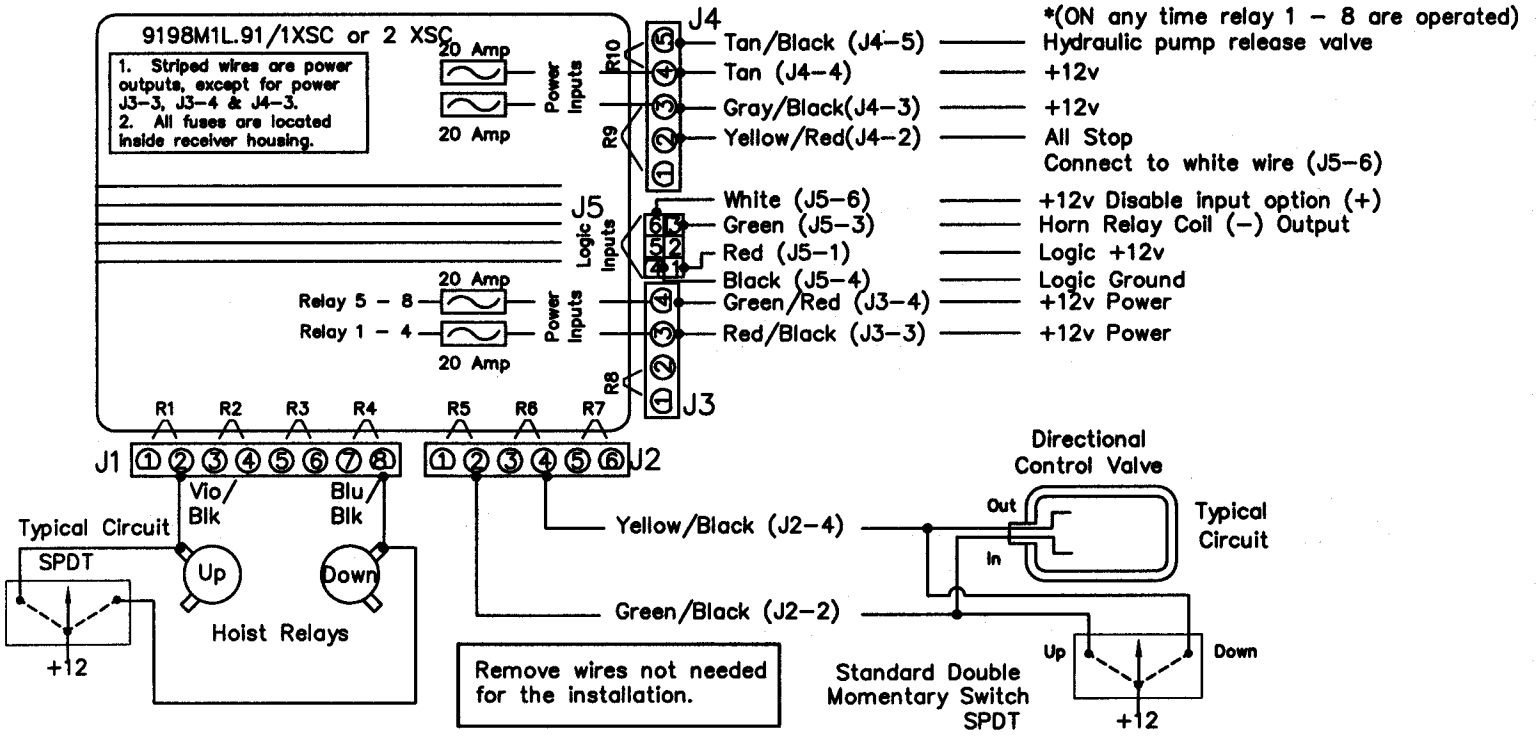
NAME	TOUCHTRONICS, INC. v	TITLE	9 Channel Remote Control Wiring Diagrams
	ELKHART, INDIANA PH: 219-294-2570 – FX: 219-293-1611		Page -5-

DWG DATE	DWG #	REV #	REV DATE
01.12.98	9chnnl-b	C	07.25.00

Fig 7.1

DC motor with optional Hydraulic pump with all stop button

*Note: The hydraulic pump release valve option must be ordered from the factory.



