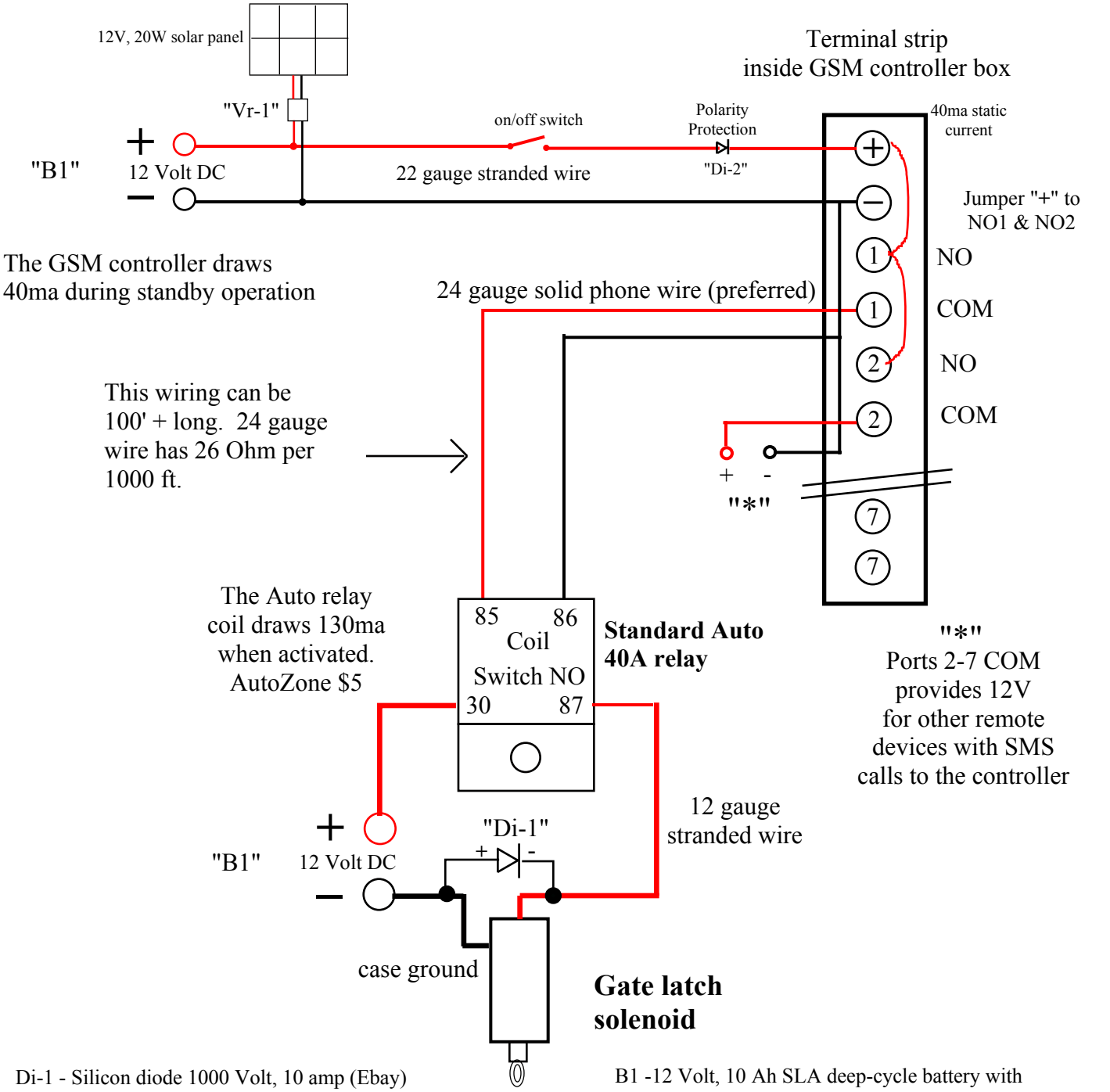
Circuit Diagram (wired operation)

