

Warranty and Indemnity

The *Footprint RCU4* device carries a twelve month warranty. This warranty covers all parts contained within the *Footprint RCU4* device and the cost of the labour to replace any such part during the warranty period. All warranty repairs must be carried out by Electronic Specialists or their designated agent. The warranty does not include any freight cost that may be incurred, nor does it include any repairs required due to any cause other than normal component failure.

Although all reasonable care has been taken, in the unlikely event of a problem occurring, Electronic Specialists and or any of its acting Agents will in no way be responsible for any loss of count data from this device or any interference or damage it may cause to any other equipment or property whatsoever.

Footprint Wireless Link

“Footprint Wireless Link” is guaranteed against faulty materials and workmanship for a period of twelve months from date of purchase. This equipment will be repaired free of charge on the condition that it is returned, freight paid, to an authorised “Footprint” dealer. This guarantee will become void if the equipment has been interfered with in any such way or if the fault is caused by abuse other than normal wear and tear. Also, the manufactures and suppliers will in no way be held responsible for any interference or problems that may be caused through the use of the Footprint Wireless Link System.

Specifications:

Receiver Unit

Power Requirement 12V DC 200mA

Transmitter Unit

Frequency 433.920MHz
 Modulation FM
 Output power Less than 25mW
 Power supply 12V DC 200mA

Available from:

ELECTRONIC SPECIALISTS
 73 Deveron Street P.O. Box 1759 Invercargill New Zealand
 Ph. 0064 3 218 2515 www.electronic-specialists.co.nz Fax 0064 3 218 2454

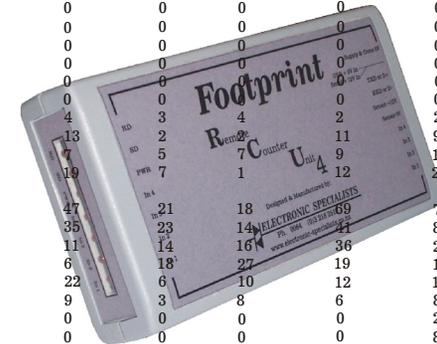
Footprint RCU4

4 Input Remote Counter Unit

People Counter Unit

Operating and Installation Instructions

		Electronic Specialists					Door 1	
Jamies Jeans Ltd		PEOPLE COUNTER REPORT					21/02/98	
Start Date: 15/02/98		Weekly Total: 1071					Finish Date: 21/02/98	
Period	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
0.00 to 1.00 am	0	0	0	0	0	0	0	
1.00 to 2.00	0	0	0	0	0	0	0	
2.00 to 3.00	0	0	0	0	0	0	0	
3.00 to 4.00	0	0	0	0	0	0	0	
4.00 to 5.00	0	0	0	0	0	0	0	
5.00 to 6.00	0	0	0	0	0	0	0	
6.00 to 7.00	0	0	0	0	0	0	0	
7.00 to 8.00	0	0	0	0	0	0	0	
8.00 to 9.00	0	4	3	4	2	2	0	
9.00 to 10.00	0	13	2	10	11	9	0	
10.00 to 11.00	0	7	5	7	9	17	0	
11.00 to 12.00 Midday	0	19	7	1	12	23	0	
12.00 to 1.00 pm	0	47	21	18	21	74	0	
1.00 to 2.00	0	35	23	14	14	89	0	
2.00 to 3.00	0	11	14	16	36	22	0	
3.00 to 4.00	0	6	18	27	19	13	0	
4.00 to 5.00	0	22	6	10	12	14	0	
5.00 to 6.00	0	9	3	8	6	8	0	
6.00 to 7.00	0	0	0	0	0	23	0	
7.00 to 8.00	0	0	0	0	0	81	0	
8.00 to 9.00	0	0	0	0	0	95	0	
9.00 to 10.00	0	0	0	0	0	0	0	
10.00 to 11.00	0	0	0	0	0	0	0	
11.00 to 12.00 Midnight	0	0	0	0	0	0	0	
Totals:	0	173	102	107	217	472	0	



Designed & Manufactured by:

