

How to Choose a Truck Scale Intercom System

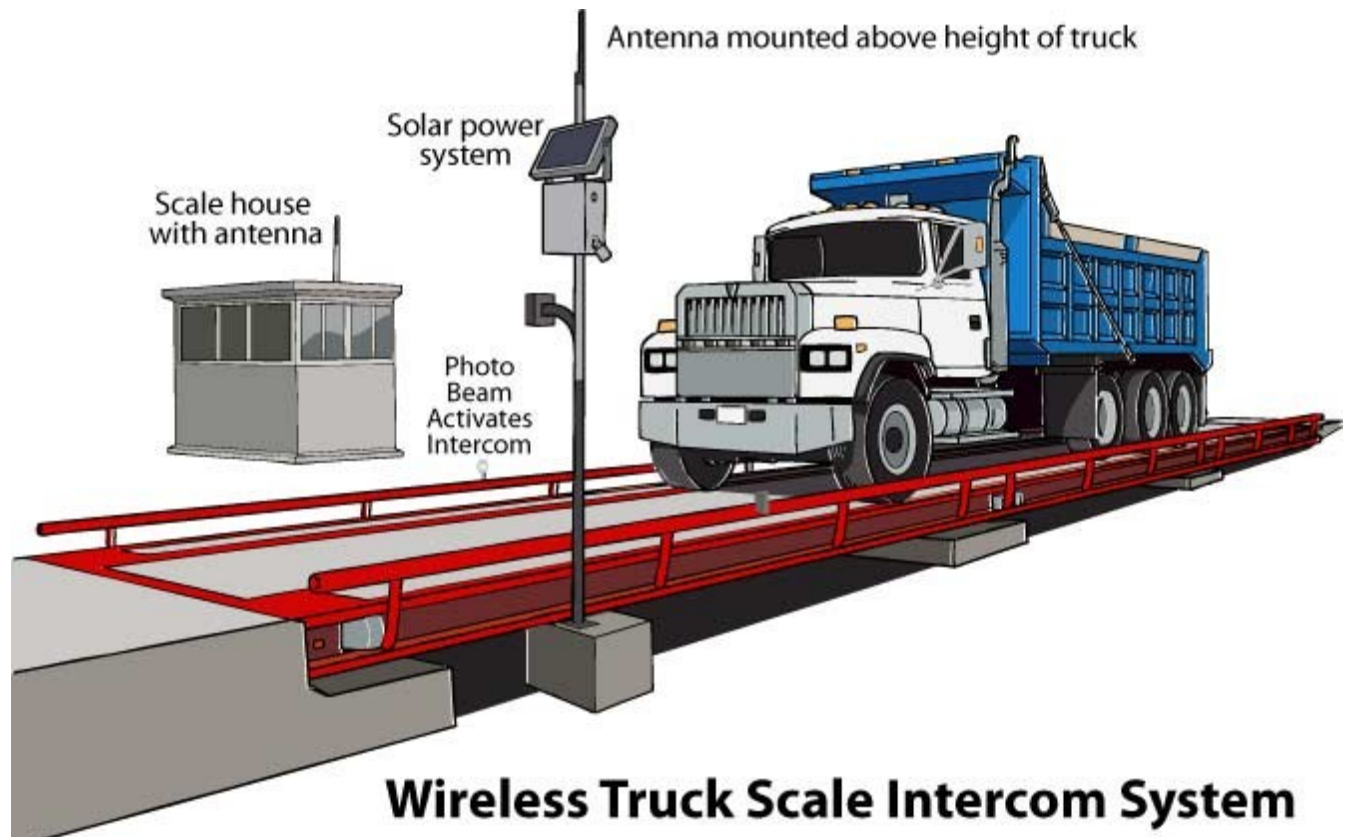


When drivers pull on to a truck scale, there often needs to be some form of communication so they know what's expected of them. There are a variety of solutions for truck scale intercoms that can be tailored to the unique installations of each of these scales. These solutions will be discussed here.

