COUNTERS & ACCESSORIES LTD

USER MANUAL

Collect XP

COUNTERS & ACCESSORIES LTD

Collect XP

Lodge Farm Business Centre • Castlethorpe
Milton Keynes
Phone 01908 511122 • Fax 01908 511505
Web www.c-a.co.uk

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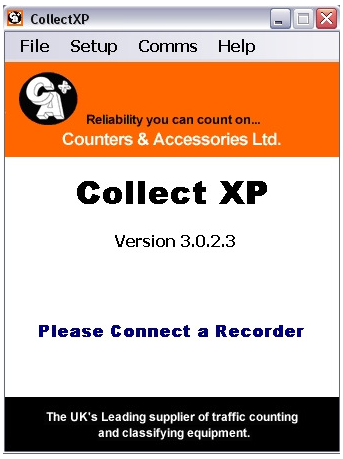
Chapter 1

Chapter One - Setting Up

Installing The Application

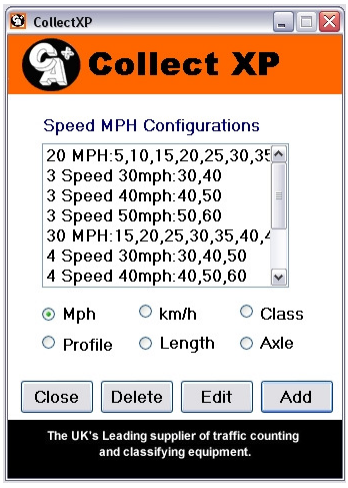


Insert the CD into a CD drive and follow the on-screen prompts. The Set-Up will install both Collect XP and if necessary the .NET framework required to run it.

Initial Setup

Before you plug in your recorder it is a good idea to initially run Collect XP and change any necessary settings. The following section details all of these options

File – Dump-File Directory



When collecting data it is automatically saved onto the computers hard-drive. The directory files are saved to can be changed via the Dump-File Directory (CTRL+D) button on the File menu.

Setup – Surveys

The surveys button allows you to add, edit, or delete any of the survey classification settings. This is useful if you want to specify exactly what speed bins the recorder should use and not use one of the defaults.

Setup – Preferences

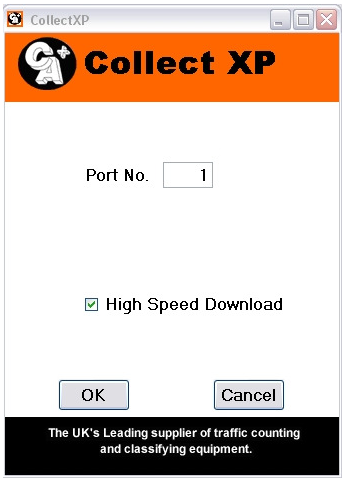
From this screen it is possible to change the measurement defaults to use the American standards as well as set the computer to synchronise the recorders time to its own.

Setup – Log File

From here you can view or clear the software's log file. A log file is a record of everything Collect XP does.

Comms

Depending on your hardware setup you may have to change the communication port that CollectXP will look for your recorder on. This is performed in the Comms Menu.



Within this screen you can also turn off high speed downloading. If you are having problems getting data from a recorder with it losing its connection turning this off may solve the problem.

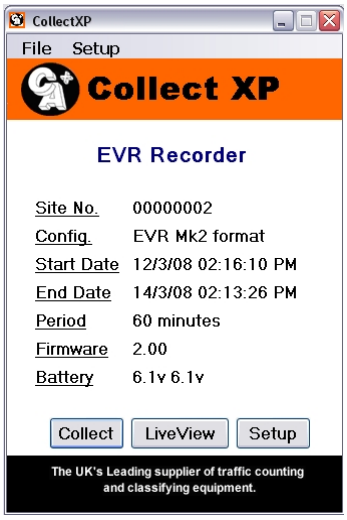
Help – Recover/Reset Recorder

In the unlikely event that the recorder encounters any issues and becomes unresponsive these two buttons will be able to fix it.

The recover button will attempt to fix whatever is wrong with it and hopefully continue what it should be doing, while the reset button should be used if the recover option doesn't work and the recorder will be reset.

