

# QUICKSTART "BASIC" GUIDELINES FOR MODEL 1603 - DOWN LOOP WITH ENTRY LANE TRAFFIC ONLY



120 S. Glasgow Avenue  
Inglewood, California 90301  
U.S.A.

**Model 1603 is intended for installation only on barrier gates used for vehicles.** Pedestrians must be supplied with a separate access opening. For safety and installation instructions, please refer to the Installation/owner's manual.

**CAUTION:** Installation and use of traffic control spike unit in areas that are subject to freezing weather with the potential of snow and ice accumulation is not recommended. The unit may freeze in the up position and cause unintended injury or damage due the inability of the spikes to retract.

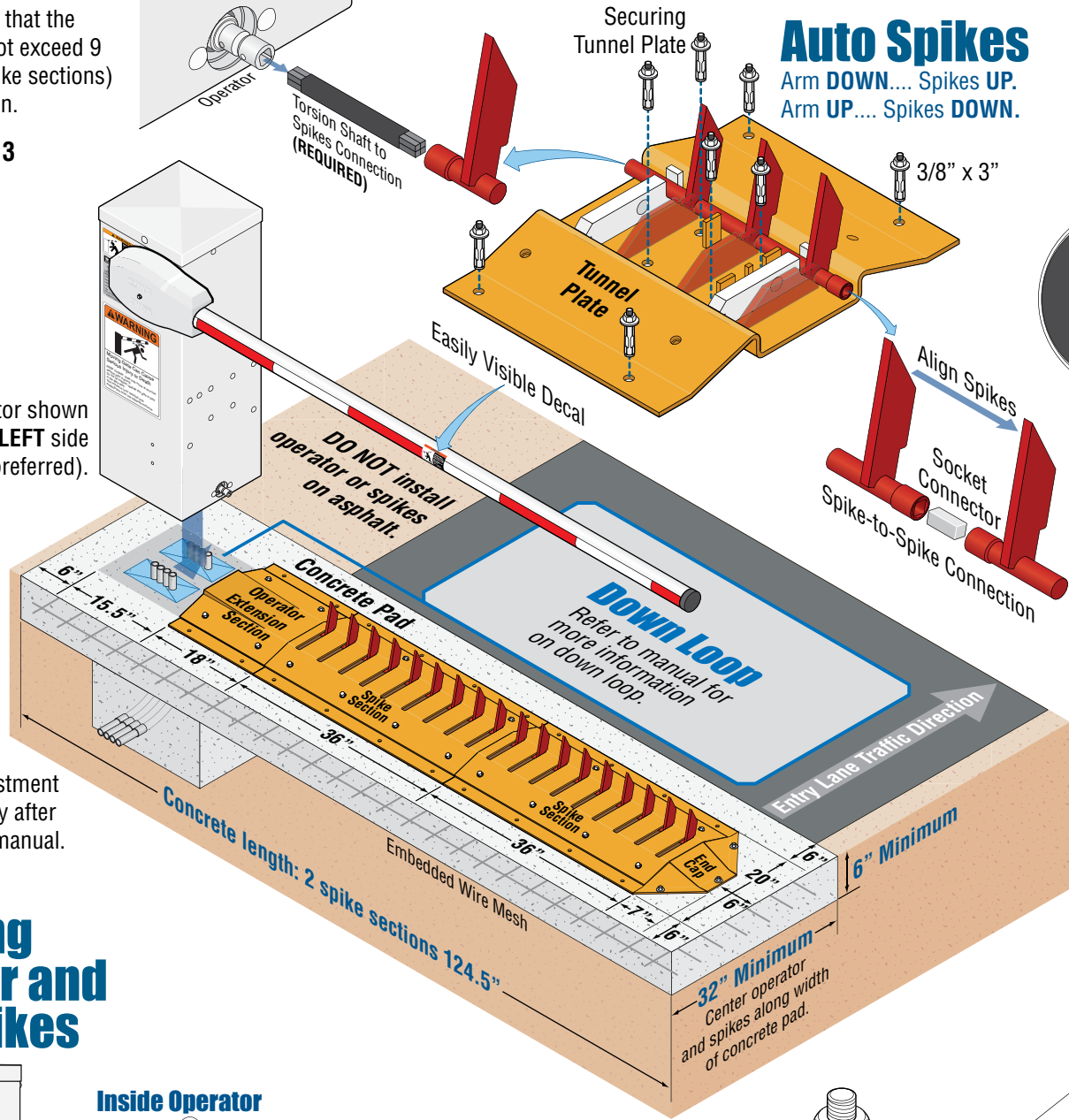
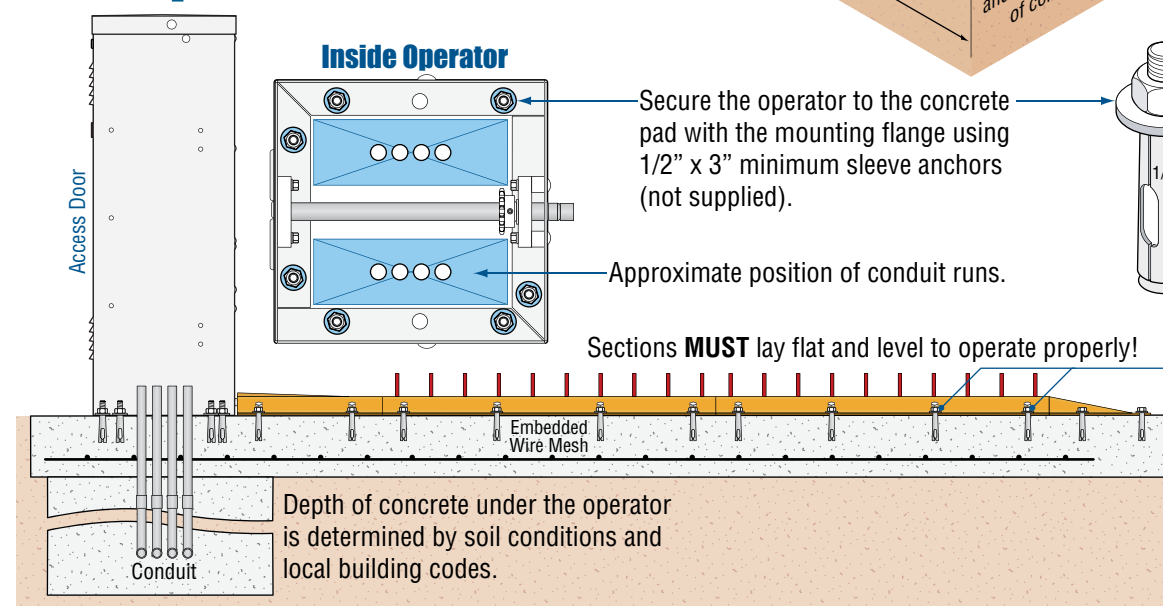
It is recommended that the "Spike" sections not exceed 9 feet (Three 3-Ft spike sections) for proper operation.

