

SoftClient

Help Version - 1.01.49

2005-05-23

This help file serves the help manual to SoftWin version 3 and can be access via the program be selecting help.

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1 #K AIM

The aim and goal of this document is to serve as a general help manual for the use of the Softcon program SoftWin 3. More technical details are available in documents that describe the database functions, communication and installation specifics.

The document SoftWin3_Spec lists the specifications of the program and those specifications must comply with this document and visa versa. Certain specifications may be duplicated here for completeness and clarity (e.g. priority criteria), but duplication should be limited where possible.

General development info about the program SCS_Client is:

Count of tasks: 8 (plus Mux tasks and client request tasks).
Program language: C++, IDL (Interface Definition Language).
Technology: MFC, Multithreading, DAO, COM and RPC.
Program architecture: Multiple document templates.
Program development: MS .NET (Visual C++ 7.0).

2 #K GENERAL

SCS_Client is the general Building management module of the Softcon SoftWin3 range of programs. It performs the Access control and input monitoring and output control via field control panels. It can be installed and run on many PCs as required and requires a link to the program SCS_Server that interfaces to the system databases.

SCS_Server communicates with the databases and links via TCP communication links to client programs that can be running on the same and/or on different PCs. The program SCS_Client described in this document.


Not all functions are available or are limited in Softcon versions. These are generally indicated in **purple** this document as: **Limited option** - see **SECURITY** settings.

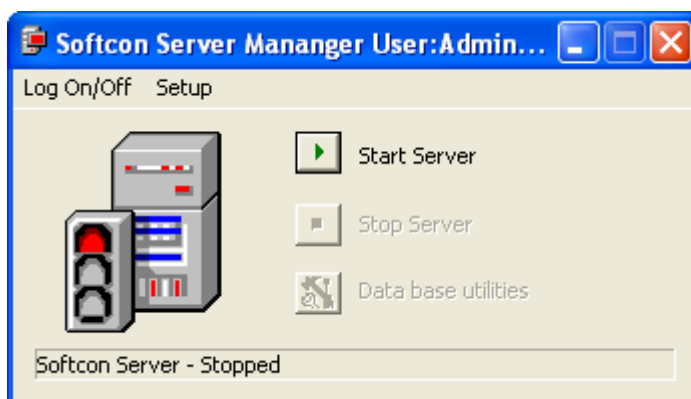
Different **languages** are accommodated via configuration databases.

3 #K START-UP

The Softcon program SCS_Server.exe must be running before the client program is started.



SCS_Server is started by clicking on the  icon (desktop or in start / programs / softwin3) or automatically is installed in the start-up (C:\Documents and Settings\All Users\Start Menu\Programs\Startup).



Selecting the Start Server button runs the program.

A server icon to the task bar (bottom right) indicated the status of the server:



indicates stopped.



shows busy initializing.



indicates running.

On starting, databases are open, checked and corrected.

When starting SCS_Server, the following parameters can be added after the filename, separated by spaces (e.g. SCS_server.exe /start /audit). To add the parameters in the icon, right click on the icon and select properties\shortcut. Parameters are:

- ⌘start automatically runs the program (eliminates the need to select the Start Server button).
- ⌘audit enables the [audit](#) of edit changes (operator edit changes are logged to file).
- ⌘language selects a non-English [language](#).

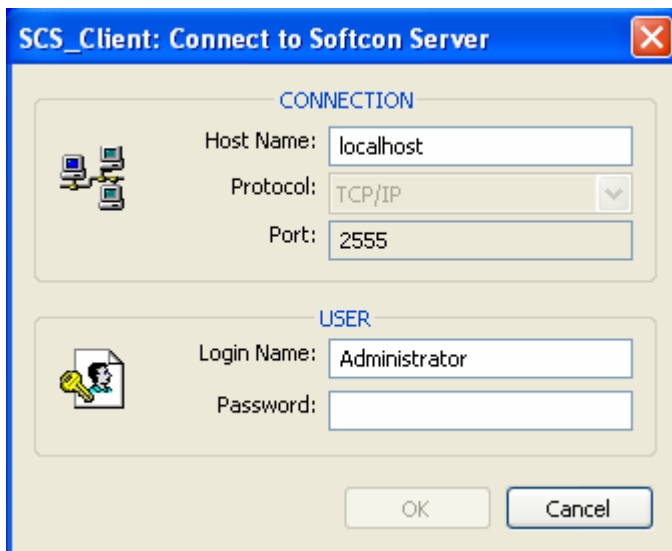
Right clicking on the title bar (top blue section) and selecting [help about](#), or starting with the parameter [/?](#) lists all options.



SCS_Client can be started via the [SCS_Client](#) icon with the following parameters:

- ⌘start Starts and links to the previous server selected, with the password shut down with.
- ⌘start:??? Starts and links to server running on PC ???, with the password shut down with. ??? is the network name or IP address of the PC.

These parameters can be viewed in [help about](#) or by starting the program with the parameter [/?](#)



When not start with /start, a connection and logon box is displayed.

The [Host Name](#) is the network name of the PC where SCS_Server is running. If on the same PC, [localhost](#) can be entered.

⌘[Protocol](#) and ⌘[Port](#) are currently fixed and cannot be edited (future options).

Default ⌘[Login Name](#) and ⌘[Password](#) are Administrator (caps ignored) and Admin (capital A). See [passwords](#) to change or add users and passwords.

When SCS_Client start running the following occurs:

- Initialises the server for communication.
- Creates and opens Mux, Event log-files.
- Starts the RPC service.
- Connects to the server application and receives the client RAM information.
- Creates the client RAM temporary tables and loads and checks the client RAM.
- Starts the connection task.
- Starts the analyze task.
- Starts Mux tasks.
- Starts COM port tasks.

Starts card set-up task.



The program SCS_Start.exe can be used to start server and client. SCS_Start is passed the programs to be started (separated by spaces), preceded by the parameters that are to be passed to them – e.g.

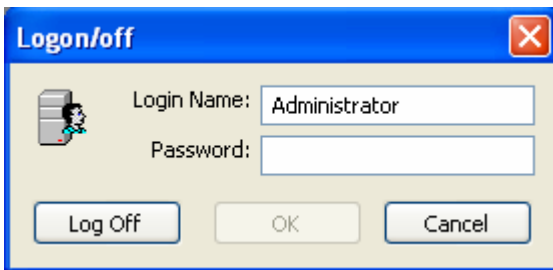
```
SCS_Start.exe \start \audit SCS_Server.exe SCS_Client.exe
```

The SW is protected by [security keys](#) that are stored in the mux card. Test and demo versions are available.

4 **CLOSING**

In order to log the closing, SCS_Client should be stopped before SCS_Server (if not, SCS_Client saves the log in a temporary file and only logged to the event log when the server restarts).

SCS_Client is simply stopped by selecting the close icon in the top left corner or by selecting exit in the File menu. Closing is password protected and these stopping options are faded when not enabled.



Before the server can be stopped, logon is required. Double click on the server icon in the task bar (bottom right) displays the server display. Select logon and enter an administrator password. The default is Administrator (caps ignored) with the password Admin (capital A). The program is stopped via the stop button and closed via the icon. Selecting while the server is running minimizes to the server icon in the task bar.

SCS_Client does the following when closing:

- Stops COM port tasks.
- Stops card set-up task.
- Stops the Mux task.
- Stop the analyze task.
- Frees the client RAM.
- Stops the connection task.
- Closes the client RAM temporary database.
- Stops system thread for connections to daily log-databases.
- Sends “bye” to the server application.
- Stops RPC service.

5 #K EVENTS

Events are used as triggers and/or are generated by the following program functions:

- Counters: Increment or decrement counters on events.
- Event-Events: Generate events on event triggers.
- Exe events: Start programs or batch files on event triggers
- Timed events: Generate events on time schedules.

To understand counting and event functions, the event concept must be understood. The SoftWin structure indicates the flow of events between the programs and program modules.

Events are messages that are generated by occurrences that happen in the system (e.g. inputs change, counters change, cards are enabled, cards are reported out-of-area, etc. Some events are automatically generated (e.g. if the event CARD OUT-OF-AREA is received from a controller, access checks if this is true. If the card in fact is not out of area, it automatically generates an event CARD ENABLED. Events can increment and decrement counters, can trigger new events (see [event set-up](#)) and can start programs (see [exe events](#)). This is achieved by setting event triggers that are compared to events occurring, and when the trigger matches the event occurred, counts are in/decrements, new triggers generated and programs started.

