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Mighty mule gate opener manual 560

Page 1 You agree to properly install this product and that if you fail to do so GTO, Inc. shall in no event be liable for direct, indirect, incidental, special or consequential damages or loss of profits whether based in contract tort or any other legal theory during the course of the warranty or at any time thereafter. Please record the product serial number (located on the control box cover), and the date and place of purchase in the spaces provided below. Refer to this information when calling GTO for service or assistance with your automatic gate opener. Serial Number _____ Date of Purchase _____ Place of Purchase _____ Remember to keep all receipts for proof of purchase. Table of Contents Gate Opener Class Categories _____ inside cover Units and Standards Conversion Chart _____ Units and Standards Conversion Chart _____ Units and Standards Conversion Chart inside cover PLEASE READ THIS FIRST! ----- page iii Important Safety Instructions ----- page 1 Disconnecting the Opener ----- Disconnecting the Opener... E-Z GATE OPENERS PLEASE READ THIS FIRST! Thank you for purchasing a Mighty Mule® E-Z Gate Opener—GTO's "do-it-yourself" automatic gate opener! When correctly installed and properly used, your Mighty Mule® E-Z Gate Opener will give you many years of reliable service. Please read the following information and watch the enclosed videotape to ensure you have the correct system for your particular needs. Because GTO automatic gate openers are only part of the total gate operating system, it is the responsibility of the part consumer to ensure that the total system is safe for its intended use. IMPORTANT SAFETY INSTRUCTIONS For The Consumer WARNING: To reduce the risk of injury or death: READ AND FOLLOW ALL INSTRUCTIONS. Failure to meet the requirements set forth in the instruction manual could cause severe injury and/or death, for which the manufacturer cannot be held responsible. When designing a system that will be entered from a highway or main thoroughfare, make sure the system is placed far enough from the road to prevent traffic congestion. Page 7 IMPORTANT SAFETY INSTRUCTIONS Entrapment Zones for a proper Pull-To-Open installation: Zone 1 - leading edge of the gate and the fence post. Zone 2 - between the gate and the gate post. Zone 3 - the path of the gate.



Zone 4 -... Page 8 If any of these signs or warning decals become damaged, illegible or missing, replace them immediately. Contact GTO for free replacements. The gate is automatic and could move at any time, posing a serious risk of entrapment. No one should be in contact with the gate when it is moving or stationary. IMPORTANT SAFETY INSTRUCTIONS Secondary Means of Protection Against Entrapment As specified by Gate Opener Safety Standard, UL 325 (30A.1.1), automatic gate openers shall have an inherent entrapment sensing system, and shall have provisions for, or be supplied with, at least one independent secondary means to protect against entrapment. (recommended, not included) Entrapment Protection GTO's inherent obstruction settings, even when properly adjusted, may not be sensitive enough to prevent bodily injury in some circumstances. For this reason, safety devices such as safety edge sensors (or photoelectric sensors), which stop and reverse gate direction upon sensing an obstruction, are suggested for enhanced protection against entrapment. IMPORTANT SAFETY INSTRUCTIONS These warning labels should be found at the locations specified below. If any of them are missing, immediately contact GTO for replacements. DC SWING SERIES / 500 Conforms to UL 325 STANDARDS Maximum Gate: 500 lb. (226.7 kg); 16 ft. (4.8 m) Voltage: 12 Vdc;...

