



Installation and Maintenance Instructions for ENFORCER Automated Surface Mount Traffic Spike System

Thank you for your purchase of Guardian Traffic System Controllers the finest and best-engineered traffic controllers made. These units are built to last, employing the finest engineering, using the highest quality materials and precision fabrication. To insure your units provide long lasting service and safety please follow these installation and maintenance instructions.

If you have any questions do not hesitate to contact our customer service or engineering staff at 1.520.881.3380 or toll free 1.800.866.9115 (8:00 AM to 5:00 PM - MST) or e-mail to sales@guardiantraffic.com. Thank you for choosing Guardian Traffic Systems.

SAFETY NOTICE

Traffic Spike Systems are an inherently damaging product and are intended to puncture tires. There are risks and liabilities involved in the use of these products. To minimize your exposure, it is extremely important that adequate safety measures are taken in the installation, location, site conditions, use and maintenance of the units. Warning signs should be installed at all sites where spikes are installed. Illumination of the spike units especially in areas of adjacent pedestrian traffic is recommended.

IMPORTANT NOTE FOR INSTALLATION OF ALL TRAFFIC SPIKE UNITS:

Signage - Warning signs are imperative to provide sufficient notice of the danger to drivers and to pedestrians. Illumination of the teeth, especially in areas adjacent to pedestrian traffic, is also important if the area will be accessible after daylight. Be sure your customer is aware of these inherent dangers.



14115.100 Lighted • # 14150.100 Reflective

It is recommended to use Guardian Warning Sign Model 14115.100 (lighted) or 14150.100 (reflective) that warns drivers of the inherent danger of the device including a notice for pedestrian traffic to stay clear of the area. If there will be traffic after dark be sure to provide adequate lighting in the area and use the warning sign Guardian Model 14115.100.



Site Conditions – Carefully select your site so that the units are installed in a solid surface asphalt or concrete. Traffic spike systems should not be installed in dirt, on any curve, inclines or where the road surface is uneven or where the road surface is in poor condition. Also, do not install in areas where there is significant water runoff that could potentially do damage to the components of the units. Use caution and install precautions when installing near high pedestrian traffic.

General Instructions - These instructions are provided in order for you to receive the maximum performance from your traffic control system. Failure to strictly follow these installation instructions will affect the performance of your traffic controllers.

Guardian Traffic System will not be responsible for property, vehicles, tires, or personal damage resulting from improper installation. Guardian Traffic System will not be responsible for repairing malfunctions or replacing parts resulting from improper installation. Replacement parts needed in order to repair damage or malfunction caused by improper installation or abuse are not covered under your warranty.



ENFORCER Surface Mount Automated System with End Bevel, Boom Arm, and Stop-Go Signal

INSTALLATION - Surface Mount Models

Guardian Traffic Systems Controllers can be installed using one of two methods of application or a combination of the two.

The first is by bolting the units down to a concrete surface (not recommended for asphalt).

The second is by affixing them to the road surface using epoxy in the case of asphalt (tarmac) road surfaces.

The surface should be clean, dry, level and as smooth as possible.

The units cannot be installed on or near gravel, a highly irregular surface or on an incline or curve.

Make sure the installation staff has a safety vest and is wearing safety glasses.

General Instructions

1. Carefully determine the location for your Traffic Control Units. Normally you would want the units placed at least 15' – 20' (4.5m – 6m) into the lane.
2. If you are installing a heater element in your system then you will need to plan for the location of the where your thermo device and power will be located. See instructions with your heater cable.
3. Clean the area with a weed blower, broom or other method to insure a clean and dry surface.
4. Mark the location with a chalk line or other suitable mark to assist in aligning and locating the units in the desired position. You may also place the individual segments in the location you wish to install them and then mark the location. Make sure the teeth are orientated the correct way.
5. Lay out all components of the traffic controller (motor control tower, tunnel assembly, teeth and top plate assembly, and end bevel) as they will be when installed. Standard execution is to locate the operator on the left side of the traffic lane.

6. Check to make sure there are no obstructions in the traffic lane and check for proper traffic flow angles. Traffic controllers **must not be installed** on any curves, slopes, grades, or anywhere that immediate turns are required before or after the units.
7. Set Operator and tunnel, teeth sections, and end bevel in desired location. Bolt the operator and tunnel section down.
8. Remove the top plates or the tunnel and teeth sections.
9. As show in the attached diagram (1320 Surface Mount), the coupling joins the shafts between sections providing positive drive and assuring proper tooth alignment configuration. Align the keyways of the adjoining shafts leaving space to install and coupling.
10. Slide the coupling and key halfway on the operator tunnel shaft.
11. With the tooth section located so the shaft can slide into the coupling, slide the entire tooth section so it is flush against the operator tunnel.