The GSM controller must be switched to MODE0
#PWD123456#MODE0
Also change the time to 500ms
#PWD123456#GOT500

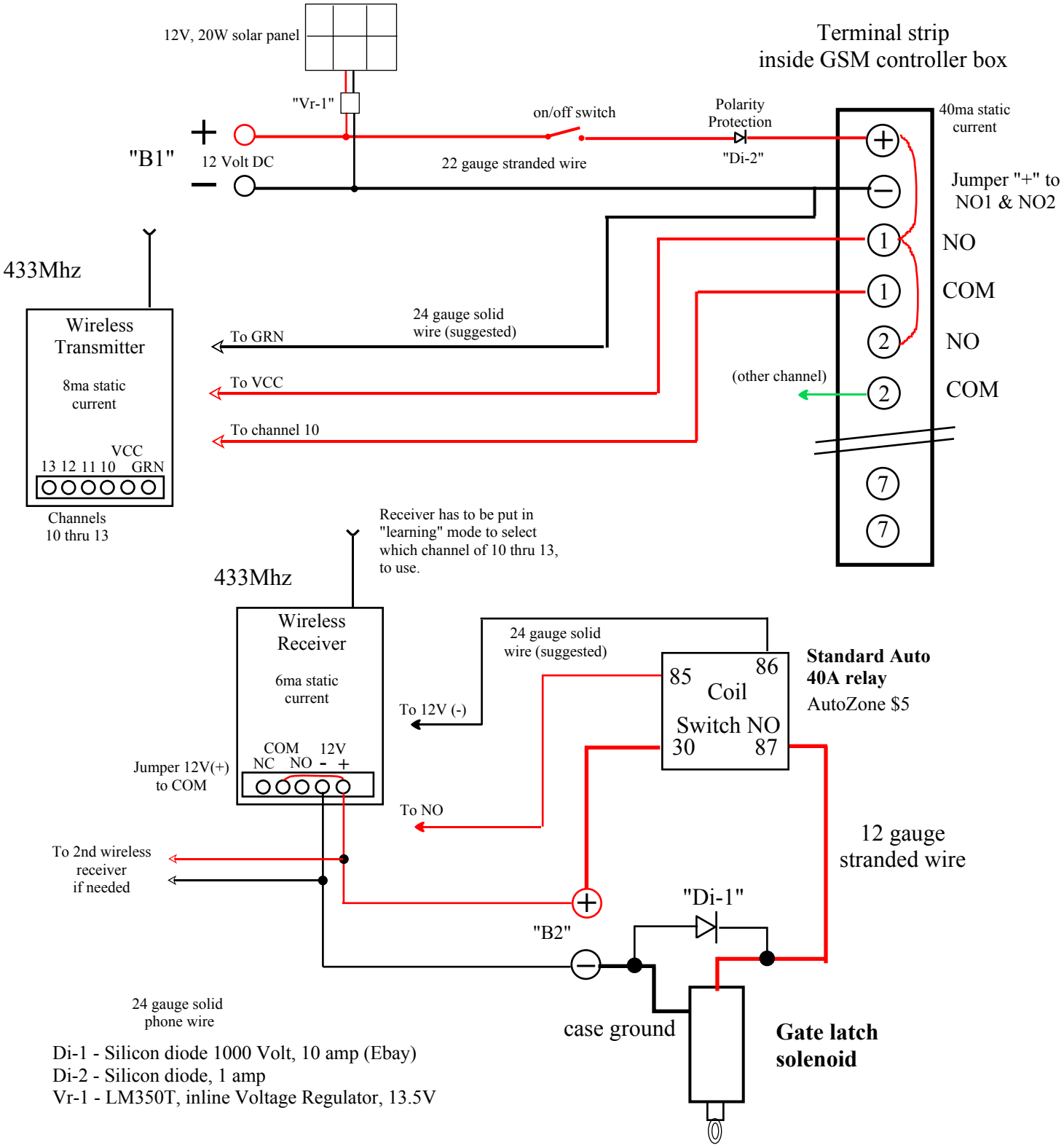


Di-1 - Silicon diode 1000 Volt, 10 amp (Ebay)
Di-2 - Silicon diode, 1 amp
Vr-1 - LM350T, inline Voltage Regulator, 13.5V