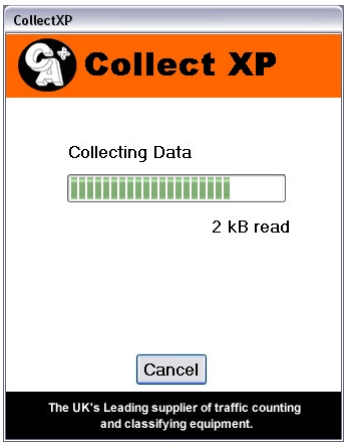
Main Screen

The main screen is a summary of the current configuration of the recorder and will automatically appear when the software detects a recorder. From here you can collect the data currently being stored on the recorder by pressing the Collect button, change the configuration via the Setup screen or view what is happening on the road via the LiveView (LiveView is only available on certain types of recorders)



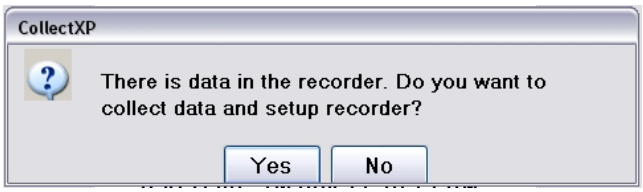
Collect

To pull data off of a recorder is a very simple process. By pressing the Collect button all of the data currently on the recorder is "Dumped" onto the computers hard drive.



Setup

The Setup screen is where you will spend most of your time while using Collect XP. To use the Setup screen you must first collect the data from your recorder, if you do not press the Collect button before trying the Setup button you will be reminded of this and asked to collect your data.



Setup – Clear Recorder

From the Setup menu you can clear any data off of the recorder. This is useful if your recorder has been sat recording nothing for a long time and you want to start a new survey. The password to do this is 911

Setup – Clear Data after Dump

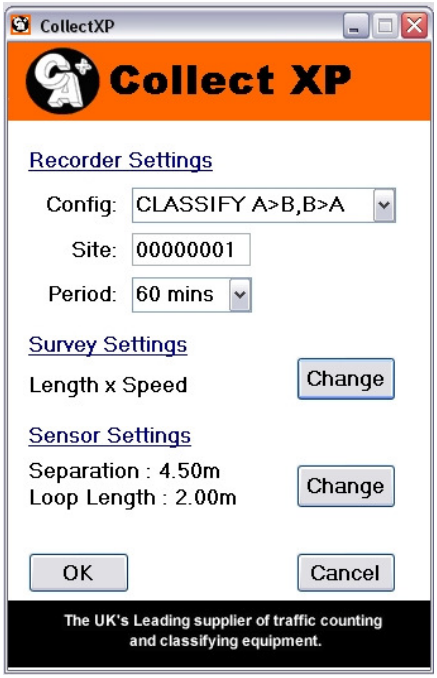
This setting is on by default and will clear any data from the recorder after it successfully downloads onto the PC. Untick if you wish to turn this off and want to clear the recorder manually (using the option above)

Chapter 2

Chapter Two - The Setup Screen

Depending on the type of recorder you are currently using many different options could potentially be available to you on this screen, all of which will be covered in this section of the manual.

Recorder Settings



Config

The configuration dropdown menu on the main setup screen is the most important option on any of the screens. From here you choose how the recorder will interpret the data it receives from its sensors. What these settings mean will be explained in more detail on the following pages

Site

The Site Number is the unique identifier used to distinguish between sites when in a database. As a result ensuring each site has a different Site Number is vital.

Period

The period is the interval in which the recorder groups its data. It is noted that having a smaller period allows for more precise counts, but as there will be more data the recorders memory will fill up faster.

Survey and Sensor Settings

Depending on the configuration setting chosen a number of settings will be available with these two sections. These will be explained in detail on the following pages.

Chapter 3

Chapter Three - Configuration Settings

As mentioned previously the configuration setting is the most important setting as it determines every other option available in the Setup screen. This section will cover the common choices for the Config and when each should be used.

Volume Configurations

A volume configuration is used when only the number of vehicles passing over a sensor is to be recorded, no information on what these vehicles are will be stored.

Four points can mostly explain the various Volume Count configurations:

- Each letter from A-H represents a loop.
- A lower case letter denotes a central loop in an N+1 array.
- A comma is used to divide the channels.
- Assigning an unused loop to a channel has no effect on the count.