ELECTRONIC SPECIALISTS
 73 Deveron Street P.O. Box 1759 Invercargill New Zealand
 Ph. 03 218 2515 www.electronic-specialists.co.nz Fax 03 218 2454

Footprint RCU4

People Counter System

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Wireless Link Information

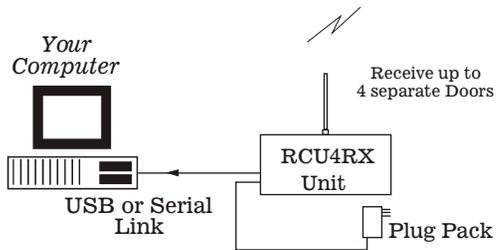
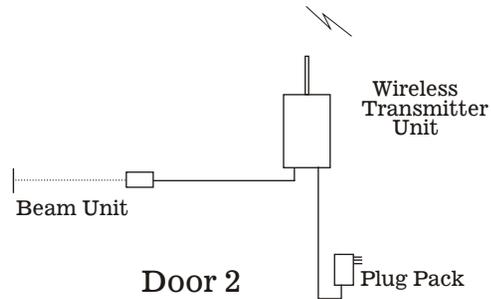
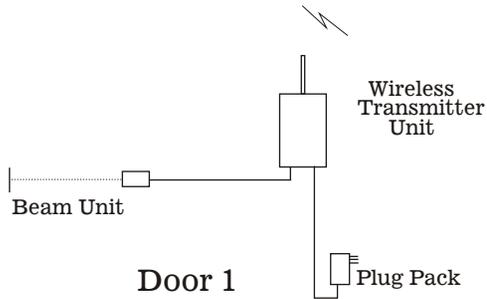
1. The Transmitter and Receiver units **must** be mounted away from any metal surface and the Aerial units **must** be located vertically.
2. When power is first applied to the Transmitter unit, the Data Led will flash three times indicating that the unit is functioning correctly.
3. When power is first applied to the Receiver Unit, the Power Led will blink three times indicating that the unit is functioning correctly.
4. On reception of data from the Transmitter Unit the RD Led in the Receiver Unit window will flash once per beam break.
5. In the unlikely event of a neighbours system interfering with your system, your system can be reprogrammed to avoid this. Contact us for reprogramming.
6. You can use up to four separate Transmitter Units with the one Receiver Unit. Each Transmitter **must** have a different address. Inside the Transmitter Unit box, there is a small dual in line switch that is used for setting the particular address or door number. See diagram. Only one of the four switches should be on. All remaining switches should be off. Set switch 1 on for door 1, switch 2 on for door 2 etc.
7. Typical range of the Wireless link is approximately 200 metres direct line of sight.



Address switch
Set to Door 1

Wireless Option

This option eliminates the need for the 3 wire cable between the Beam unit and the RCU4. Typical range of the wireless link is about 200 metres depending on how much steel is in your building. You should note the requirement for mains power for each Transmitter Units Plug pack near each Door.