B1 -12 Volt, 10 Ah SLA deep-cycle battery with solar panel producing 1.2 amps during peak daylight hours

Notes -
The D1 diode will prevent excessive arcing at the switch contacts inside the Auto Relay.
Port 1 on the GSM Controller will activate the auto relay for a preset amount of time whenever the controller receives a call from a pre-authorized phone number. 500 ms (1/2 second) is sufficient and will not cause overheating of the solenoid. If placing the solenoid and auto relay a long distance from the controller then use another similar battery for it. It will rarely be used and can be recharged manually when needed.

Circuit Diagram (wireless operation)

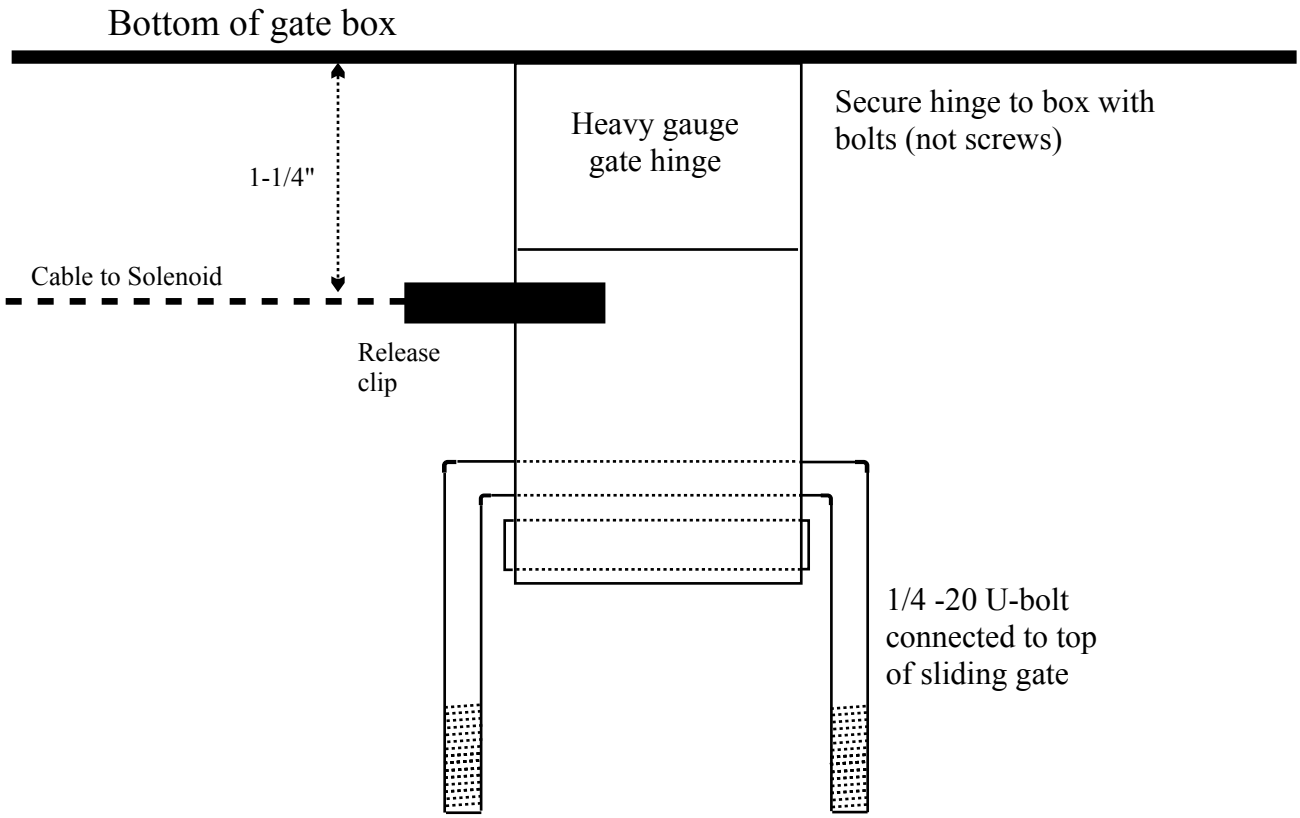


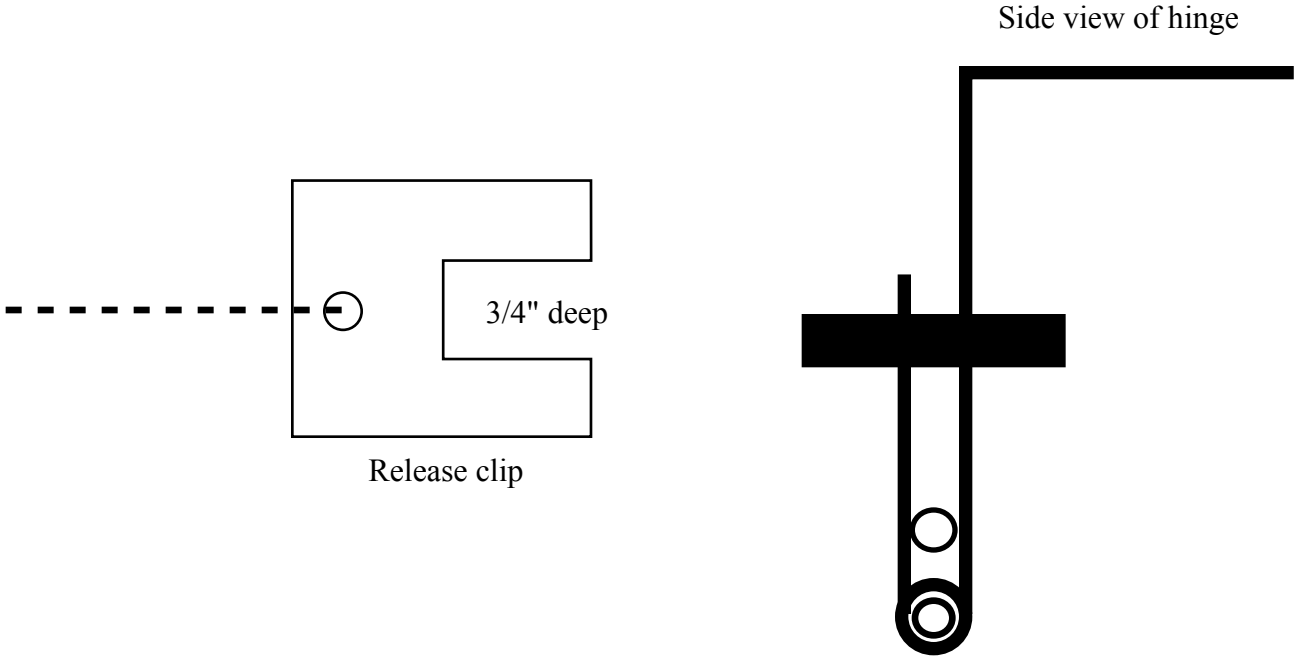
Di-1 - Silicon diode 1000 Volt, 10 amp (Ebay)
Di-2 - Silicon diode, 1 amp
Vr-1 - LM350T, inline Voltage Regulator, 13.5V

B1 - 12 Volt, 10 Ah SLA deep-cycle battery with solar panel producing 1.2 amp during peak daylight hours
B2 - 12 Volt, 10 Ah SLA deep-cycle battery. Suggest 5W solar panel in summer, 10W in winter.

