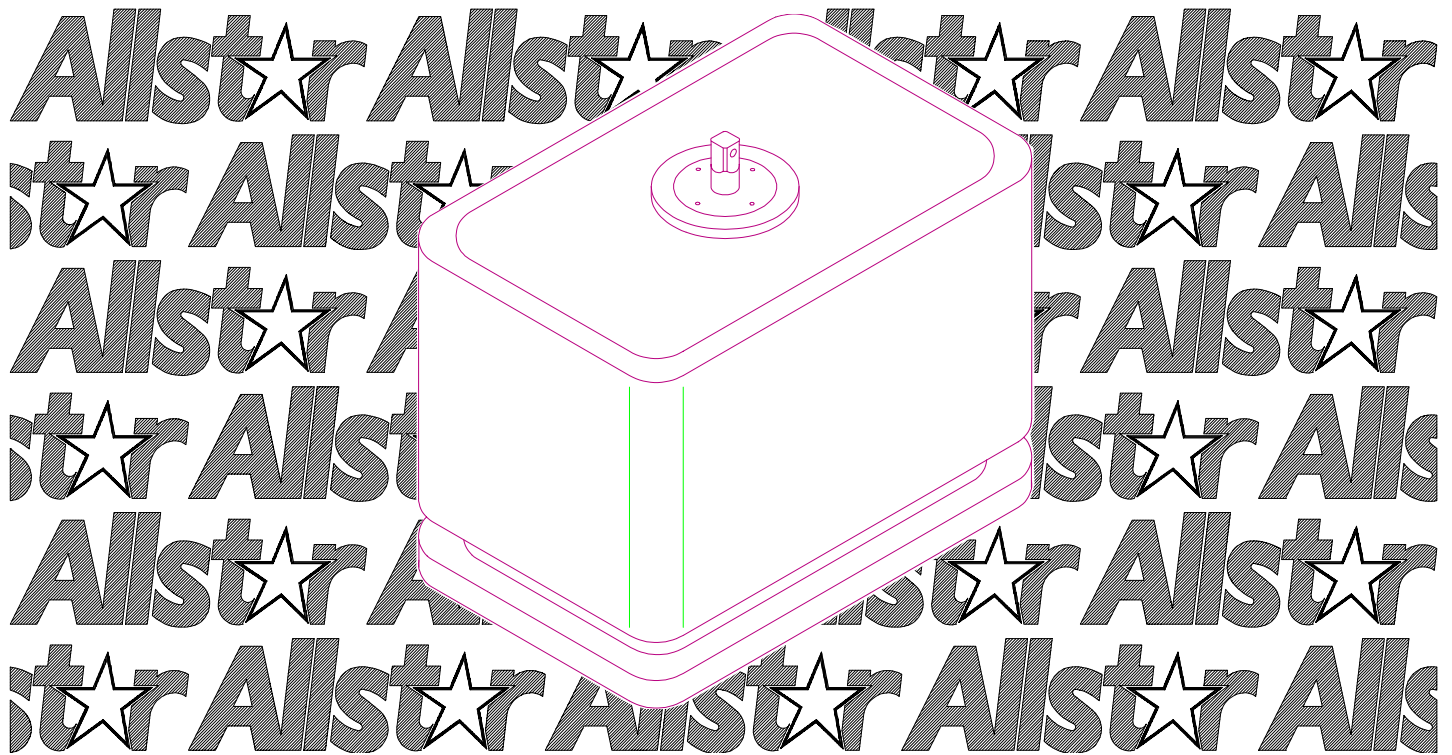


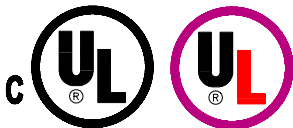
INSTALLATION AND OWNER'S MANUAL

HDSWG 1000

*Heavy Duty Commercial
Vehicular Swing Gate Operator*



104950



As of date of manufacture,
meets all ANSI/UL 325
Safety Requirements for
Vehicular gate operators

Serial #:
Date Installed:
Your Dealer:



**READ THIS MANUAL
CAREFULLY BEFORE
INSTALLATION OR USE**



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READ THESE STATEMENTS CAREFULLY AND FOLLOW THE INSTRUCTIONS CLOSELY.

The Warning and Caution boxes throughout this manual are there to protect you and your equipment. Pay close attention to these boxes as you follow the manual.

WARNING
Indicates a MECHANICAL hazard of INJURY OR DEATH. Gives instructions to avoid the hazard.

CAUTION
Indicates a MECHANICAL hazard of DAMAGE to your gate, gate operator, or equipment. Gives instructions to avoid the hazard.

WARNING
Indicates an ELECTRICAL hazard of INJURY OR DEATH. Gives instructions to avoid the hazard.

CAUTION
Indicates an ELECTRICAL hazard of DAMAGE to your gate, gate operator, or equipment. Gives instructions to avoid the hazard.

The Allstar HDSWG 1000 Vehicular Gate Operator will provide convenience and assurance to the ultimate users for many years. It is ruggedly built of the finest materials and has been thoroughly inspected and tested at the Allstar factory. It has many features that will aid in the installation and testing of the complete gate system. The HDSWG 1000 has been evaluated by Underwriters Laboratory, Inc. (UL) and is certified to comply with UL Standard for Safety 325, as evidenced by the UL symbol on the name plate. (115 Volt version only.)

sensors, protective screen mesh, etc) to eliminate hazards in your gate system design.

* The Allstar HDSWG 1000 built-in overload detector will activate if there is an abrupt increase in motor current above that normally required to move the gate. THE OVERLOAD DETECTION POINT IS AN ADJUSTABLE SETTING THAT MUST BE DETERMINED AT THE TIME OF INSTALLATION. THIS SETTING MUST BE TESTED PERIODICALLY TO ENSURE PROPER OPERATION. THE MORE FREELY THE GATE WILL MOVE THE MORE SENSITIVE THIS SETTING CAN BE MADE.



NOTICE

BEFORE ATTEMPTING INSTALLATION, READ THIS MANUAL CAREFULLY SO YOU WILL BE THOROUGHLY FAMILIAR WITH THE FEATURES OF THE HDSWG 1000 AND ITS PROPER INSTALLATION PROCEDURES.

Because the Allstar HDSWG 1000 (as well as gate operators sold by other manufactures) is designed to start and move gates weighing as much as 1200 pounds, or more,---the Allstar HDSWG 1000 is capable of producing high levels of force. It is important in the design of the total gate system that designers, installers and users be aware of the hazards that may be associated with the **IMPROPER** design, installation and use of Vehicular Gate systems and Gate Operators.

The gate operator is only one part of a complete automatic gate operating system. As each location and usage is different, a properly designed system will include all applicable safety devices.

As the designer and installer of the GATE SYSTEM, you must advise the purchaser on the proper use of the gate system. You also have the primary responsibility of insuring that **ALL** possible operational hazards have been considered and eliminated. **YOU MUST ADVISE AND WARN** the purchaser and the ultimate user of **ANY HAZARDS** that you have not been able to eliminate.

The Allstar HDSWG 1000 has a built-in "overload detector" that can help reduce the hazards of your gate system. This device, however, must not be considered as the primary defense system. Consider all available options (electric leading edges, photoelectric



NOTICE

THE IMPORTANT SAFEGUARDS AND INSTRUCTIONS IN THIS MANUAL CANNOT COVER ALL POSSIBLE CONDITIONS AND SITUATIONS WHICH MAY OCCUR DURING ITS USE. IT MUST BE UNDERSTOOD THAT COMMON SENSE AND CAUTION MUST BE EXERCISED BY THE PERSON(S) INSTALLING, MAINTAINING AND OPERATING THE EQUIPMENT DESCRIBED HEREIN. DO NOT USE THIS EQUIPMENT FOR ANY OTHER THAN ITS INTENDED PURPOSE — OPERATING A SWING GATE.

ADVISE THE PURCHASER TO CHECK THE SENSITIVITY OF THE OVERLOAD PERIODICALLY AND, AFTER REMOVING THE CONTROL BOX COVER, LOG THE DATE TESTED ON THE LOG DECAL PROVIDED ON THE CONTROL BOX (See Figure 1, below.)

The HDSWG 1000 is also provided with a Torque Limiter that may be adjusted to "slip" when an obstruction is encountered. However, the purpose of the Torque Limiter is to protect the HDSWG 1000 mechanical parts. Whether the overload is activated before the Torque Limiter slips will depend upon the "tightness" of the adjustment of the Torque Limiter. This adjustment will be explained in the final check out of the HDSWG 1000.

WARNING HIGH VOLTAGE				
ONLY A QUALIFIED TECHNICIAN SHOULD SERVICE THIS GATE OPERATOR				
PERIODICALLY TEST SENSITIVITY OF OVERLOAD				
*** READ MANUAL ***				
LOG DATE OVERLOAD TEST				DATES OPERATOR SERVICED
DATE TESTED	DATE TESTED	DATE TESTED	DATE TESTED	



A: IMPORTANT INSTALLATION NOTES

 WARNING!	TO REDUCE THE RISK OF SEVERE INJURY OR DEATH: READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS AND GATE SYSTEM DESIGN PARAMETERS!
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GATE SYSTEM DESIGN AND INSTALLATION SAFETY CHECK LIST:

- DO NOT locate any device (key switch, switch, key pad, card reader, etc.) in a position where it may be activated by a person reaching through the gate or while touching the gate in any manner.
- Install all devices that will open or close the gate in such a manner that THE GATE WILL BE IN FULL VIEW WHEN THE DEVICE IS OPERATED. The recommended distance between gate or fence and accessory is 10 feet.
- SECURELY ATTACH THE WARNING SIGNS provided with the HDSWG 1000 on the gate (one on the outside and one on the inside) where they can be seen by persons in the area of the gate to alert them of automatic gate operation. (If the user refuses to have the warning signs installed, Allstar recommends that you note this on your records and have the user sign a disclaimer.) See Figure 2.



Figure 2

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- FOR INSTALLATIONS WHERE IT IS LIKELY THAT CHILDREN WILL BE PRESENT NEAR THE AUTOMATIC GATE, PLACE A WARNING SIGN SPECIFICALLY DIRECTED TO PARENTS AND VISITORS TO KEEP CHILDREN AWAY FROM THE GATE AND NOT ALLOW CHILDREN TO PLAY ON THE GATE. (If the user refuses to have the sign installed, Allstar recommends that you note this on your records and have the user sign a disclaimer.) See Figure 2.
- For ORNAMENTAL “GRILL TYPE” GATES, injuries may occur when people put arms through the openings or children “ride” the gate by standing on the chain and holding on to the gate. THIS POTENTIAL HAZARD CAN BE MINIMIZED BY INSTALLING A MESH SCREEN ON THE GATE. See Figure 3.

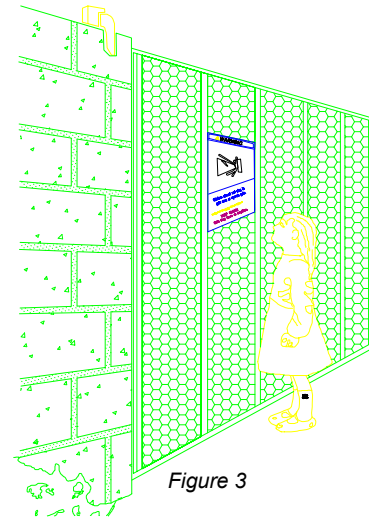


Figure 3

- The Allstar HDSWG 1000 is a VEHICULAR GATE OPERATOR and as such is NOT RECOMMENDED FOR PEDESTRIAN traffic. In installations where pedestrians are likely to be nearby, install a pedestrian gate and use leading edge detectors and/or photocells in your design to protect system entrapment zones. Allstar can provide these products for incorporation in your gate installation.
- SWING GATES HAVE THE POTENTIAL HAZARD OF HANDS AND FINGERS BEING PINCHED between the gate edge and the post to which the gate is mounted. It is recommended that the hinges be mounted so that this opening increases as the gate swings open. **PROTECT THIS "PINCH POINT" SO THIS HAZARD IS AVERTED.** See Figure 4.
- CONSIDER ALL OTHER "PINCH POINTS" IN YOUR DESIGN of the gate system. Observe the arm as it opens and the two arm pieces swing past each other. Use protective measures to reduce hazards at this location. Restrict access to the arm motion. See Figure 4.
- DO NOT overtighten a force limiting device (clutch, sensitivity adjustment, hydraulic valve, etc.) to compensate for a damaged gate. A well maintained gate will ensure easy manual operation (if needed) and maximum operator obstruction sensitivity.
- Outdoor or easily accessible controls must be of the security type to prevent unauthorized use of the system.
- Make sure the gate operating system is placed far enough back from the road to eliminate traffic backup. The distance from the road, size of the gate, usage level and gate cycle/speed must be taken into consideration to eliminate potential hazards.

A: IMPORTANT INSTALLATION NOTES

- Check the operator manufacturer's specification to ensure that the operator is proper for the cycles per hour, size and type of gate.
- USE EXTREME CAUTION WHEN WORKING NEAR THE BELTS AND PULLEYS when the operator cover is removed. Apply power to the operator only when instructed to do so.
- Before activating the "timer to close" option of the HDSWG 1000, ENSURE THE PERSONAL ENTRAPMENT DEVICES (operator reversing feature, edges, photocells) ARE OPERATING and install VEHICLE DETECTOR LOOPS AND VEHICLE DETECTORS for protection of user vehicles. Read the manual for information on the installation of these devices. IF VEHICLE DETECTOR LOOPS HAVE BEEN INSTALLED TO PREVENT THE GATE FROM CLOSING ON A VEHICLE, INSTRUCT THE USER TO PERIODICALLY CHECK THE OPERATION OF THE DETECTORS.
- Make sure that the gate moves freely, all hinges are in good working order, the gate does not bind in any manner and the gate swing area is clean and free of irregularities.
- When the HDSWG 1000 Control Box cover is removed and the small metal cover from terminals 14, 15, 16, 17 and 18 is also removed, 115 Volts will be exposed AS LONG AS THE MAIN POWER SWITCH IS ON. EVEN IF THE RED POWER LIGHT IS NOT LIGHTED, 115 VOLTS AC MAY STILL BE PRESENT ON THESE TERMINALS. NEVER LEAVE THE INSTALLATION WITH THESE COVERS REMOVED.
- DO NOT INSTALL THE OPERATOR UNTIL ALL GATE PROBLEMS HAVE BEEN CORRECTED.
- DO NOT consider the built in sensitivity overload as the primary defense system. Consider all options in the gate system design.
- DO NOT connect any auxiliary equipment to the HDSWG 1000 (detectors, card readers, etc.) until the gate operator and all its functions are fully tested. Only connect one device at a time and ensure its proper function(s) before moving on to the next device.
- Install the operator on the inside of the property/fence line. DO NOT install an operator on the public side of the fence line or gate. Outward swinging gates should not open into public areas.
- IDENTIFY THE ENTRAPMENT ZONES AND PINCH POINT AREAS PER FIGURE 4. Design the gate installation to minimize the risk of entrapment in these areas. Install additional safety equipment such as four wire edges and photocells to further minimize risk. All entrapment zones are required to be protected.