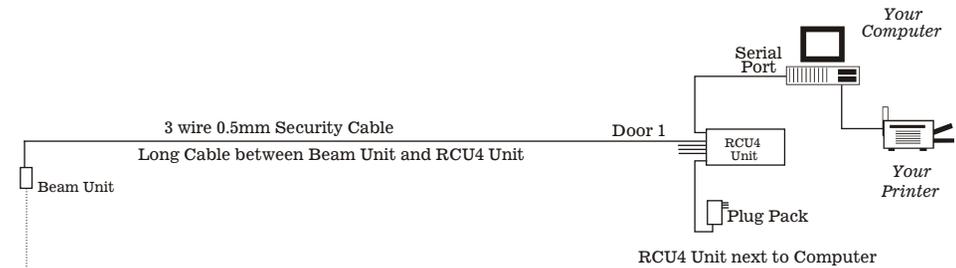
System Overview

4 Input Remote Counter Unit (RCU4)

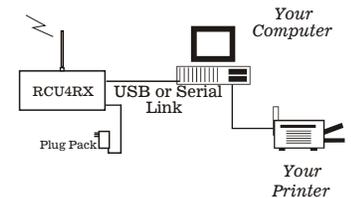
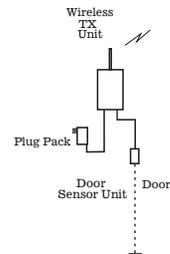
The *Footprint 4 Input Remote Counter Unit (RCU4)* is a microprocessor controlled counting system that allows up to four inputs to be connected so that it can log counts for each of the four inputs. The RCU4 is then connected to either a Serial or USB computer port, depending on the model supplied. RCU4 is capable of counting contact closure events, on a per hour basis, twenty four hours a day for up to one week at a time. You should note, that the computer with the *Footprint RCU4* software installed on it, is only required to extract the count data from the RCU4 unless the RCU4 is operating in the 'Auto Download' or 'Auto Email' mode in which case the Footprint software must be running at all times.

We have two types of systems available:

Cable System

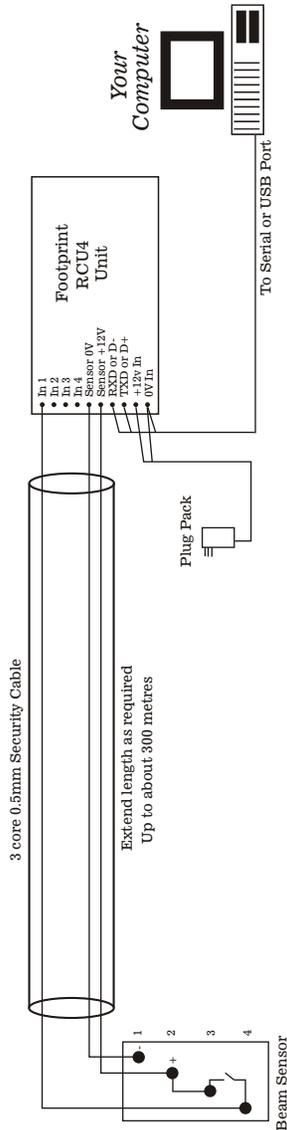


Wireless System



Cable System Wiring Connections

The amount of current drawn by a typical 5 metre IR Beam is approximately 50mA. Therefore a suitable cable would be a three wire core 0.5 to 1.0mm flexible alarm cable or similar.



4.

You should note that power for the RCU4 Unit and the beam units is derived from the Plug pack which must be powered all the time.

Connect 2nd, 3rd and 4th Beam Units the same as shown above, except use In 2, In 3 and In 4 inputs. Parallel up all the Sensor +12V and 0V wires.

V151207

Extremely Important Information

You need to take note of the following important requirements:

1. **Start Date**

Whenever the RCU4's memory is cleared a new "Start Date" is installed in the RCU4's memory. This Date is picked up from the PC Computer's current date and time. Therefore you should ensure that the Pc's date and time are correct.

The Start Date is used in the File name and shows when the current logging period starts. E.g. Shopname_20090813_Wk.csv

If the RCU4 has just been Downloaded, the Start Date should never be more than 7 days prior to the current date.

If when a Download is complete the Start Date is more that seven days from the current date then the RCU4 will have written over previous data as it can only log up to one week of data.

2. **Blocked Beam**

RCU4RX models with V2.1 firmware have a built in "Blocked Beam" sensor. When the beam has been blocked for 60 seconds or more the RCU4RX will sound 6 beeps every minute while the beam is blocked.

3. **Auto Download Mode**

When using the "Auto Download" mode it is essential that the computer is running at the time set for Auto Download. Failure to achieve this will result in no Download of the Count Data and therefore no clearing of the memory, resulting in an out-of-date "Start Date" as in 1 above.

4. **Auto Email Mode**

When using the "Auto Email" mode it is essential that the computer is running at the time set for Auto Download. The Footprint Software will Email a copy of the csv file immediately after downloading the count data.

You should note that it is essential that the Footprint software be running in the background at all times in the Auto Email and or Auto Download modes. Clicking the Hide button will minimise the Footprint software to the bottom right-hand system tray allowing it to still run in the background.