Safety Disable Circuits: Options 1, 2, & 3

Fig 7.2 (Option 1)

Mount a proximity switch (magnetic switch or limit switch) on the gear display needle bracket. TouchTronics p/n: Sws.080

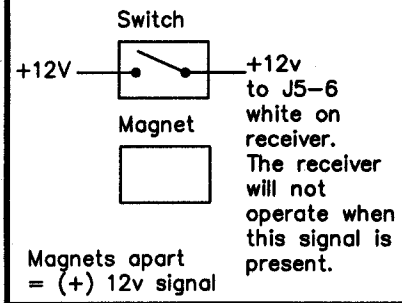


Fig 7.3 (Option 2)

Safety circuit with limit switch

Limit switch n.c. when vehicle is in park
Limit switch n.o. when vehicle NOT in park
M = Door latch motor solenoid

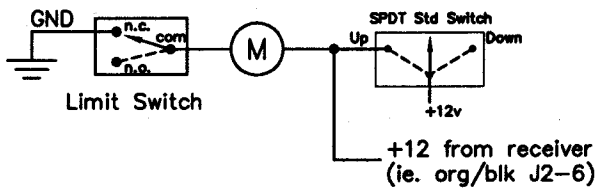
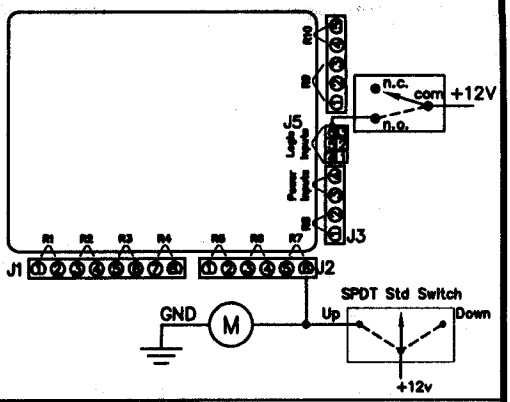


Fig 7.4 (Option 3)

Limit switch n.c. when vehicle is in park
Limit switch n.o. when vehicle NOT in park
M = Door latch motor solenoid



Door Lock / Unlock or Window Circuits

Fig 7.5 Typical Reversal Rest ⊖ Ground circuit with master and slave switch

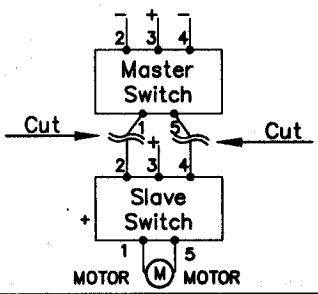


Fig 7.6 Reversal Rest ⊖ Ground Motor with Switch 1 & 5 output switch polarity when activated and are ground when

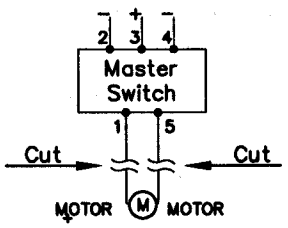
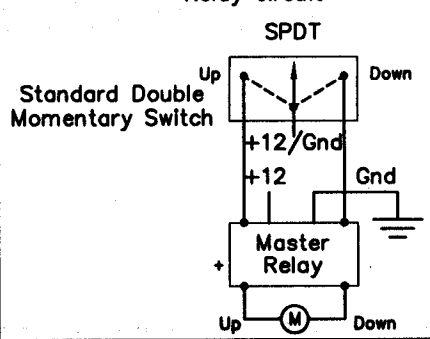


Fig 7.7 Typical Master Relay circuit



NAME

TOUCHTRONICS, INC.

ELKHART, INDIANA
PH: 219-294-2570 - FX: 219-293-1611

TITLE 9 Channel Remote Control Wiring Diagrams

DWG DATE	DWG #	REV #	REV DATE
01.12.98	9chnnl-b	C	07.25.00

Trouble Shoot Guide:

1. The remote control system does not work or is dead.
   a. Check the logic +12v and logic ground connections. If the connections are not good, the receiver will not operate.
   b. Check the fuses located inside the receiver, replace them if they are blown.
   c. Check the batteries on the transmitter. If they are dead or the voltage is below 8.5 volts, replace them.
   d. Check the system disable input J5-6 (white wire). Does this wire have +12 voltage? If so, remove the +12v, the receiver should now work.
2. The relays click but there is no output.
   a. Check fuses inside the receiver. Replace them if they are blown.
   b. Check the power inputs, J3-3, J3-4, J4-3, and J4-4. There should be +12v on each input
3. The motor works with the switch, but not with the remote control or the motor will only travel in one direction.
   a. Check the switch function. What type of switch diagram do you have? Most 12vdc motors require a reversal rest at ground circuit. There are special switches which can directly operate a reversal rest at ground circuit. If you do not have a special reversal rest at ground switch, the switch will operate the motor, but the remote control will not operate the motor or it will only operate the motor in one direction. To correct the problem, you will need to get a reversal rest at ground switch or use a pair of relays to simulate the circuit and use a SPDT switch the same as the switch used in a master relay circuit.
4. A fuse blows everytime the motor operates.
   a. If the circuit is a reversal rest at ground circuit, you must cut (fig 4.5) the wires between the master switch and slave switch or cut (fig 4.6) the wires between the switch and motor. Wire the circuit per figure 5.1.
5. The remote control has poor range, less than 20 feet.
   a. Check the antenna wire. Is the antenna wire exposed to the air? RF signals do not pass through metal or tinted windows.
   b. Is the antenna wire wrapped inside a bundle of wires? If it is, remove the antenna wire and route it by itself to an exposed location.