The only exception is for single lane roads, where two loops are installed in a single lane. Assuming the loops are AB, the configuration is "A>B, B>A". With this configuration, vehicles travelling from A>B are put into Channel 1 and those travelling from B>A are binned in Channel 2.

Example 1:
Directional Volume Count, Dual Carriageway. - AB, CDEFGH

Selecting this configuration would mean counts on loops A and B would be counted in Channel 1 and counts on loops C and D would be counted in Channel 2. If loops were connected to EFGH, these would also be counted in Channel 2.

If overtaking was common on the site, then an N+1 loop array may be installed. The configuration would then become AbC, DeFGH, where 'b' and 'e' are the central loops that straddle the two lanes.

Example 2:
Lane Specific Volume Count, 8 lane motorway - A, B, C, D, E, F, G, H

This configuration means that the count from each loop (A, B, C, D, E, F, G, and H) will each be assigned to a separate channel.

Classification Configurations

The Classify (Class) configurations follow the same rules as Volume configurations for loop naming and dividing channels.

An arrow (>) is also used to indicate the expected direction of traffic flow (as classification requires two loops per lane).

The UD (or U/D) suffix indicates that the lanes should be unidirectional. Any vehicles detected against the flow of traffic (as indicated by the arrow, >) are dismissed as erroneous readings.

It should be noted that even if loops aren't referred to in the scheme, they are still included in their respective channel should they trigger (see examples).

Example 1:
Classification on a two lane road - Classify A>B, C>D

This configuration classifies vehicles travelling in each direction on a two lane road. Vehicles detected travelling against the expected flow are grouped into the other channel. A vehicle detected travelling from B>A would be added to Channel 2. It is also to be noted that any vehicle data received from loops EF or GH will also be added to channel 2.

Example 2:
Classification on a Dual Carriageway - Classify A>B, E>F UD

The UD suffix is added because any counts contrary to the expected flow of traffic would typically be incorrect on a dual carriageway. A vehicle detected travelling from B>A would be ignored as erroneous.

The 3 Chan and 4 Chan classification configurations bin each pair of loops into a separate channel. The A>B + B>A configuration combines classification data for both directions into one channel.

Any vehicles travelling on CD will be binned in channel 1, while any data from GH will be binned in channel 2.

Per Vehicle Data

Per Vehicle is the most comprehensive of all the possible recording methods recording information for every vehicle detected individually. It is to be noted that the file size for busy per vehicle sites is often considerably higher than either volume or classified data. This is due to the fact that vehicles are not put into time groups as they are for volume and classified data as well as the fact that there is an increased amount of data stored on each vehicle.

It should be noted this is only the case on very busy sites. For quiet sites it is actually possible for per vehicle data to produce less data than classify data. If a site is setup with a large number of bins and a short period time it will create a lot of blank data when no cars are passing (in the middle of the night for example).

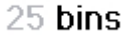
Per Vehicle data also gives the advantage that as all data is recorded you can change the period and speed bins as you wish after the data has been collected

Although when using Per Vehicle data although you don't have access to the configurations of the other data types it is effectively A>B,C>D,E>F,G>H and the loops should be configured as such.

Chapter 4

Chapter Four - Survey Settings

Depending on the type of recorder being used and the configuration chosen on the previous screen the options within the survey settings screen can vary greatly. Here you will find a explanation of each. One important thing of note here is the number of bins your configuration will need. A bin is the number of different brackets the data is divided into. The type of recorder being used will put restraints on the number of bins available.



Speed

A simple choice of Miles Per Hour or Kilometres Per Hour depending on personal preference. This setting will affect the speed bins if a speed configuration is chosen below which makes manually changing from Mph to km/h after recording the data problematic.

Use Profiles

The "Use Profiles" tick box toggles between using length or profile, which will be explained below.

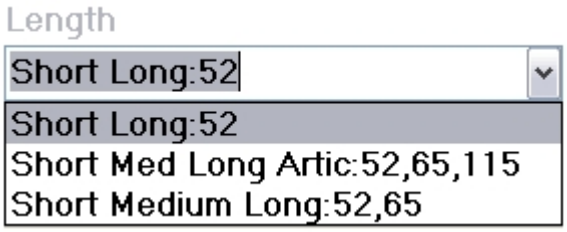
Configurations

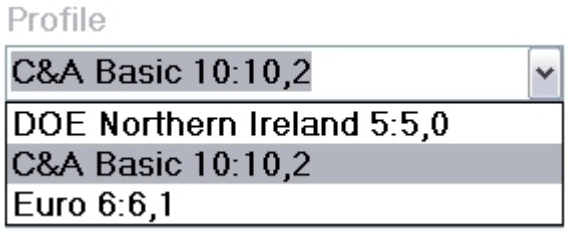
A number of possible combinations are available on this section of the menu depending on the options before it. They will be explained below.

