

Well-planned barns and pastures, and innovative use of high- and low-tech gadgets can make life on the farm much easier. If you have any helpful "husbandry hints," *Alpacas Magazine* would love to hear from you.

# ■ Automatic Gate Openers

**T**he most likely reason alpaca ranchers do not have a gate on the entrance to their property is because they do not like to stop to open and close a gate each time they enter or leave their property. Automatic gate openers eliminate the hassle of manually opening and closing a gate.

Farm gate automatic openers are now available that are both reasonably priced and operate reliably. They allow the owner to either use a remote control or press the buttons on a keypad to open the gate. The gate opens automatically, stays open for about two minutes while you drive through, and then closes automatically.

### Reasons to Gate a Ranch Entrance

Alpacas are a curiosity to the general public. Alpaca owners want visitors to their ranch, but when visitors stop by unexpectedly, they can leave alpaca owners feeling out of control of their time. An entrance gate can help eliminate unscheduled visitors and put the owners in control of their time.

A professional-appearing ranch entrance is the first thing that a new customer sees on a visit to an alpaca ranch. Alpaca ranchers need an attractive entrance to welcome visitors, while concurrently providing alpaca security. An open entrance may be allowing uninvited visitors to access the ranch even when the owner is not at home. It is good peace of mind to have a gate close behind you as you leave your ranch unattended. Plus, if you happen to leave a barn door or pen gate open, you may have alpacas get out and wondering loose on your ranch. A closed entrance gate can serve as a second confinement system and keep the alpacas off of busy roads.

### How Automatic Gate Openers Work

An automatic gate opener is a mechanical device that swings a driveway gate open when activated by an electric impulse from a remote control device, an

electronic keypad, or a sensor mounted in the edge of the driveway. Usually the opener will pull the gate open inward towards the property, allow the gate to remain open for a short period of time (usually about two minutes) and then automatically close after you have had time to drive through the gate.

The opener has an electric motor to operate a mechanical arm to pull the gate open and then push the gate shut. An electric control box mounted near the gate hinge post is the brains to the system. Automatic gate openers are usually powered by a battery and operate on low voltage for safety. Some installations use a transformer that is plugged into a 110-volt outlet to charge the battery. In cases where power is not reasonably available, one or a series of solar panels can be installed to charge the battery.

### Control Devices That Operate the System

There are several control devices that can operate the gate opener system. A post-mounted push button is the simplest device to activate the gate. It does not provide any security, however, because it is simply a button that anyone can push to open the gate. It has some appropriate uses on the interior of a ranch, but not on an entrance gate.

The most popular control device is a post-mounted keypad that can be coded to open the gate only when a precise series of numbers has been entered. It can also be programmed with several different codes so that you could, for example, give a code to a delivery company for a one day use, without giving out the code that you have given out to all of your family members. The code can be deleted after the delivery and not affect other code settings in the system.

Another device is a remote control that is carried in your vehicle, similar to a remote control garage door opener. The remote control can be programmed so that other garage door and gate opener remotes cannot activate your system.



1. Farm gate automatic openers are now available that are both reasonably priced and operate reliably.



2. An automatic gate opener is a mechanical device that swings a driveway gate open when activated by an electric impulse from a remote control device, and electronic keypad or a sensor mounted in the edge of the driveway.



3. Lay out the proposed location for all posts, trenches, etc. by spray painting markings on the ground with white paint. Call the utility companies that serve your area and request they check your spray paint markings and mark their underground utilities prior to you digging.



4. Drill post holes and hang the entrance gate.



5. Drill holes in the gate post for mounting the gate opener control box. Use caution in locating the control box so that it does not affect the full operation of the gate.



6. A sensor device is available for opening the gate while exiting the ranch. The sensor is installed along the driveway on the property side of the gate, buried about one foot deep and a distance of fifty feet from the gate. When a large metal mass, such as a car, passes near the sensor, the gate opener opens the gate.



7. Install the exit sensor in the trench and connect the conduit and wire to gate opener control box.



8. Run wiring in PVC conduit from the key pad to the control box, the exit sensor to the control box and the power source to the control box, all in separate conduits. Note the wire running from the control arm feeds directly into the control box.



9. Install a key pad post, wiring, and PVC conduit from the key pad to the control box. Note the power supply service and freshly backfilled trench that also leads to the control box. Both lines are in separate conduits.



10. An electric control box mounted near the gate hinge post is the brains to the system. All wires run to this box. It is powered by a battery and the battery is charged by either an electric supply line or solar panel.



11. Enjoy your new automatic gate opener.

A sensor device also is available for opening the gate while exiting the ranch. The sensor is installed along the driveway on the property side of the gate, buried about one foot deep and a distance of fifty feet from the gate. When a large metal mass, such as a car, passes near the sensor, the gate opener opens the gate and leaves it open for about two minutes. Then it automatically closes the gate. This sensor is used as an automatic gate opener on the exit lane of the property so that one does not even have to push a button or keypad to exit the property.

### Safety Consideration

Be sure your automatic gate opener has a built-in safety obstruction sensor that once activated, causes the gate to stop and reverse its direction (much like a garage door opener). The sensitivity for this safety feature should be fully adjustable. Also be sure that your gate opener meets the new Underwriters Laboratory safety standards (UL 325 standards).

### Materials List

1. Gate opener system
2. Key pad
3. Driveway sensor
4. Remote controls
5. Power source or solar panel
6. Electrical wire for the gate opener system
7. Gate and hinges
8. PVC electrical conduit and fittings
9. Corner posts and braces
10. Fence materials
11. Miscellaneous hardware

### Installation Procedure

Automatic gate openers come with a very good set of installation instructions and are relatively easy to install for do-it-yourself people. Here is an overview of the installation procedure. Be sure to follow manufacturer's instructions and have a certified electrician handle any electrical connections for the system.

1. Plan out the gate location, function, and materials to be used
2. Determine the type of power source – solar or electric service
3. If using an electrical service, consult an electrician
4. Purchase all materials
5. Thoroughly read all installation instructions for components (pay particular attention to gate post locations, underground connections to various components, and physical placement of components to allow full range of gate operation)
6. Lay out the proposed location for all posts, trenches, etc. by spray painting markings on the

ground with white paint

7. Call the utility companies that serve your area and request they check your spray paint markings and mark their underground utilities prior to you digging
8. Adjust your plans to avoid underground utilities
9. Drill post holes and hang the entrance gate
10. Mount the gate opener on the gate
11. Mount the gate opener control box on a gate post or nearby post
12. Run the wire from the opener to the control box
13. Trench for all underground lines (two to three feet deep)

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a gate close behind you as you  
leave your ranch unattended

14. Run wiring in PVC conduit from the key pad to the control box, the exit sensor to the control box and the power source to the control box, all in separate conduits
15. Install the exit sensor in the trench
16. Install the key pad and post
17. After double checking all wiring and conduits, backfill trenches
18. Consult your electrician for connecting to the power source
19. Follow manufacturer's instructions for powering up the system
20. Follow instructions for adjusting the open and closed positions of the gate opener
21. Set the key pad and remote control codes

### **22. Enjoy your new automatic gate opener**

Automatic gate openers eliminate the need to stop each time an alpaca rancher enters and leaves his or her property. With this hassle removed, a controlled ranch entrance can give alpaca owners control of their time and provide better alpaca security.

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