FCC STATEMENT

Because of the limited space on the PowerTouch transmitter case, the notice of compliance with FCC rules is printed here: This device complies with Part 15 of FCC Rules. Operation of this device is subject to the following two conditions. (1) This device may not cause harmful interference. (2) This device must accept any interference that may be received, including interference that may cause undesired operation.

TouchTronics, Inc.
Limited 1 Year Warranty Policy

Section One

Seller will warranty any product originally manufactured and sold by seller for a period of 12 months (1 year) from the original retail sale or in-service date. It is the purchaser's responsibility to complete the warranty registration card and mail it to seller within thirty (30) days of the retail sale date. Seller will not warrant any product that does not have a warranty card on file with the seller's warranty department. Warranty card must be received within one year of the date of manufacture.

Section Two

The following are in lieu of all warranties, express, implied or statutory including but not limited to, any implied warranty of merchantability of fitness for a particular purpose and of any other warranty obligation on the part of seller. Seller, except as otherwise hereinafter provided, warranty the goods against faulty workmanship or the use of defective materials for a period of one year.

Seller's sole and exclusive liability shall by (at seller's option) to repair, replace or credit buyer for and such goods which are returned by buyer during the applicable warranty period set forth above, provided that (1) seller is promptly notified in writing or phone upon discovery by buyer that such goods failed to conform and an explanation of any alleged deficiencies, (II) such goods are returned to seller, (III) seller's examination of such goods shall disclose that such alleged deficiencies actually exist and were not caused by accident, misuse, neglect, alteration, improper installation, unauthorized repair or improper testing. If seller elects to repair or replace such goods, seller shall have a reasonable time to make such repairs or replace such goods.

Seller's warranties as herein above set forth shall not be enlarged, diminished, or affected by, and no obligation or liability shall arise or grow out of, seller's rendering of technical advice or service.

Products damaged by the customer or during installation cannot be claimed as a warranty. All devices returned that are not covered under the seller's warranty policy, will be charged a minimum of $25.00 for evaluation plus additional charges for components and labor to repair the device not to exceed the original selling price. Seller considers the following to be typical examples of customer or installation damage: burned or broken traces on the printed circuit board, burned or damaged components, dirt or water residue on the printed circuit board or inside the case, modifications by the customer, broken cases or housings and dead batteries.

Section Three

A return material authorization number (RMA) must be issued by seller before any product is returned for evaluation or repair. Warranty repairs must be completed at authorized repair facilities.

TOUCHTRONICS, INC.

57315 Nagy Drive
Elkhart, IN 46517

email: touchtronics@touchtronics.com
web site: www.touchtronics.com

ph: 219-294-2570
fx: 219-293-1611

TOUCHTRONICS, INC.

57315 Nagy Drive
Elkhart, IN 46517

web site address: www.touchtronics.com
e-mail address: touchtronics@touchtronics.com

ph: 219-294-2570
fx: 219-293-1611

Coding 919 Series Transmitters

02/05/01

Document: D919-d1.doc
Revision A - 04.03.01

The receivers in the 919 series of remote controls are designed to learn any 919 series transmitter code. The following instructions will tell you how to place the receiver in the "Learn Mode". The receiver can learn up to four different transmitter codes.

Coding the Transmitter:

1. Turn transmitter power switch 'ON'. The power switch is located on the side of the transmitter.
2. **To prevent functions from operating during the coding process, disconnect the relay outputs by unplugging connectors 'J1' and 'J2'.**
3. Press and hold the **#1** button on the transmitter ***while*** *you are doing step* ***#4 (a or b)***.
4. To place the receiver into "learning mode"
   a) Take the brown wire, located in connector J5 - position 5, (small 6-pin connector) and touch it three (3) times to a +12v source within a 5-second time period.
   b) In some cases, a momentary toggle switch has been installed which provides this "learning mode" signal. Turn toggle switch 'ON' and 'OFF' three (3) times within a 5-second time period.
5) When the code is learned, the channel #1 relay will click 'ON'.
6) Test the newly coded transmitter by pressing all other buttons (1-9) one at a time. If the receiver has correctly learned the new code, the corresponding relay should click 'ON'.
7) If the new code has not been learned by the receiver, try the coding process a second time.

If there are any problems recoding the transmitter, please call the factory at 800-294-2570.