• AS THE INSTALLER YOU ARE RESPONSIBLE FOR:

1. ASSURING THAT THE OWNER/END USER OF THE SYSTEM UNDERSTANDS ITS BASIC OPERATION AND SAFETY FEATURES. IN PARTICULAR, BE SURE THE OWNER/END USER UNDERSTANDS THE LOCATION AND OPERATION OF A MANUAL DISCONNECT (WHERE PROVIDED) OR HOW TO OPERATE THE GATE MANUALLY.
2. POINTING OUT TO THE OWNER/END USER OF THE GATE SYSTEM THAT CHILDREN OR PETS ARE NOT ALLOWED TO PLAY ON OR NEAR THE GATE, FENCE OR ANY PART OF THE SYSTEM, AND THAT THE SAFETY INSTRUCTIONS SUPPLIED WITH THIS OPERATOR AND THEIR IMPLEMENTATION ARE THE RESPONSIBILITY OF THE OWNER/END USER.
3. LEAVING THE INSTALLATION AND MAINTENANCE MANUAL FOR THIS OPERATOR AS WELL AS ANY ADDITIONAL SAFETY INFORMATION SUPPLIED WITH THIS OPERATOR OR OTHER COMPONENTS OF THE GATE SYSTEM WITH THE OWNER/END USER.
4. NOT PLACING IN SERVICE THIS OPERATOR IF YOU HAVE ANY QUESTIONS ABOUT THE SAFETY OF THE GATE OPERATING SYSTEM. CONSULT THE OPERATOR MANUFACTURER.

SWING GATE ENTRAPMENT PROTECTION

Use the following illustration to minimize the risk of injury in your design of the swing gate operator system.

Entrapment Zones: Design in personal entrapment protection devices to protect people from entrapment in the zones shown below.

Pinch Points: Use protective measures (guards, padded edges, etc.) to protect people from the pinch points shown below.

THE CONCRETE PAD

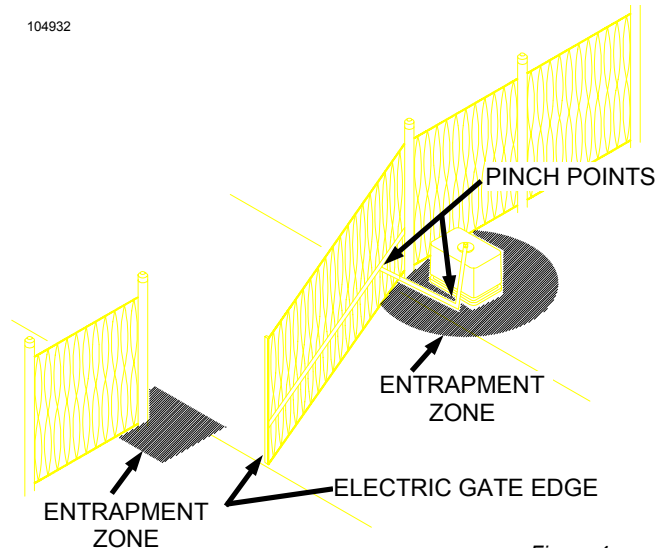


Figure 4

★ B: PREPARING THE SITE

The standard HDSWG 1000 is designed to operate a single leaf gate. The control box and mechanical units are separate devices. It is necessary to find a suitable location to mount the control box, i.e., post or wall. Separate low voltage and high voltage conduits will be run between the control box and mechanical unit. (See Figure 8.)

To properly install a bi-parting gate system, it is necessary to add one additional mechanical unit to the design. The control box will operate two mechanical units. It is necessary to run an additional low voltage and high voltage conduit between the two mechanical units. (See Figure 8.)

The Installation of the HDSWG 1000 MECHANICAL UNIT will require a suitable concrete pad as a mounting base. The dimensions of

critical for the proper operation of the Arm that the center line of the shaft of the HDSWG 1000 MECHANICAL UNIT be located exactly as shown on the bolt pattern drawing, Figure 6.

PLACING THE VEHICLE DETECTOR LOOPS

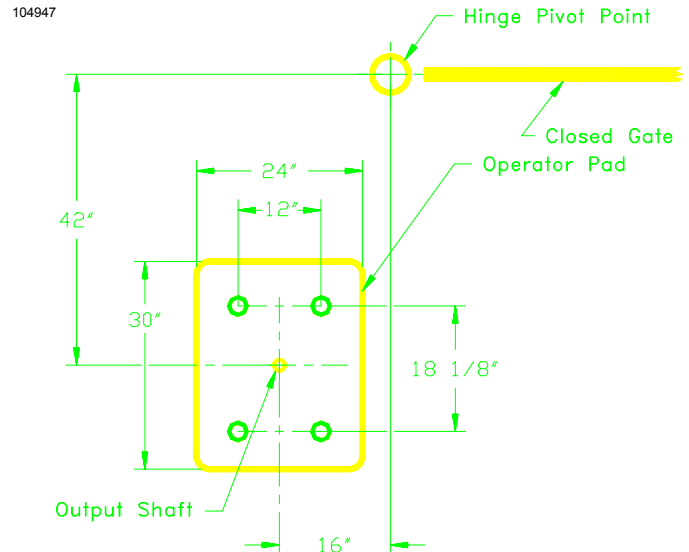


Figure 6: Operator Footprint

If Vehicle Detectors are to be used with the HDSWG 1000, the "Loops" to be buried in the drive should be installed during the site preparation phase of the installation. Proper placement of the Vehicle Detector wire loops is critical if the loops are to provide satisfactory, extended service. THE MOST IMPORTANT CONSIDERATIONS ARE: 1) PROPER WIRE TYPE AND, 2) GOOD, TIGHT CONNECTIONS FROM THE LOOP TO THE LOOP TERMINATING CONNECTOR. **The termination of the loop wires will be at the Vehicle Detector itself, not on the HDSWG 1000 terminal board.** Observe the wiring diagram supplied with the Vehicle Detector Manufacturer. The Vehicle Detector may be mounted in the HDSWG 1000 MECHANICAL UNIT. The AC power delivered to the MECHANICAL UNIT by the HDSWG 1000 Control Box will **NOT** be satisfactory for the Vehicle Detector. A separate A/C service must be provided for the Vehicle Detector.

Two different types of Loop Installations will usually be encountered when placing the loops in the drive: 1) If the driveway material is already in place, saw cuts will be needed in which to place the loop wire. 2) For loops where the paving material will be installed after the loop is positioned, it is necessary that the loops be placed in Schedule 40 PVC pipe to maintain uniform loop spacing with respect to the surface of the pavement. The loop should be placed 1.5" below the surface of the pavement and at least 2" above any reinforcing steel. The lead-in wires need not be in PVC, but must have a least six (6) twists per running foot.

THE LOOP WIRES MUST BE CONTINUOUS. NO SPLICES OR CONNECTIONS IN THE LOOP ARE TO BE PERMITTED BELOW GROUND. THE ONLY CONNECTION WILL BE AT THE TERMINATION OF THE WIRE AT THE VEHICLE DETECTOR. Above ground splices may be used providing the wire is twisted, soldered and moisture sealed. For best long term results, do not use wire nuts anywhere in the loop system. Connect to the Vehicle Detector harness by soldering.

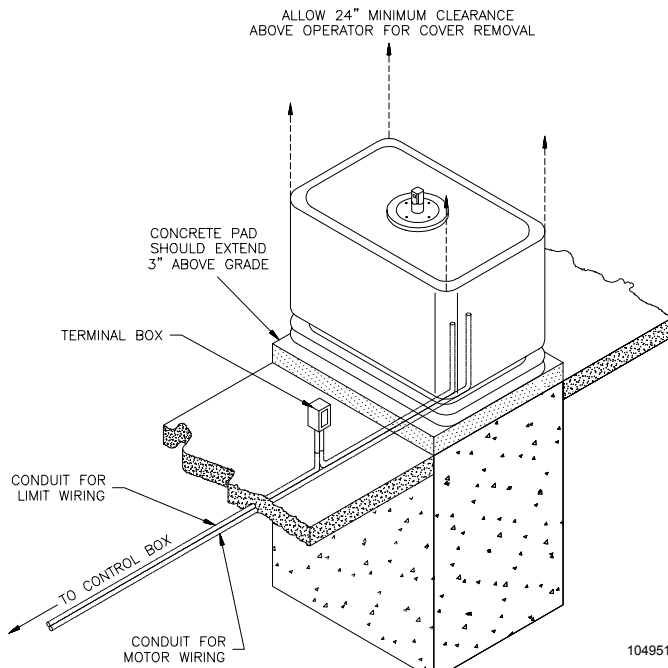


Figure 5: Pad Configuration

the concrete pad should be sufficient to allow at least 3" of clearance from each edge of the pad to the nearest operator mounting hole. The top of the pad should be at least 3" above grade to raise the operator above any standing water. The depth of the pad below grade is dependent on the weight and size of the gate and the soil conditions at the site of the installation. ALWAYS FOLLOW LOCAL BUILDING CODES.

If no suitable concrete base exists, a pad must be poured. See Figure 6 for plans for this pad. If the location of the operator is such that vehicles have the potential of hitting the operator, consideration should be given to installation of protective posts in front of the operator.

If a suitable concrete base already exists for mounting the operator it will be necessary only to drill mounting holes for the HDSWG 1000 MECHANICAL UNIT. 3/4" mounting holes are located on the front and rear of the MECHANICAL UNIT. The bolt pattern is shown in Figure 6. The mounting bolts should be 1/2" diameter or larger. "Red head" or wedge anchor concrete bolts are usually satisfactory.

If mounting anchor bolts are to be installed prior to pouring the pad, pay particular attention to the bolt pattern and the location of the mounting holes with respect to the center line of the gate post. It is

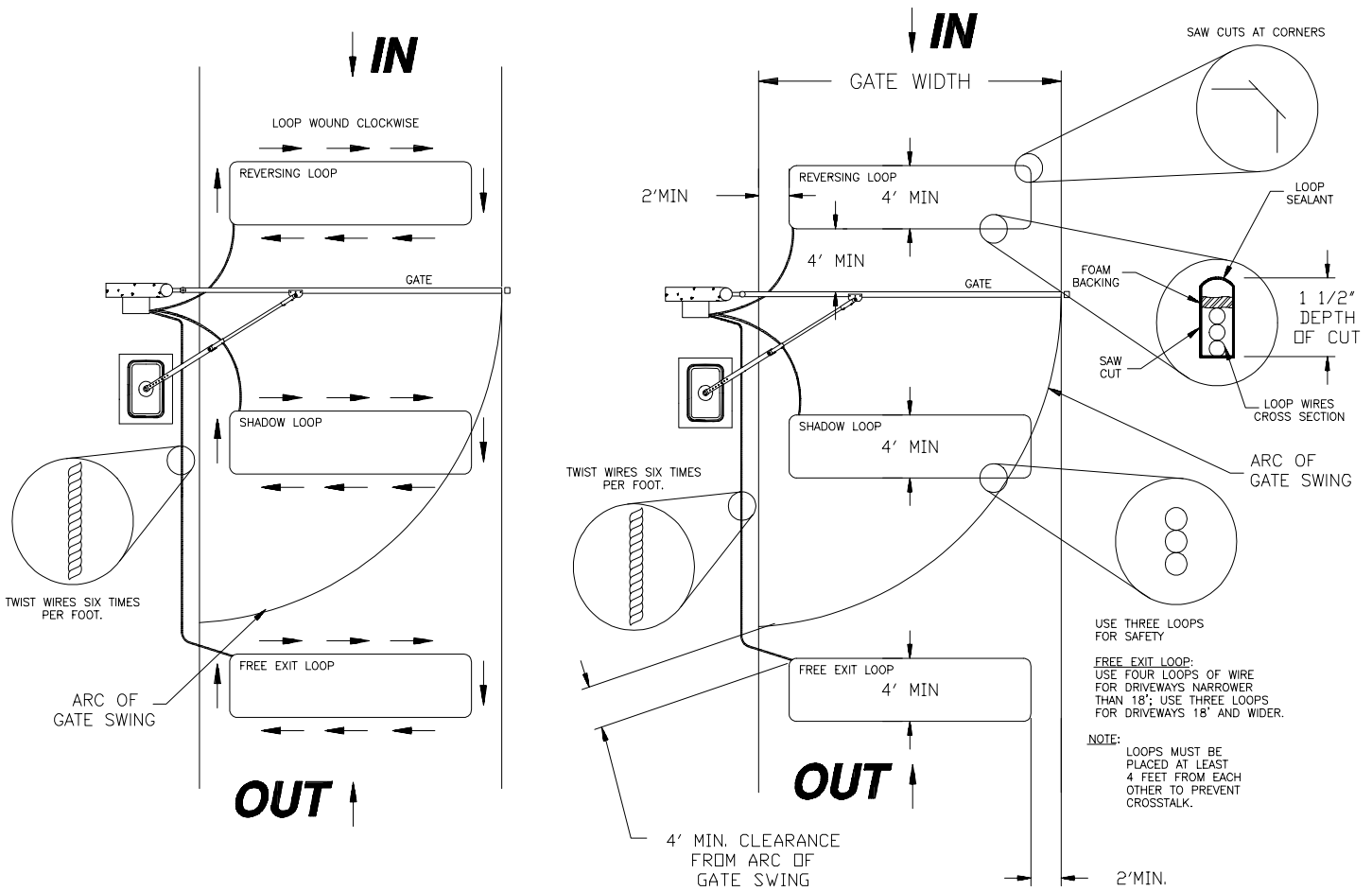


Figure 7: Loop Diagrams

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For saw-cut installations, observe the methods recommended in Figure 7, above. The saw-cut must be to a depth of 1.5", clean and with no sharp corners. After placing the wires, it is essential that the wires be held tightly in place by a foam backing prior to pouring the sealant. **THIS IS ESPECIALLY IMPORTANT WHEN FREEZING IS LIKELY.** No voids should exist that will permit the collection of water that might freeze and push the loop wires out of the slot. The sealant used should not be hard setting and should be suitable for pavement material.

THE WIRE USED FOR THE LOOPS MUST BE HEAT AND WATER RESISTANT, CROSS-LINK POLYETHYLENE INSULATED. TYPE XLPE IS BEST. RHW IS O.K. DO NOT USE ANY PVC INSULATED WIRE. (PVC insulation will absorb moisture that may affect Detector operation.) WIRE SIZE SHOULD BE #16 GA. STRANDED OR LARGER.

VEHICLE DETECTOR LOOP BLANKING FOR SWING GATES

The inside loop for a swing gate installation must be located at least 4 feet outside of the arc of the gate. If it is not, the Vehicle Detector

may detect the gate as it moves over the loop and cause the Gate to reopen. If the gate is large and a single leaf, the arc usually requires that the loop be a considerable distance from the closed gate position. This may not be an effective position for the loop. In this case, a "blanking" or "shadow" loop may be used.

WHEN A SHADOW LOOP IS NECESSARY, THE HDSWG 1000 MUST BE ORDERED WITH A SPECIAL DOUBLE POLE LIMIT SWITCH FOR THE OPEN LIMIT SWITCH. The Vehicle Detector relay control signal must be routed through the normally open contacts of the second switch contacts of the Double Pole Open Limit Switch. When the gate is in the fully open position, this contact will close the circuit of the Vehicle Detector to the HDSWG 1000 and prevent the gate from closing when a vehicle is over the Shadow Loop. When the gate is closing or opening, this contact of the Limit Switch is open and the Vehicle Detector signal path is broken.