An event is generated by posting a message on the notice board, and consists of 7 parts:

- TimeDate.** This is used for logging functions and presently does not affect counters or events.
- Type.** The event type defines what kind of event occurred:
 - 1 Reader - data received from readers or data sent to readers.
 - 2 Input - change in monitored inputs or the set-up.
 - 3 Output - output being changed.
 - 4 Controller - going on/off-line, powered up, set-up.
 - 5 Camera.
 - 6 Counter - counters changing value, or reaching minimum or maximum.
 - 7 Timer.
 - 8 Command-button (DDE event message generator). An event string is sent.
 - 9 EXE-button. A program is started.
 - 10 System.
 - 11 Vend base.
 - 12 Vend Item.
 - 13 Asset receiver.
 - 14 Vender.
 - 15 Asset Tag.
 - 101 Photo.
 - 102 Database value, reader provides reference (string field gives ID to ACCESS.SQL file).
 - 103 Drawing link.
 - 500+ Database value (string gives ID to ACCESS.SQL file).
- System.** Defines which reader, input, output, counter or controller.
- Status.** What event occurred, e.g. out-of-area, level change, off-line, maximum reached, depending on type, e.g.
 - readers: Out of area, Out of time, Entered, Card enabled, Card disabled.
 - inputs: Level change.
 - outputs: Level change.
 - counter: Minimum reached, count changed, maximum reached.
 - Controllers: On, off-line, powered up.
 The complete status list is (unless indicated as level, i.e. is in the state already, the status is edge, i.e. it occurred now):

Controller events:

- | | | |
|---|------------------------|---|
| 1 | On-line. | |
| 2 | Off-line. | |
| 3 | Power-up. | |
| 4 | Set-up. | t4 n? s4 x1 Sets RTC |
| 5 | Reset. | |
| 6 | Request status. | |
| 7 | Cards reset. | |
| 8 | Cntrl time sync. | t4 n? s8 xdate vtime is logged when starting SCS_Client with /cntrltime |
| 9 | Cntrl time sync error. | t4 n? s9 xdate vtime is always logged |

Card events ([note 2](#)):

- | | | |
|----|----------------------|---|
| 19 | Set card properties. | t10 n0 s19 xref vstatus z1area-group z2time-group (change is audited) |
| 20 | Out-of-area. | |
| 21 | Out-of-time. | |
| 22 | Entered. | |

23 Card enabled.
 24 Card disabled.
 25 Expired.
 26 Wrong PIN.
 27 Card set-up.
 28 Card at reader (level).
 29 APB error.
 30 Out of count.
 31 Late entered.
 32 Captured.
 33 No host.
 34 Strictly from error.
 35 Not found ([note 1](#)).
 36 Set-up APB/strict.
 37 Set-up out count.
 38 Set-up expire.
 39 Duress.
 40 Guest request ([note 1](#)).
 41 Guest reply, value=error code where > 0 pay ([note 1](#)).
 42 LCD display (V is the line number, data as parameter).
 43 Parking exit.
 44 Wrong card format.
 45 Wrong card facility([note 1](#)).
 46 ATB error.
 47 Park entry.
 48 Park exit.

I/O events:

50 Level changed.
 51 In value (level).
 52 Operation change (by time group).

Counter events:

70 Maximum (level and edge).
 71 Minimum (level and edge).
 72 Available (level and edge).
 73 In maximum.
 74 In Minimum.
 75 In Available.

Operator events:

100 Operator changed.
 101 Accept alarm.
 102 Run report. x is the report number.
 103 Operator controller set-up. t4 nCntrl s103 xref).
 104 Operator controller reset. t4 nCntrl s104 xref.
 105 Backup. used as trigger to exe event.
 106 Operator change DT. t10 nPC s106 xoperator voldD z1_oldT.
 107 Dist Server change DT.

General events:

130 Buzzer on.
 131 Buzzer stop.
 132 APB reset.
 133 RAM refresh.
 134 Net Ping.
 135 Cards status check.
 136 Cards expiry check.
 137 Run exe event.
 139 Set area count. x0 all cards, or specific; v0 default reset count value, else value.
 140 Start RAM refresh.
 141 Reset period count. x and v as 139.
 142 Reset period status. x0 all cards, or specific; v0 status to alt, v1 status to normal.
 143 Security shut down.
 144 Server off-line. t10, alarm.
 145 Server on-line. t10.
 146 User terminates system. t10, xref = user, n=PC, v=application.
 147 User logged on. t10, xref = user.
 148 User logged off (default logon).
 149 Password change.
 150 Illegal password change.
 151 Unsuccessful password change.
 152 Illegal logon attempt.
 153 Encoding card. t10, xref=user, value=application,z1=card ref programmed.
 154 Printing card. t10, xref=user, value=application,z1=card ref printed.
 155 LCD display.
 156 Wrong mux version.
 157 System Auto Log-off.

Camera control events (reserved for future use):

200 PTZ power.
201 Iris control.
202 Camera select.
203 Camera Monitor select.
220 PTZ zoom.
221 PTZ focus.
230 PTZ PAN.
240 PTZ tilt.
250 PTZ PAN/TILT.
251 PTZ PAN/TILT stop.
252 PTZ position set.
253 PTZ position go to.
260 PTZ alarm set.
261 PTZ alarm reset.

External system link events:

270 Ext Access Log.
271 Ext Access request.
272 Ext Access answer.

Vending events (not logged):

300 Vend show funds.
301 Vend show item.
302 Vend Funds error.
303 Vend do.
304 Vend request.
305 Vend show value.
306 Vend show item.
307 Vend add cash.
308 Vend item not found.

Vending events (logged):

350 Vend PC add cash.
351 Vend cash added.
352 Vend filled.
353 Vend maintained.
354 Vend cleaned.
355 Vend vended.
356 Vended insufficient.
357 Vended Card unknown ([note 1](#)).
358 Vended Item unknown.
359 Vend filling due.
360 Vend maintenance due.
361 Vend Clean due.
362 Vend Clear done.
363 Vend PPOS sale ([note 1](#)).
364 Vend PPOS take-on.
365 Vend PPOS cash-up.
366 Vend PPOS Entry.
367 Vend PPOS Exit.

Distribution server events:

400 DistrServer Start.
401 DistrServer Done.
402 DistrServer Failed.
403 DistrServer Modem Connected.
404 DistrServer Connection Failed.
405 DistrServer Connection Done.
406 DistrServer Start Listener
407 DistrServer Received Data.

SMS events:

450 SMS Sent.
451 SMS Remove on timeout (messages in send queue are removed after time-out, not sent due to error).
452 SMS Remove Stop (messages in send queue are removed after port is stopped).
453 SMS Error.

Email events:

460 Email: Sent. t10, n=computer ref, x=user ref, v=email_to ref
461 Email: No dial-up connection.
462 Email: No SMTP connection.
463 Email: Send error.
464 Email: User close App.

Modem events:

500 Scheduled link successfull. Schedule reference in v.
501 Scheduled link error. Schedule reference in v. Error in z1 (see SCS_CntrlModem logged messages).

502 Manual link successful. Schedule reference in v.
503 Manual link error. Schedule reference in v1. Error in z1 as above.
504 Modem/Cntrl overrun.

Fingerprint events:

510 FP Add Record (see [FP events](#) for details).
511 FP Add Record Done.
512 FP Remove Record.
513 FP Remove Record Done.
514 FP Download dB.
515 FP Download dB Done.
516 FP Clean dB.
517 FP Clean dB Done.
518 FP Enrol System.
519 FP Enrol System Done.
520 FP Enrol User.
521 FP Error.
522 FP Reader Setup.
523 FP Reader Setup Done.
524 FP Logs.
525 FP Logs done.

Video capture events:

530 Video capture do (see [video events](#) for details).
531 Video capture done.
532 Video capture error.

Asset events:

600 Asset Violation.
601 Asset Violation Cleared.
610 Asset Issued.
611 Asset Returned.
612 Asset Booked.
613 Asset Booking removed.
614 Asset Booking expired.
615 Asset Late Return.

Controller events:

1020 Out-of-area.
1021 Out-of-time.
1022 Entered.
1025 Expired.
1026 Reversed.
1027 Card set-up.
1050 Level change.

↳ **Value.** Some event types use this value to indicate more information, e.g. input change. It indicates the level of the input change (1 or 2). See [Input setup](#) in counting and event triggers, if value is zero, it is ignored for the event match. In reader event types it can be set with the card trigger group that must match the event (if zero, the cards trigger group is ignored). For outputs, 1 to 10 is the output level, 11 to 20 is permanent level not changed by time group in the controller (all controllers may not have this feature). In the Softcon MD350 mimic driver controller, Level 1 is on, level 2 is off and level 3 on the output sets the LED to flashing.

↳ **Xref.** Some event types use this to give additional information. When used with readers, it indicates a specific card (if zero, all cards).

↳ **Alarm.** When the PC receives an event, it is checked whether it is in alarm. Certain events are always alarm (e.g. off-line) and others on only on set time (e.g. inputs). When alarm is detected, the event alarm field is set to 2 and when normal it is set to 1. None is set to 0 and alarm accepted is set to 3.

↳ **Zx.** Certain events use additional z1 to z7 parameters that contain additional data. The vending and long card number data are stored in these parameters.

When the Softcon program ACCESS.EXE starts running, it generates the event:

t4 n0 s3 x0 v0 Controller 0, powered up.

This can be used to reset APB, count the number of times it started, etc.

When access receives the event t4 n0 s3 x0 v0, it automatically generates the event:

t4 nx s6 x0 v0 Controller x, request status for each controller.

Note 1: parameters Z2 to Z5 contain card data, with Z2 the decimal number of the first 6 (hexadecimal) digits, Z3 the digits 7 to 12, Z4 the digits 12 to 18 and Z5 the last 2 digits. A -1 value in Z2 to Z5 indicates no digits. In the activity display, the Z2 parameter is displayed as the hex string calculated from Z2 to Z5.

Note 2: Card **access control events** of cards in the card database (20 ... 34, 39) generated by the system set the v field with the cards trigger group. The trigger group can be used for special triggers in generating new events, incrementing counters, sending SMS, etc.