Single Gate Opener Parts List Opener and Mounting Hardware ® Page 13 (continued) Control Box and Electrical Components Battery (1) WARNING Receiver (1) GTO Transmitter(1) Moving Gate Can Cause Injury Or Death KEEP CLEAR! Gate may move at any time. Do not allow children to operate gate or play in gate area. / " • Battery charge is maintained by a GTO Solar Panel Charger: float voltage of 14.5 Vdc output is from a 19 " x 8 silicon alloy panel. Installation Overview Pull-to-Open Gates (Gate Opens into the Property) The diagram shown below is an example of a pull-to-open installation on a chain link fence and single gate. Mounting the opener on a masonry column requires special procedures; see Column Installation Information on page 36 if you intend on page 36 if you intend on page 36 to mount the opener on a column. Installation of Mounting Hardware The position of the post bracket determines the leverage and efficiency of the opener. The post bracket position also sets the clearance between the opener and gate in the open and closed positions (minimum 2 inches for safety reasons). The curved design of the post bracket works well for installations on round and square fence posts. Determining the Mounting Position of the Post Bracket Assembly and the Gate Bracket Step 3 NOTE: The following steps are 3/8" x 2" Bolt Insert the " x 2" bolt through intended for pull-to-open gate the center hole of the post installations. Page 18 IMPORTANT: While determining the mounting point for the post pivot bracket assembly, be sure that the position allows for a minimum of 2 inches of clearance between the gate and the opener in both the open and closed positions, as shown in the diagrams below. Page 19 Installing the Post Bracket Assembly and Gate Mark fence post through 1 middle of bracket slots 1 Step 7 and drill 3/8" holes Mark reference points for bolt holes on the fence post through middle of bracket slots. Marking reference points in this manner allows room for adjustment when mounting the post bracket assembly and gate bracket. Mounting the Opener Step 11 Attach the opener to the securely bolted post bracket assembly and gate bracket using clevis pins, bushings, and hairpin clips, or optional Pin Locks (see Accessory Catalog). Verify that the opener is level and adjust the post bracket assembly if necessary. At this stage of the installation, the opener should be installed on the gate and the closed position stop should be in place. Check List • The gate is plumb, level, and swings smoothly on its hinges. • A plate or support was added for the gate bracket (if necessary). • ... Connecting Opener Power Cable Step 14 BLACK Make sure the control box power switch is in the OFF position. The ON/OFF Switch is located on the bottom of the control box. Remove the control box cover and slide the battery into position with its terminals to the RIGHT (see illustration). Powering the System Installation of the Transformer IMPORTANT: • The transformer is designed and intended for indoor use. If the transformer can be plugged only into indoor use. If the transformer can be plugged into an outside electrical outlet, a weatherproof cover or housing (available at local electrical supply stores) must be used. Page 24 IMPORTANT INFORMATION ABOUT LOW VOLTAGE WIRE The only wire acceptable for use with GTO products is 16 gauge multi-stranded, low voltage, PVC sheathed wire. This particular gauge enables the transformer to provide an adequate charge through the control board to the battery at distances up to 1000 ft. Step 6 Strip " of insulation from the ends of the low voltage wire. Attach these stripped ends to the transformer terminals. A dab of household petroleum jelly on each terminal will help prevent corrosion. Make sure the exposed wires do not touch each other! Step 7 Plug the transformer into the electrical outlet. CONTROL BOARD SETTINGS DIP Switches 1 2 3 4 5 6 7 Main DIP Switch Settings (MODES) DIP Switch #1 - Soft Start/Stop The Soft Start/Stop feature slowly starts the gate as it begins to open and slows the gate as it comes to the closed position. Setting the Closed Position Limit TURN CONTROL BOX ON Your Mighty Mule® has two Limit Settings 1) OPEN Limit setting: (Gate in the OPEN POSITION / the limit is FACTORY SET and NOT ADJUSTABLE) The open limit setting is the fully open position. 2) CLOSED Limit setting: (Gate in the CLOSED POSITION) To achieve optimum closed position, you are required to complete the following FOUR STEPS: Step 1... Obstruction Sensitivity Potentiometer IMPORTANT: For safety reasons the obstruction setting or For safety reasons the obstruction setting or Stall Force Stall Force on the Mighty Mule® control board comes from the factory set at on the Mighty Mule® control board comes from the factory set at MIN (minimum). Setting Your Personal Transmitter Code All GTO transmitters are set to a standard code at the factory and are ready to operate your Mighty Mule® Gate Opener ® For your safety and security, however, we strongly recommend that you replace the factory setting with your own personal... • Standard receiver cable length is 10 feet (receivers with a longer cable are available as special order items; call the GTO Sales Department). NEVER splice receiver cable! • Run the cable through PVC conduit to protect it from damage.