Length / Profile

When set to length or profile the vehicles will be categorised by the type of vehicle they are. A Short Long setup splits vehicles between being above and below 5.2 metres. Likewise the Short Med Long Artic brackets vehicles at less than 5.2 metres, between 5.2m and 6.5m, between 6.5m and 11.5m and above 11.5m.

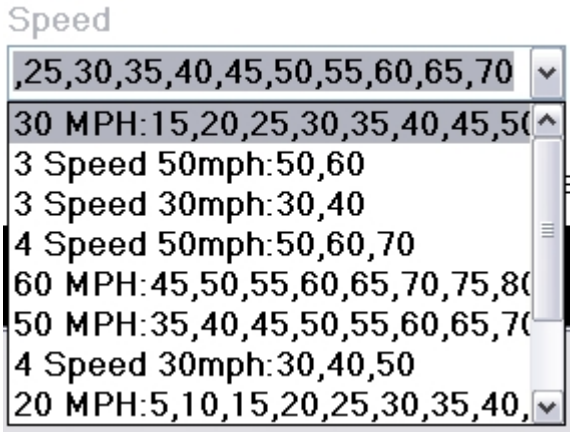
Profiles are more accurate in their definitions of vehicle types and as such need more bins to work. A breakdown of the profiles offered can be found in the appendix of this manual.





Speed

As with the Length/Profile settings your data can also be classified by Speed with the first and last speed boundaries being anything less than and anything more than respectively e.g. 3 Speed 30mph:30,40 would have bins of less than 30mph, 30-40mph, and over 40mph



Chapter 5

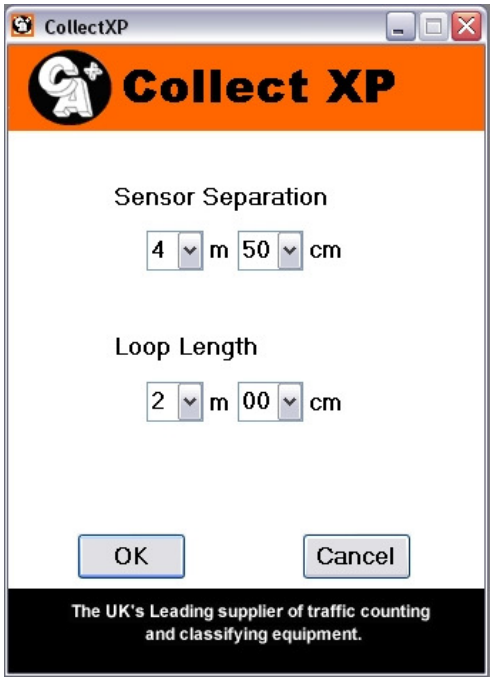
Chapter Five - Sensor Settings

Sensor Separation

To measure speed and to correctly classify vehicles it is necessary to have two sensors in a single lane. The recorder can then make the necessary speed and class calculations. As a result knowing the exact distance between the two sensors is vital to ensure accurate data.

Loop Length

Like the Sensor Separation before it, it is vital that the physical length of the loop is recorded correctly to ensure accurate data.



Appendix A

Appendix A - Profile Classification Schemes

CA 10	
1	Motorcycle
2	Car/Light Van
3	Car or Light Van + Trailer
4	Heavy Van
5	Light Goods Vehicle
6	Rigid
7	Rigid + Trailer
8	Articulated HGVs
9	Minibus
10	Coach

EURO 6	
1	Motorcycle
2	Car/Light Van
3	Car + Trailer
4	Rigid/Heavy Van/Minibus
5	Articulated HGVs
6	Bus/Coach

DOE NI 5	
1	Car/Car + Trailer/Light Vans
2	Heavy Van/Minibus
3	Rigid Lorries
4	Rigid Lorries + Trailer, Articulated HGVs
5	Bus/Coach