6 #K FILE MENU

6.1 #K Save.

Saves the data in the current active window. This function is only active when the active window data can be saved, and the data is saved to the current data source.

6.2 #K Save as.

Saves the data in the current active window to a new file name. This function is only active when the active window data can be saved. The file location, name and type is requested.


6.3 . Save As Live

Should data on display change as a result of database changes by other programs, the data on display is automatically updated when the display has been saved as live.

6.4 . Save Not As Live

Displays saved not as live, display data contained in the databases when the display is opened or after refresh (select F5 key). Changes to databases by other programs are not updated on the current display.

6.5 #K Close.

Closes the selected window (if password allows). This is equivalent to selecting  in the window.

6.6 #K Print. Ctrl+P

When in certain menus, the print option is active. In list editors, the selected lines are printed with column headers and column widths.

6.7 #K Print preview.

When the print option is active, the preview is active – showing a print preview for the default printer.

6.8 #K Print setup.

Enters the Windows printer set-up menu.

6.9 #K Exit. Exit the program.

7 #K EDIT

#K Select all	Ctrl+A
#K Undo	Ctrl+Z
#K Cut	Ctrl+X
#K Copy	Ctrl+C
#K Paste	Ctrl+V
#K Delete	Del
#K Properties	Alt+Enter
#K Move to front	Ctrl+Plus
#K Move to back	Ctrl+Minus
#K Move forward	Plus
#K Move back	Minus
#K Move item	

8 STATUS MENU

The status group displays the status of the system via [list editors](#), and is generally used by the operator to see the status of the system and to change certain parameters such as: isolate reader, APB reset (is password is enabled). Below are lists provided as shipped, new lists can be added or existing lists can be deleted as required. A variety of data filters are provided and can be changed by the administrator.

8.1 Status editor

The status editors available, with data that can be displayed are:

- ⌘ **Cards:** Reference, name Car Registration, Car Description, Phone, Location, Location Time, APB location, Free movement, Zone count, Card status. See [Card Set-up](#) for field definitions.
- ⌘ **Cards on-site:** Same as status cards, with a record filter of on-site.
- ⌘ **Controllers:** Reference, Room, Location, Mux, Status (On-line or Off-line), Status DT (when status last changed), Power-uP DT. Set-up data can be sent to a controller by right clicking on the appropriate controller and selecting [Set-up](#). Selecting ⌘ [Reset](#), send the set-up and card information to the controller. See [Controller Set-up](#) for field definitions.
- ⌘ **Counters:** Reference, Name, Now count, Minimum and Maximum. See [Counter Set-up](#) for field definitions.
- ⌘ **Inputs:** Reference, Name, Room, Operational status (normal or isolated), Now level, Level names, When last changed, Count of change and Since date-time, Controller and Equipment type. See [Input Set-up](#) for field definitions.
- ⌘ **Muxes:** Name and status (on-line or off-line).
- ⌘ **Outputs:** Reference, Name, Room, Operational status (normal or isolated), Now level, Level names, When last changed, Count of change and Since date-time, Controller and Equipment type. See [Output Set-up](#) for field definitions.
- ⌘ **Readers:** Reference, Name, Room, Last card name and reference, Last time, Number of entries and Since date-time, Controller, Equipment type. See [Reader Set-up](#) for field definitions.

8.2 Local Muxes Info

PCI or ISA cards, referred to as **Mux** cards (multiplexing data to and from) are installed in client PCs. These cards communicate with the controllers, sending set-up, control and card information and receiving status changes. The statuses of the muxes install in the local PC are display with **Name**, **Version** of EPROM, **Status** of the mux (RCT), Number of messages in the **Out** buffer (data to be sent to the mux card) and the number or Not Acknowledges (**Nack**) encountered since the program started running.



⌘ **Name** is the description given to the card.

The ⌘ **Version** of the program install in the mux card is read automatically when SCS_Client starts running.

The ⌘ **Status** of the mux is Receiver ready (capital R indicates data available to be received from the card), Transmitter ready (capital T indicates that the mux is ready to receive data, i.e. the PC may transmit data) and Control received (a capital C indicated the last character of data received from the mux card is a control character, i.e. a start or end character). Normally the status is a capital 'T' and a small 'r' with the 't' momentarily changing to lower case as data is transmitted to the card and the r momentarily changing to a 'R' as data is received. A continuous lower case 't' indicates that the card is not reading the transmitted data and a continuous capital 'R' indicates that the SCS_Client is not reading the data from the card.

Normally the Out buffer should indicate 0, i.e. no messages are in the queue to be sent to the mux card. When a controller is reset, or a card(s) status is sent to controller(s), the out buffer count runs up and down back to zero, this happens as the mux card send data to the controllers.

⌘ **Nacks** are encountered when communication errors occur in data transfers between the PC and the mux card. This number should be low (typically less than ten) and if continually increasing, indicates a faulty or badly installed mux card.

When communication (comms) with the mux card is correct a green  icon indicates on-line, a  red icon indicates off-line, i.e. comms is faulty. Mux cards continuously **poll** the controllers for data. Should a

controller not respond, an «**off-line**» message is generated and polling of that controller is terminated. All off-line controllers are automatically re-pollled in a 5-minute cycle. Right clicking on a mux and selecting the poll button can request polling. Communication with an off-line controller is established, an «**on-line**» messages is generated.

9 #K CARD MENU

Limited options - see [SECURITY](#) settings.

9.1 #K Card Editor

The card menu provides card information via [List editors](#). Lists are provided and more can be created by the user. Lists provided as default are:

#K Card Admin.	Displays data generally edited by Admin staff.
#K Card All.	Displays all card data.
#K Card Vend.	Displays vending data generally edited by Vending/canteen staff.
#K Card Visitors Pre-register.	Displays data of pre-registered visitor (activated in future versions).
#K Card Visitor Parking.	Displays data of parking bays (activated in future versions).

When a list is displayed, right clicking on a record provides a property sheet that can have 4 pages.

The **General page** contains general personal information regarding the cardholder and has no effect on the functioning of the system. The data is editable and is not checked for format or contents, and is not changed by the system when the card moves. The data descriptions, the type and length of data, can be changed via set-up tables.

.Personal Details for Card holder

Title.	Selected from a list. The list can be added to via a list editor in set-up list menu.
Surname.	Holders surname. This field is often used to enter the surname and first name.
First Names.	
ID number.	ID number (or passport if no ID number).
Gender.	Selected from a list. The list can be added to via a list editor in set-up list menu.
Employ number.	Company employment number, or "VISITOR - company name". The database for this parameter is normally set as unique (used by SCS_POS). When not unique, set the following c:\softwin3\config\database.mdb: Table "FIELDS", change "INDEX" to 0 in record "ID"=F_CD_EMPLOY. Table "RAM_GROUPS", remove record "ID"=8003. Table "SQL_READ", remove record "GROUP_ID"=8003.

.Contact Numbers

Home.	Telephone numbers.
Work.	Telephone numbers.
Cell.	Telephone numbers.
Other.	Telephone numbers.

.Address

Address 1.	Street or Apartment number and name.
Address 2.	
Suburb.	If applicable.
City.	
Postal code	
Email.	

.Business

Company.	Generally used for contractors or visitors.
Department.	Selected from a list that is editable via a set-up list editor.
Description.	Work description.

.Vehicle info

Car registr 1,2,3.	Registrations of all vehicles that can be used to site, e.g. NVR664T.
Description 1,2,3	Description of the vehicles, e.g. Grey BMW.


.Other info

Citizenship.	Country of citizenship (optional).
Union affiliation.	Selects the trade union the cardholder is affiliated to (optional).

The **Status page** contains Access control information of the card. Data as the cards location is not editable and most of the data is editable via list selections. The data descriptions can be changed via set-up

tables, but type should not be changed. The details of how access is granted or denied are described in the document SCS_Card_Access.

Locations and Groups

- ⌘ **Location and Time.** The current location of the card and when it moved there (year-month-date, hr:min:sec).
- ⌘ **Previous location.** The previous location of the card, i.e. the previous area zone it was in before the last time the card was used.
- ⌘ **Area Group.** Area groups define to which area zones the cardholder may be granted access to. Many cards may be allocated to the same group (e.g. "Area group - managers" with access to all zones) or the card can have its own unique group. The area group is edited by selecting  which access SoftZone.
- ⌘ **Multi Group.** Cards can belong to multiple groups, e.g. to the parking group, the admin group and the management, each giving access to certain area zones. If any of the allocated groups has access, access is permitted.

- ⌘ **Expire Area Group add.** Defines additional area zones the cardholder may be granted access to when the card expires.
- Expire Area Grp delete.** Defines area zones the cardholder may not be granted access to when the card expires.
- ⌘ **Count Area Group add.** Defines additional area zones the cardholder may be granted access to when the cards counters are full (see zone counting).
- Count Area Grp delete.** Defines area zones the cardholder may not be granted access to when the card expires.
- ⌘ **Time Group.** **TIME GROUP** defines when a card may be granted access. One of 15 access time groups are selectable (with 8 time zones), e.g. "Time group 1 - managers" with 24 hr access. The first 15 time groups have been configured for the Softcon access controller CR351/4 and only these must be used if the data is to reside in the CR351/4 controller.
- ⌘ **Trigger Group(V).** A trigger group can be allocated that is used in triggered events (e.g. when entering an area, the group counter is incremented). This group is set in the Value element of a card event.
- CD Count AreaGroup.** A group can be allocated, and when the cardholder enters an area selected in the group (e.g. the canteen), the card counters are decremented.
- ⌘ **Capture Group.** The card can be set to capture when entering specific areas. Set-up groups are set with the zones to which cards are captured and a capture group is set for the cards to be captured. Typically a group is set to capture at building exits, another at parking exit only.
- ⌘ **Park Start.** When the card enters through a reader set as a **park entry** or **park pay** reader, the PC date/time is automatically entered in the park start field. The data is automatically cleared when exiting at a **park exit** reader.

