Installation and Operating Instructions

For

Q-SCAN

TwinPlex and TwinComm

Electronic People Counters

Contents

1. Notes

1.1 Important

We strongly advise that you read the installation and operating instructions before attempting to use the equipment. Correct positioning and setting up is important and will provide you with years of trouble free operation. In some cases temporary installation, for test purposes, is recommended.

1.2 Location

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 12cm to 15cm from the floor to the bottom of the counter and at chest level for counting bodies. The latter will avoid arms and handbags etc. from being counted. Never locate the system in direct sunlight and areas with highly reflective surfaces.

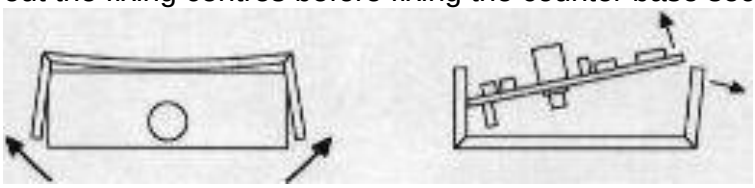
1.3 Fixing Surface

For temporary installation you may wish to use items like "Blu-Tack" or "double sided tape but the equipment **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. Installation

2.1 Counter Installation

Remove the front cover of the counter by gently lifting the sides out of the base grooves (Figure1) and separate the two halves. Avoiding contact with any of the components, flex the bottom half of the enclosure outwards (Figure2) and lift the circuit board out of its slots. Using the counter base or the drawing on the inside of the back page as a template mark out the fixing centres before fixing the counter base securely to your chosen location.



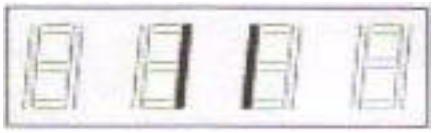
(Figure 1) (Figure 2)

Avoiding contact with any of the components, insert the circuit board in its slots. Using the grooves in the front cover as guides, slide the cover 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 the loose ends of the adaptor cable and if possible secure it to the mounting surface.

2.2 Reflector positioning

Check that the supplied mains adaptor is connected to the mains and, if applicable, switched on. Four bars on the display should now be flashing telling you that the counter is in set-up mode:

1) Hold the reflector 1m in front of the counter and move it about until the display changes to one of the patterns shown below. Figure 4 indicates that the reflector is too far to the right, figure 5 shows it to far too the left.
2) Take the reflector to its intended location. Making sure that the whole area of the reflector is facing the counter, move it up, down, and sideways, and mark out an area within which the setting-up indicator looks like figure 6.
3) Finally fix the reflector exactly in the middle of the marked out area.



(Figure 3)

(Figure 4)

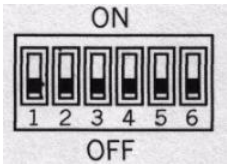
(Figure 5)

(Figure 6)

3. Mode Selection

3.1 Preparation

Disconnect the power supply and remove the front cover of the counter as described in the installation section. Towards the right and bottom of the circuit board you will find a selector switch (see below) used to select the counting modes. Using a small object make your selections by sliding the switches to either the ON or OFF position. Replace the front cover when your selections are completed.



If the distance between the counter and the reflector is less than 3m, slide switch number one to the ON position. Otherwise leave it in the OFF position.

3.1 Counting/Set-up mode

To select counting mode slide the switch number **2** to the **OFF** position. You can enter the set-up mode anytime by sliding the switch to the **ON** position.

3.2 Switch Settings

Switch No.	'On' means	'Off' means
1	Entrance width is less than 3m	Entrance width more than 3m
2	Counter in 'Set-up' mode	Counter in 'Counting' mode
3	Body counting (Chest height)	Leg Counting (12cm to 15cm from floor)
4	*Direction A → B*	*Direction B→A*
5	*Count in one direction (switch 4 sets direction)*	*Bi-directional counting (switch 4 does nothing)*
6	Reset Enabled	Reset Disabled

3.3 Counting direction

To count in one direction only slide switch **5** to the **ON** position and, referring to the letters printed on the grey and red main logo on the front cover of the counter, slide switch number **4** to the **ON** position to count from **A to B**, or to the **OFF** position to count from **B to A**. To count in both directions leave switch **4 On** and slide switch **5** to **OFF**.

4. Display

4.1 Indicators

At regular intervals small dots will travel across the bottom of the display to indicate the counting direction and to confirm that counting is in progress.

4.2 Viewing

To view the recorded count, momentarily place one of the supplied magnets over the area of the front cover marked "MAGNET". If you are using the optional remote fob, point the fob at the counter and press the switch once.

4.3 Reset

To clear the display and reset the count, hold one of the supplied magnets over the area of the front cover marked "MAGNET" until the display clears. If you are using the optional remote fob, point the fob at the counter and press the switch once to light up the display. Press it a second time to enter the reset mode and if you are sure that you want to reset press again to clear the display.

Twincomm users please note that the above procedure will only clear the display memory. To clear the download memory refer to section 6.