Refer to Section 3 Auto Spike System Installation in the manual for COMPLETE spike installation.

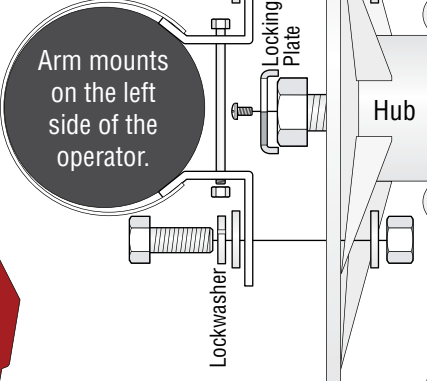
**Note:** Operator shown mounted on the LEFT side of traffic lane (preferred).

**Note:** Spike adjustment may be necessary after installation, see manual.

## Mounting Operator and Auto Spikes



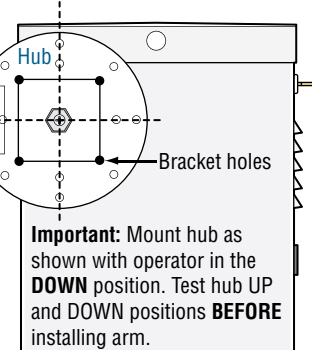
## Arm Assembly



## Spike Assembly

1. Snap all sections together using socket connectors with spikes aligned with each other. **Important Note:** Operator extension section's torsion shaft **MUST** connect to operator.
2. Test spike rotation **BEFORE** securing tunnel plates to concrete with 3/8" x 3" sleeve anchors.

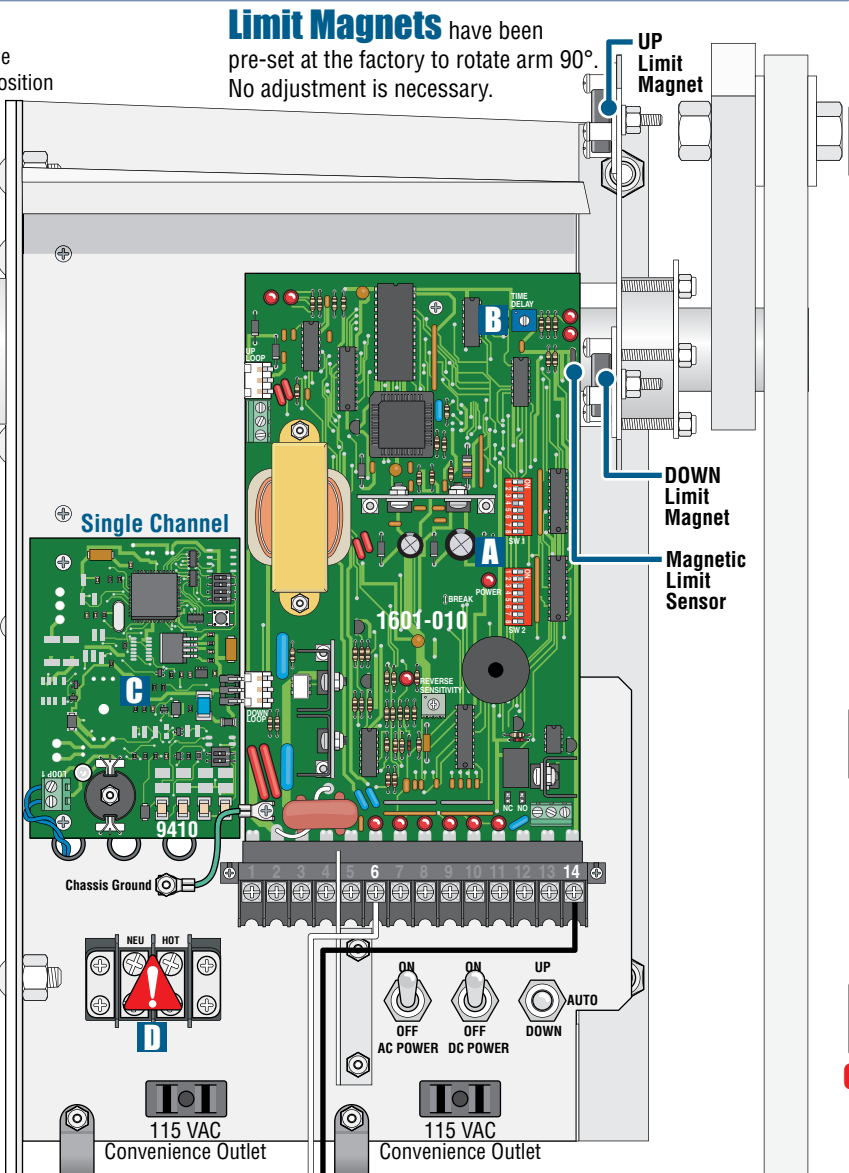
## Arm Bracket Holes



Secure the tunnel plates to the concrete pad using 3/8" x 3" sleeve anchors (not supplied). **Cut off excess threads flush with top of nut on all ramps.**

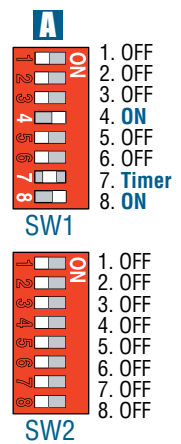
## Limit Magnets

Limit Magnets have been pre-set at the factory to rotate arm 90°. No adjustment is necessary.