⌘ **Accumulation Data** - The time **ACCUMULATION** total for the card is not editable and is calculated by the system, and represents the totals since the last day-, week- and month-end.

- ⌘ **Day.** Card total for the present day.
- ⌘ **Week.** Card total for the present week.
- ⌘ **Month.** Card total for the present month.

- ⌘ **Hr/week.** Data used in reports – typically the minimum hours required per week.
- ⌘ **Hr/leave.** Data used in reports – typically the hours leave used during the current week.

⌘ **Status** – Each card is set with a status of Disabled, Enabled or Capture. When the card has expired, the **expired status** is used and when the cards count is full, the **count full status** is used. Typically an expired card becomes capture.

⌘ **Counts** - Parameters in this section are used only in certain installations when counting of the card in to a specific area zone is required (e.g. in to a canteen) or in vending type applications All the parameters are editable, with the value and entries parameters being update by the system as the card moves in to certain area zones. Two counters are available for a card, a normal (overall) counter and a period counter (which limits entries within the **Period** set). For example limit to 3 entries per day (period counter limit of 3, period of 0000-00-01) with a total limit of 25. Both counters increment (or both decrement) whenever there is an entry to the counting area zone. These are the **count now** and the **Pcount now** values. When either counters reach the limit as set in **count limit** and **Pcount limit** (or zero if decrement), the Count full area group add zones are added and the delete group zones are denied access. The cards status is changed to the **Count full status**.

For example a card could become be a capture card or be disabled, or not given access to the counting area zone. The period counter is automatically reset to the **Plimit** (if counting up) or to 0 (if counting down) when the card enters in a new period (e.g. in a new day) and the **period next** changes to the end of the period.

Zone counts can be set to increment or decrement in the general set-up menu.

- Count Now, limit.** The current overall count is displayed and is updated by the system when the card entered the count zone. The limit is the maximum number of times the card can enter the count zone.
- Period.** Time period of the period counter, limiting the card to the count zone according to the period count limit.
- Pcnt Now, limit.** The now value of the period counter and the limit value of the period counter.
- Last date.** The last date the period counter started.

The **Card page** contains card related Access information.

CARD Info - Data in this section is editable and is not altered by the system.




- Number 1, 2.** This number is the true number encoded in to, or on to the card or tag. In most installations, the number is equal to the card reference number. This number is only used for readers set with DB10, for other settings, the reference number is used as the card number. Readers are set to use cards 1 or 2 (e.g. MAG and PROX card). For DB10, the number of digits for number depends on the setting in the general set-up menu. For example when set to 5, 5 digits must be entered for number, with leading zeros to make up the 5 digits. The default set in the XLI files is 1, thus requiring no leading zeros.
- Issue 1, 2.** Certain card types use issue numbers that typically follow the card number. The issue number can be read as part of the card and wrong issue cards are rejected. This requires a setting in [set-up/general set-up/cards mask](#). The issue number can be set (also in cards mask menu) to auto increment when the card is programmed.
- Previous.** This number indicates the previous card number the cardholder used and is only used for documentation purposes and does not affect the functioning of the system.
- Host** A card number can be linked to a host card, only being allowed access via a reader which gives access to the area (or linked area) in which the host is in. The linked number is the reference number of the host, not the card number. This option is also referred to as **Follow me**.
- Visitor ref.** If the card is a visitor card, as entered by the visitor system, the last visitor reference (i.e. the visitor that last was allocated to use the card) is displayed. If a normal card, the reference is zero.
- Pin code.** A pin number can be allocated to cards when pin pads are installed. Depending on the set-up of the Pin Pad and reader time groups, access is via either card or pin code or both. Cards set with a pin code of zero, gains access only by card, no pin is required. Should more than one cardholder have the same pin code and access is only by pin (no card is swiped), the system reports access to the holder of the pin code first found in the database (starting at card 1). When cards and pin codes are used, the correct card is reported. A 9 in the last digit of the code is reserved for duress report, i.e. when a cardholder changed the last digit to 9, a duress alarm is generated (access is granted if the card normally has access).
- Issued.** This is the date and time the card was issued and serves as the enable time for the card. The card will not function before this date/time. The format is year-month-date hour:minute (e.g. 1986-12-30 11:50).
-  Sets the issues to date/time of the PC and the expires time as defined in the [expire mask](#) in the General set-up menu
- Expires.** The card expires on this date/time. The format is the same as above.
- Expire Status.** The status of the card when expired, e.g. when the card is expired, it is a capture card, normally it is enabled.
- APB Reset.** When checked, the card has a free APB movement, i.e. when attempting to gain access via an APB reader and the card has access but has an APB error, access will be granted.
- Passback.** A card set as a passback card, overrides anti-passback, i.e. the card can be used for multi-access to the same area zone without the requirements to exit the zone (as is required for anti-passback). The required option is selected by clicking in the down arrow and clicking on the required option.
- Ext Access.** Sets the card to be controlled by the external linked system for access requests at readers marked as Ext Access. These cards are not stored in the controller and access is granted or denied by the external system.

Photo Info – Contains photo related data and is editable and is not altered by the system.

Photo. A photo can be linked to the card by entering the file name (with path). Drawing can be created with photos linked to readers, i.e. the photo of the card presented to the specific reader is displayed (see SoftDraw). The photo is linked to the card by double clicking on the photo area, which opens a list box of photos in the photo database. Select the appropriate photo by scrolling the list. Photos are of any popular file types, e.g. .bmp, .jpg, etc. The photo file name can be edited or selected.

The **video** window, **label** selection, **MAG Read** and **MAG program** and   buttons are enabled when an integrated Card MakerCardMaker is installed.

The **Vend page** contains card related vending related data that is described in the vending manual.

Late Status. Readers can be set as a “late” readers, resulting in a “late event” being generated when the card enters via such a reader (the normal entered event is also generated). This event is logged and changes the cards late status to “late”. This status can be changed to “normal” (not late) by clicking on the list box.

Last Late. When a card is set to late, the time of the event is set in the last late field.

The menus **New Card Label**, **Open Card Label**, **Label Library**, **MAG Read** and **MAG Default Write 36/255/custom** are used to set labels and MAG reader/programmers when the integrated **Card maker** is installed. See [Card Maker](#).

9.2 **DEPARTMENT**

The departments available for allocation to cards via a list box in the **CARD** menu are edited via the department menu. The menu is a simple list of departments.

9.3 **TITLE**

Cardholders’ titles are selected from a list that is edited in the title menu.

9.4 **UNION**

A union affiliation can be allocated to cardholders. The affiliation is selected from a list that is set in this menu.

10 INTEGRATED CARD MAKER

Limited option - see [SECURITY](#) settings.

A card maker can be integrated in to SCS_Client as an option. This allows for the taking of photos in the card edit property sheet, printing of cards and programming MAG cards. Card can also be printed in a batch via the Tools/[Print cards menu](#). The additional functions are:

Menu: Card. Card Page of a card property sheet:

A **video window** displays the live video. Moving the cursor over the window displays the capture frame (set in [video photo width and height](#)). The frame is move over the image and a photo is taken by clicking. The photo is saved in the [default photos folder](#), with the extension and type as set in the [default photo extension](#). The file name default to the card reference number.

To print a card or to program a MAG card, a label must be allocated to the card. A **label** can be selected which is used when printing or programming (if MAG) the card. Labels are created via the [card label design](#).



The card preview is displayed by clicking on the preview icon.



The card is printed to the default printer by clicking on the print icon.

When a programmer / reader is installed and enabled (see [MAG programmer](#)), the data on the MAG card is read and displayed by selecting **MAG Read** and swiping the card. The card can be programmed (as set in the card label) by clicking **MAG program** and swiping the card.

Selecting **Crop from file**, the selected card file is displayed in the video window, allowing the cropping of the file, i.e. the frame is move over the image and a photo is taken by clicking (as for the live video). This facilitates the use of file from emails, digital cameras, etc. Right clicking on the video window when in the crop mode, provides facilities to **zoom** in or out. To revert back to live video, select the **Video Camera** button.

When in the video camera mode, right clicking on the video window allows setting the video source. **Preview mode** and **Overlay mode** selections set the mode and are dependant on the device installed. **Video Format** and **Video Source** access the video driver, allowing the setting of resolution (typically 352x288), pixel depth/compression (typically RGB 24), gain control, image mirror, flicker, video enhancements and device settings (brightness, contrast, etc.). The options available and the functionality are dependant on the video driver installed.

When scanning images/documents that are linked to a card, **Scan Source** selects the scanner and **Acquire** starts the scan process. The scanned image is displayed in the video block and is saved by moving the capture block over the section to be saved.

Menu: Card



New Print Label.