First let's cover the problems encountered that are common among many truck scales:

1. Trucker's arms aren't long enough, unless the truck is driven by a gorilla. The mirrors on most trucks stick out quite far, and since truckers don't want to hit the intercom when they are driving up, their arms aren't long enough to push a button without getting out of the cab. In some cases that's not a problem, but we will cover solutions for both instances.
2. Engines of the trucks are quite loud. If the driver stays in the truck then whatever intercom solution is chosen needs to have ample volume to overcome the engine noise.
3. Some truck scales accommodate trucks of all sizes so at what height do you put the intercom? A pickup truck driver would need the neck of a giraffe to talk into an intercom on a pole for an 18 wheeler, or vice versa.
4. There may be obstructions such as concrete, railroad tracks, or other obstacles that make running wire next to impossible. In this case, you'll have to rule out wired systems and go with a wireless truck scale intercom system. If you go with a wireless system, the truck itself may be an obstruction to the signal. There are ways and systems to overcome this.
5. If you can only install a wireless system and there's no AC power near where the intercom will be installed, then you'll need a solar power system to go with the intercom.
6. You may not always have staff watching for trucks arriving so how do you know when one pulls up? That's where some sort of notification system is needed.
7. If you have trucks of varying lengths, and they stop in different places, where do you put the intercom? This is something you may need to address with signs.
8. Of course money may be an issue too so that could limit what type of system you can choose.

There are the solutions to each of the problems above that will be discussed below.



1. Driver Arm Length

If you can install a wired system, there are intercoms that use loud horn-type speakers that also act as the microphone as well. You can install a button so the driver can call the scale house, but this isn't necessary as long as someone knows the truck is there and can call out to it. If the operator needs to be alerted of an approaching truck, then a photo eye that rings a bell could be installed. To talk to the driver, the scale house operator just presses a Push-to-Talk button on the inside intercom, and the truck driver can then talk hands free.



Wired Intercom with Horn Speaker

If you need a wireless system and the driver can't get out of the truck, then we recommend a full-duplex wireless system that has the ability to automatically activate its transmit capability when a photo beam is broken. So when the driver pulls up, the system goes into transmit and receive mode on both sides and both parties can carry on a conversation. After the call, the system times out and waits for the next truck.



If the driver can get out of the truck and push a button to talk, then a wireless callbox can be used to communicate with the scale operator. What's beneficial about this application is that the scale operator can use a handheld two-way radio to talk to the drivers so he or she doesn't have to be confined to one location. You could also use a basic wired intercom system as well since the driver is likely away from the noise of the truck.

Wireless Callbox with Radio

If you don't need the driver to talk at all, a public address system could be used to broadcast messages. There is even a wireless PA system that would enable your scale operators to use handheld two-way radios to broadcast messages to the truckers. These systems have a range of a mile or more so the operator wouldn't need to even be anywhere near the scale. There is a wireless alert device available that could alert the operator that a truck is on the scale.

2. Noisy Engines

For a wired system this is where a loud horn speaker helps overcome the noise of the truck. For the wireless system the full-duplex intercom has noise cancellation built in, plus a speaker that gets loud enough to communicate over most engines.