To augment your protection against entrapment, GTO recommends using some form of additional safety device. When installed, contact sensors must be mounted in compliance with UL 325, Underwriters Laboratories safety standard for gate openers. Review page 5 for information about mounting requirements for safety edges ("contact sensors"). Page 32 Non-Contact Sensors (photo beams) If not installing a non-contact sensor skip to next section. PLEASE NOTE: Non-contact sensors are not included with Non-contact sensors are not included with Non-contact sensors are not the Mighty Mule® 500. The Mighty Mule® 500 can also accept "Safety" input from normally open "dry-contact" output devices such as photo beams connected to the SAFETY input terminal. Connecting Accessories If not connecting accessories skip to next section. The Mighty Mule® 500 can accept NORMALLY OPEN CONTACT accessories, such as; Push Button Entry Devices and Key Pads.



Refer to the sensor manufacturer's instructions for information about installing these devices on a vehicular gate. Make sure the power to the opener is turned STALL FORCE off before connecting safety device wiring to the... Push to Open Installation Determining The Mounting Position of The Post Bracket Assembly Swinging gates shall not open into public access areas! 3/8" x 2" Bolt A "Push-to-Open" gate opens out from the property. out from the property. A Push-to-Open Bracket is required for this type of installation (see Accessory Catalog). Page 35 Step 3 With the gate in the fully closed position and the opener retracted, swing the opener to the gate.



Mark reference points for bolt holes on gate cross member through middle of gate bracket slots. The opener must be level.



(Some vertical adjustment is possible by sliding the post bracket assembly up and down.) Drill "... Page 36 Step 3 With the gate in the desired open position PRESS & HOLD the "SET LIMIT" button on the control board for 5 seconds. Step 4 Press the transmitter button and allow the gate to return to the closed position. YOUR GATE'S OPEN POSITION LIMIT IS NOW PROGRAMMED. Maintenance & Troubleshooting Guide If your gate opener does not function properly after it is installed, use this guide before calling the GTO Service Department. • On all gates weighing 250 lb. or more, routinely grease the ball bearing hinges at least 4 times a year; more frequently if the gates are near a coastal area. 12 V Battery 12.0 to 13.5 Vdc 7.0 Ah Charging circuit 12.0 to 14.8 Vdc measure voltage with battery connected The GTO, Inc. Technical Service Department is open Monday - Friday 8:00 - 5:00 (Eastern Time) A.M. 1. First use the procedures found in the Maintenance & Troubleshooting Guide (see page 33). 2. If you are unable to solve the problem, call the GTO Service Department at (800) 543-1236, or (650) 575-4144. Refer to the serial number (located on the control box cover) and date of purchase when calling for assistance. Column Installation Information F THIS OPENER WILL BE USED WITH GATES THAT ARE MOUNTED ON MASONRY, BRICK, OR ROCK (etc.) COLUMNS, READ THE FOLLOWING CAREFULLY BEFORE PROCEEDING The simplest solution is to install the opener in a push-to-open configuration (requires Push-To-Open Bracket, see Accessory Catalog). ® E-Z GATE OPENERS ACCESSORIES Accessories are Available From Your Retail Store Solar Panel (FM121) Not Compatible with Mighty Mule® 250 The Solar Panel is a 5 watt solar powered battery charger for use with the FM500 & FM502 gate opener systems. Particularly suited for remote installations, each Solar Panel comes with tubular steel support, mounting clips, wire connectors, and 8 ft. Page 42 1-800-543-GATE! The contents of all material available on this installation manual are copyrighted by GTO, Inc. ("GTO"), unless otherwise indicated. All rights are reserved by GTO, and content may not be reproduced, downloaded, disseminated, published, or transferred in any form or by any means, except with the prior, written permission of GTO. Any reprinting of GTO publications is by permission only. Copyright infringement is a violation of federal law.