Bolting to Surface

12. Bolt the tunnel and tooth section together
13. Bolt the first tooth section.
14. Place the end bevel at end of last tooth section, bolt it to adjacent tooth section and then bolt it down.

Concrete Surface Installation

15. When bolting into concrete (not recommended for asphalt) drill holes in the road surface in the corresponding larger hole on each spike section.
16. Place your anchors per manufacturer's instructions. Do not use an anchor that will stick up above the traffic control unit that could cause damage to the passing tires. The recommended product is a ½" (1.27cm) Large Diameter Tapcon (LDT) Concrete Anchor by SIMPSON STRONG TIE, REDHEAD or similar.
17. If you would like extra holding force you can add the epoxy mentioned below.

Asphalt Surface Installation

18. If your surface is asphalt the best method of application is using Construction Grade Epoxy supplied by Guardian Traffic Systems or your local building supply vendor.
19. Locate each spike section and end units next to the desired location. The epoxy has a relatively short setting time and proper positioning of the segments facilitates installation.

20. Check all the interlocking tabs on the units to make sure that all units are aligned correctly. Check the orientation again to insure they are correct to the traffic. Unlatch the latch down mechanism for this procedure.
21. Check again to make sure the area is dry and clean of any debris to insure the best bonding of the epoxy.
22. Prepare the epoxy in accordance with the manufacturer's recommendation.
23. Starting with the first unit, trowel a good thick coating of the epoxy within the boundaries of the pre-marked area. Then place the spike unit on over the area and press down firmly and as you do so move slightly in four directions to make sure the unit is firmly fixed and the epoxy is well distributed under the unit.
24. Proceed with the next segment inline, following the same procedure and installing them with the interlocks securely in place.
25. After all the toothed segments are installed, the end sections can then be installed in a like manner.
26. Be sure to apply the epoxy as recommended to insure the proper distribution of the epoxy for the maximum adhesion of each segment.
27. After all the segments and end section are in place you may then nail the units to the road surface using hardened nails in the small holes on both sides of the unit. This is desired to insure the units stay fixed and do not move while the epoxy sets.
28. It is recommended that a sufficient time be allowed for the Epoxy to set before traffic is allowed to pass over the traffic controllers. The time allowable time will depend on the environment where the units are being installed and the epoxy being used (you may wish to use a minimum of four hours). Check the epoxy manufacturer's recommendations.
29. Maintain adequate warning barricades in place throughout the construction and curing process and until ready to activate.
30. When ready to activate make sure all warning signs and any other precautions you may have taken are in place. Please see instructions below.

MAINTENANCE of GUARDIAN Traffic Controllers:

It is necessary to maintain your Guardian Traffic System Controllers consisting of periodic inspection insuring proper tooth and shaft movement and cleaning of any debris that may have settled or lodged inside the controller (dependent upon the site and elements in your area).

Accumulated debris can be vacuumed, blown or manually cleaned out by unbolting the top-plate, which gives free access to the inner cavity of the unit. If debris is allowed to build up the unit will malfunction which could cause damage to the unit or to vehicle tires traveling in the correct direction. The accumulation of organic matter and debris may cause premature rusting and deterioration of steel components.

With proper installation and maintenance of Guardian Traffic System Controllers will provide many years of cost-effective and reliable directional access control.

If you have any questions please visit our web site www.guardiantraffic.com or call our customer service or engineering department for more information at 1.520.320.1810 or 1.800.866.9115 or E-mail us at sales@guardiantraffic.com.

ELECTRICAL:

Refer to operator manual supplied with all Automated Traffic Control Systems upon shipping. This manual can be found in an envelope attached to the top of the barrier gate operator.

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LIMITED WARRANTY for GUARDIAN TRAFFIC SYSTEMS Products

GUARDIAN TRAFFIC SYSTEMS warrants that the Traffic Control Spikes System shall be free from all defects in material and workmanship for a period of one year (12 Months) from the date of the original invoice under normal use and service and specifically excludes surface paint, any work, products or wiring done by others. GUARDIAN'S obligation under this warranty is specifically limited to repairing or replacing, at its option, any defective part, which upon examination by GUARDIAN proves to be defective during the warranty period. This warranty excludes any and all labor in regards to repair or replacement. This warranty shall not apply to surface paint or to any part which has been improperly installed, improperly maintained, rust or deterioration due to water retention, improper drainage or weather, accident, improper use, speed exceeding five miles per hour, traffic going the wrong way causing damage or any part which has been altered or repaired by any person not expressly authorized, by GUARDIAN, in writing to do so.