Good procedure is to set the Auto Download to occur on the day you expect the first people to come through the door. This ensures that the Start Date is the date of the first counts. If your store closes at 5.30pm and the Auto Download was to occur on say Tuesday at 7pm, then this would install Tuesday as the new Start Date but you would not get any counts until Wednesday 9.00am when your store reopens. Setting the Auto Download to say 1.00am Wednesday will keep the Start Date aligned with the first counts.

E &OE

13.

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General System Operation

System Operation

In the Manual Mode you only need your PC Computer to extract (download) the count data from the RCU4. This means you do not need to have a computer at the site where the RCU4 is until you need to download the data.

When the system is functioning correctly the PWR light on the window end of the RCU4 Unit will flash slowly.

When the Beam is interrupted, the following three features can be observed.

- A. The light on the beam unit comes on.
- B. In 1, In 2, In 3 or In 4 light comes on, on the Footprint RCU4 Interface Unit.
- C. A tone is heard coming from inside the RCU4 Unit if Tone is enabled via the Footprint Software.

NOTE:

If the Beam Unit is out of alignment, all three above will be observed continuously.

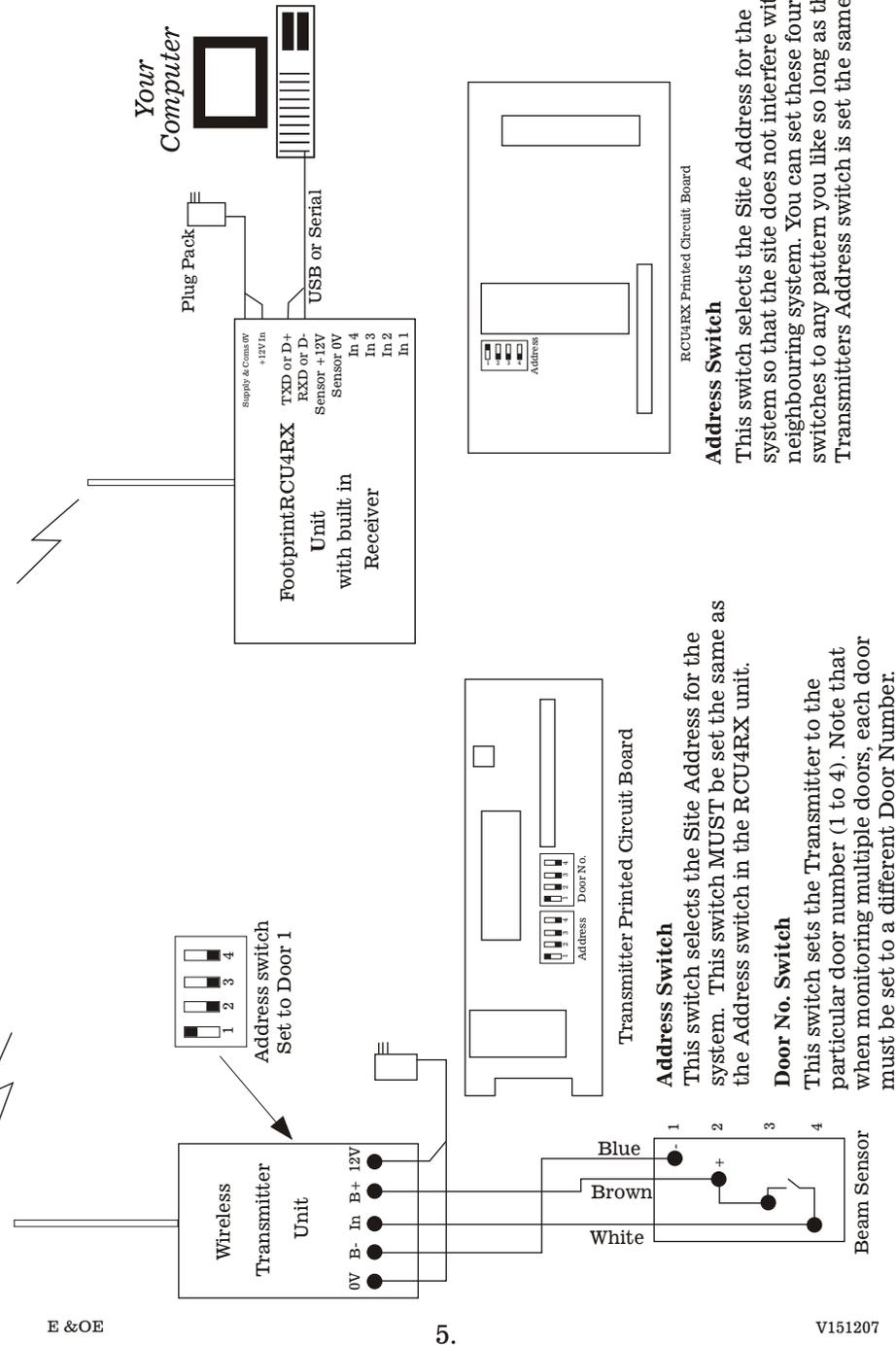
You should regularly check that the PWR light is still flashing slowly and that the In 1, In 2, In 3 or In 4 lights come on when the Beam is broken.