Creates a new print label. A label is the design of a card print and can contain any or multiples of the following items:

- Background.** An image that is used as a background, selected from the symbol table. It is advisable to create the background the 2 pixels less than the size of the card, and be placed at 1 pixel from the top corner, this ensures that the card edge is displayed on design, that the aspect ratio of the background is not changed and that no definition is lost in sizing the background (hence 1007 x 632 pixels for ISO cards – see size below).
- Barcode.** Barcode data to be programmed on to the card. The position and size of the barcode must be such that the optical sensor of the reader is in the middle of the barcode, typically at card position 12mm from the card bottom edge, with a height of 9.4 mm. Assuming a standard card - landscape, this converts to a card position of 138 (510 on display) and height of 30 (110 on display). See size below. The printer must be set to print black using the resin black. A copy mask can be added (preventing a photo copy of the barcode) by adding a red or grey block on the background or by adding a symbol (use c:\softwin3\bmp\sq_red.bmp) and placing it below the barcode (typically at position 1 pixel less in x and y, and 2 pixels larger in size). Move symbol to back, then background to back and barcode to front.

- ⌘ **Count Item.** A running number. When printing, the operator is asked for the start number and the total to print. If an invisible number is required, set no font or the size to zero.
- ⌘ **Field data.** Data from the card database selected for printing, e.g. the cardholder's name.
- ⌘ **Fixed text.** Fixed descriptions, e.g. 'NAME'.
- ⌘ **Photo.** The photo linked to the card.
- ⌘ **Symbol.** Images selected from the symbol table.
- ⌘ **Track.** MAG track data to be programmed on to the card.

Right clicking on an item and selecting Properties accesses the properties of an item. Alternatively, select the item by clicking on the item and select properties from the edit menu, or select **Alt+Enter** on the keyboard.

The ⌘ **size** and ⌘ **position** of the items can be changed by editing ⌘ **X-position**, ⌘ **Y-position**, ⌘ **Width**, ⌘ **Height** in the properties of the item or by selecting the item and stretching the item by clicking and dragging on the edge markers (on the corners or on the middle of the sides) – the dragging automatically changes the position and size setting of the item. Items can be aligned left, right, top or bottom and can be equally spaced horizontally or vertically and be equally sized by selecting the items and selecting the appropriate symbol (see below). Size and position are in display pixels, with position the distance from the top left corner of the page to the top left corner of the item. One mm is 3.2 pixels. The print area for typical card printers is 53.7 mm by 85.4 mm and the print to display factor is 3.7. The following table lists the typical sizes of a landscape card:

		CARD		DISPLAY
		mm	pixel (x3.2)	pixel (x3.7)
width		85.4	273	1009
height		53.7	172	634


Items can be rotated by 0, 90, 180 or 270 degrees, by selecting the appropriate selection in the item properties menu.


⌘ **New Items** are added by right clicking and selecting new items, by selecting new item in the edit menu or by selecting Ins on the keyboard. Items can be ⌘ **copied** and ⌘ **pasted** by selecting the items and selecting copy from the edit menu or by right clicking or by selecting **Ctrl+C**.


Selected items are ⌘ **deleted** by selecting **Del**.

The size of the card is obtained from the settings of the selected default printer. The printer is selected via the **PRINTER SET UP** menu.

Hot keys available for editing are:


⌘  **Mode Select.** Items are selected by clicking on the item. Keeping in the shift key while selecting, allows for multiple selection (or unselecting by clicking on the selected item with shift selected). To select all items in a block, select the mode select key, which becomes depressed (indication block select mode) – click and drag a block over the items to be selected. To unselect items in the block, exit the block select mode (by clicking on the mode select button) and click on the undesired item(s) with shift selected.


⌘  **Align Left.** Items selected are aligned left to the last item selected.


⌘  **Align Right.** Items selected are aligned right to the last item selected.

⌘  **Align Top.** Items selected are aligned to the top of the last item selected.

⌘  **Align Bottom.** Items selected are aligned to the bottom of the last item selected.

⌘  **Space Horizontally.** Items selected are equally spaced horizontally, using the spacing of the of the last two item selected.

⌘  **Space Vertically.** Items selected are equally spaced vertically, using the spacing of the of the last two item selected.

⌘  **Same Width.** The width of the selected items are sized to the width of the last selected item.



Same Height. The height of the selected items are sized to the width of the last selected item.



Same Size. The size (width and height) of the selected items are sized to the that of the last selected item.



Open Card Label. Edit an existing print label. All editing functions are described in the new label section above.

Label Library. Registers images, icons, symbols and backgrounds (bitmap or JPEG type files) in the symbol library. Once registered, they can be placed on card label designs. These files are created with paintbrush or appropriate programs. The description given to the symbol is displayed in the properties of a background or symbol items. The file name of the item must include the path.



MAG Read. When in a card list display, selecting read and swiping a card, moves the cursor to the line, which is allocated to, the card read. When editing card number and reading a card, the card number is entered to the edit field. The data is displayed in the read display line.

The programmer type is set in the [PC set-up](#) menu.

MAG Default Write loco, hico, Custom

Certain programmers require a programming power setting for the card type, generally HiCo or LoCo, are a custom setting. This is sent to the programmer when the option is selected.

Menu: Set-up, Set-up Editor

Barcode

Barcode data to be programmed on cards are set as an item on the label allocated to the card. The barcode item is selected from a list that is set via this menu.

The name is a descriptive name that identifies the setting (e.g. Parking 24hr) and is shown in the label design. Type sets the barcode to one of the following:

- Code 128
- Code 3 of 9
- Code 93
- 12 of 4
- Rational

The data set what is to be programmed and can consist of fixed data or data from card fields. The fields are enclose in curly brackets { } and the number of characters are indicated with a % character. The % character could be followed by a minus (fill in the front) or plus (fill at the back) character. For example: Client code 123, site code 3 equals facility code 31491 (123*256 + 3)

31491{%F_CD_NUM}{%F_CD_ISSUE1}.

Selects fixed number 31491, followed 5 characters from the card number field (filled with 0 at the front), 2 characters from the issue field (filled with 0 at the front). This requires the controller facility location setting of 2 to 6, number location of 7 to 13 (card number consists of 7 digits which includes the issue number).

MAG Programmer

Cards printer can program MAG card. The MAG data is sent as print data with special start and end characters and characters indicating the track number. These characters are set in this table for each printer type (Windows driver name), for each track. When printing, the characters are automatically added to the MAG track string as set on the card label via the MAG track setting.

Note that the Windows default printer is used and if the name of the default printer is not found in the MAG programmer list, no start and end characters are added. The match comparison is until the first space or underscore is found, i.e. these and characters after are ignored.

MAG Track

Data to be programmed on to MAG cards are set as an item on the label allocated to the card. The MAG item is selected from a list or track setting that is set via this menu.

The **name** is a descriptive name that identifies the setting (e.g. Parking 24hr) and is shown in the label design. **Track** sets the track to 1, 2 or 3.

The data set what is to be programmed and can consist of fixed data or data from card fields. The fields are enclosed in curly brackets { } and the number of characters are indicated with a % character. The % character could be followed by a minus (fill in the front) or plus (fill at the back) character. For example: Client code 123, site code 3 equals facility code 31491 ($123 * 256 + 3$)

31491{%F-5%F_CD_NUM}{%F-2%F_CD_ISSUE1}.

Selects fixed number 31491, followed 5 characters from the card number field (filled with 0 at the front), 2 characters from the issue field (filled with 0 at the front). This requires the controller facility location setting of 2 to 6, number location of 7 to 13 (card number consists of 7 digits which includes the issue number).

11 **SET-UP MENU**

Limited options - see [SECURITY](#) settings.

11.1 **Set-up Editor**

11.1.1 **AREA ZONE**

An area **zone** is a physical location and has a name, e.g. "OUTSIDE", "RECEPTION". Area zones are used in access control applications, e.g. what is the location of a cardholder, where the card has access to, where card readers are located and to where the reader can give access to. The number of area zones within a system is defined in the configuration database (the maximum would be twice the number of readers in the system, i.e. each reader is a unique zone and grants access to a unique zone) and each zone is given a name via the AREA ZONE menu (by clicking on the area zone name and editing the name. Area zones can also be **linked** to other area(s) for anti-passback (APB) purposes, for example: reader A gives access to zone "OUTSIDE VISITORS/STAFF" and reader B gives access to "OUTSIDE STAFF". Visitor cards are set to only exit via reader A (which has a card capture unit) and not via reader B (no capture unit). Staff can exit via reader A or B. Both readers give access to the same physical area zone, but B is configured to ensure capturing of visitor cards. If APB is used on staff cards, the two "OUTSIDE" areas need to be linked to prevent APB problems. If areas are not required to be linked, set the zone link to itself or to Area Zone 0. More than one area zones can be linked to a specific zone. Linking is set by clicking on the drop down list box and selecting the zone to be linked to.

11.1.2 **BUILDINGS**

For reporting and order listing purposes only, equipment such as reader, controllers, etc. are allocated to a room where it is installed in. The room is allocated in a building, the name is selected from a list box that references to the data in the buildings table.

11.1.3 **CAMPUSES**

Buildings are allocated in campuses for identification purposes and are used in reporting and list ordering.

11.1.4 **CLIENT LABELS**

In order to print or program a MAG card, a label must be allocated to the card. When creating a label, the card name is automatically added in to a label table. The label can be edited via this list. The reference number is stored with the card when allocated.

