

# Installation and Operating Instructions

For



**ModuPlex, UniPlex and UniComm**

**Electronic People Counters**



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## 1. First Time Use

The Moduplex/UniComm is a low voltage electronic device for indoor use and must only be operated by means of the attached mains adaptor. **Never** install the system where it might be directly exposed to the weather.

### 1.1. Location

Correct positioning and setting up is important and will provide you with years of trouble free operation. Choose a location where people move freely so that undue obstruction of the beam is avoided. A minimum distance of 30cm should be maintained between any passing person and the Counter and the overall distance between Counter and Reflector must not exceed 5m. The ideal mounting height for counting legs is 15cm from the floor to the bottom of the counter and at chest level for counting bodies. Never locate the system in direct sunlight and areas with highly reflective surfaces.

### 1.2. Fixing Surface

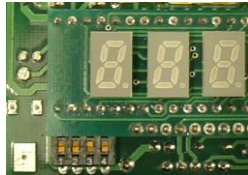
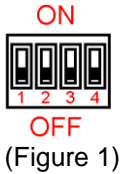
The equipment can be installed temporarily but **must** eventually be securely fixed to an **even** and **smooth** surface. Rough or uneven surfaces may cause internal damage and will almost certainly affect the accuracy of the system.

## 2. User Preferences

The UniComm offers various user preferences like Leg or Body counting and divide by 2 etc. which are chosen by selecting the appropriate lever positions of the selector switch (Figure 1) mounted on the bottom left of the circuit board. To gain access to the switch remove the front cover, as described in section 4, and using a small object like a ball point pen, slide the switches to the desired settings.

### 2.1. Switch Settings

Switch No.	'On' means	'Off' means
1	Body counting (Chest height)	Leg Counting (12cm to 15cm from floor)
2	Divide count by 2	Show full count
3	Display On	Display Hidden
4	Reset Enabled	Reset Disabled



### 2.2. Leg/Body counting

With the Moduplex you have the option of recording passing people by either counting their legs or their bodies. The counter automatically displays the correct number for either option. For "**Leg counting**", slide switch number 1 to the **OFF** position and for "**Body counting**", slide the switch to the **ON** position.

### 2.3. Divide by 2

The Moduplex will count your visitors on the way in as well as on the way out. To obtain the correct number of visitors that have actually entered your premises you need to half the recorded total. The 'Divide by 2' feature will do this for you automatically

### 2.4. Display On/Off

The numerical Display can either be permanently lit, or hidden. If the display is switched off you can still view the recorded data by momentarily placing one of the magnets between the two arrows on the front cover.

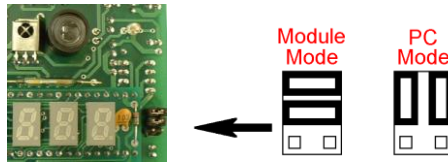
### 2.5. Reset Enable/Disable

If the reset facility is disabled, the only way of resetting the count to zero is using the PC software. If reset is enabled, hold one of the supplied magnets between the two arrows until it resets to 0000 (about 5 seconds).

**Please note that resetting the display has no effect on the recorded data stored for downloading.**

### 3. Operating Modes

The Moduplex offers three different types of operating modes, which are selected by changing the positions of the two links mounted on the circuit board. To gain access to the links, remove the front cover of the counter as described in section 4. Change the positions of the links, shown below, until they match the diagram of your chosen operating mode.



#### 3.1. Manual Mode

Manual operation simply means taking visual readings from the Display at user determined intervals. To view the recorded count, if the display is set to off, momentarily place one of the supplied magnets between the two arrows on the front cover. To clear the display and reset the count to zero, hold the magnet in place for about 3 seconds or until the display clears.

#### 3.2. Module Mode (Only applicable to Moduplex)

To transfer the recorded data from the Counter to the Module, ensure that the Counter is switched **ON** and plug the Module directly into the 9 way D Type connector on the top of the Counter. Following a short delay, to ensure proper mating between the Counter and Module, transfer starts automatically with the download status reported on the Display as detailed in the Display Function section 5 (Figures 4-6). To transfer the data from the Module to your PC, follow the instructions in the download section of the software booklet.