Saving Of Data

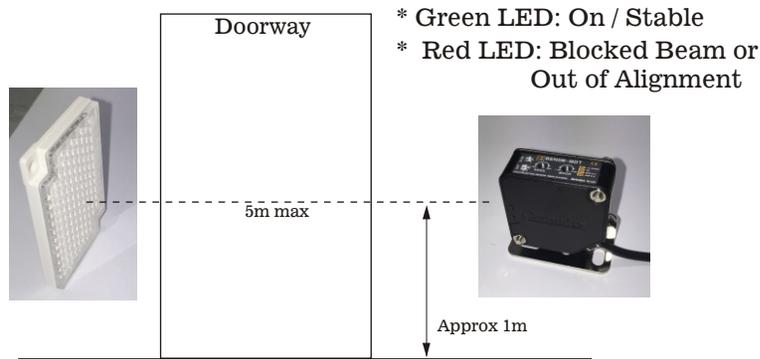
The Footprint Software will save all count data to the Computers hard drive when you Down Load the RCU4. Data is saved in two files. Week Grid data is saved in a file called ShopName_20090731_Wk.csv where 20090731 represents the start date of the current weeks data. A new file is created each week.

Year Grid data is saved in a file called ShopName_2009_Yr.csv where 2009 represents the current year. You should note that both of these files are created automatically.

Wireless System Wiring



Mounting Of Beam Sensor



1. Keep Beam Unit out of direct sunlight.
2. Mount Beam approximately one metre above floor level.
3. Beam and Reflector should be mounted firmly.
4. Beam must be aligned with the reflector.
5. Care should be taken to ensure that the beam is not obstructed by a display stand etc.
6. Select Beam location to enable easy access to wiring.
7. The maximum distance from the standard Beam Unit to the reflector is 5 metres.
8. **Cable System**
Run a 3 wire cable from the Beam Unit back to the PC Computer and connect up as per the wiring diagram on page 4.
- Wireless System**
Run a 3 wire cable from the Beam Unit back to the Wireless Transmitter and connect up as per the wiring diagram on page 5.
9. **Blocked Beam**
RCU4RX models with V2.1 firmware or later have a built in “Blocked Beam” sensor: When the beam has been blocked for 60 seconds or more the RCU4RX will sound 6 beeps every minute while the beam is blocked.

Testing The Footprint RCU4 System

Once the system has been installed and connected correctly the following procedure should be carried out.

1. Confirm that the RCU4 is actually working by observing the PWR Led blinking slowly in the RCU4's end window.
2. **Cable System**
If using Door 1, when the Beam is broken you should see the In 1 Led come on while the Beam is interrupted - or In 2 for Door 2 etc.
- Wireless System**
When the Beam is interrupted you should see the RD Led flash indicating that the RCU4RX has received a signal from a Door Wireless Transmitter.