ELECTRICAL POWER REQUIREMENTS

The HDSWG 1000 can be ordered for 115 Volts AC (VAC) or 230 VAC operation. Which voltage HDSWG 1000 to order depends solely on the distance from the electrical service to the operator and the wire size desired to be used. The AWG wire size for the

★ B: PREPARING THE SITE

electrical service depends on the distance of the operator from the breaker panel. Refer to Table 1 to determine the correct wire size. The NOMINAL column is the ideal distance from the breaker panel to the operator for a given wire size and voltage. The distances shown in the MAXIMUM column should never be exceeded and should only be used where it is known that the voltage at the power panel will never be less than 105 VAC. (The HDSWG 1000 will operate at a voltage as low as 95 VAC measured at the input


WIRE SIZE	NOMINAL DISTANCE	MAXIMUM DISTANCE
#14	100 FT	200 FT
#12	150 FT	300 FT
#10	250 FT	500 FT
#8	400 FT	800 FT
#6	600 FT	1200 FT
#4	1000 FT	2000 FT
#2	1600 FT	3200 FT

Table 1

terminals to the operator. The "maximum distance" of Table 1 is calculated to supply 95 VOLTS to the HDSWG 1000 during the "stop cycle" when the line voltage is at 105 VOLTS.) **NOTE! FOR A BI-PARTING INSTALLATION, THERE WILL BE TWO MECHANICAL UNITS OPERATING AT THE SAME TIME. IT WILL BE NECESSARY TO REDUCE THE LENGTHS IN TABLE 1 BY A FACTOR OF TWO.**

Class 2 low voltage wiring from external controls such as a key pad, card reader, telephone entry device, etc. must be brought to the HDSWG 1000 CONTROL BOX by a separate conduit from the 115 VAC electrical hook up conduit. Low voltage control wires MUST NEVER be routed in the same conduit as the HIGH VOLTAGE power wires.

Note! The limit switch wires from the HDSWG 1000 CONTROL BOX to the HDSWG 1000 MECHANICAL UNIT ARE LOW VOLTAGE WIRES AND MUST BE ROUTED IN A LOW VOLTAGE CONDUIT TO THE CONTROL BOX.



WARNING!

**AVOID ELECTROCUTION:
DO NOT ROUTE LOW VOLTAGE WIRES IN SAME CONDUIT AS HIGH VOLTAGE WIRES. FOLLOW ALL LOCAL ELECTRICAL CODES OR THE NATIONAL ELECTRICAL CODE.**

OTHER VOLTAGES AND THREE PHASE SYSTEMS.

The HDSWG 1000 can operate at other voltages or on three (3) phase systems. To operate at 440 VAC it will be necessary to install an external step down transformer. The transformer should be located in a separate electrical box and protected by suitable circuit breaker and/or fusing. A 440 Volt rated switch should also be installed. Follow local electrical codes or the National Electrical Code. The transformer selected should be UL LISTED and be rated for 500 Volt-Amperes/Watt.

IF TWO MECHANICAL UNITS ARE TO BE USED FOR A BI-PARTING GATE SYSTEM, THEN A 1000 VOLT-AMPERE/WATT TRANSFORMER MUST BE USED.

Operating from a three (3) phase line will require the use of a 230 VAC rated HDSWG 1000. The HDSWG 1000 may be operated from a 230 Volt "Delta" line or a 120/208 "Y" line. In either case, ONLY one "leg" of the three phase line will be used. The unbalance of the line will be minimal since the full rate current of the HDSWG 1000 at 220 VAC is only 2.2 amperes. (4.4 Amperes for a bi-parting system.) Connect any two wires of the three phase system to the 230 VAC HDSWG 1000. Tape the third wire carefully so that it does not short to any other object. (The "Y" system will have 4 wires, one of which will be the "common". Make sure the common is NOT selected as one of the wires connected to the HDSWG 1000.) It is always best to also pull a ground wire from the electrical service box to the HDSWG 1000 to ensure the frame is securely affixed to GROUND.

SERVICE CONDUIT

For new installations the conduit for the High Voltage may be brought to a junction box near where the HDSWG 1000 CONTROL BOX will be located or it may be brought directly to the Control Box.

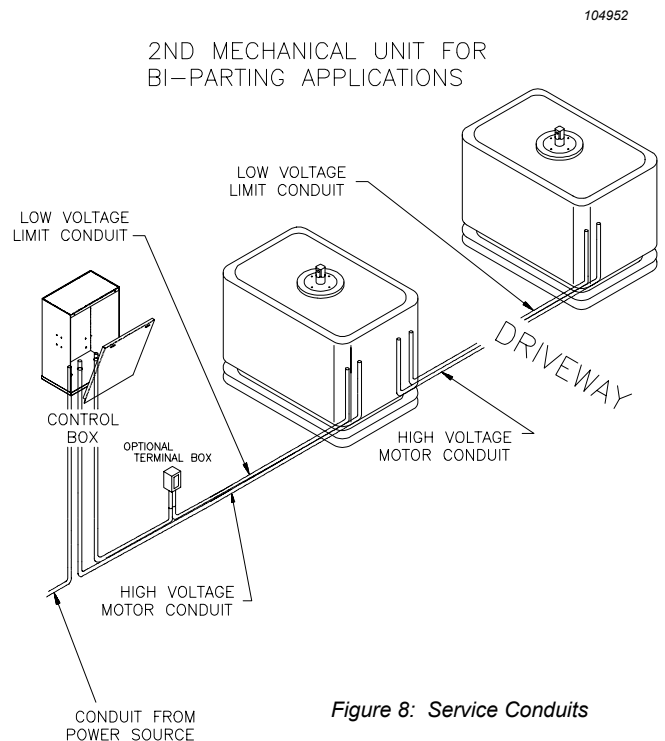


Figure 8: Service Conduits

TOOLS REQUIRED

The following tools and materials are required for a proper installation of the HDSWG 1000.

1. Wire cutter, stripper and crimping tools. (For attaching accessory equipment to the control box barrier strip.)
2. A #2 Phillips Head screw driver for removing the screws to the High Voltage cover.
3. Medium standard straight blade screw driver for the terminal strip screws.
4. Very small blade screwdriver. (For adjusting the potentiometer on the Logic and Power board.)
5. Electric arc welder or an electric drill with a 3/8" bit. (For attaching Arm Bracket to the Gate.)
6. Several feet of #18 or #22 gauge insulated multistrand wire. (For connecting accessory equipment to the control box terminal strip, and for limit switch control wires.)
7. Four 1/2" diameter concrete "redhead" bolts with hex nuts, flat washers and lock washers. (For attaching the HDSWG 1000 to the concrete pad.) (Not Included)
8. Concrete drill and bit. (To drill mounting holes for concrete bolts.)
9. Multimeter. (To test line voltage and other measurements as necessary.)
10. Small level. (To level HDSWG 1000 at installation.)
11. Torque Wrench and 1-5/8" Socket

UNPACKING CHECKLIST

The HDSWG 1000 as shipped consists of the components listed below.

Mechanical Unit

Swing Arm

Crank Arm

Electrical Unit

Crank Arm Extension

Swing Gate Fittings

Wood Pallet with 4 lag bolts

Swing Arm Bracket

Swing Arm Padlock with keys

Instruction Kit

Instruction Manual

Warning signs

Swing Arm Kit

Hardware Package

★ C: INSTALLING THE

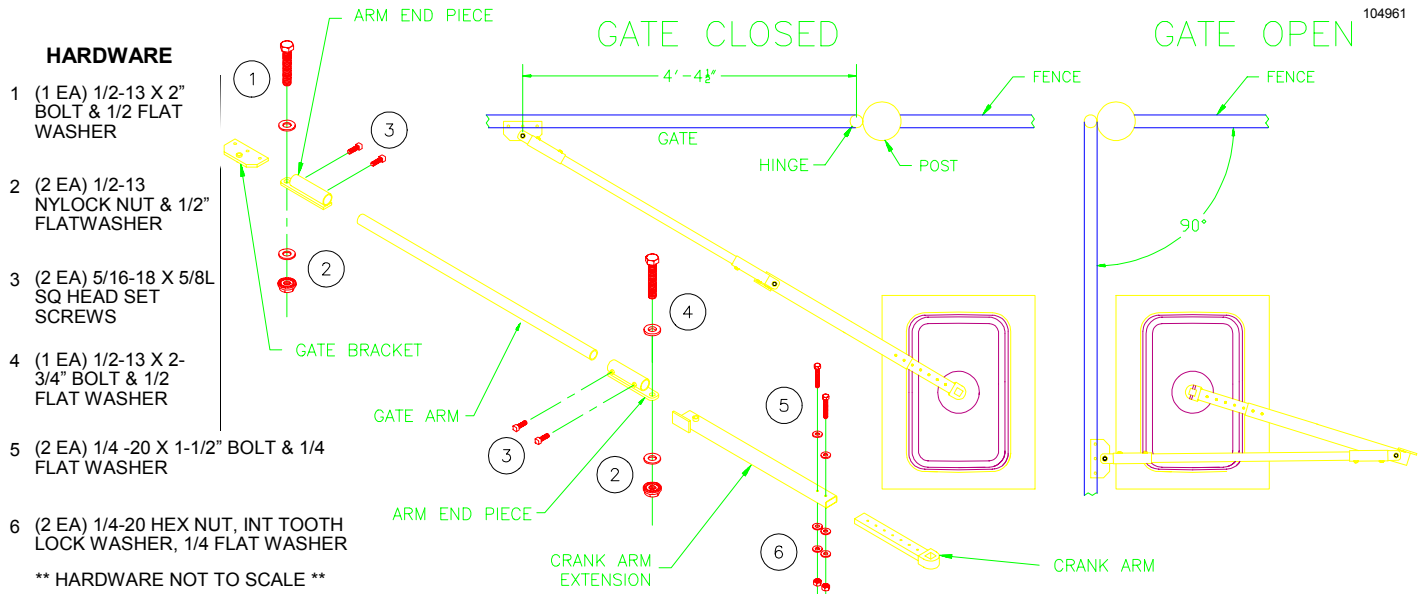


Figure 9: Arm Positions

PLACING THE HDSWG 1000 MECHANICAL UNIT

Remove the rain seal from the shaft of the HDSWG 1000. SAVE IT! The rain seal will be used later. Next, remove the cover from the HDSWG 1000 MECHANICAL UNIT by removing the 1/4 inch diameter bolts on each side of the Unit and set it aside. It is one of the last items that will be replaced at the completion of the installation.

The recommended procedure for attaching the HDSWG 1000 MECHANICAL UNIT to the concrete pad (for those installations where the anchor bolts were not previously installed) is first to locate and drill the hole for the mounting hole nearest to the gate post. Locate this hole by referring to the diagram in Figure 6. After placing a bolt in the hole, mark and drill the remaining three holes. This can be accomplished with the operator in place.

Before inserting the concrete bolts, make sure the HDSWG 1000 MECHANICAL UNIT is level. If any corners of the HDSWG 1000 are resting above the pad, flat washers may be inserted under the MECHANICAL UNIT. Place the flat washers, lock washers and nuts on the concrete bolts and tighten securely.

For previously placed anchor bolts, the procedure is the same except that the bolts will already be in place. If 1/2" diameter anchor bolts were set, the 3/4" mounting holes on the HDSWG 1000 MECHANICAL UNIT will allow some adjustment for desired alignment. Washers can be used under the HDSWG 1000 MECHANICAL UNIT to accurately level the unit as above.

TO REVIEW: Make sure the correct position of the HDSWG 1000 MECHANICAL UNIT from the center line of the gate hinge pivot point to the center line of the HDSWG 1000 is in accordance with the drawing of Figure 6.

INSTALLING THE HDSWG 1000 ARM

Temporarily locate the Gate Bracket on the Gate with C-clamps or by tack welding. Install the gate bracket to the gate so the gate arm will be level when connected to the HDSWG 1000. See Figure 9 for positioning of the Gate Bracket.

Loosen the adjustment nut of the Torque Limiter located on the top of the Gear Box on the HDSWG 1000 MECHANICAL UNIT with the 1-5/8 hex socket. This is done by removing the small set screw on the large nut and loosening the nut.

For the installation shown in Figure 9, attach the Crank Arm Extension to the Crank Arm with the (2) 1/4-20 x 1-1/2" long bolts provided. The overall length of the cranking arm is now 33 5/8" from the center of the Output Shaft to the center of the pivot at the "elbow." Note that the cranking arm is adjustable to (5) possible settings: 32-1/8", 30-5/8", 29-1/8", 27-5/8" and 26-1/8" long.

Install the Crank Arm and Extension on the HDSWG 1000 main shaft and make sure the Crank Arm swings freely from side to side. Connect the Gate Arm to the Crank Arm Extension and the Gate Bracket. With the Gate in the closed position, the "elbow" will be up against the closed position stop on the Crank Arm Extension. The Gate should be in the properly closed position. (See Figure 9.)

Loosen the Stop Pall on the large output drive sprocket located on the output shaft on the HDSWG 1000 MECHANICAL UNIT. (See Figure 10.) Move the Gate to the fully open, 90 degree position. The Arm extension should fold back over the arm as shown in Figure 9. If it doesn't, some adjustment of the gate bracket or operator position may be necessary. With the gate in the fully open position, adjust the stop pall on the sprocket against the stop on the HDSWG 1000 frame and tighten the set screw. Open and close the gate several times until you are satisfied that the arm position is correct. Finish welding or bolting the Gate Bracket to the Gate and remove the C-clamps.

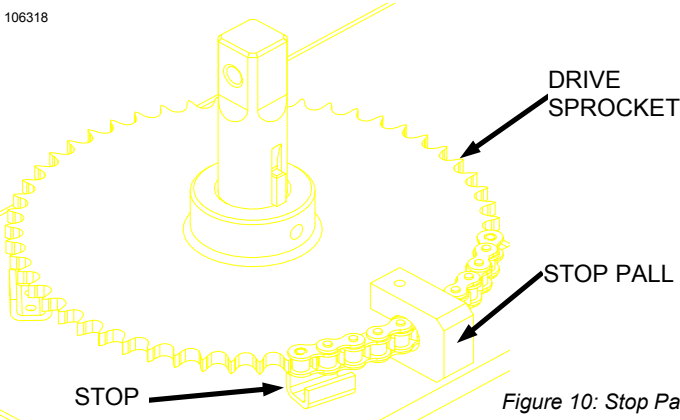


Figure 10: Stop Pall

C: INSTALLING THE OPERATOR



WARNING!


**RISK OF ENTRAPMENT.
TO MINIMIZE POTENTIAL FOR GATE CONTROLS
TO BE ACTIVATED WHILE ALREADY IN USE,
LOCATE THE HDSWG 1000 CONTROL BOX IN
FULL VIEW OF THE GATE.**

ELECTRICAL HOOK UP

The HDSWG 1000 electrical connection is made at the electrical junction box provided in the HDSWG 1000 CONTROL BOX, see Figure 11. There are three cutouts on the bottom of the CONTROL BOX to permit conduit entry. Run a flexible water tight conduit from the service junction box to the access hole that is just under the junction box containing the main power switch of the HDSWG 1000. Pull three #14 wires from the service junction box to the junction box inside the HDSWG 1000 Control Box. If the HDSWG 1000 is wired for 115 Volts, pull a black, white and green wire. If the HDSWG 1000 is wired for 230 Volts, pull a black, red and green wire.

INSTALLING THE HDSWG 1000 CONTROL BOX

The HDSWG 1000 CONTROL BOX may be mounted remotely from the MECHANICAL UNIT. Four mounting holes are provided at the back of the CONTROL BOX. These should be used to mount the CONTROL BOX to a solid, flat surface. Use a caulking material around the holes to ensure a water tight seal. The CONTROL BOX should be located so that the Gate and the MECHANICAL UNIT/UNITS ARE IN FULL VIEW FROM THE CONTROL BOX.



WARNING!