The advantage of wireless operation is that the GSM controller and external antenna can be placed at a site with better cell reception or at a site central to several traps. One X'mtr and four R'cvr's could potentially activate 4 different trap gates or other devices on one trap.

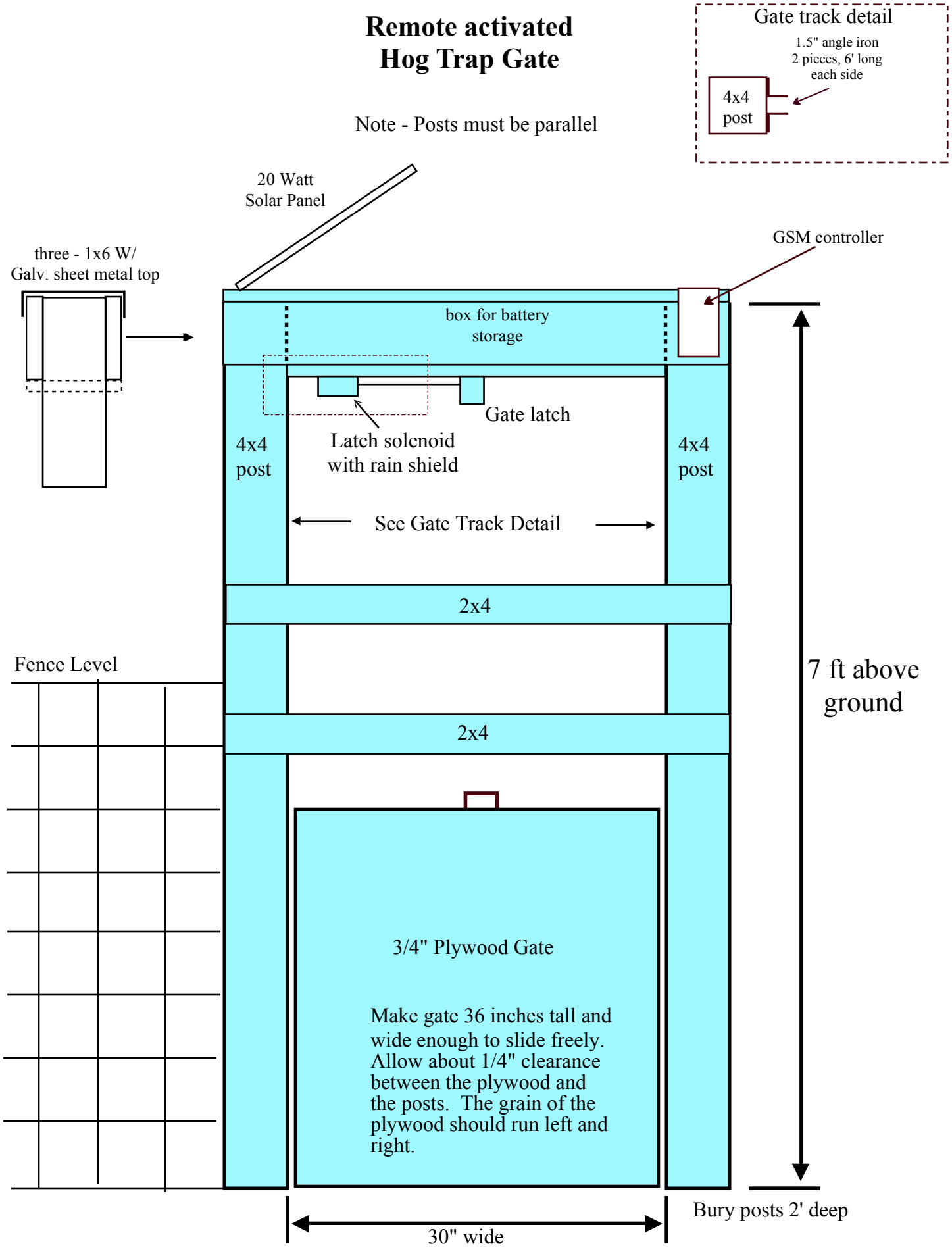
Double set latch
Tested with 50 lb weight