Count Accuracy Test

1. Carry out a Download and choose ‘Yes’ when asked if you want to clear the memory.
2. Walk through the door four times. Do not just wave your hand through the beam, just walk through it like a customer would.
3. Carry out a Download and observe the counts displayed on the screen for that door. If the RCU4 is set to divide the counts by 2 for that door then you should see the value 2 otherwise you should see the value of 4.

Description of LED Indicators

The RCU4 has seven LED status indicators as follows:

1. In 1	Input No 1	On when input is triggered. (Cable system only)
2. In 2	Input No 2	On when input is triggered. (Cable system only)
3. In 3	Input No 3	On when input is triggered. (Cable system only)
4. In 4	Input No 4	On when input is triggered. (Cable system only)
5. PWR	Power On Led	Flashes slowly while CPU is running.
6. SD	Send Data	On when RCU4 is Sending Data.
7. RD	Read Data	On when RCU4 is Receiving Data.

Footprint Software Tools Menu

Tools Menu

Note: All the settings below are saved to the hard drive in your PC so you only have to configure these settings to your requirements the first time you use the Footprint RCU4 software.

Coms

Click on Tools / Coms to setup the com port that you have connected the RCU4 into. You will have to close the current com port before you can select a new one. Remember to open the com port again.

Setup Shop Name

Click on Tools / Setup Shop Name to install your shop name. The name length is limited to 35 characters. The name you put in will appear on the Week Grid Viewer window and on all printouts as well as in the downloaded file name.

Setup Beep Control

Click Tools / Setup Beep Control to enable (ticked) or disable each individual door beeper.

Setup Count Divide

Click Tools / Setup Count Divide to enable or disable each individual door count divider. If the Count Divide box for Door 1 is set to 2 the RCU4 will only count every second person through the door. If it is set to 1 then the RCU4 will count every person. The current setting for each individual door is displayed on the Week Grid Viewer window and is on each printout.

Setup File Save Folder

Click Tools / Setup Save Directory to set the location that you wish the count data files to be saved in. You do not need to put in a file name just select the directory and the system will create the file name for you. The default file location is the same location as the Footprintrcu4_V4_0.exe file.

Setup Close Password

To prevent careless shutting down of the Footprint software it requires a password to be entered before the software can be shut down. Default is: 1234

You can change this at any time but make sure you can remember it so you can easily shut the software down if you wish.

Setup Automatic Download

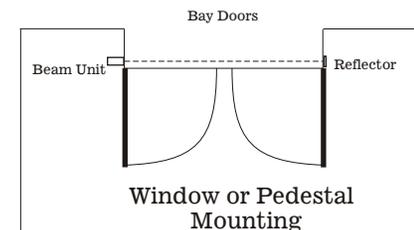
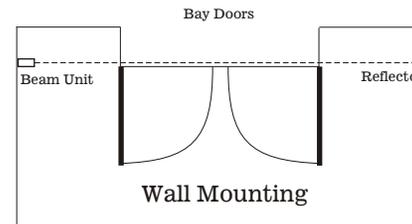
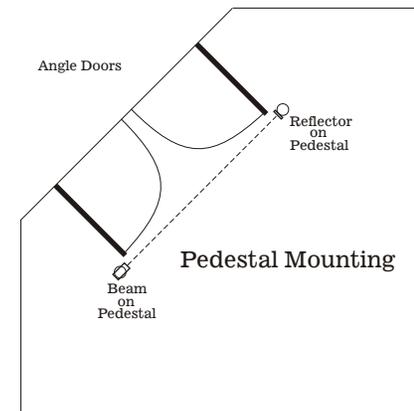
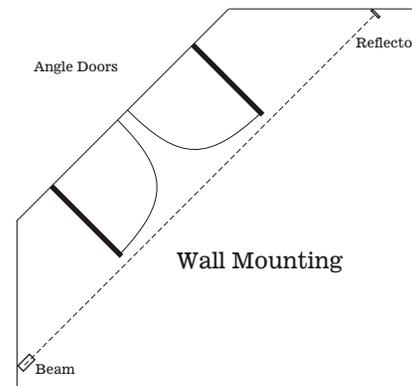
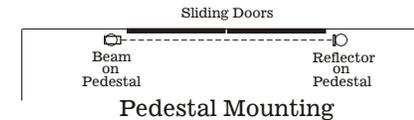
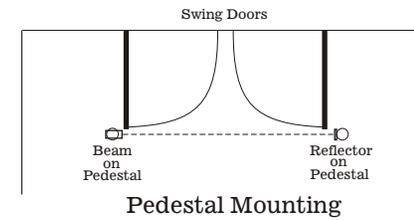
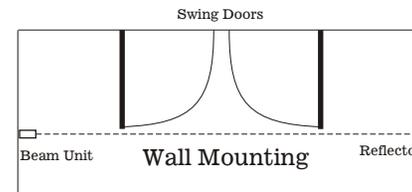
Click Tools / Setup Automatic Download to configure the automatic download features. If the Auto Download Mode box is ticked the system will run in the automatic mode. It will download the count data at the day and time selected in the Automatic Download Schedule and save it as a csv file on your hard drive. It will then clear the RCU4's count memory.