**TO AVOID ELECTRICAL DAMAGE TO OPERATOR
DO NOT ALLOW TOTAL WIRE LENGTH FROM THE
CONTROL BOX TO AC POWER SERVICE PANEL
PLUS THE DISTANCE FROM THE CONTROL BOX
TO THE MECHANICAL UNIT TO EXCEED WIRE
LENGTH GIVEN IN TABLE 1 FOR AC SERVICE.**

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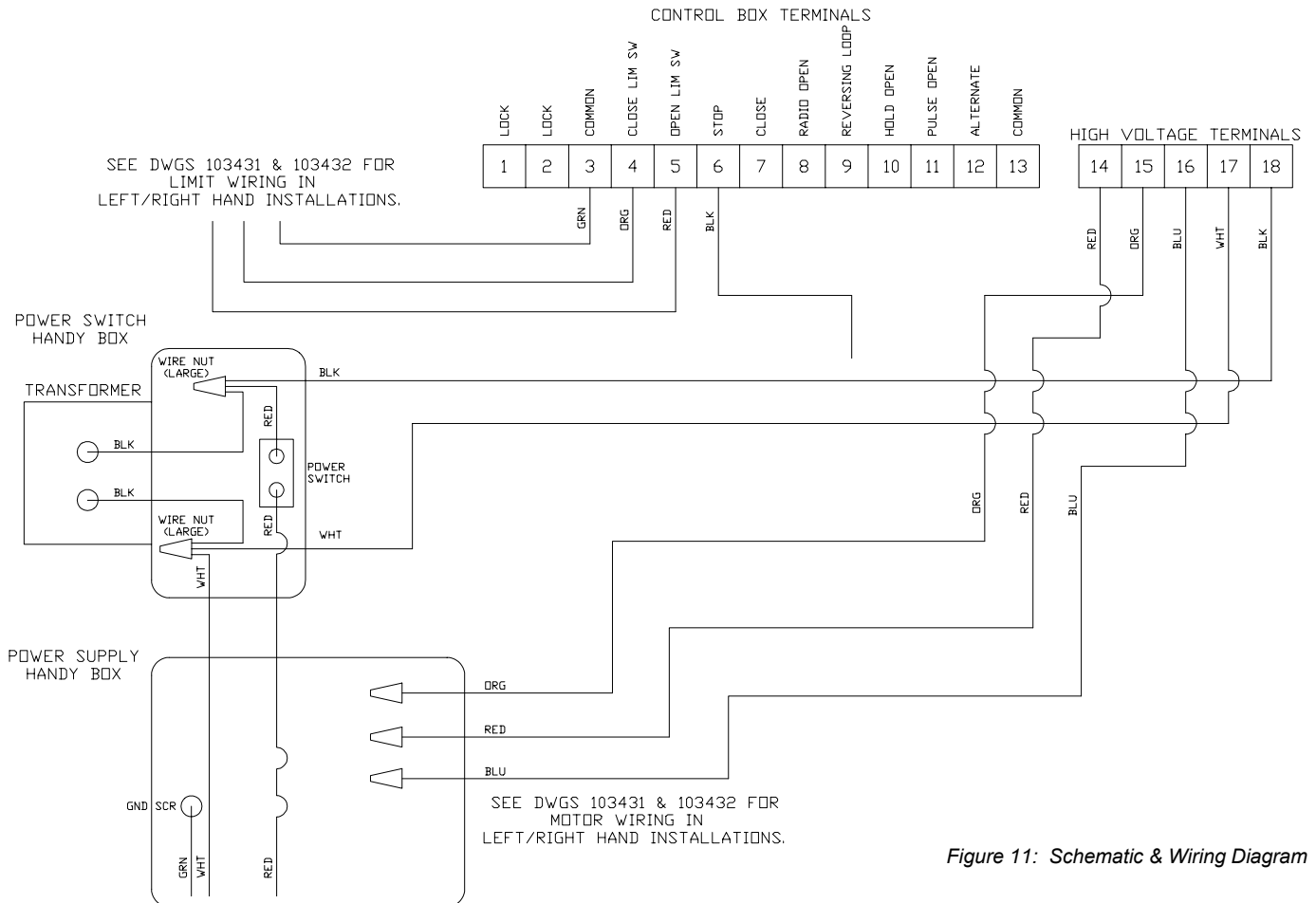



Figure 11: Schematic & Wiring Diagram

★ C: INSTALLING THE OPERATOR

CONNECTING THE AC WIRING



WARNING!

RISK OF ELECTROCUTION
DO NOT BEGIN THE ELECTRICAL CONNECTION PROCEDURES UNTIL THE POWER IS TURNED OFF AT THE CIRCUIT BREAKER

115 VOLT INSTALLATIONS:

Starting at the HDSWG 1000 4 x 4 handy box proceed as follows:


1. The BLACK wire attaches to the 115 VAC HOT wire, normally black.
2. The WHITE wire attaches to the 115 VAC NEUTRAL wire, normally white.
3. The GREEN wire attaches to the GROUND wire, normally green.

230 VOLT INSTALLATIONS:

Note: in 230 VAC wiring systems, there will be two "HOT" wires, normally a red and a black wire. If there is a white wire, typically it will be a neutral wire. Starting at the HDSWG 1000 4 x 4 handy box, proceed as follows:

1. The BLACK wire attaches to one of the 230 VAC HOT wires, normally black.
2. The RED wire attaches to the other 230 VAC HOT wire, normally red.
3. The GREEN wire attaches to the GROUND wire, normally green.

PROPER OPERATION OF THE SURGE PROTECTOR MOUNTED ON THE HDSWG 1000 BACKPLANE BOARD DEPENDS UPON A SOLID GROUND. ALSO, UL LISTING REQUIRES THAT THE HDSWG 1000 FRAME BE GROUNDED.



WARNING!

TO REDUCE THE RISK OF DAMAGE DUE TO LIGHTNING, ENSURE A SOLID GROUND FROM THE HDSWG 1000 GROUND WIRE IN THE SERVICE ENTRANCE 2 x 4 HANDY BOX TO THE ELECTRICAL SERVICE GROUND OR TO A EARTH GROUND STAKE NEAR THE HDSWG

ADDITIONAL LIGHTNING PROTECTION

For those areas where a high probability of ground lightning strikes exists (Florida, Georgia, etc.) additional lightning protection should be installed in the HDSWG 1000. Although it may not be possible to protect against all strikes, additional protection will substantially reduce the occurrence of lightning damage. Allstar's lightning data indicates that the most strikes enter the HDSWG 1000 through the power lines. Effective protection requires that the surge current from the lightning strike be shunted to ground. This must be done without raising the potential of the circuitry in the HDSWG 1000, with respect to ground, to the levels that will damage the solid state circuitry. Lightning strikes generate enormous currents for very short periods of time. Unfortunately, the period of time is long enough to damage solid state components and many times, other components. The key to success is a very low resistance path from the surge protector to ground for these currents in addition to a surge protector that will act fast enough to protect the solid state circuitry. Several manufacturers offer suitable surge protectors.

CONNECTING THE MECHANICAL UNIT TO THE CONTROL BOX

It will be necessary to run two conduits from the Control Box to the Mechanical Unit. One will be used for the A-C power lines and another for the low voltage, class 2 wiring. See Figure 8. There are cutouts on the bottom of the Control Box to accept these two conduits.

Note the different wiring configurations for right-hand installations and left-hand installations (see Figure 12, page 13). For proper operation, the limits and motor must be wired as shown.

BI-PARTING WIRING

For a Bi-Parting installation, an additional two conduits must be installed between the First Mechanical Unit and the Second Mechanical Unit. (See Figure 8, page 8.) For a Bi-Parting installation, one operator must be a Left Hand unit and the other a Right Hand unit.

The two motors of the Bi-Parting HDSWG 1000's will be wired in parallel. BOTH motors will run until both are shut off. If the two gate leafs do not open exactly the same amount, then the first gate leaf to reach it's open position will have to be held (or mechanically stopped) in that position until the second gate reaches its open position. Now, both motors can be turned off. The stop for the first gate can be installed externally or the HDSWG 1000 internal Stop Pall mounted on the large output drive sprocket of the HDSWG 1000 may be used.

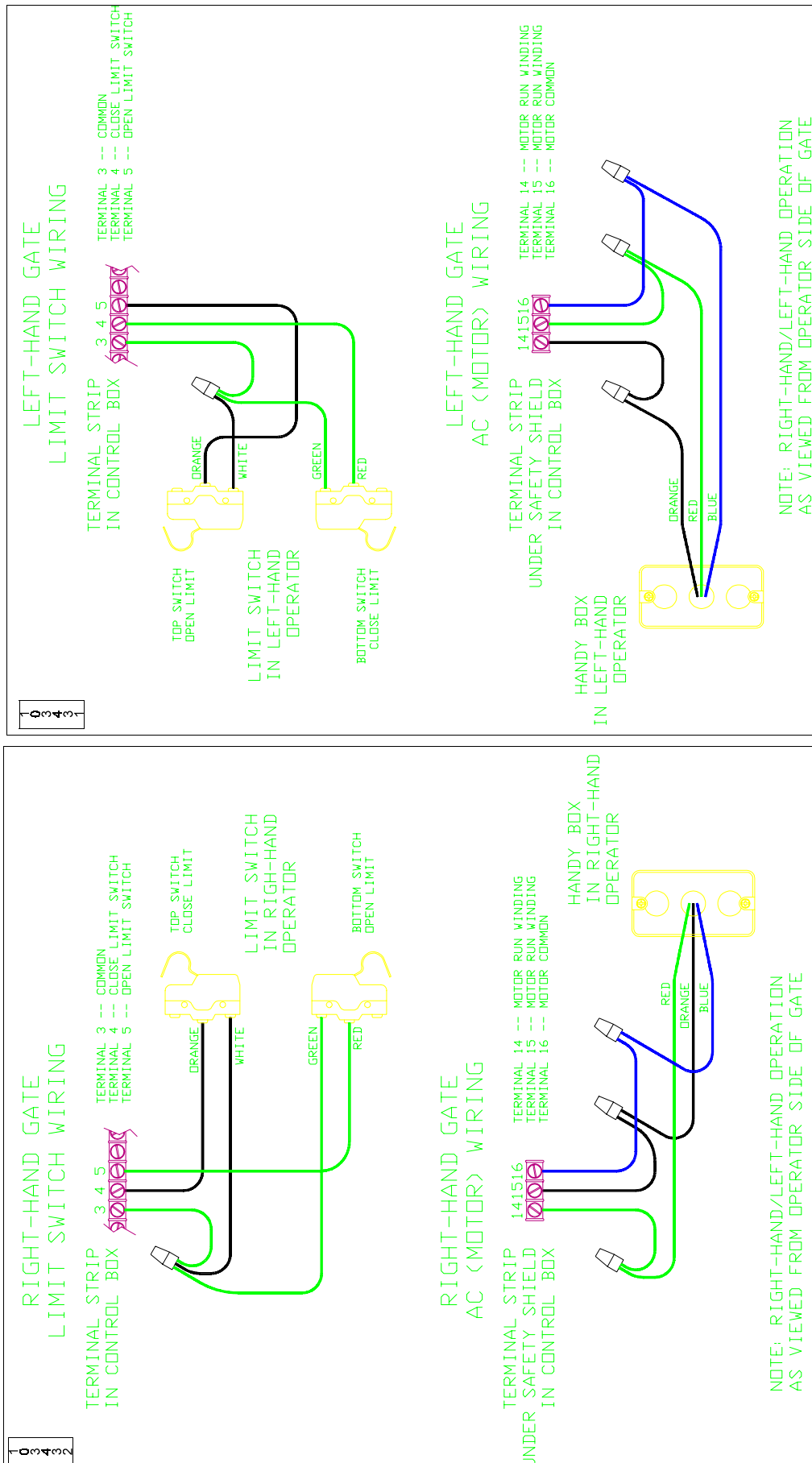
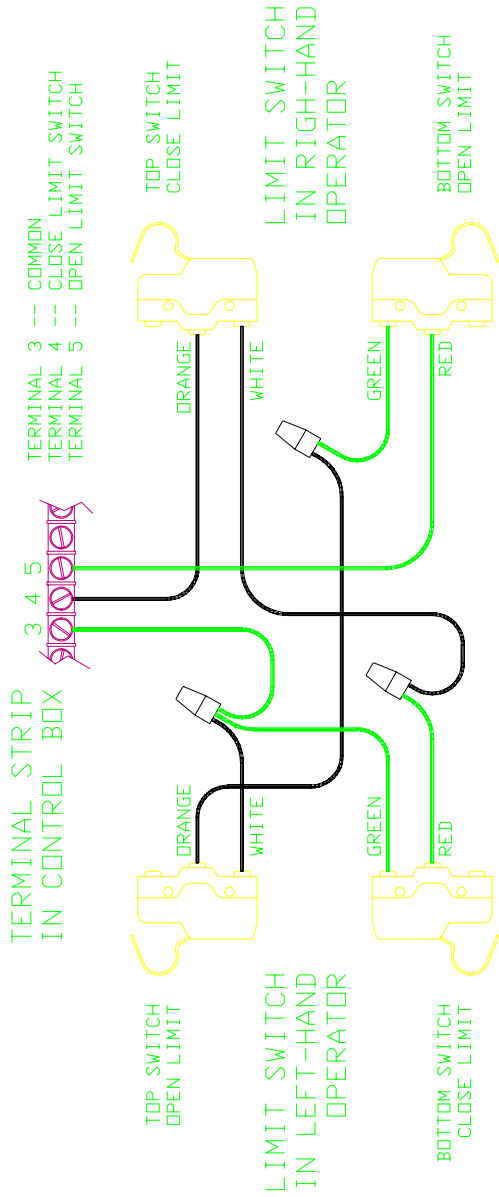


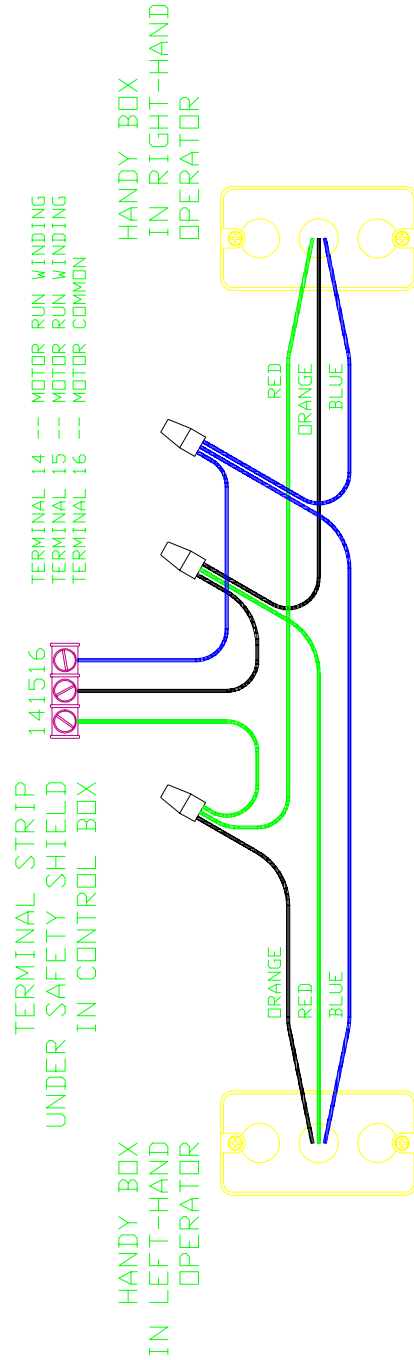
Figure 12: Left/Right Hand Installation Limit & Motor Wiring Diagram

★ C: INSTALLING THE OPERATOR

BI-PARTING GATE LIMIT SWITCH WIRING



BI-PARTING GATE AC (MOTOR) WIRING



NOTE: RIGHT-HAND/LEFT-HAND OPERATION AS VIEWED FROM OPERATOR SIDE OF GATE

Figure 13: Bi-Parting Installation Limit & Motor Wiring Diagram

C: INSTALLING THE OPERATOR

The Limit Switch contacts of the two Bi-Parting units need to be wired in series. Both limit switch contacts must be closed before a connection is made to the limit switch input at the Control Box to stop the motors at the Open or Closed position.