Remote activated Hog Trap Gate

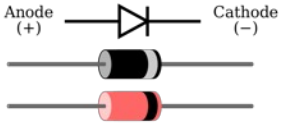
Note - Posts must be parallel



7-Port GSM Controller
Ebay - $129

60# "Door Popper"
Solenoid
Ebay $49

12 Volt SLA battery



Alternate diode markings

Auto Relay
Autozone #4232
$5

DC12V 1 CH Wireless Receiver
433MHz W/ Learning Code

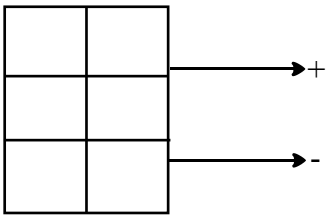
Ebay $5

SC2262 433MHZ ASK
OOK Wireless Transmitter

Ebay $5

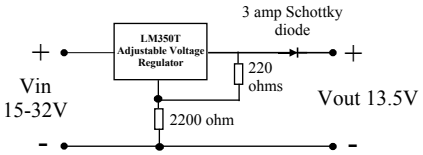
VR-1 Voltage Regulator

20 Watt solar panel



Reverse current diode not needed when using Vr-1

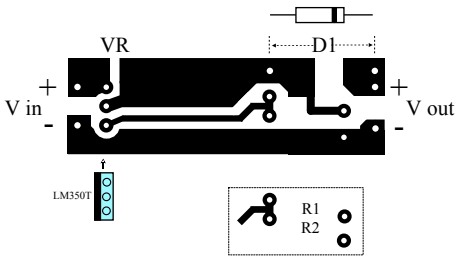
Schematic



R1 - 220 Ohms, R2 - 2200 Ohms (1/4 watt)

Note - the 3 amp diode will prevent backfeed through the resistors when regulating the voltage into a battery

Circuit board
1-5/8" long by 1/2" wide



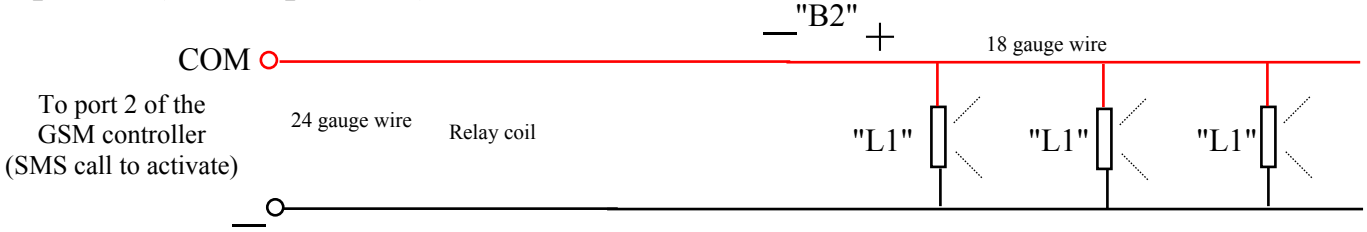
LM317T

Diagram is same for LM350T

Lighting the trap enclosure

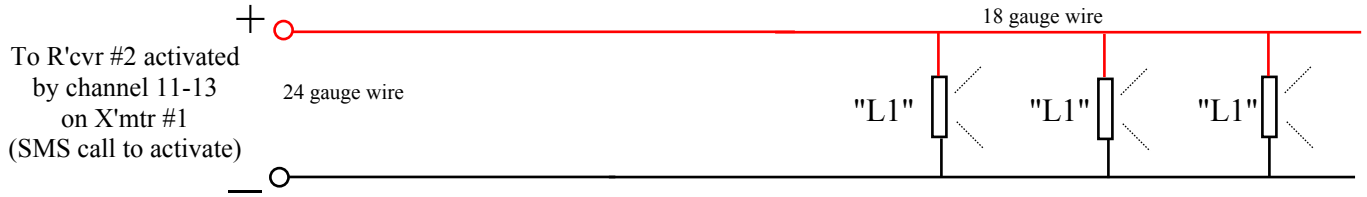
This should enable better night viewing with the MMS game camera