Wireless PA System

3. Truck Height

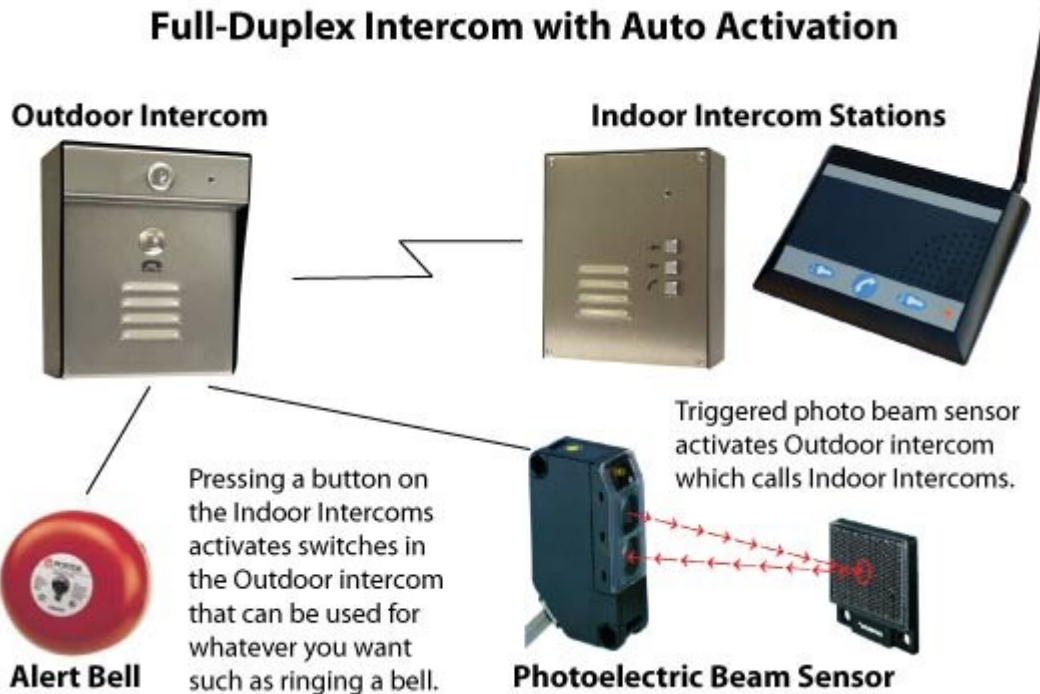
If the driver doesn't have to push a button, you can mount the intercom or horn speaker somewhere in between the differing heights and you should be OK. If you use a system that does require button pushes, then there is a 72" & 42" Dual-Height, Pad-Mount Pedestal Pole where you could mount two intercoms.

4. Obstructions

Depending on the scale installation, it may be virtually impossible, or at least far too expensive, to install cable for a wired system. Trying to bore or cut through metal, asphalt, or concrete can add thousands to the installation cost.

However, there can be obstructions for a wireless system as well. Buildings, hills, or even the truck itself are obstructions. The best signal will be obtained with clear line of sight between the inside and outside units. It's not absolutely necessary to be able to see between points since radio signals do bounce around. But, your chances of success will be reduced, especially if you go with a full-duplex intercom that uses 900MHz as its frequency. 900MHz systems have lower power than a system that uses VHF or UHF, but the feature set is greater and may be needed.

There are ways to overcome the obstructions by raising the antenna height over the truck, or by installing high gain antennas mounted as high as possible. If you want to learn more about how far wireless communications can reach, the article and video at this web address will help: www.intercomsonline.com/range



5. Solar Power

If you can't run wires, you also may not be able to get power to the location where you need the intercom. A self-contained solar power system may be your only option. What wattage solar panel you choose depends on several factors, but the greatest will be determined by the number of trucks that run through the scale daily. If you have 200-300 trucks a day, a 50-watt system will likely do it for you, while fewer trucks than that you can probably get by with a lower wattage system as long as you don't have cloudy days for days on end.

6. Roaming Staff

If your scale operators are roaming around, you'll need some way of notifying them that a truck has arrived. If they are far away from where they need to be, then you may want that notification to occur even before the truck has arrived so the operator can get back to the scale house. You could install a motion or photo beam sensor earlier in the path of the truck. But if you are using a full-duplex intercom that automatically turns on then you'll still need detection at the intercom system as well.

7. Truck Length

If the trucks coming on to your scale are pretty much all the same length, then where you put the intercom depends on where you want the trucks to stop. If they are varying lengths then you may need to put the intercom towards the front of the scale as long your scale measures accurately with small trucks this way. Regardless, you may need signs to tell truckers where to stop.

8. Budget

Wired systems are the lowest cost but you have to factor in the labor cost to run wire, which can be astronomical. A full duplex wireless system is very expensive, but depending on the features you need, it may be your only choice, and it still may be less than the labor cost of installing a wired system. If you have to go with solar power that's going to add quite a bit to the cost as well. Either way, wired or wireless, installing a system may save you money in the long run through increases in productivity and efficiency.

Contact the intercom experts at www.IntercomsOnline.com and we can help you choose the right truck scale intercom system for your unique application.