The operation of the Bi-Parting installation is as follows: After receipt of a command to open, both units will begin to open together. The first gate to reach its open position will be stopped by the mechanical stop. Its motor will continue to run. The Torque Limiter will be adjusted to slip when the stop is encountered with the motor still running. The limit switch contact on this first unit is adjusted to close at this position. The second gate has not reached its fully open position. Its limit switch will be still open and no command will be given to the limit switch input at the terminal board until the gate has reached the maximum open position and the open limit contact is closed. Now, a contact will be made to the limit switch input at the terminal board through both limit switch contacts. Both motors will be turned off.

A wiring schematic of the Bi-Parting installation is shown in Figure 13. It is important this schematic be followed closely and that the color codes at the MECHANICAL UNITS and the CONTROL BOX be followed exactly. Most of the difficulties encountered with Bi-Parting installations are due to the wiring instructions not being followed.

ACCESSORY EQUIPMENT HOOK-UP

All accessory equipment is connected to the 13 terminal barrier strip located at the bottom of the HDSWG 1000 Control Box (Backplane). To expose this terminal strip and the Backplane, remove the cover on the Control Box.

There are 7 command inputs (#6 through #12) available to the installer on the HDSWG 1000 in a addition to 2 commons. To trigger any of these inputs, a switch or relay closure to the common terminal for a duration longer than 100 milliseconds and of a resistance of less than 100 ohms is necessary. Three of the inputs, HOLD OPEN, REVERSING & STOP, can be continuous commands as noted below. Labels on the Backplane

identify the function of each of the terminals on the barrier strip. See the INPUT COMMANDS Reference Chart on page 18 related to each terminal number on the barrier strip for an explanation of each of the inputs.

The HDSWG 1000 has an auxiliary transformer mounted in the Control Box to power accessory equipment. This is a Class II transformer and is equipped with an internal fusible link. If this link is "blown" the transformer must be replaced. The transformer is powered at all times that the HDSWG 1000 main power switch is ON. It is not fused by any of the fuses on the Backplane. The maximum power that can be supplied by this Auxiliary transformer is 20VA or about 1 Ampere at 24VAC. This is usually sufficient to supply most accessory equipment such as a radio receiver, loop detector or card or key pads.

IF THE AUXILIARY TRANSFORMER IS USED TO POWER A RADIO RECEIVER, NO OTHER EQUIPMENT MAY BE CONNECTED TO THE AUXILIARY TRANSFORMER. When a radio receiver is connected to the transformer for power, one end of the receiver relay must be connected to the common terminal on the barrier strip. This will effectively ground one side of the auxiliary transformer even if it is a "4 wire" receiver---in most cases. Many other auxiliary devices, such as card readers and key pads, (using bridge rectifiers) require that both sides of the transformer supplying power be "floating" and not grounded. FAILURE TO OBSERVE THIS RESTRICTION WILL DAMAGE THE ADDED DEVICE.

WIRING RADIO RECEIVERS TO THE TERMINAL STRIP

Radio Receivers may be either 3 wire (terminal) or 4 wire units. THE 4 WIRE VERSION OF THE RECEIVER IS PREFERRED SINCE NO ADDITIONAL CONNECTIONS TO THE RECEIVER WILL BE REQUIRED.

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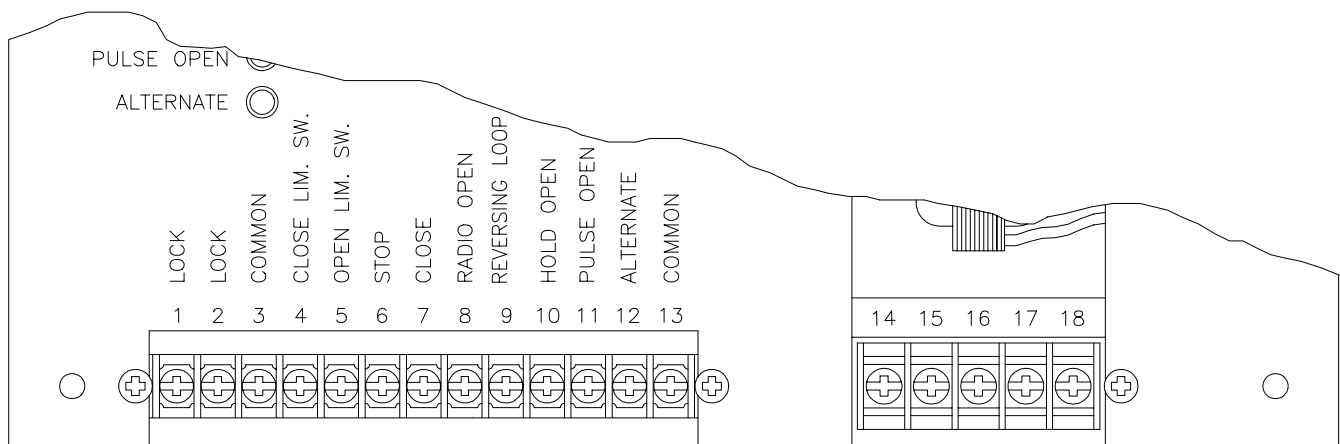


Figure 14: Terminal Strip

★ C: INSTALLING THE OPERATOR

THREE TERMINAL RECEIVERS

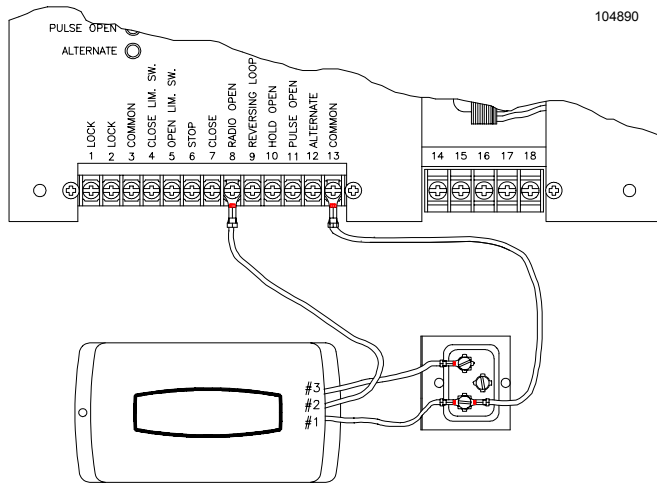


Figure 15: Wiring 3-Wire Receiver

If a three terminal receiver is to be used, the #1 terminal of the receiver is normally COMMON to both the auxiliary transformer (power input) and the radio relay. Most radio manufacturers label this terminal as 24 VAC. Connect a wire from the #1 terminal of the radio receiver to one side of the auxiliary power transformer. Connect another wire from this same terminal of the auxiliary power transformer to the #13 terminal (COMMON) of the HDSWG 1000 terminal strip, as shown in Figure 15. The #2 terminal of the radio receiver is normally the relay contact of the receiver. Connect a wire from this #2 terminal of the radio receiver to the #8 terminal (RADIO OPEN) of the HDSWG 1000 terminal strip. The #3 terminal of the radio receiver is usually labeled RADIO PWR and is connected to the opposite side of the auxiliary power transformer, normally labeled 24 VAC. See Figure 15 for wiring a three wire receiver.

FOUR WIRE RECEIVERS

Four wire receivers replace the "spade" terminals on the RECEIVER

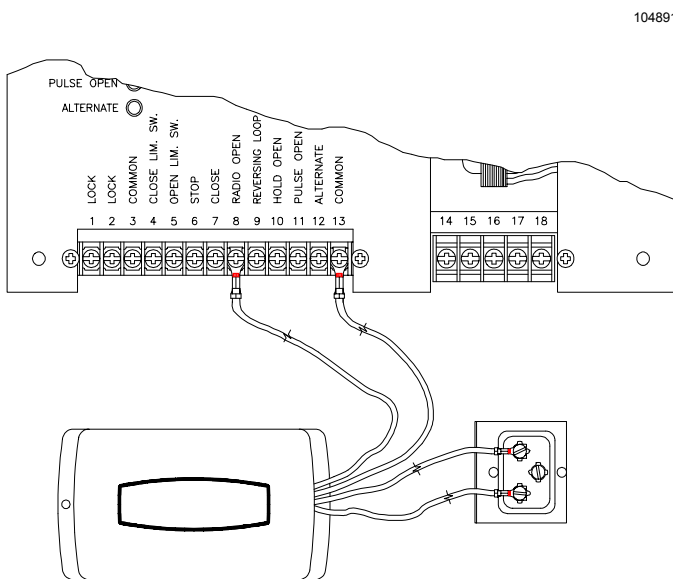


Figure 16: Wiring 4-Wire Receiver

with 4 wires. These wires are typically color coded. The instructions with the receiver must be carefully followed to properly connect the receiver. For any 4 wire receiver, two of the wires will be for power input and two will be for the relay contacts. Connect the two wires for the power input to each side of the 24VAC winding of the AUXILIARY transformer. Connect one of the two wires for the relay to terminal #8 (RADIO OPEN) and the other wire to terminal #13 (COMMON) on the HDSWG 1000 terminal strip. See Figure 16 for connecting 4 wire receivers to the HDSWG 1000.

NOTE: IF THE 4 WIRE RECEIVER INSTRUCTIONS SHOW THAT TWO OF THE WIRES ARE OF THE SAME COLOR AND ARE COMMON CONNECTIONS INSIDE THE RECEIVER, ONE OF THESE WIRES SHOULD BE CONNECTED TO TERMINAL #13 (COMMON) ON THE HDSWG 1000 AND THE OTHER TO ONE SIDE OF THE TRANSFORMER.

WIRING A 3-BUTTON STATION

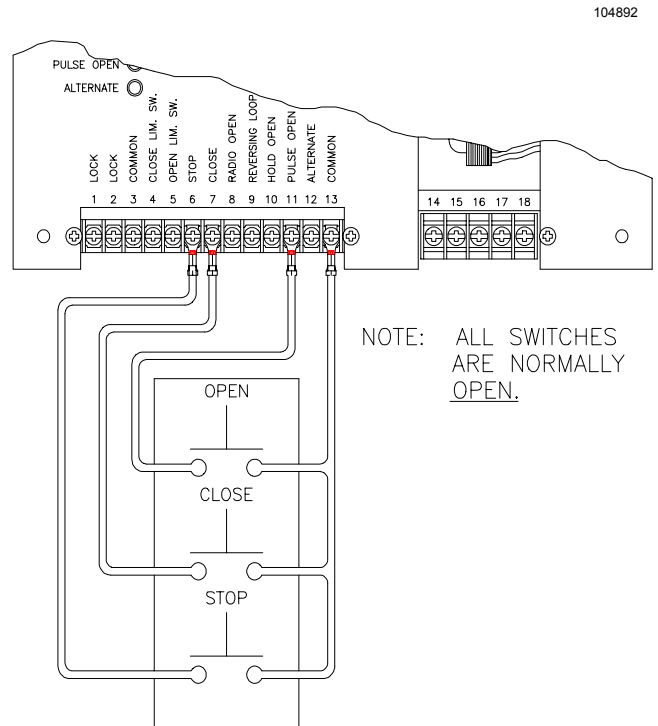


Figure 17: Wiring 3-Button Station


NOTE: THREE BUTTON STATIONS MAY BE ORDERED WITH THE STOP BUTTON AS NORMALLY OPEN OR NORMALLY CLOSED. THE HDSWG 1000 WILL OPERATE ONLY WITH A NORMALLY OPEN STOP BUTTON. See Figure 17 for instructions on wiring a Three Button Station.

C: INSTALLING THE OPERATOR

WIRING A KEYPAD, CARD READER OR TELEPHONE ENTRY SYSTEM

These devices activate the HDSWG 1000 by a relay contact closure within the device. Typically, two wires or terminals are provided by the device to operate the gate. Follow the manufacturers instructions on locating these connections. If one of the connections at the device is labelled as COMMON, then connect this to Terminal #13 of the HDSWG 1000 Terminal strip. Connect the other contact to Terminal #11 (PULSE INPUT). If no identification of the connections is noted at the device, then the two wires may be connected to terminals #11 and #13 of the HDSWG 1000 in any order.

Keypads, Card Readers and Telephone Entry Systems are typically



WARNING!


RISK OF ENTRAPMENT!

**TO REDUCE THE RISK OF INJURY OR DEATH:
LOCATE KEYPAD, CARD READER, KEY SWITCH
OR SIMILAR ENTRY DEVICES IN A LOCATION
WHERE A USER CAN NOT REACH THROUGH THE
GATE OR FENCE TO ACTIVATE THE GATE
OPERATOR. THE RECOMMENDED DISTANCE
BETWEEN THE GATE OR FENCE AND
ACCESSORY SWITCH IS 10 FEET.**

located remotely from the HDSWG 1000. The wiring used is low voltage or CLASS 2. Be sure to run an independent conduit for this wiring from the Entry Device to the HDSWG 1000. The wire size should be #16 or #18 stranded for ease of handling.

WIRING VEHICLE DETECTORS

There are three connections that need to be made; 1) the AC power to the Detector, 2) the control connection to the HDSWG 1000, and 3) the connection to the loop. All these connections will be made at the Vehicle Detector connector. Follow the wiring instructions provided by the Vehicle Detector Manufacturer.



WARNING!

**IMPROPER WIRING COULD CAUSE
ELECTROCUTION OR DAMAGE TO CIRCUITRY.
FOLLOW LOCAL BUILDING AND ELECTRICAL
CODES.**

VEHICLE DETECTOR POWER

Vehicle Detectors may be ordered for 115 VAC or 24 VAC operation. The Auxiliary Transformer in the HDSWG 1000 may be used to supply 24 VAC power, however, the cautions regarding use of a Radio Receiver described must be observed. Allstar recommends that a 115 VAC Vehicle Detector be used to preclude any future difficulties even though a receiver may not be installed at this time. The 115 VAC may be obtained from the HDSWG 1000 at the HDSWG 1000 Control Box. **The AC power should never be taken from a location where it will be switched off at the HDSWG 1000 Power Switch.** Be aware that any connection to the HDSWG 1000 4 x 4 handy box will invalidate the UL Listing since the Detector will be "cord connected".

CONNECTING THE VEHICLE DETECTOR TO THE HDSWG 1000

For a REVERSING LOOP connection of the Vehicle Detector, the "relay" or "presence" output of the Detector will be connected to Terminal #9 (REVERSING LOOP) of the HDSWG 1000 and the RELAY COMMON wire will be connected to Terminal #13 (COMMON) of the HDSWG 1000. As long as a relay closure is present on these two lines, the HDSWG 1000 will not allow the gate to close. If the Vehicle Detector is activated and the gate is in the closed position, the presence of this signal will prevent the HDSWG 1000 from opening the gate. If the gate is opening, the gate will continue to open. If the signal is removed before the Timer to Close times out after opening, the gate will close after the Timer to Close has completed its cycle. If the signal is removed after the Timer to Close has completed its cycle, the gate will begin to close immediately.

For a FREE EXIT connection of a Vehicle Detector, the RELAY or PRESENCE output signal will be connected to Terminal #10 (HOLD OPEN) and the RELAY COMMON signal connected to Terminal #13 (COMMON) of the HDSWG 1000. **DO NOT CONNECT THE FREE EXIT OUTPUT SIGNAL TO ANY OTHER TERMINAL, SUCH AS PULSE OPEN, BECAUSE THE GATE WILL CLOSE AFTER REACHING THE OPEN LIMIT AND THE TIMER TO CLOSE HAS COMPLETED ITS CYCLE, EVEN THOUGH THE VEHICLE HAS NOT EXITED THE FREE OUT LOOP.**

CONNECTING THE LOOP WIRES

Follow the instructions of the Vehicle Detector Manufacturer when connecting the loop wires. Good, tight connections are most important. It is recommended that these wires be soldered to the wiring harness of the Vehicle Detector.




