QUICKSTART “BASIC” GUIDELINES FOR MODEL 1603 - DOWN LOOP WITH ENTRY LANE TRAFFIC ONLY

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.

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.

Auto Spikes

Arm DOWN... Spikes UP, Arm UP... Spikes DOWN.

Auto Spikes Operator and Mounting

Arm in the DOWN Position

Auto Spike Assembly

Arm mounts on the left side of the operator.

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

Vertical

Horizontal

Important: Mount hub as shown with operator in the DOWN position. Test hub UP and DOWN positions BEFORE installing arm.

Access Control Device

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

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

Not included - Refer to the manual and Loop Information Manual (available free from 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.
**Quickstart “Basic” Guidelines for Model 1603 - DIP-Switch and Wiring Reference**

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### SW 1 DIP-Switches

<table>
<thead>
<tr>
<th>Switch</th>
<th>Function</th>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Down Active when arm is in Full up.</td>
<td>OFF</td>
<td>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.</td>
</tr>
<tr>
<td>2</td>
<td>Down Active when arm is moving up or is up.</td>
<td>ON</td>
<td>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.</td>
</tr>
<tr>
<td>3</td>
<td>Self-Test</td>
<td>OFF</td>
<td>Normal setting. Self-test is turned off.</td>
</tr>
<tr>
<td>4</td>
<td>Gear Box Travel</td>
<td>OFF</td>
<td>Normal setting. Operator uses 360° of gearbox. Extends wear life of gearbox.</td>
</tr>
<tr>
<td>5</td>
<td>Down / Reverse Loop and Input</td>
<td>OFF</td>
<td>Down / Reverse loop and input function as a REVERSE loop and REVERSE input.</td>
</tr>
<tr>
<td>6</td>
<td>Relay / Activation</td>
<td>OFF</td>
<td>Normal setting. Relay activates when the DOWN loop detector (DoorKing plug-in detector only) senses a vehicle presence.</td>
</tr>
<tr>
<td>7</td>
<td>Up Input Function</td>
<td>OFF</td>
<td>Up Input will raise arm and/or reset the down timer. Input will not lower the arm.</td>
</tr>
<tr>
<td>8</td>
<td>Timer</td>
<td>OFF</td>
<td>Timer to lower arm is OFF.</td>
</tr>
<tr>
<td>9</td>
<td>Up Loop Port Input</td>
<td>OFF</td>
<td>Output of the loop detector plugged into the UP loop port is switched to terminal 7 for connection to other input terminals.</td>
</tr>
</tbody>
</table>

**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.

### SW 2 DIP-Switches

<table>
<thead>
<tr>
<th>Switch</th>
<th>Function</th>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Model 1603</td>
<td>OFF</td>
<td>Switch must be OFF for model 1603 barrier gate operator.</td>
</tr>
<tr>
<td>2</td>
<td>Multiple Input Memory ON/OFF Switch</td>
<td>OFF</td>
<td>Normal setting. Operator will require a single UP command; then require a DOWN command. Operator will not accept multiple UP commands. Operator will not accept the next UP command until the previous DOWN command is in progress.</td>
</tr>
<tr>
<td>3</td>
<td>Multiple Input: Memory Options (SW2, Switch 2 must be ON)</td>
<td>OFF</td>
<td>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 will not count multiple UP commands. Distance between access control device and barrier operator is a factor when using this option. See Installation/Owner’s manual for more information.</td>
</tr>
<tr>
<td>4</td>
<td>Stop Arm Function</td>
<td>OFF</td>
<td>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.</td>
</tr>
<tr>
<td>5</td>
<td>Reverse Delay</td>
<td>OFF</td>
<td>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.</td>
</tr>
<tr>
<td>6</td>
<td>Arm Rotation Direction</td>
<td>OFF</td>
<td>Normal setting. Arm will NOT stop DOWNING the down cycle.</td>
</tr>
<tr>
<td>7</td>
<td>Spare</td>
<td>OFF</td>
<td>Normal setting. Leave in OFF position.</td>
</tr>
<tr>
<td>8</td>
<td>Spare</td>
<td>OFF</td>
<td>Normal setting. Leave in OFF position.</td>
</tr>
</tbody>
</table>

**WARNING**

- **Contact Sensor (Reversing Edge)**
  - Contact and Non-Contact Sensors Note: Helps minimizes the potential of the arm lowering on vehicular or other traffic that loops cannot sense.
  - 21” Typical Beam Height: 27.5” Max. Beam Height.
  - 3-Wire Radio Receiver
  - Manual Gate Control Toggle
  - 24 Volt
  - Down/Reverse Input
  - Up/Inputs
  - 3-Wire Radio Receiver

**Installation/Owner’s manual**

- GateKing Kit
- P/N 1514-073
- 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.