## Board Adjustments

See reverse side.



## Auto-Close Timer



When SW1, switch 7 is turned ON, automatic timer can be set from 1-59 seconds to automatically lower arm.

**Note:** The auto close timer CAN be used with down loops. Refer to the manual for more info.

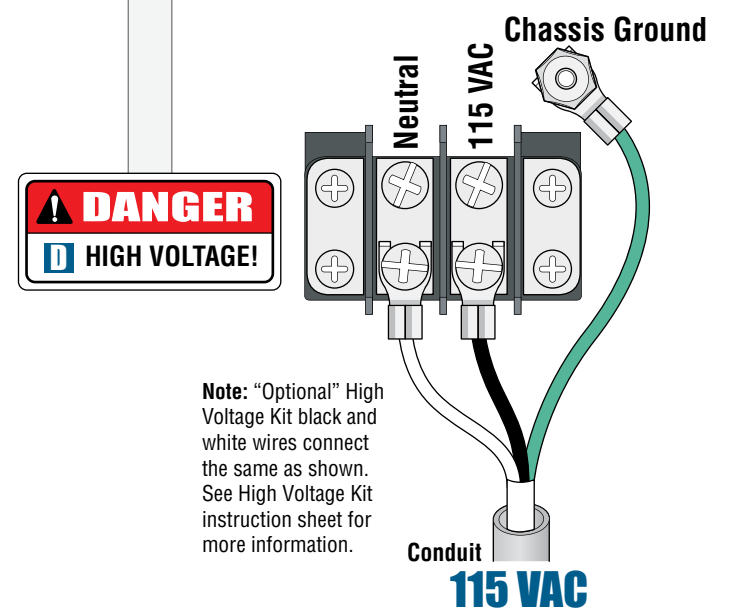
## Loop Detectors

**C** Not included - Refer to the manual and Loop Information Manual (available free from [www.dkaccess.com](http://www.dkaccess.com)) for more information on loops and loop detectors.

## VAC Connection

**OPERATOR MUST BE PROPERLY GROUNDED!!**

**Tip:** It is recommended that a surge suppressor be installed on the high voltage power lines.



**Note:** "Optional" High Voltage Kit black and white wires connect the same as shown. See High Voltage Kit instruction sheet for more information.

## Access Control Device

See reverse side and refer to Installation/Owner's manual for other access control device connections.

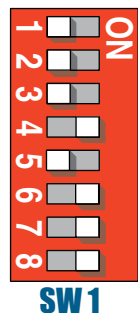
# QUICKSTART "BASIC" GUIDELINES FOR MODEL 1603 - DIP-SWITCH AND WIRING REFERENCE



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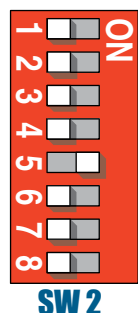
**Model 1603 is intended for installation only on barrier gates used for vehicles.**  
Pedestrians must be supplied with a separate access opening. For safety and installation instructions, please refer to the owner's manual.