C: INSTALLING THE OPERATOR

TERMINAL STRIP REFERENCE CHART

#	NAME	DESCRIPTION			
1	LOCK SOLENOID		11	PULSE OPEN	Pulsed signal. Identical in operation to RADIO OPEN input. Used for access control devices such as telephone entry, keypads, card readers and 3-button stations.
2	LOCK SOLENOID				
3	COMMON	One of (2) board commons provided on the terminal strip	12	ALTERNATE	Pulsed signal. This input is used for "COMMAND OPEN/COMMAND CLOSE" applications. The 1st signal will cause the gate to begin opening. A 2nd signal received during the open cycle will stop the gate immediately. A 3rd signal will close the gate. Connect appropriate access control device to this terminal and #3 or #13 COMMON. Disable the Close Timer.
4	CLOSE LIMIT SWITCH	Used to configure right hand/left hand operation — See P. 13, Fig 11, Limit Switch Wires. NOTE: Ensure that wire to terminal 4 is same color as wire to terminal 14.			
5	OPEN LIMIT SWITCH	Used to configure right hand/left hand operation — See P. 13, Fig 11, Limit Switch Wires. NOTE: Ensure that wire to terminal 5 is same color as wire to terminal 15.	13	COMMON	Second of (2) board commons provided on the terminal strip.
6	STOP	Continuous or pulsed signal. Overrides all other signals. Once activated, the gate will immediately stop and await a new command. If the STOP input is continuously activated, the gate will not move.			
7	CLOSE	Pulsed signal. CLOSE overrides all other signals except HOLD OPEN, STOP, and REVERSING. Once activated, the gate will close immediately.	14	MOTOR RUN WINDING	Used to configure right hand/left hand operation — See Section C. Figs. 11 & 12, Motor Control Wires. NOTE: Ensure that wire to terminal 14 is same color as wire to terminal 4.
8	RADIO OPEN	Pulsed signal. Once activated the gate will open fully. Activation while the gate is closing will cause it to re-open.	15	MOTOR RUN WINDING	
9	REVERSING	This input is active only when the gate is closing or when it's fully open and the Close Timer is operative. All stand-alone vehicle detectors, photo-eyes and active edges should be connected here and to terminals #3 or #13 COMMON. Multiple devices may be connected in parallel.	16	MOTOR COMMON	Used to configure right hand/left hand operation — See Section C, Figs. 11 & 12. Motor Control Wires NOTE: Ensure that wire to terminal 15 is same color as wire to terminal 5 Center tap for motor run windings
10	HOLD OPEN	Continuous or pulsed signal. Usually used with an external toggle switch or free exit vehicle detector. Once activated, the gate will open fully and remain open until the HOLD OPEN signal is no longer present. If the close time is enabled, the controller will time-out and close the gate once the HOLD OPEN input is no longer active	17	AC INPUT	
			18	AC INPUT	

D: STARTING THE OPERATOR

SETTING THE LIMIT SWITCHES RIGHT-HANDED OPERATION



WARNING!

RISK OF ELECTROCUTION
DO NOT BEGIN TO SET THE FOLLOWING
ADJUSTMENTS UNTIL THE POWER IS TURNED
OFF AT THE HDSWG 1000 CONTROL BOX

With the cover removed from the HDSWG 1000 MECHANICAL UNIT, and the arm connected to the gate as well as to the HDSWG 1000 Operator, position the gate at its fully closed position. Identify the lower Limit Switch. Loosen the clamping nut on the Limit Switch Cam for the lower Limit Switch. Rotate the cam on the output shaft until it engages the Limit Switch and an audible “click” is heard. Repeat this several times until you are confident that the position of the cam is such that the Limit Switch is just closed. Carefully tighten the nut on the Limit Switch Cam. Snug the set screw on the cam against the output shaft to protect the cam from accidental movement. Open the gate to its fully open position. Repeat this procedure for the upper Limit Switch and Cam. (See Figure 18.)

SETTING THE LIMIT SWITCHES LEFT-HANDED OPERATION

For a LEFT HAND installation, the cam positions will be reversed. The Upper Limit Switch will be the close Limit Switch and the Lower Limit Switch will be the Open Limit Switch.

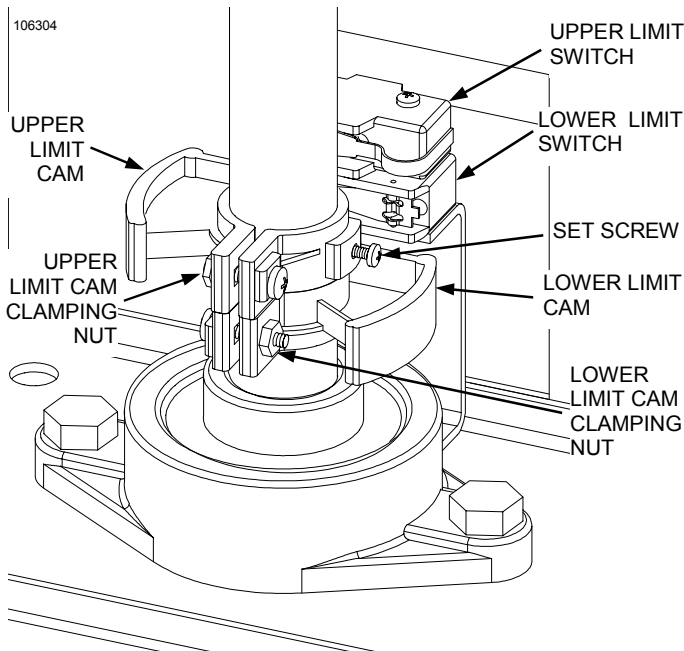


Figure 18: Limit Switches

PRESETTING THE MOTOR OVERLOAD SENSITIVITY

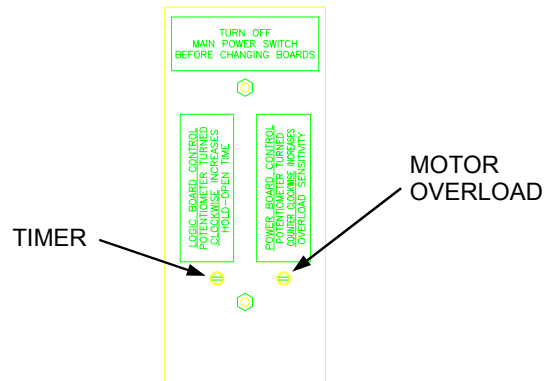
The HDSWG 1000 is shipped from the Factory with the overload setting at its most sensitive setting. During the initial check out phase, it will be necessary to adjust the sensitivity to prevent inherent overloads from gate friction and other gate anomalies. See Figure 19. Adjust the "OVERLOAD" potentiometer approximately 1/4 turn clockwise. Note! Turning the potentiometer clockwise decreases sensitivity. Turning the potentiometer counterclockwise increases sensitivity.

WARNING: THE OVERLOAD POTENTIOMETER MUST BE SET MORE PRECISELY PRIOR TO COMPLETING THE HDSWG 1000 INSTALLATION. (See, FINAL SETTING OF THE MOTOR OVERLOAD SENSITIVITY)

SETTING THE SWITCH SELECTABLE OPTIONS

The switch selectable options are located on the Logic board. The board must be removed before the switch can be set. (BE SURE THAT THE POWER IS OFF BEFORE REMOVING THE LOGIC BOARD. The boards are keyed with a slot to prevent accidental incorrect insertion.)

OVERLOAD MODE



104896

Figure 19: Switch Selectable

The mode of operation for the HDSWG 1000 overload condition is set at the factory

The HDSWG 1000 will stop when OPENING and will stop when CLOSING when an overload is detected by the HDSWG 1000 overload function.



D: STARTING THE OPERATOR

TIMER TO CLOSE SETTING

The Timer to Close is controlled by the switch in position #3. If Switch #3 is set OFF, the Timer to Close function will operate after the gate has opened.

If Switch #3 is set ON, the Timer to Close function will be disabled.

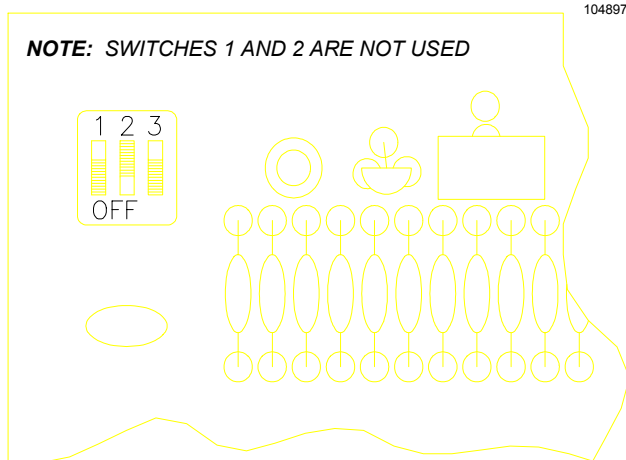


Figure 20: TIMER TO CLOSE SETTINGS

APPLYING POWER TO THE HDSWG 1000

PRE-POWER CHECK LIST

Before applying power to the HDSWG 1000 for the first time, go through the following check list to ensure that all is in order for the application of power.

1. Check that the HDSWG 1000 power switch is off.
2. Check that the breaker at the power panel is on.
3. With a voltmeter on the proper scale, check that the line voltage at the input to the HDSWG 1000 is the voltage that is expected. Connection of a 115 VAC HDSWG 1000 to an unexpected 230 VAC line is a common occurrence. This will cause readily identifiable board failure that **WILL NOT BE COVERED UNDER WARRANTY**.
4. Manually move the gate to the center of the gate opening.
5. Make sure the Torque Limiter is properly adjusted to slip under a load when a moderate amount of force is applied to the gate in the center of its travel. If the adjustment is too loose, the overload sensitivity will not function properly and the Torque Limiter may slip when the gate is under a wind loading. Start by tightening the large nut on the Torque Limiter to 35 ft-lbs/in. To fine tune, increase or decrease this by approximately 5 ft-lbs/in. increments. When a satisfactory setting is found, tighten the set screw in the side of the large nut.
6. Make sure that the proper selection has been made at the Switch selectable options.
7. Make sure that the overload sensitivity is set to its preliminary start up position.

8. Remove the 15 AMP fuse at the Backplane of the HDSWG 1000. (Motor fuse.)

CHECKING THE INDICATOR LIGHTS

There are 14 indicator lights on the Backplane of the HDSWG 1000. See Figure 21. These lights are used to verify proper operation of the HDSWG 1000.

TURN ON THE MAIN POWER SWITCH TO THE HDSWG 1000.

- Note that the 24 V lamp is lighted. This indicates that power is applied to the Backplane and boards and the power supply is functioning
- Note that no other lamps are lighted.
- Connect one end of a short piece of wire (not supplied) to terminal #13 (COMMON).
- With the other end of this wire, (make sure that this loose end is free of insulation), touch the following terminals and observe the noted response of the lamps.

1. Terminal #3, Close Lim Sw.: Close Lim Sw light is ON.
2. Terminal #4, Open Lim Sw.: Open Lim Sw light is ON.
3. Terminal #8, Radio Open.: Radio Open light is ON, Open Triac light is ON and Lock light is ON.
4. Remove wire from Terminal #8, Radio Open. Radio Open light goes OUT, Open Triac light stays ON, Lock light stays ON.
5. Terminal #7, Close.: Both Open and Close Triac lights are momentarily ON, then Open Triac Light goes OUT and Close

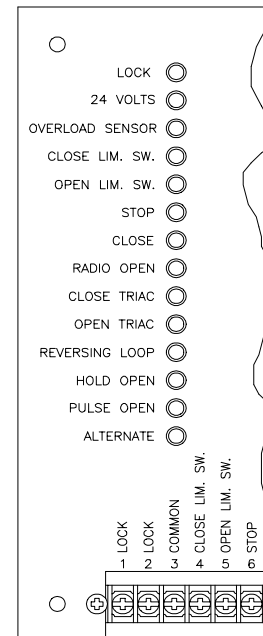


Figure 21: Indicator Lights

D: STARTING THE OPERATOR

RUNNING THE HDSWG 1000

Triac Light stays ON. Lock light is ON.

6. Terminal #6, Stop,: Both Open and Close Triac lights are momentarily ON, then both Open and Close Triac lights go OUT. The Lock light goes OUT. The stop light is ON as long as the wire is held on the terminal and the stop light goes OUT when the wire is removed.
7. Terminal #7, Close.: Observe that the Close Triac Light comes ON, the Lock light is ON and the Close light is ON. Remove the wire from terminal #7 and observe that the Close light goes OUT the Triac and Lock lights stay ON.
8. Terminal #9, Reversing Loop,: Observe that both Triac lights are ON momentarily and then the Close Triac light goes OUT and the Open Triac light stays ON. The lock light is ON.
9. Terminal #6, Stop,: Same as before above, Sequence 6.
10. Terminal #12, Alternate: Alternate light is ON, Close Triac light is ON and Lock light is ON. Remove wire and note that the Alternate light goes OUT but the Close and Lock lights stay ON.
11. Hit Terminal #12, Alternate again: Note that the Alternate light comes ON, that the Close Triac light goes OUT and that the Open Triac light comes ON and that the Lock light stays ON.
12. With the multimeter set to measure DC voltage on the 50 Volt scale or more, measure approximately 28 Volts DC at Terminal #1, LOCK.

CHECK OF THE INDICATOR LAMPS HAS BEEN COMPLETED.

IF THE INDICATOR TEST PERFORMED SATISFACTORILY, TURN OFF THE AC POWER SWITCH AT THE HDSWG 1000 CONTROL BOX AND REPLACE THE 15 AMP FUSE.

PRE POWER-ON CHECKLIST

Before running the HDSWG 1000, make sure

1. The proper Left-or Right-hand or Bi-Parting wiring has been completed.
2. The Limit Switch Cams have been preliminarily set.
3. The Motor Overload Sensitivity has been preset.
4. The Switch Selectable Options have been set.
5. The Gate has been positioned in the center of it's travel.
6. The Torque Limiter is properly adjusted.
7. No other devices should be connected to the terminal strip until the powering-up procedures are completed.

Turn ON the main power switch. The stop cycle "thump" should be heard and both the OPEN and CLOSE Triac Lamps should come on for approximately 1/2 second and then go out. The gate should not move. If the gate moves in either direction more than a few inches or continues to run, turn off the power and call Factory Service for assistance.



WARNING!

**RISK OF ENTRAPMENT
OVERLOAD SENSITIVITY HAS NOT BEEN SET.
DO NOT ALLOW ANYONE NEAR THE GATE AND
DO NOT LEAVE GATE AND HDSWG 1000
UNATTENDED UNTIL FOLLOWING PROCEDURES
HAVE BEEN COMPLETED.
USE CAUTION DURING THIS FINAL
ADJUSTMENT PERIOD.**

1. Give the HDSWG 1000 a command to open by touching the jumper wire connected to Terminal #13 (COMMON) to Terminal #8 (RADIO OPEN). The gate should move to the fully open position.
2. If the TIMER TO CLOSE option has been selected, the timer will activate the gate to close within approximately 45 seconds.
3. Allow the gate to close and note the position of the gate.