5. Miscellaneous

5.1 Memory

The non-volatile memory is up-dated every 10 minutes and is protected against accidental removal of the power supply and power cuts. **No batteries required.**

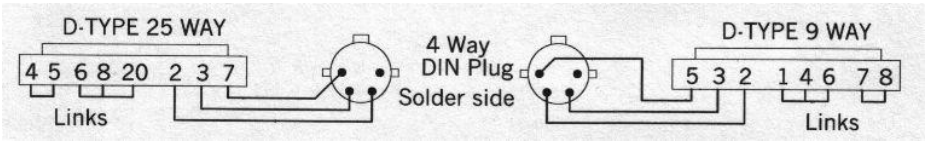
5.2 Beam obstruction

If for any reason the system becomes obstructed for prolonged periods, two flashing bars ***(Figure 3 in section 2)*** will warn you of the situation. Remove the obstruction and the system will automatically return to counting mode.

6. TwinComm

6.1 Connections

Using the supplied DIN plug and the correct type of RS232 cable, i.e. standard cable for distances of up to 15m or extended distance cable for distances of up to 150m, make the connection between the counter and a suitable D-type plug which matches the serial port of your computer as shown below. For portable equipment make up a length of cable with end connections as shown below. (Cables can be supplied by Axiomatic Technology Ltd).



6.2 Q-Scan Software

The easiest way to communicate with your Twincomm counter is using the Q-Scan software. This will allow you to download count data, and automatically set the time and date of the counter.

6.3 Communication settings

Without the Q-Scan software, for the counter to be able to communicate with your computer you will need communication software set to the following parameters. Most, if not all, computers will have this software pre-installed and to find out how to set or change your communications settings consult the manufacturer's manual.

Parity = none/ Data bits = 8/ Stop bits = 1/ Baud rate = 9600
You also have to tell the computer which connector or serial port you are using.

Example using Microsoft Windows Hyper Terminal

1. First navigate your way to the program called Hypertrm via Programs\Accessories\Communications\Hyper Terminal.
2. Start the Hypertrm program and in the "Connection description" window that appears enter a name like Q-Scan or Counter, choose an icon and click OK.
3. Ignore the first three entries in the "Connect to" window that appears and scroll down to one of the Direct to Com options in the Connect Using window and click the port the counter is connected to and click OK.
4. Enter the following port settings in the Com Properties window that appears. Bits per second **9600**, Data bits **8**, Parity **None**, Stop bits **1,** ignore Flow control and click OK.
5. Open the File option tab and click on save. This will create a file with "your name & icon" which you may wish to copy to your desktop for easy access. Clicking on the new file will automatically open Hyper Terminal ready for changing the counter settings or downloading of the data.
6. To download the data from the counter, make sure the counter is connected to your PC, switched on and in counting mode. Click on the icon you have created to start Hyper terminal. Click on the Transfer option and choose Capture Text. In the following Capture Text window change the file name to something more suitable and then change the txt format of the file to csv and then click Start. If you do not change the file name the current data will be added to the previously saved file. To create a new file simply change the file name as described above.
7. **Make sure Scroll Lock and Caps Lock on your keyboard are turned off** and type lower case d to download the data. When the data has finished scrolling down the screen close the connection and exit Hyper Terminal. Clicking on the file you have just created will open a spreadsheet showing the downloaded data.
8. To change the user settings of the counter click on the same file and icon you have created for downloading and type lower case s and then follow the instructions below.

6.4 User settings

To set the correct date, time and counter identification etc. ensure that the counter is switched ON and **"open"** or **"run"** your communications software from the computer. Follow the instructions of your communications software and connect, or go on-line, to the counter. Type lower case **S** on your keyboard to display the following line. **DD/MM/YY-D-HH:MM-????-MEM(Y/N)**. "**DD/MM/YY**" refers to the current date i.e. Day, Month and Year. **"D"** refers to the weekday number and ranges from 1 - 7 i.e. if you choose for Monday to be day number 1, Tuesday will become number 2 and Wednesday number 3 etc. The following

Monday will be number one again. You can assign any day with any number between 1 and 7 at any time. **"HH:MM**" refers to the current time and **"????**" to your chosen counter identification number. **"MEM(Y/N)**" asks you whether you want to clear all the counts from the memory.

Using the exact delimiters, key in the new settings until they look like the following sample **07/03/98-5-15:42-5412-y** and press enter. If you make an incorrect entry you will have to re-type the whole line starting with the date. Having completed the changes, check them with the downloading facility described in the following section and then exit the communications software. The above settings are protected against power failure for up to 10 days.

6.5 Data retrieval

The counter data is structured so that each day is allocated a separate line which contains the counter identification number followed by the date, day number and finally the 24 individual cells listing the recorded counts for each hour of the day. If the counter is left to record uninterrupted, a total of 31 days of data will be stored in the memory, which remains unchanged until the end of the 31st. day. During the next day only the oldest piece of information will be overwritten with new information, therefore leaving the remaining records intact for processing.

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