Option 1 (wired operation)



Number of lights should not exceed capability of battery or relay

Option 2 (wireless operation)



L1 - 10 watt Battery powered LED floodlight

Uses 1 Amp

Both available on Ebay

Optional night vision LED floodlight

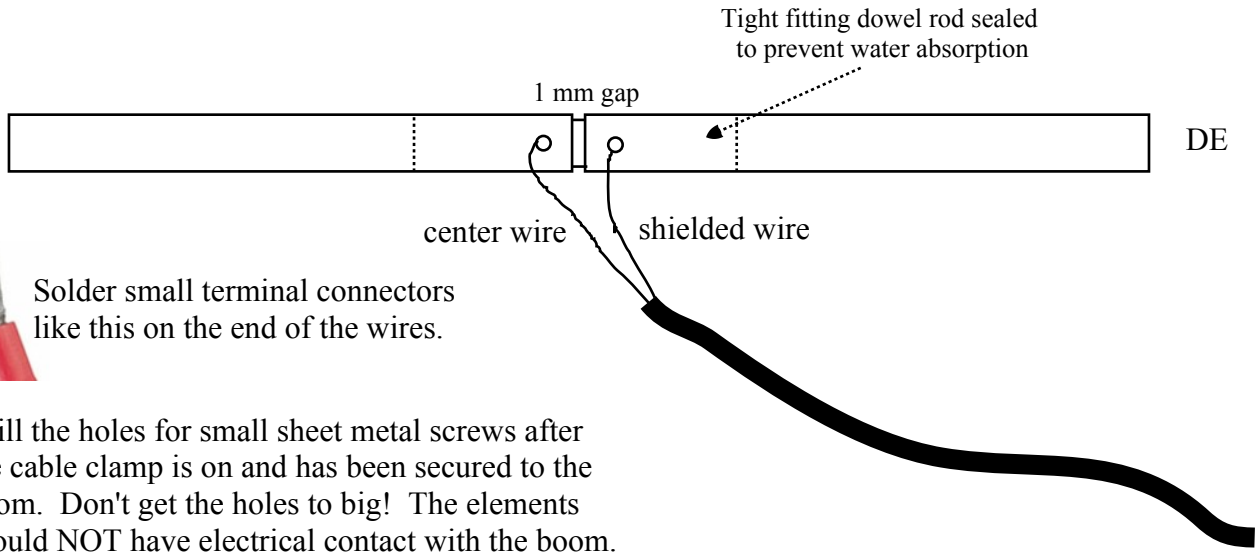
Uses 200ma

Notes -
The lights can be turned on at any time by a SMS call to the appropriate port of the GSM controller. A second call will turn them off. This is called "ratchet" mode operation.

Example 6 element Yagi antenna for the GSM controller

Elem.	Len	Posn.	Diam.	Type	Material
1	181	100	9	Dipole	Aluminum
2	154	169	9	Dipole	Aluminum
3	129	235	9	Dipole	Aluminum
4	117	332	9	Dipole	Aluminum
5	116	386	9	Dipole	Aluminum
6	131	477	9	Dipole	Aluminum

Measurements given in Millimeters. 9 mm = 3/8 inch. Get a metric tape measure. The first element hole will be 100 mm from the rear end of the boom. The DE hole will be 169 mm from the rear end, and so forth. Antenna gain is about 10 dbi.



Solder small terminal connectors like this on the end of the wires.

Drill the holes for small sheet metal screws after the cable clamp is on and has been secured to the boom. Don't get the holes to big! The elements should NOT have electrical contact with the boom.

After done, waterproof the connections with several coats of thick black paint

The antenna can be spray painted if desired.

Cable clamp