## SW 1 DIP-Switches



Switch	Function	Setting	Description
1	Down Active when arm is full up.	OFF	Activation and then deactivation of the down loop or down / reverse input will cause the arm to rotate down ONLY if the deactivation occurred after the arm reached the FULL UP position.
		ON	Activation and then deactivation of the down loop or down / reverse input will cause the arm to rotate down AFTER reaching the FULL UP position regardless of when the deactivation occurred.
2	Self-Test	OFF	<b>Normal setting.</b> Self-test is turned off.
		ON	Run self-test.
3	Gear Box Travel	OFF	<b>Normal setting.</b> Operator uses 360° of gearbox. Extends wear life of gearbox.
		ON	Operator uses 180° of gearbox.
4	Down / Reverse Loop and Input	OFF	Down / Reverse loop and input will function as a REVERSE loop and REVERSE input.
		ON	<b>Normal setting.</b> Down / Reverse loop and input will function as a down input and cause the arm to rotate down upon deactivation of the input. See SW 1, switch 1 for additional information.
5	Relay 1 Activation	OFF	<b>Normal setting.</b> Relay activates when the DOWN loop detector (DoorKing plug-in detector only) senses a vehicle presence.
		ON	Relay activates when the UP loop detector (DoorKing plug-in detector only) senses a vehicle presence.
6	Up Input Function	OFF	Up Input will raise arm and/or reset the down timer. Input will not lower the arm.
		ON	Up Input will raise arm if it is down, or will lower arm if it is up.
7	Timer	OFF	Timer to lower arm is OFF.
		ON	Timer to lower arm is ON. Set from 1 to 59 seconds for close time delay. Timer can be used as a <b>secondary</b> closing command for a down loop. Timer countdown starts when arm has fully raised. Down loop activation will cancel timer and lower arm <b>OR</b> arm will lower when timer has timed out.
8	Up Loop Port Input	OFF	Output of the loop detector plugged into the UP loop port is switched to terminal 7 for connection to other input terminals.
		ON	<b>Normal setting.</b> Output of the loop detector plugged into the UP loop port will raise arm when activated.

## SW 2 DIP-Switches



Switch	Function	Setting	Description
1	Model 1603	OFF	Switch <b>must</b> be OFF for model 1603 barrier gate operator.
2	Multiple Input Memory ON/OFF Switch	OFF	<b>Normal setting.</b> Operator will respond to a single UP command, then require a DOWN command. <b>Operator will not accept multiple Up commands.</b> Operator will not accept the next UP command until the previous DOWN command is in progress.
		ON	Turns ON the multiple input memory option 1 or 2 (See switch 3). SW 1, switch 4 must also be on.
3	Multiple Input Memory Options (SW2, Switch 2 must be ON) (SW1, Switch 4 must be ON)	Option 1 (OFF Position)	Override a DOWN command – When the arm is in the up position for a vehicle passing through and the next vehicle's UP command is received, the operator will hold the arm up and wait for the next vehicle to clear the down loop before lowering the arm. The operator <b>will not count</b> multiple UP commands. Distance between access control device and barrier operator is a factor when using this option. Remote transmitters recommended for this option. See Installation/Owner's manual for more information.
		Option 2 (ON Position)	Override Multiple DOWN commands – The operator <b>will count</b> multiple UP commands received <b>during</b> an UP command and require a matching number of DOWN commands before lowering the arm. Distance between access control device and barrier operator is a factor when using this option. Remote transmitters <b>NOT</b> recommended for this option. See Installation/Owner's manual for more information.
4	Stop Arm Function	OFF	<b>Normal setting.</b> Arm <b>will NOT stop</b> DURING the down cycle.
		ON	Stop Arm Function – Arm <b>will stop</b> DURING the down cycle if a vehicle activates the down loop. An UP command will raise the arm, or the arm will continue down AFTER the down loop is cleared.
5	Reverse Delay	OFF	Arm reversal is delayed approximately .5 seconds when a reverse input from terminal 9 is received during the down cycle. (eg. non-contact sensor beam is blocked). Limited application use.
		ON	<b>Normal setting.</b> Instant Reverse – Arm reversal is delayed approximately .1 second when a reverse input from terminal 9 is received during the down cycle. (eg. non-contact sensor beam is blocked)
6	Arm Rotation Direction	OFF	<b>Normal setting.</b> Leave in OFF position.
7	Warn Before Operate Beeper	OFF	Beeper will beep <b>2 times</b> before lowering arm <b>ONLY</b> when the <b>TIMER</b> times out. If using a down loop, when it gets activated, it will cancel the timer and lower arm <b>WITHOUT beeping.</b>
		ON	Beeper will beep <b>2 times</b> before lowering arm <b>EVERYTIME.</b>
8	Spare	OFF	<b>Normal setting.</b> Leave in OFF position.

**Note:** After a DIP-switch setting is changed, power must be turned OFF and then turned back on for the new setting to take affect.