IF THE GATE HITS THE OPEN OR CLOSE STOPS OR EITHER THE OPEN OR CLOSE TRIAC LIGHT REMAINS ON AFTER REACHING THE MECHANICAL STOPS AND THE LIMIT SWITCH LIGHT IS "ON", TURN OFF THE MAIN POWER SWITCH. IF THE GATE HITS THE MECHANICAL LIMIT AND THE LIMIT SWITCH LIGHT DOES NOT COME ON, THE LIMIT CAM OR THE STOP WILL NEED TO BE READJUSTED

If the gate stops short of the desired fully open or closed position or if it bangs against the end stops, TURN OFF THE MAIN POWER and reset the appropriate Limit Switch Cam. After you have attained the final adjustment, run the HDSWG 1000 open and closed several times to ensure that the positions set will be retained.



D: STARTING THE OPERATOR

MAXIMUM RUN TIMER

The HDSWG 1000 is equipped with a Maximum Run Timer that is Factory set to turn the HDSWG 1000 OFF if a Limit Switch command is not received within 45 Seconds after a Command to Open or Close is given. The purpose of the Maximum Run Timer is to turn off the HDSWG 1000 if the gate should become jammed when opening or closing. In this case, the Limit Switch will not be activated. Should this occur, the Torque Limiter will slip and the pads will be worn out prematurely. The Maximum Run Timer will prevent this by turning OFF the HDSWG 1000. Once the obstruction is removed, any command will reactive the HDSWG 1000.

WHEN CHECKING OPERATION OF THE LIMIT SWITCHES, BE CERTAIN THE LIMIT SWITCH IS TURNING OFF THE MOTOR AND NOT THE MAXIMUM RUN TIMER. SHOULD THE GATE REACH THE OPEN OR CLOSED POSITION AND THE RESPECTIVE LIMIT SWITCH LIGHT DOES NOT COME ON BUT THE MOTOR STOPS RUNNING, THEN THE MAXIMUM RUN TIMER IS TURNING OFF THE MOTOR. SINCE THE NORMAL OPENING AND CLOSING TIME IS APPROXIMATELY 15 SECONDS, RESPECTIVELY, TURNING THE HDSWG 1000 OFF BY THE MAXIMUM RUN TIMER WILL CAUSE THE TORQUE LIMITER TO SLIP FOR APPROXIMATELY 30 SECONDS EACH TIME THE GATE IS OPERATED. THE TORQUE LIMITER PADS ARE NOT CAPABLE OF LONG LIFE UNDER THESE CONDITIONS. PREMATURE WEAR WILL OCCUR AND FREQUENT ADJUSTMENT OF THE TORQUE LIMITER WILL BE NECESSARY.

FINAL SETTING OF THE CLOSE TIMER

To alter the amount of time that the close timer will hold the gate open, adjust the timer potentiometer located on the Logic Board. See Figure 19.

The Close Timer is adjustable from 0 to approximately 45 seconds. Turning the potentiometer **clockwise increases** the delay; turning it **counterclockwise decreases** the delay.

FINAL SETTING OF THE MOTOR OVERLOAD SENSITIVITY

The motor overload sensitivity was preset before turning on the main power to prevent the operator from "self-tripping" during the preliminary adjustment period. **NOTE:** The HDSWG 1000 is shipped from the factory with the OVERLOAD option set to stop the gate in the opening and closing direction if an overload is detected. Start from the closed gate position and give the HDSWG 1000 an open command. As the gate is opening, adjust the OVERLOAD

potentiometer in the counterclockwise direction until the OVERLOAD SENSOR lamp blinks and the gate stops. Adjust the OVERLOAD potentiometer a very small amount in the clockwise direction. Give the HDSWG 1000 an open command and observe the OVERLOAD SENSOR lamp and the Gate. If the light blinks and the gate stops, again turn the OVERLOAD potentiometer a slight amount in the clockwise direction. Repeat this process until the gate will open without the OVERLOAD tripping and with the OVERLOAD potentiometer in the most counterclockwise direction. (Make sure the gate swings easily and there are no obstructions in the path of the gate.)

When you are satisfied that you have the best setting, test this setting by striking the gate a sharp blow with the palm of your hand when the gate is closing. The OVERLOAD should respond immediately to your blow. If the Torque Limiter slips before the overload is detected, the Torque Limiter will need to be tightened. The purpose of the Torque Limiter is to protect the mechanical components of the HDSWG 1000 (primarily the Gear Box). The Torque Limiter should be adjusted so that the OVERLOAD will be activated before slippage occurs.

IMPORTANT ! THE OVERLOAD POTENTIOMETER MUST BE ADJUSTED TO THE MOST SENSITIVE POSITION POSSIBLE WITHOUT CAUSING "SELF-TRIPPING" DUE TO THE GATE'S INHERENT FRICTION OR TO VARIATIONS IN THE GATE HINGE. TRY ADJUSTING THE POTENTIOMETER SEVERAL TIMES BY SMALL INCREMENTS, TESTING THE OVERLOAD BY STRIKING THE GATE WITH YOUR PALM IN BOTH DIRECTIONS OF TRAVEL. REPEAT THIS TEST UNTIL YOU ARE SATISFIED YOU HAVE THE MOST SENSITIVE SETTING OF THE POTENTIOMETER.

Disconnect the crank arm from the output shaft to permit re-installation of the cover on the mechanical unit. Install the operator cover and secure it to the frame with (2) 1/4-20 hex bolts. Remember to re-install the rain seal on the output shaft. Re-connect the gate arm on the HDSWG 1000 and secure it with the padlock provided. Complete the installation by replacing the cover on the Control box.

Review the Installation Notes in Section A of this manual and describe the gate system operation to the end user. Review the Gate Operator System Operation and Safety Guide in Section F of this manual with the end user.

E: INSTALLATION NOTES FOR AUXILIARY EQUIPMENT



You are now ready to install and connect the ancillary equipment. INSTALLATION STEPS DETAILED IN SECTIONS A, B, C AND D MUST BE COMPLETE BEFORE PROCEEDING.

1. Vehicle Detectors:

If a Vehicle Detector (Reversing Loop) is to be a part of this installation, start with this first. Connect the Vehicle Detector to AC power and the Loop in accordance with the Manufacturer's instructions and the information contained in this manual. Do not connect to the terminal strip of the HDSWG 1000 at this time. Test the Vehicle Detector independently using the presense lamp on the front panel of the detector and a metal plate over the loop. When you are satisfied that the Detector is working properly, connect the output wires to the "REVERSING" terminal on the terminal strip in the Control Box.

Give the gate an open command and allow the Timer to Close to start the gate to close. Place the metal plate over the Loop and observe that the "REVERSING" light comes ON and the gate reopens.

2. Shadow Loop:

WHEN A SHADOW LOOP IS NECESSARY, THE HDSWG 1000 MUST BE ORDERED WITH A SPECIAL DOUBLE POLE LIMIT SWITCH FOR THE OPEN LIMIT SWITCH. The Vehicle Detector relay control signal must be routed through the normally open contacts of the second switch contacts of the Double Pole Open Limit Switch. When the gate is in the fully open position, this contact will close the circuit of the Vehicle Detector to the HDSWG 1000 and prevent the gate from closing when a vehicle is over the Shadow Loop. When the gate is closing or opening, this contact of the Limit Switch is open and the Vehicle Detector signal path is broken.

If a "Shadow" loop is to be installed, connect the output wires of this Detector to the "HOLD" open terminal. Place the metal plate over the Shadow loop. Give the gate an open command. Note that the gate reaches the fully open position, that the Hold Open light is ON and that the gate does not close. Leave the metal plate on the loop for at least one minute. The gate should not close. Remove the metal plate from the loop and observe that the gate closes.

3. Free Exit:

If a "FREE EXIT" Detector is installed, connect the output wires of this Detector to the HOLD OPEN Terminal. (It is acceptable to have more than one device connected to the same Terminal.) Place the metal plate over the FREE EXIT LOOP and observe that the HOLD OPEN lamp is ON and the gate opens to the fully open position. Leave the metal plate on the loop for at least one minute. Observe that the gate does not close. Remove the plate from the Loop and observe that the gate closes. (Some Vehicle Detectors will "tune out" a constant obstruction to the loop after 15 to 30 minutes.)

4. Installing other entry devices:

After you are satisfied that all the loops are functioning properly, proceed with the installation of the additional devices, such as a Radio Receiver, Telephone Entry or Key Pad. Connect the Radio Receiver to the Radio Terminal. Observe the precautions regarding radio receivers described on page 15. Other entry devices **MUST** be connected to the PULSE terminal.

5. Installing a Magnetic Lock:

The HDSWG 1000 is wired to supply 24 Volts DC to a Magnetic Lock. The Lock will have two wires that are to be connected between Terminals #1 and #2 on the Terminal strip in the Control Box. These terminals are marked LOCK. The maximum current that can be supplied is 1 AMP. Therefore, the "resistance" of the Magnetic Lock between it's terminals must measure more than 30 Ohms. (Most Magnetic Locks have a resistance of 100 ohms or greater.) When the gate is in the closed position, the LOCK light on the Panel in the Control Box must be ON. (Note, the Allstar MARK I uses the same Logic Board as the HDSWG 1000, except for the connection to the LOCK circuit. If the LOCK light is not lighted but comes on when the gate is opening or closing, a MARK I Logic Board has been accidently installed in your HDSWG 1000. It must be replaced with HDSWG 1000 BOARD. The HDSWG 1000 Logic Board has a small board mounted on the back for the MAXIMUM RUN TIMER.)

The Magnetic Lock will be released by the HDSWG 1000 about 100 milliseconds prior to giving the gate an open Command. This time delay is to allow the magnetic field in the Magnetic Lock to decay and release the Lock prior to starting the gate. If the gate does not open and it appears that the Magnetic Lock is not releasing promptly, put a 1000 ohm 1 watt resistor across Terminals 1 and 2 on the Terminal Strip.



F: GATE OPENER SYSTEM OPERATION & SAFETY GUIDE

To the Owner/End User of Allstar's HDSWG 1000:

Thank you for choosing an Allstar product. We are confident you will have many years of use and satisfaction with your gate operator.

Our HDSWG 1000 Operator is part of your unique gate operating system, which may consist of a variety of components, including the gate, the gate tracks, posts, and electronic safety features. These components combined present certain risks and safety issues of which you, the end user, must be aware.

Each unique system presents a unique set of hazards which we cannot possibly address individually. These instructions will help you to identify the potential risks and safety issues your gate operator system presents, and guide you as you make your system as safe as possible for everyone who uses it.

Your first step is to consider the intended use of the gate system, who will be using the gate system, and in what manner the system is installed. You should have a clear understanding of how often the gate will be opened, who will be opening it, whether children and the general public will be near the gate system, and how close the gate system is to public property. Once you have answered these questions, you are ready to decide what safety measures must be taken to prevent injury.

To minimize the risk of entrapment in your gate system, install the following safety features:

- Electric gate edges
- Enclosed tracks
- Vertical guard posts
- Protective screen mesh
- Photoelectric sensors
- Instructional and precautionary signs



ALL APPROPRIATE SAFETY FEATURES MUST BE INCORPORATED INTO YOUR GATE SYSTEM.

- Covers for exposed rollers

Each safety feature is a separate component in your gate system. Read and follow all instructions for each of the components of your unique system. **Ensure that all instructions for mechanical components, safety features and the Allstar HDSWG 1000 are available for everyone who will be using your gate system.**

The two warning signs shipped with your HDSWG 1000 Operator (See Figure 2, Page 4 of this manual) must be installed in prominent positions on both sides of your gate. Keep them clean and legible.

Read and follow the safety points on the following page which present the basic guidelines for the safest operation of your gate operator system.

PRECAUTIONS FOR PEDESTRIAN TRAFFIC OR RESIDENTIAL AREAS.



The internal operator overload sensor may not be adequate entrapment protection in all situations to prevent arm, leg, or hand injuries. Padded electric gate edges, pneumatic gate edges, or photoelectric sensors are therefore necessary when automatic gates are used near pedestrian traffic. **Use of a pedestrian walk gate is mandatory where there is nearby pedestrian traffic.**

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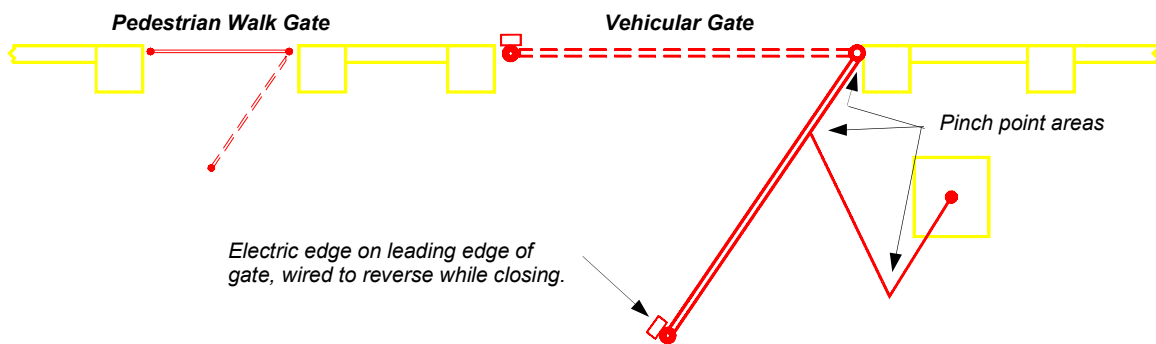


Figure 22: Entrapment Protection

F: GATE OPENER SYSTEM OPERATION & SAFETY

AVOID ENTRAPMENT: Stay away from the **path** of the gate and all moving parts (gate arms, etc.) at all times. Keep clear of the pinch points identified below. Install guards or other safety features to prevent access to pinch point areas. Install guards on open rollers.

PREVENT PERSONAL INJURY OR DEATH: Do not stand near or on the gate. Gate may be activated without notice. Do not allow anyone to “ride” the gate, or place arms or legs through the gate. The force of the gate can cause serious personal injury or death.

NO CHILDREN OR PETS ALLOWED: Never allow a child to operate gate controls, “ride” a gate, or play in the area of a gate. **Install and store all controls out of children’s reach.** Also, pets must be kept away from the gate. Install a pedestrian gate in applications where children or pets need access.

KEEP GATE IN SIGHT: Never activate the gate unless it is in sight. Install mounted controls in full view of the gate. Be sure the gate area is clear before activating the gate, and watch the gate and gate area as the gate is in motion.

LOCATE MANUAL CONTROLS SAFELY: A manual control such as a pushbutton or keyswitch must be included in your gate system design to be used if automatic controls such as radio controls or loop detectors do not function. Carefully consider the placement of the manual control: It must be **out of reach of the gate** so that no one pushing the button or inserting the card is in the path of the gate or moving parts; it must also be **within sight of the gate** so that the operator can watch the gate and gate area during operation. The recommended minimum distance between the gate or fence and manual controls accessory is 10 feet.

INSTALL SAFETY DEVICES: In residential applications or in areas where pedestrians may be present, or if your gate closes automatically, be sure an electric edge(s) and/or a photoelectric sensor(s) has (have) been installed and is/are operating properly. These features are intended to detect pedestrian traffic and prevent injury or entrapment.

Loop detectors may be installed to detect vehicular traffic and prevent vehicular damage.

MAINTAIN THE GATE AND GATE HARDWARE: A damaged gate or one that cannot be easily opened and closed manually must be repaired before installing a gate operator. A poorly operating gate may cause the load sensing device of the operator to fail, causing a risk of entrapment. **Never overtighten the clutch or load sensing device to compensate for a poorly swinging gate.** Correct all mechanical problems on the gate and gate hardware before installing the gate operator.

