

Scrap Dragon

Scale Interface Guidelines

Description & Requirements

General

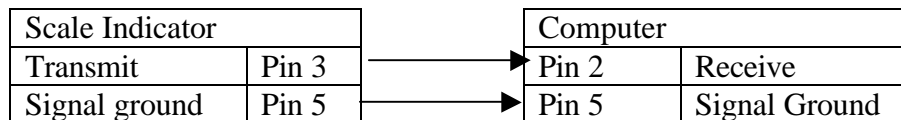
The Scrap Dragon scale interface takes advantage of the continuous mode computer output that is produced by most electronic scale indicators. Technically this is called asynchronous non-polling simplex communication and is similar to the method used to update external scoreboards.

Scale indicator requirements

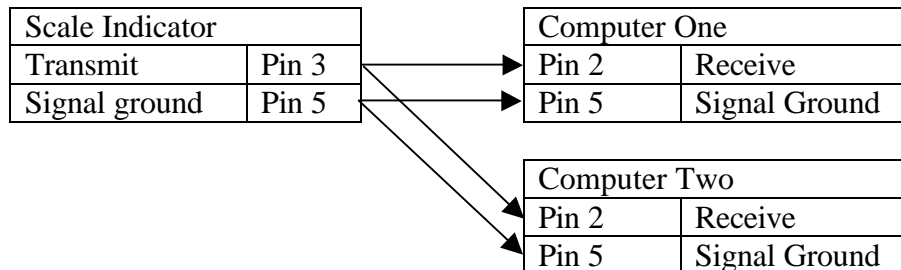
The scale indicator must be capable of outputting a continuous signal for computer interfacing on at least one serial port (RS232C). The indicator must produce a minimum of 10 updates per second (transmission rate of one data record every 100 milliseconds)

Physical connection

The scale is connected to the computer using an RS232 serial connection. This can be accomplished with a standard null modem cable. However, since no data is transmitted from the computer to the scale, it is usually only necessary to connect the transmit pin on the scale to the receive pin on the computer and a signal ground. For a standard DB9, the pin out is as follows:

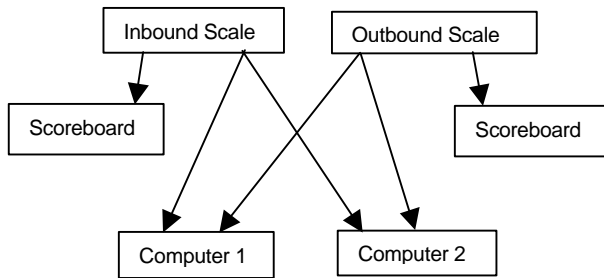


It is often necessary to have two computers reading the scale simultaneously. This can be accomplished easily if the scale indicator has two serial ports capable of providing continuous output. If additional serial ports are unavailable on the scale indicator, then a “Y” cable can be used to connect an additional computer as follows:

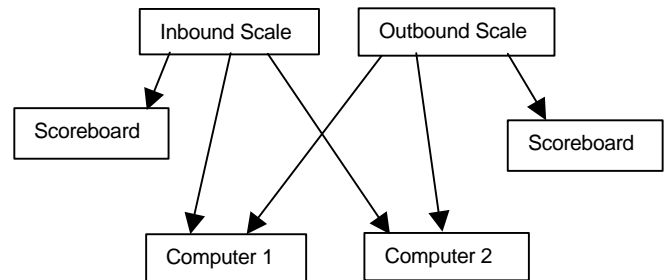


It is also common to have two scales attached to a single computer (e.g. Inbound, outbound). This requires that two serial ports be available in the computer. It is also possible to interface two scales to two computers so that either computer can read weights from either scale, as in the following diagrams.

Using “Y” cables:



Using extra serial ports:



Scale indicator configuration

The serial ports on the scale indicator must be configured or programmed to produce the desired output. The exact procedures and parameters vary for each device. Consult your scale indicator manual for specific instructions or ask your scale maintenance company to perform the required configuration. See the programming guidelines below for guidance.

Scale configuration guidelines

These vary by manufacturer and device. Not all will apply in every case.

Parameter	Setting
Serial port enable/disable	Enable
RS232 or 20 ma current loop	RS232
Communications Mode	Continuous
With Checksum	No
Single Line or GTN	Single Line – Gross only
Lb or kg	Lb
Simplex or duplex	Simplex
Baud	9600

In addition, it is necessary to know the data format and asynchronous communications parameters. **The attached worksheet must be completed for each scale indicator in order for us to properly configure the Scrap Dragon scale interface software for your indicator.**

Testing the interface

The easiest and most reliable way to test the interface is by using the Windows communications program, Hyper Terminal. This program is normally installed with Windows, but if it isn't on your system, it can be installed from the control panel using add/remove programs and windows setup. Set up a direct connection to the com port using hyper terminal. Set up the correct baud rate, data bits, parity and stop bits. If the interface is working correctly you will see the data stream from the scale. This can and should be done in advance of the installation of the Scrap Dragon software.