#### 3.3. PC Mode (Not applicable to UniPlex)

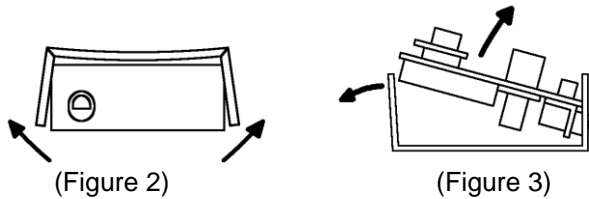
This mode requires a permanent RS232 connection to your remote PC or a standard serial cable for use with Laptops or similar portable equipment. **Make sure that the Counter is switched off and the links are set to PC Mode before attempting to link the Counter to your PC.** The permanent connection needs to be terminated with a 9 or 25 way D Type plug that matches a spare RS232 serial port on your PC. To transfer the data from the Counter to your PC, follow the instructions in the download section of the software booklet.

## 4. Installation

The Moduplex is distributed worldwide with the **Date/Time** set to GMT (Greenwich Mean Time) and, unless your location falls within that time zone, you will have to adjust the **Time/Date** to reflect your local time zone. You can use the Data module or the permanent RS232 link, either before or after installation of the counter, to change these settings. (Not applicable to the UniPlex)

### 4.1. Counter Installation

Remove the front cover of the counter by gently lifting the sides out of the base grooves (Figure 2) and separate the two halves. Avoiding contact with any of the electronic components on the circuit board, gently flex the bottom half of the enclosure outward (Figure 3) and lift the circuit board out of its slots.



Using the counter base as a template, mark out the fixing centers and screw the base securely to your chosen location. Re-insert the circuit board and ensure it is properly located in both the lower and upper slots of the enclosure. Using the grooves in the front cover as guides, slide the top back on to the base until it is fully seated. Check that the cover and the base have fully interlocked and if necessary press both sides in until they do. Tuck away any loose ends of the adaptor cable and if possible secure it to the mounting surface.

### 4.2. Reflector positioning

Ensure that the counter is powered up. Hold the reflector at a distance of about 1m in front of the counter and move it about until the LED on the front of the counter remains lit. Ensuring that the LED remains on, slowly move the reflector to its intended location. Making sure that the whole area of the reflector is facing the counter, move it slowly up, down, and sideways, and mark out an area within which the LED indicator remains on and does not flicker. Finally fix the reflector exactly in the middle of the marked out area.

**Note:** It is possible to increase the standard operating distance of 5m by adding a second reflector.

## 5. Display Functions

Apart from the usual function of displaying the recorded data the numerical display is also used to highlight other operations.

### 5.1. Data Transfer (Not applicable to UniPlex)

Upon connecting the Data module to the Counter, and following a short delay, the Display changes to four horizontal dashes (Figure 4) indicating that the Module is receiving data from the Counter. To indicate that all the data has been transferred the Display will change to Fin- (Figure 5). If the error message (Figure 6) appears, remove the module and wait for a few seconds before repeating the above procedure.



(Figure 4)



(Figure 5)



(Figure 6)

### 5.2. Beam obstruction

If for any reason the system becomes permanently obstructed for long periods, the horizontal dashes on the Display (Figure 4) start flashing to attract the user's attention. If the obstruction is removed the system will automatically resume counting.

## 6. Trouble Shooting

If the Counter counts erratically or not at all, the most likely cause will be that the transmitted beam is either only partially being returned to the receiver or not at all. If this is the case, the small LED on the front of the counter will either be off or flickering.

***The following should have been observed during installation.***

- 1) The circuit board must be inserted in the grooves correctly and the front cover fully seated on the base **(section 4.1)**.
- 2) The Reflector must be properly aligned with the transmitted beam **(section 4.2)**.
- 3) The minimum distance between people and the Counter and the maximum distance between Counter and Reflector must be maintained **(section 1.1)**.
- 4) The counter must be securely fixed to a vertical surface and away from highly reflective areas **(section 1.1)**.
- 5) Check that the Leg/Body counting switch setting (Figure 1) in **(section 2.1)** is set to the correct position.





**Supplied by:**  
Axiomatic Technology Ltd  
Graphic House  
Noel Street  
Kimberley  
NG16 2NE

Tel: 0115 8757506  
Fax: 0115 8757510  
[sales@q-scan.co.uk](mailto:sales@q-scan.co.uk)  
[support@q-scan.co.uk](mailto:support@q-scan.co.uk)

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