MAINTAIN ALL COMPONENTS OF GATE SYSTEM: Follow the maintenance instructions included with the gate, the gate operator, and the safety features and/or accessories that make up your gate operator system. Have a professional service technician perform any adjustments or maintenance to the components. **Fully test all safety features routinely.** Discontinue the use of faulty safety equipment immediately, and have the equipment replaced.

KNOW YOUR GATE ARM DISCONNECT FEATURE: In the event of a power outage, you may need to manually operate your gate. The HDSWG 1000 is equipped with a keyed padlock to permit the gate arm to be manually disconnected from the HDSWG 1000 operator. This will allow you to manually push the gate open or close as needed. Be sure to have the service technician or dealer installing your gate system give you the key to the padlock and show you how to use this feature quickly and safely. Keep the key in a safe, accessible place.

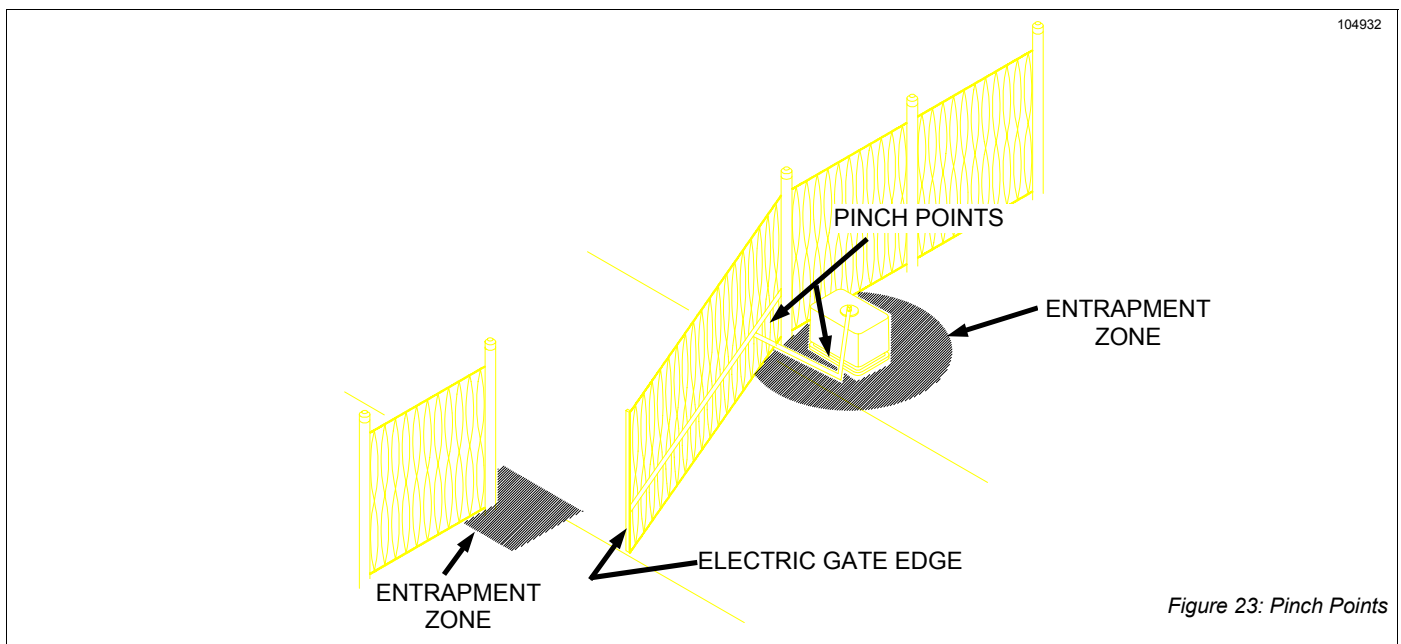


Figure 23: Pinch Points



MECHANICAL UNIT EXPLODED VIEW

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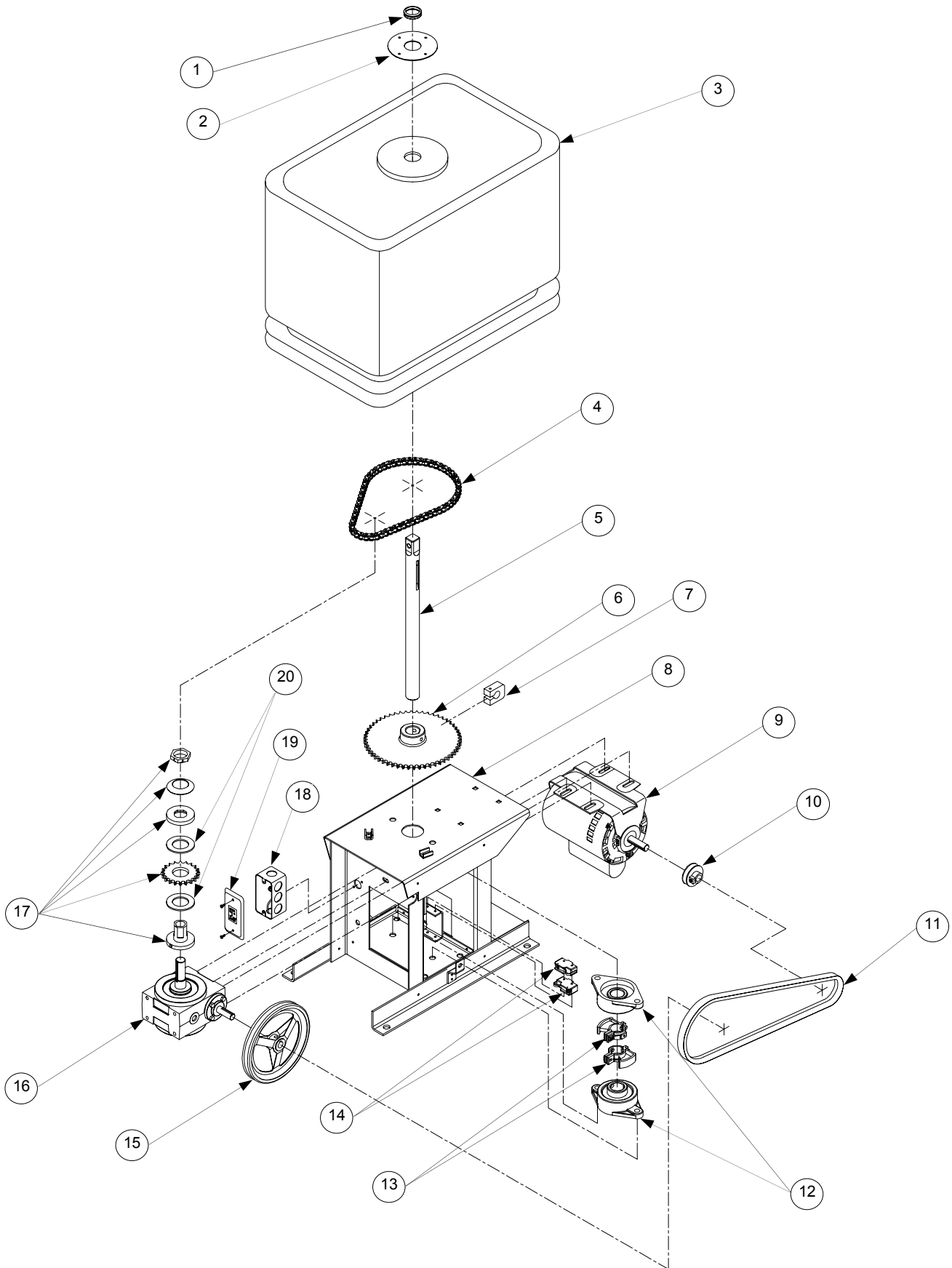


Figure 24: HDSWG 1000 Mechanical Unit Exploded View

MECHANICAL UNIT PARTS LIST

ITEM #	PART #	DESCRIPTION
1	10291	RAIN SEAL RUBBER RING
2	104442	RAINSEAL PLATE
3	10279	OPERATOR COVER
4	10221	ROLLER CHAIN
5	104452	OUTPUT SHAFT
6	10216	SPROCKET, 1-1/4 SHAFT
7	104479	ARM STOP PALL
8	10278	OPERATOR FRAME
9	10172	MOTOR
10	10213	PULLEY, 2 IN V BELT, 5/8 IN BORE
11	10220	V-BELT
12	10215	BEARING, 1-1/4 SFT
13	10436	ACTUATOR, LIMIT CAM
14	10156	LIMIT SWITCH
15	10219	PULLEY, 8 V-BELT, 5/8 BORE
16	10218	SPEED REDUCER
17	10217	TORQUE LIMITER
18	10173	HANDY BOX, 1-7/8 DEEP
19	102735	HANDY BOX COVER WITH LABEL & SCREWS
20	10231	CLUTCH DISC

ARM KIT & CONTROL BOX EXPLODED VIEW & PARTS

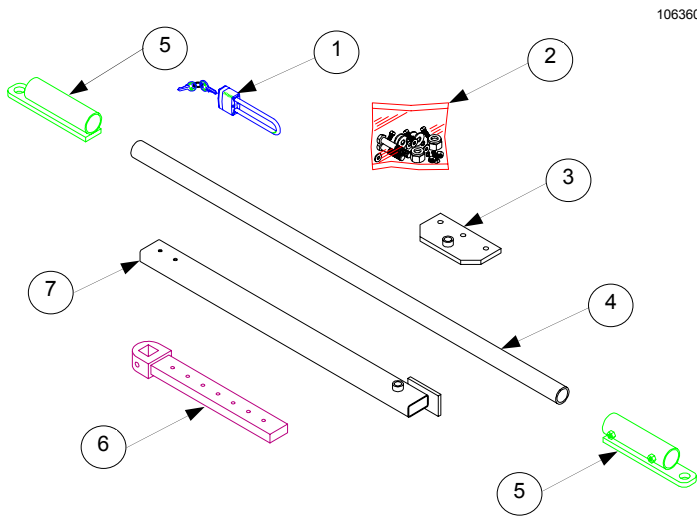


Figure 25: HDSWG 1000 Arm Kit Exploded View

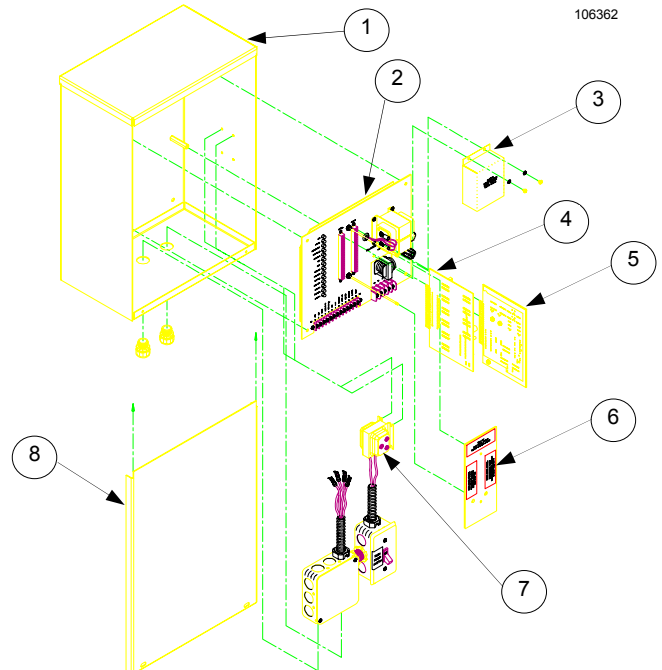


Figure 26: HDSWG 1000 Control Box Exploded View

ITEM #	PART #	DESCRIPTION
1	10667	PADLOCK WITH KEYS
2	102928	HARDWARE BAG, ARM KIT
3	104476	ARM BRACKET
4	104448	ARM
5	104475	ARM FITTING
6	104474	CRANK ARM
7	104473	CRANK ARM EXTENSION

ITEM #	PART #	DESCRIPTION
1	102911	CONTROL BOX
2	01008	BACKPLANE
3	104456	HI VOLTAGE COVER
4	01055	LOGIC BOARD
5	01054	POWER BOARD
6	102830	PCB SHIELD
7	10152	115 VOLT TRANSFORMER
8	102925	CONTROL BOX COVER



TECHNICAL SPECIFICATIONS

PHYSICAL

PAD: 24W x 30D x 3H

OVERHEAD CLEARANCE: 21 Inch Minimum

UNIT SIZE: 16-1/8 x 24-7/8 x 17-1/4

FRAME: Welded steel, Coated to UL Standards

COVER: Molded Polyethylene

SHIPPING WEIGHT: 150 lbs.

ELECTRICAL

PRIMARY VOLTAGE: 115 VAC, 60 Hz

ELECTRICAL SOURCE: One 3-Wire 15 AMP Service per Operator

CONTROL VOLTAGE: 12/24 VDC

RADIO RECEIVER 24 VAC

POWER:

MOTOR: 1/2 HP, 4.4 AMP PSC, Instant Reversing

DRIVE

DRIVE SYSTEM: 60:1 Gearbox

TORQUE LIMITER: Mounted on Output Shaft, Adjustable

OUTPUT SHAFT: 1-1/4 Diameter Ball-Bearing Mounted

LIMITS: Independent Open & Close; Displaced Cam with Micro Switch

CAPACITIES

MAX. GATE WEIGHT: 1000 lbs.

MAX. GATE WIDTH: 18 Feet

MAX. CYCLES PER HOUR: 60 Open/Close per Hour
1200 Open/Close per Day

GATE SPEED: 13-15 Seconds for 90° Opening

Specifications subject to change without notice. Consult the factory.



Manufacturer's Limited Warranty

Allstar warrants its gate operators to be free from defect in material and workmanship for a period of five (5) years from the date of purchase for single family home use and three (3) years from the date of purchase for multi-family and commercial use. This warranty covers all components except the electronic circuit boards which are warranted for three (3) years from the date of purchase for single family home use and two (2) years from the date of purchase for multi-family and commercial use. To obtain service contact your dealer.

To obtain service under this warranty the buyer must obtain authorization instructions for the return of any goods from Allstar before returning the goods. The goods must be returned with complete identification, with copy of proof-of-purchase, freight prepaid and in accordance with Allstar's instructions or they will not be accepted. In no event will Allstar be responsible for goods returned without proper authorization or identification.

Goods returned to Allstar for warranty repair within the warranty period, which upon receipt by Allstar are confirmed to be defective and covered by this limited warranty, will be repaired or replaced at Allstar's sole option, at no cost and returned pre-paid. Defective parts will be repaired or replaced with new or factory rebuilt parts at Allstar's sole option.

This limited warranty does not cover non-defect damage, damage caused by unreasonable use, damage caused by improper installation or care, vandalism or lightning, fire or excessive heat, flood or other acts of God (including, but not limited to misuse, abuse or alterations, failure to provide reasonable and necessary maintenance), labor charges for dismantling or reinstalling a repaired or replaced unit, or replacement batteries.

These warranties are in lieu of all other warranties, either expressed or implied. All implied warranties of merchantability and/or fitness for a particular purpose are hereby disclaimed and excluded. Under no circumstances shall Allstar be liable for consequential, incidental or special damages arising in connection with the use or inability to use this product. In no event shall Allstar's liability for breach of warranty, breach of contract, negligence or strict liability exceed the cost of the product covered hereby. No person is authorized to assume for Allstar any other liability in connection with the sale of this product.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state. Warranty effective after May 15th, 1997.

For Information:
Phone 610-436-6190 FAX 610-344-0210

c.p. Allstar Corporation
Downingtown, PA 19335

This Gate Operator is built in the USA and
complies with all requirements of
Underwriters' Laboratories Standard UL-325.
P/N 107765 Rev. A, 5/97