11.1.5 **CONTROLLER SET-UP**

The PC communicates with controllers in the installation, sending set-up data (e.g. real time now is 12:30) or control commands (e.g. open the door) to them and receiving status changes from them (e.g. door illegally opened). The number of controllers is **Limited** - see [SECURITY](#) settings.

The following data is to be set:

- Description.** A descriptive name is given for easy identification.
- Room.** Setting of where the controller is installed (rooms are allocated in building that are located in campuses).
- Equipment.** Sets the type of equipment for reporting and identification.
- Type.** The type of controller (e.g. CR351, DF350). This data is used to reference the correct equipment translation files to convert the message to/from controllers accordingly.
- Mux** Controllers generally tie to a Local Area Network (LAN), which communicates with a card installed inside the PC (referred to as the mux). The Mux set-up locates the mux in the required PC.
- Lan Master.** Softcon controllers can be tied to a sub-LAN via a LAN master controller (known as an SDF). The SDF is a slave on the top LAN to the mux (other controllers can be tied to this top LAN) and a master to the sub-LAN. Select the name of the SDF controllers, which is the master to the LAN to which the controller being set-up is connected. If no LAN master is installed (i.e. the controller directly connects to the LAN and to the PC, select the same controller as being set-up).

Node.	Each controller connected to a LAN must have a unique address on the LAN to which it is tied, this must match the setting on the controller itself. Address per LAN generally start at one and cannot exceed 254. Address 0 and 255 are reserved. Note that node addresses on a sub-LAN are independent of nodes on any other LAN (e.g. controller 10 could have node address 1, and be tied to SDF 5 which has node address 1 on PC LAN 2).
Order.	To help with maintenance, the order of the controller on the LAN is registered. The mux is position zero and the first controller on the one direction is 1, followed by 2, etc. Position of controllers on the other segment of the LAN from the mux (if existing, i.e. the mux is not at the end of the LAN), is indicated as -1, -2, etc. The order number has no relation to the node number and has no effect on the system.
Power.	If checked, the controller is reset (set-up and card data is sent to the controller) when a power-up message is received from the controller.
Status.	The status of controller is indicated as on-line or off-line . This data is not editable and is automatically changed when the controller communication status changes.
Version.	When communication with the controller is established, a version name/number is read from the controller and displayed in the version column. This data generally indicates the type of unit and the version of the SW installed in it.
Status DT.	When the controller status changes (i.e. to on or off-line), the date and time are recorded, thus indicating the last time the status changed.
PowerUp DT	When a power-up message is received, the date and time are recorded, thus indicating the last time the controller powerd-up.
INs.	Indicates the number of ports of the controllers used as inputs. This parameter is required for controllers that have virtual ports that can be configured as inputs or outputs. The Softcon MD351 controller requires this setting.
OUTs.	Indicates the number of ports of the controllers used as outputs. This parameter is required for controllers that have virtual ports that can be configured as inputs or outputs. Presently no Softcon controllers require this option.
RDs.	Indicates the number of ports of the controllers used as reader ports. This parameter is required for controllers that have variable number of readers. Presently no Softcon controllers require this option.

11.1.6 **COUNTERS**

The system provides for numerous counters to be kept within the system.

Statistical counts are kept on reader, input and output activities. These counts are available in the **READER SET-UP**, the **INPUT SET-UP** and **OUTPUT SET-UP** menus respectively, with the counts from the last reset given under the **Count** block. The count is automatically incremented every time the reader is used and when the input or output changes to the input/output level set under **Level** respectively. Initially the counts must be reset manually and the **Reset** time entered. Automatic resetting is to be included.

Inputs can be set to as counting inputs (currently CR355 and DF350 only). The counts are done in the controller and the count values are sent to the PC on change or after a delay. See **input count set-up**.

System counters (up to 65000, set in the DATABASE set-up files) keep counts in accordance to set events and can be used in displays and can control outputs and be logged when limits (set maximum and zero) are reached. These counters are set-up via the **COUNTER SET-UP** menu with the data listed below.

Name.	A descriptive name given to the counter to identify it.
Now.	The current value of the counter. The value can be set manually and is automatically updated when it increments or decrements as a result of an event trigger.
DateTime.	The last time the counter now value changed.
Min.	A pre-set minimum, equal to or below which a counter minimum event is automatically generated when the counter now value changes. The colours of name and now value are set to be in blue when the counter is in minimum.
Max.	A pre-set maximum, equal to or above which a counter maximum event is automatically generated when the counter now value changes. The colours of name and now value are set to be in red when the counter is in maximum.

- Rep Min.** When the counter value changes and is minimum, the change is set to be logged, displayed, and printed and to trigger other events (or counters). See Event Reporting.
- Rep Now.** When the counter value changes and is not minimum or maximum, the change is set to be logged, displayed, and printed and to trigger other events (or counters). See Event Reporting.
- Rep Max.** When the counter value changes and is maximum, the change is set to be logged, displayed, and printed and to trigger other events (or counters). See Event Reporting.
- TG Min.** When the counter changes and is minimum, the time-group setting sets when the event is an alarm and when the timed report function is active. See event reporting.
- TG Now.** When the counter changes and is not minimum or maximum, the time-group setting sets when the event is an alarm and when the timed report function is active. See event reporting.
- TGMax.** When the counter changes and is maximum, the time-group setting sets when the event is an alarm and when the timed report function is active. See event reporting.

Events that result in the counter incrementing or decrementing are **Added** via the property sheet (right click on the counter). The trigger event is set with **Type**, **System Item** number, **Status**, **Xref**, **Value** and **Alarm**. See events. The value by which the counter is incremented is indicated with a plus (e.g. +1) or decremented with a minus (e.g. -2).

A counter can be a **sum** of counters by setting an & in the +- column. & is only valid for counters. Any event can serve as a trigger. Only the now counts of counters in the triggers with & are used to calculate the value of the counter, all other triggers are ignored in the calculation. The event generated is counter maximum, available or minimum.

Where **access** must be granted **according to counts**, all functions are done via the PC, using **EVENTS**:

1. Cards are not enabled in the reader (reader set as DB location PC).
2. The PC receives from the mux, the event READER, CARD OUT-AREA and automatically does a check to see if card is enabled, that the card is not out-of-area by checking if the cards area group has access to the readers "TO AREA" and that the card is not already in the area (if the card is not a passback card and the reader is an APB reader). The event READER/CARD ENABLED or READER/CARD DISABLED or READER/CARD OUT-AREA is issued.
3. An event to open the door must be set to trigger on READER/CARD ENABLED and end with COUNTER/AVAILABLE/VALUE=count group(optional).
4. An event to generate READER/CARD ENTERED must be set to trigger on the door open command, or have the same two triggers as required by the door open. The CARD ENTERED event must transfer the card number by setting **Xref** equal to the negative of the READER/CARD ENABLED trigger.

For example, open front door if card is enabled, and count_1 available for count group 50, update card location and APB:

Event: Open_door : algorithm 1*5										
	Type	output	system	front_door	status	level change	value	1	xref	-5
ref 1	counter	system	count_1	status	available	value	0	xref	0	
ref 5	reader	system	reader_in	status	enabled	value	50	xref	0	
Event: Update : algorithm 2										
	Type	reader	system	reader_in	status	entered	value	0	xref	-2
ref 2	output	system	front_door	status	level change	value	1	xref	0	

Event Open_door triggers Event Update, and the card number is transferred from trigger 5 to trigger 2 to event Update.

ALTERNATIVELY

Event: Open_door : algorithm 1*5										
	Type	output	system	front_door	status	level change	value	1	xref	0
ref 1	counter	system	count_1	status	available	value	0	xref	0	
ref 5	reader	system	reader_in	status	enabled	value	5	xref	0	

Event:	Update : algorithm 2*3				
	Type reader	system reader_in	status entered	value 0	xref -3
ref 2	Type counter	system count_1	status available	value 0	xref 0
ref 3	Type reader	system reader_in	status enabled	value 50	xref 0

Counter: Count_1 is typically set as follows : **min** 0, **present** 5, **maximum** 10

Type reader	system reader_in	status entered	value 0	xref 0 +1
Type reader	system reader_out	status entered	value 0	xref 0 -1

11.1.7 CR351/2/4/5 SET-UP

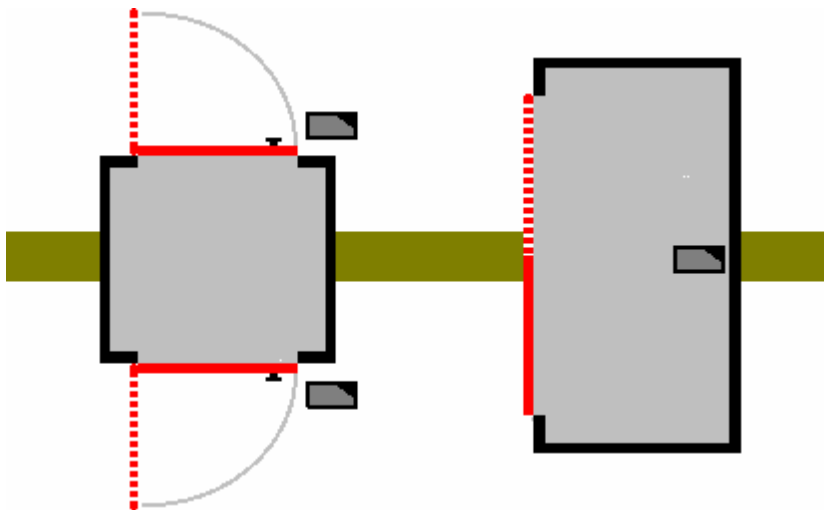
Data, which is specific for the CR351, CR352, CR354 and CR355 controllers and do not influence any other parameter in the system, are displayed and viewed in this menu. The CR355 is set to function as a CR351/2/4 by setting CR351 type in the controller set-up menu. All CR351/2/4 and the CR355 controller set as type CR351 functions are referred to CR351 below.