There is no warranty of merchantability or fitness for any particular purpose nor is there any other warranty, express or implied, except as specifically stated in the above paragraph. GUARDIAN does not represent that the products purchased may not be compromised or circumvented; that the products will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; or that the product will in all cases provide adequate warning or protection. Buyer understands that a properly installed and maintained spike system may only reduce the risk of a burglary, robbery, fire or other event occurring without providing an alarm, but it is no guarantee that such will not occur or that there will be no personal injury or property loss as a result.

GUARDIAN shall in no event be liable neither for personal injury, tires, property damage or other incidental or consequential damages nor for any special damages or any further loss, which may arise in connection with any claim. However, if GUARDIAN is held liable, whether directly or indirectly, for any loss or damage arising under this limited warranty or otherwise, regardless of the cause or origin, GUARDIAN'S maximum liability shall not in any case exceed the purchase price of the individual product or products which shall be the complete and exclusive remedy against GUARDIAN.

Any legal action or proceeding relating to your use of GUARDIAN Products shall be instituted in a state or federal court in Pima County in the State of Arizona. You by purchasing these products and GUARDIAN agree to submit to the jurisdiction of, and agree that venue is proper in, these courts in any such legal action or proceeding.

This warranty may vary from State to State and certain restrictions may apply.

1320 Automated Traffic Spike System Parts List

Part No.	Product Description
1334.100	Stop-Go Light
1320.300	ENFORCER Traffic Spike Extension – 3’
1320.310	ENFORCER Traffic Spike Tunnel
1320.370	ENFORCER Traffic Spike Extension – 3’ – Galvanized
1300.EN	ENFORCER Replacement 1-3/4” Extension Nut (5 per 3’ section)
1320.RCB-HJ	ENFORCER Replacement Connecting Bar – s/Swivel Hiem Shaft
1320.RK-HJ	ENFORCER Replacement Kit – 2 Swivel Heim Joints w/2 Nuts
1320.SM35	ENFORCER Replacement Spring for MBE35 Operator
1320.SM40/50	ENFORCER Replacement Spring for MBE50/MIB40
1320.TEE/C	ENFORCER Replacement Shaft w/Teeth MIG or SM Includes Coupling
1320.TSC	ENFORCER Replacement Tunnel Shaft for Automated 4’-11” includes Coupling
1320.VB	ENFORCER Replacement Vertical Bar, Connection Bar & Parts In-Ground & Surface Mount
1334.B	ENFORCER Replacement Bulb for Stop-Go Light
1334.LH	ENFORCER Replacement Stop-Go Red/Green Lens – with Hood Only
1354	ENFORCER Replacement Micro Switch for Stop-Go Light
1355	ENFORCER Replacement Shaft w/Teeth
1356	ENFORCER Replacement Coupling
1358	ENFORCER Replacement Bearing
1359	ENFORCER Replacement End Bevel
NEW PART	ENFORCER Replacement Breakaway Flange
NEW PART	ENFORCER Battery Backup BAT01
NEW PART	ENFORCER Replacement Pendulum Support PS01
NEW PART	ENFORCER Replacement Supporting Post AP01
NEW PART	ENFORCER Replacement Boom Lock BV01
NEW PART	ENFORCER Replacement 2-Channel Loop Detector DM02
NEW PART	ENFORCER GSM Interface GSM01
NEW PART	ENFORCER LED Boom Light Stripe Red/Green LEDS01
NEW PART	ENFORCER Replacement Control Board - Parking-RC01200 (12’) Microdrive
NEW PART	ENFORCER Replacement Control Board - Access-L-RC01500 (15’) Microdrive
NEW PART	ENFORCER Replacement Control Board - Access.Pro-L-RC02000 (20’) Microdrive
GUARDIAN WARNING SIGN PARTS	
1410.100	GUARDIAN Warning Sign - Reflective
1414.100	GUARDIAN Warning Sign – Lighted
1416.100	GUARDIAN Warning Sign Post - In-Ground Set
1416.110	GUARDIAN Warning Sign Post – Surface Mount w/Flange
1390.NN	Replacement Nylon Nuts use w/Aluminum Arms for Breakaway, Set of 4
1509.00	Replacement Sign Insert (2 sided for lighted)
1509.10	Replacement Sign light components, Ballast, Bulb Transformer, Capacitor, Rectifier
1509.20	Replacement Spotlight w/Bulb for Lighted Sign
1509.25	Lighted Sign Kit: 9 Electrical Part which include 2 style sockets & 2 style lamps