Setup Automatic Email

Select this window to put in the Email details as required. Check with your IT person if not sure. Ensure that the Email checkbox is ticked in the Automatic Download setup window.

Beam Sensor Mounting Positions

NOTE: The narrower the Door opening the more accurate the counts are.



Standard Beam Unit

5m Reflective (Large)

Operates up to 5 metres

Other Beam Units available

Installing Footprint Software

Install USB Driver

Insert CD into CD drive.

1. To install the USB driver Click on the correct .exe file.
CP210xVCPInstaller_x86.exe file if you have a 32bit system.
CP210xVCPInstaller_x64.exe file if you have a 64bit system.
2. When the 'Silicon Laboratories CP210x USB to UART Bridge Drivers' window appears, click the NEXT button
3. Click on the 'I accept the terms of the license agreement' radio button.
4. Click the NEXT button.
5. The driver should install automatically.
6. Restart your computer.
7. When the computer has rebooted plug the FootprintRCU4 system into a USB port.
Windows should automatically detect the CP210x USB to UART Bridge Driver and a message that your new hardware is ready to use should popup.

NOTE:

**DO NOT run the FootprintRCU4_V4_5.exe program direct from the CD.
DO NOT connect the FootprintRCU4 to a USB port before installing the USB Driver.**

Install FootprintRCU4 Software

Insert CD into CD drive.

Using Windows Explorer, select File / New / Folder

Name new folder as: Footprint

Select CD drive using Windows Explorer.

Click on the 'FootprintRCU4_V4_5.exe' file on the CD and drag it over to the new Footprint folder.

Right click on the 'FootprintRCU4_V4_5.exe' file just installed in the Footprint folder to create a short cut. Drag the short cut Icon over to the desk top window.

Double left click on this desk top icon to run the program.

Typical System Operation

Once the RCU4 unit and the Beam Unit(s) have been connected and the software has been correctly installed you are ready to test the system.

Week Grid

Click on the 'Week Grid Viewer' button to view the week Grid . Click the 'Down Load' button at the bottom of the window to extract the count data from the RCU4. The count data will appear on the grid after about 5 seconds.

Select the Tab for the Door you wish to view. E.g. Click on the Door 3 tab to view the count data for the door that is connected to the In 3 input of the Footprint RCU4 Unit.

Selecting the Combined Tab will show the combined count of all four doors.

You can print out a copy of this grid at any stage by clicking File / Print at the top left corner of the Grid Window and selecting the Door you wish to print.

Year Grid

Click on the Year Grid button to view the current years daily totals. Select the tab for the Door you wish to view.

You can print out a copy of this grid at any stage by clicking File / Print at the top left corner of the Grid Window and selecting the Door you wish to print.

Historic Grid

Click on the Historic Grid button to view any previous data by selecting the Week or Year file that you wish to view or print.

On Screen Help

Click on the Help word at the top of the blue main window to access further information relating to various options and set ups.