The data is sent to the controller on reset of the controller, when the controller powers up, or when a "SET-UP" event is generated. Other parameters for the controller are set in the input, output, reader and general menus. Latch time groups (latch open on certain times of the day) are set for the OUTPUT (level 1) linked to the READER.

The following parameters are set for each door / readers are given below. NOTE that all versions of the CR351/4 software do not facilitate the setting of different parameters for either door (or reader). In such cases, the set-up of door 1 (reader 1) is used for both doors (readers), i.e. the set-up for door 2 (reader 2) is irrelevant, these parameters are indicated with an *.

The Controller used is selected from the list of controllers.

In Booth mode, the two doors can be selected to function as a one or two reader booth. Both modes require that **two doors** are selected and that **action complete** signals are in use. **Latch monitor** (CR355) can also be used. Selection of none disables booth functions.



The sequence for **booth** mode (two readers) is; card is presented, and if access is allowed, the first door opens. When it closes and the present detection signal is active (input of the controller tied to a pressure mat or a beam inside the booth), the first door is locked and the second is unlocked. Only when the second door is detected as open, is the "entered" message generated. While the sequence is in progress, both readers are disabled. Selection of a push button results in the same sequence. If the sequence is not completed in 10 seconds, it is aborted and both doors are locked. When using a Softcon CR355 controller, the latch can also be monitored and the sequence then requires that the latch be monitored unlocked before door is detected as open and be monitored as locked after the door is detected as closed, with the rest of the sequence as normal. The CR355 can also set a booth busy output, being active while the booth process is busy. In CR355 controllers, the reader flashes red while the booth process is busy. CR355 requires the input type settings of action complete 1 and 2, booth presence, optionally latch 1 and 2 monitor and the output type settings of latch 1 and 2 and optionally the booth busy output.

In the **one door** booth mode, the door to enter the booth is opened (slides to the other side), by a push button. When a card is presented to the reader in the booth, and access is granted, the door slides to grant exit, closing the entrance.

Booth type **Interlock** (only CR355) does not perform the booth sequence but prevents either door from unlocking if the other door is open or unlocked. A booth is also an interlock.

↳ **APB reset.** Anti-passback between the two readers of the booth, can be reset within the controller, via a push button (or key switch) connected to an input. Cards enabled for either reader are enabled for both.

↳ **Doors.** The number of doors controlled (and monitored) by the controllers are set to 0, 1 or 2. When 0, the controller is only for clock in/out. One door has a reader on each side, controlling the same latch. Two doors act individually, each reader controlling its own latch. Booths and bi-directional turnstiles are set to 2 doors.

↳ **AUX. output.** The controller has a spare output which can be used as a system output (controlled via the PC) or used to indicate the last reader used (this can be used to indicate the direction of activity through a booth). Note that in card capture installations, the output is used to open the card deposit slot in the capture bin.

↳ **Reader enable.** When set to enable on input (e.g. to a vehicle detection loop), reader one is only active when aux. input 3 is high (vehicle on loop), and reader 2 is only active when aux.. 4 is high. Readers can also be en-/disabled from the PC by setting the output ports for the reader (see [I/O](#) ports below). Setting the appropriate port to level 1 enables the reader and level 2 disables the reader.

↳ **Latch click.** When set to click, the latch is energised with pulses, giving an audible clicking sound of the latch. This is used typically when using DC latches.

↳ **Buzzer.** The controller has an on-board buzzer which could be set to sound on alarm (when the door is left open too long, on multiple illegal entry attempts and when the door is opened illegally). When set to the beep mode, a single beep is sounded when the access is granted and a double beep when access is denied. When requiring a beeper for the second door (2 door selection), the aux. output is used for door 2.

↳ **Action complete.** The type of door monitor can be normally open (NO), i.e. the door contact is open when the door is closed, or normally closed (NC) when the door is closed. When the latch is energised (access is granted after presenting a card to the reader, the push button is pressed, or the PC commands the door to open), it is powered until the latch time-out expires, or until the door opens (in the NO or NC options). Setting the NO or NC options with time-out, the latch is energised until the latch time expires (regardless of whether the door opens). When selecting the change over option, the latch is energised until the door is seen as closed (after opening). The change over option is generally used when magnetic locks are used and the door must be locked when closed (e.g. in booth installations). The options are:

Normally Open	Contact open when door closed – latch unlocked till door opens or time-out.
None	No action complete contact.
Normally closed	Contact closed when door closed. – latch unlocked till door opens or time-out.
NO tmout	Contact open when door closed – latch unlocked till time-out.
NC tmout	Contact closed when door closed – latch unlocked till time-out.
NO till door closed	Contact open when door closed – latch unlocked till door closes or time-out.
NC till door closed	Contact closed when door closed – latch unlocked till door closes or time-out.

When not using action-complete, the controller reports a card entered once access is granted (and latch is energised). When action complete is used, card entered is only reported once the door is opened (after access is granted). In booth mode, which must use action complete, card entered is only reported when the second door is opened.

↳ **Card capture.** Card capture units can be connected to reader 1 or 2 (only reader 2 for CR351) of the controller and when a capture card is presented to reader 1 or 2, the card capture slot of the bin is opened (via aux. output for CR351, or the output configured for [capture output](#) for CR355 on the controller). Once a card is detected as being inserted (via aux. 3 input on the controller for CR351 and the

input configured as the **capture_input** 1 or 2), the latch is energised. Motorised card readers can be installed which will capture cards set for capture. Captured card can be automatically disabled in the system when the capture option is set accordingly. When the capture type is set to **capture_disable**, the card status, expire and count full statuses are set to disabled and the card is automatically disabled in all controllers.

⌘ **Reader LEDs.** Normally, three LED's in the reader indicate ready (orange LED), access granted (green LED) or access denied (red LED). In the 2-LED mode, only access granted (green LED) or access denied (red LED) is indicated and the extra output (what would have been the orange LED) is used to indicate that the card should be captured (this is used in certain type of card readers to capture the card - on reader 1 or 2). When selecting the LED count option, the red LED flashes when access is denied as a result of the area count being full.

⌘ **Reader time group.** The time group indicates when the reader must be used for access (e.g. always or only after hours). When not needed, it may be used, for example if the reader and PIN readers need only be used after hours, either may be used during operating hours for access. Time groups 16 to 30 have been configured for the Softcon CR351/4 controller and only these must be selected (the groups have been named accordingly).

⌘ **PIN time group.** As for the reader time group, the PIN time group sets when the PIN reader must be used for access. If both PIN and reader must be used, the PIN code is entered, followed by presenting the card. When only PIN is used, the code is entered, followed by the * key. Time groups 31 to 45 have been configured for the Softcon CR351/4 controller and only these must be selected (the groups have been named accordingly).

⌘ **Latch type.** The latch installed is either normally open (NO), i.e. contact is open, no power to the latch when the door is locked, or normally closed (NC), i.e. contact is closed (power to latch) when the door is locked (typically for magnetic locks).

⌘ **Open too long (sec).** A time out in seconds can be set after which an alarm will be generated when the door is left open too long. Note that action complete must be used. When 0 seconds are set, the door is not monitored for open too long.

⌘ **Illegal attempts.** When number of unsuccessful access request (by presenting cards to the reader or entering codes at the PIN reader) is set to more than zero, and alarm is generated when the number of attempts are exceeded. The reader may also be disabled for a time period as set in the illegal disable option below. When set to zero, illegal attempts are not reported.

⌘ **Illegal disable (min).** When the number of illegal access attempts are exceeded (see illegal attempts above), the reader will not accept any request for the set minutes, or until the door is opened from the other side (via reader or push button). When set to zero, the readers are not disabled.

⌘ **Latch time.** The time period in seconds, is the time the latch is energised when access is granted. The latch could only energise until the door opens (see action complete above).

⌘ **I/O ports** of the Softcon CR351/4 are as follows:

Input port 1	Push button 1	
Input port 2	Push button 2	
Input port 3	Action complete 1 (door 1 monitor)	
Input port 4	Action complete 2 (door 2 monitor)	
Input port 5	Aux. input 1	
Input port 6	Aux. input 2	
Input port 7	Aux. input 3	
Input port 8	Aux. input 4	
Output port 1	Latch 1	
Output port 2	Latch 2	
Output port 3	Aux. output 1	
Output port 4	Reader 1	level 1=normal, level 2=isolate (EPROM version >= 6.20)
Output port 5	Reader 2	level 1=normal, level 2=isolate (EPROM version >= 6.20)
Output port 6	Buzzer	level 1=on, level 2=off

Latches of the access controllers use levels as follows:

Level 1 Open

- Level 2 Closed
- Level 3 Open permanently (unlocked)
- Level 4 Closed permanently (locked)

Action complete (door monitors), i.e. input ports 3 and 4 need to be set as inputs which must be linked to the [READER](#). The controller reports levels as follows (not supervised in red):

Short circuit	Level 1	None.
Closed	Level 2	Level 1.
Open	Level 3	Level 2.
Illegally opened	Level 4	Level 3.
Open too long	Level 5	Level 4.
Door not opened	Level 6	Level 5.
Open circuit	Level 7	None.

11.1.8 **EQUIPMENT TYPE**

Reader, inputs, outputs and controllers can be set with an equipment type for identification purposes. This data is used in reporting and list ordering. The type name is a simple list that can be changed or added to.

11.1.9 **FINGERPRINT APPLICATION**

Selects which fingerprint reader the applications use. See [fingerprint integration](#) and reader set-up for more information.

11.1.10 **FINGERPRINT LOG-ON**

To use FP logon, the **Application** and the **PC** on which it is runs must be set. **Use FP logon** enables the FP logon. The user fingerprints are recorded (enrolled) in the card menu. Logon with fingerprint does not require a password.

11.1.11 **FINGERPRINT READER SET-UP**

Finger print readers in the system are given a descriptive **Name** and linked to an access control **Reader** when used for access control. The reader **Type** is selected from a list: Sagem MA200 (TCP with 3000 users), Sagem MA300 (TCP with 48000 users) or Sagem Morphosmart (USB reader) – more types added on request.

PC selects to which PC the reader is connected (USB) or controlled by – PC containing the dongle key. Dongles are required by certain readers (all Sagem readers).

Host communication type is set to Ethernet (TCP) or if serial, the COM port connected to (Sagem readers are Ethernet). Ethernet also require the **IP address** and **IP port** number of the reader – these are set via the keypad for each reader.

CD fingers sets the number of fingers per card users (non visitors) and **CD minimum** and **CD maximum** the database range in which the data is stored. Similarly, **Vis fingers**, **Vis minimum** and **Vis maximum** set the parameters for visitors. The number of **Fingers** per user is set to 1 or 2 – generally 1 for visitors and 2 for others).

Enrol save sets whether the finger data must be stored in the enrol reader.

Down retry set the attempts to send finger data to the reader – generally set to 3 (errors can occur or down load – 3 ensures success).

Quality sets the number of consecutive good reads to accept the print data as correct when enrolling a fingerprint, generally 3.

Consolidation check sets 3 reads must be done per print, else only one per print.

Minimum **Threshold** quality % set when reading finger print. Typically set to 50%. The higher the %, the more accurate the comparison. A lower % is faster but less accurate. Lower settings are used when users fingerprints are worn (e.g. labourers).

Operations try (generally 1), sets the maximum attempts per fingerprint operation when adding or deleting a record in a reader.

2FP Acquisition check selects that 2 acquisitions are used per finger on the Morphosmart reader.

All other settings are hidden and will be used in future updates.

11.1.12 **HOLIDAYS SET-UP**

Most time functions in the system allow different settings for holidays, e.g. access may be granted on weekdays, but not on holidays. Up to 30 holidays can be set. Ten holidays are displayed and by clicking on the vertical scroll bar, the other dates can be seen and edited (if allowed by the logged on password). The parameters are:

- Ref** This parameter is not editable and is the database reference and holiday number.
- Date** The date of the holiday (1 to 31).
- Month** The month in the year (1 to 12).
- Description** A holiday description (e.g. Christmas). This description has no system functionality.

The list set-up is defaulted with the fixed holidays in black and those that need to be changed every year in red.

11.1.13 **INPUT SET-UP**

A variety of conditions can be monitored by the system, e.g. the status of a door (open or closed) and are referred to as inputs (to the system). Input devices are transducers which convert a conditional status to an electrical status that can be measured, e.g. a door monitor is a micro-switch which closes contact (zero volt) when the door is closed and is open when the door is open (5 volt).

The number of inputs is **limited** by the SW version - see **SECURITY** settings. Although inputs exceeding these limits can be set-up, they will not be functional.

Most inputs are contacts that are open or closed, i.e. two status levels are monitored with digital electronics which can only detect the two statuses. Inputs can also be monitored in a range of values (e.g. from 0 to 255), which is termed an analogue input. By scaling the measured input, the actual status can be displayed (e.g. the temperature is 25.4 degrees C). By entering trip status levels, names can be added to the range of values read, for example values below 100 is "COLD" below 150 is "WARM" and below 255 is "HOT".

Monitored access controlled doors (**action complete**) are treated as special inputs by the Softcon Access controllers, with the door being detected as **closed**, **open**, **illegally opened** (no controlled by the controller), **open too long** or **not opened** (latch was unlocked by the controller, but was not opened). An **action complete** setting is required (not none).

By connecting one resistor across another in series with a contact, and analogue input can monitor four status levels, i.e. **short circuit** (cable short circuit), contact **open** or **closed** and **open circuit** (cable cut). The cable is then **supervised** and "**terminated**" (end of line termination, **EOL**). The Softcon CR355 controller (version 1.00 or later) can facilitate supervised inputs (but not analogue inputs) and each input requires to be set with the number of **levels**, i.e. 2, 4 (2 levels with termination), 5 (door monitor) or 7 levels (door monitor with termination). **Level settings** are:

Level	2 Level	4 level	5 Level	7 Level
1	Contact Closed	Short Circuit	Door Closed	Short Circuit
2	Contact Open	Contact Closed	Door Open	Door Closed
3		Contact Open	Door Illegally Opened	Door Open
4		Open Circuit	Door Open Too Long	Open Circuit
5			Door Not Opened	Door Illegally Opened
6				Door Open Too Long
7				Door Not Opened

The number of inputs available in the system depends on the size of the input database and is set in the set-up database. Data is accessed via the search function or selecting the input reference number. Each input in the system needs to be configured before it can be controlled. This is done via the **INPUT SET-UP** menu.

Accept Status displays the current accept status of the input and can be **unknown** (input has never been in alarm), **not accepted** (not accepted since being in alarm – may not be still in alarm), **accepted** (accepted after the input went out of alarm) or **not in alarm** (has not been in alarm since last accepted).

Alarm Status displays the current alarm status and can be in **alarm** or **not in alarm**.

Display field is used to filter records for display. As shipped inputs of the first few controllers are set with display values 1 for door monitor 1 (action complete), 2 for door monitor 2; 3,4,5,6 aux inputs 1 to 4 and

to 7 and 8 for push buttons (egress) 1 and 2. With unused inputs set to say 10, all used inputs can be displayed with a filter < 10. To display only doors, use a filter **F_IN_DISPLAY in (1,2)** and sorting by the display column with display in order or door 1,2, aux inputs and push buttons as last.

- ↳ **Room** sets the location of where the input is installed. The rooms are set in the Rooms menu.
- ↳ **Equipment** set the type of input, e.g. Push-button, door, PIR, etc. This data is used for identification, reporting and list sorting.

General Page

A **Description** is given to the input for easy identification, e.g. "Front door". The input is allocated to the hardware it is connected to by selecting the **Controller** it is connected to by clicking on the down arrow key on the list box and selecting the controller name by clicking on it. The **Port** of the controller to which the input is connected must also be edited and the port number depends on the controller type (see the appropriate controller for details). Port number for Softcon [CR351](#), [COM350](#) and [MD350](#) are reserved.

The last monitored value of the input is displayed in **Status AD** (last measured A to D value) and **Status Lev** (last status level measured). These values are not editable.

The operational status of the input is set by clicking on the down arrow of the **Operational** list box. The status is one of the following:

- NORMAL** The input is monitored according to the report settings.
- MAINTENANCE** The input is monitored as true report type, but no logging or control is done (control functions are reported, but not logged).
- ISOLATE** The input is disabled and not monitored.

Certain Softcon controllers such as the **CR355** (in CR355 mode), allows inputs to be configured as special function inputs. Inputs set to **Type Aux Input**, function a normal inputs that are monitored for open or closed (also short or open circuit if levels are set to 4 or 7). Time groups for when the input is monitored are enforced. Special functions available are:

- ↳ **Reader APB** Only when the input is low, the cards enable status for the linked reader is changed (APB), i.e. the card automatically becomes disabled for that reader and enabled for the other reader (could be changed by the PC in the on-line mode).
- ↳ **APB reset** Any card that is enabled for a reader at the controller is enabled for all readers of the controller.
- ↳ **Action complete** The door is monitored for legally opening and closing and for illegally opened, open too long and not opened.
- ↳ **Latch monitor** The latch is monitored for opening and closing. This is a function used in booth (mantrap) mode.
- ↳ **Booth presence** Booth occupied is monitored when the first door is closed when controlling a booth.
- ↳ **Capture input** Detects card dropping (micro switch) when card is captured.
- ↳ **Egress** When a push button tied to the input is detected as pushed, the door is opened.
- ↳ **Reader enable** The reader linked to the input is only enabled when the input is open.
- ↳ **Tamper** When the input is closed, a tamper is detected, the linked reader is disabled.

As described above, inputs of certain Softcon controllers can be set to detect short and open circuit, this requires a **levels** setting as described.

Units Page

When monitoring analogue transducers (with electronics that measures analogue values), **Unit** sets the unit description to be listed or displayed e.g. "degrees C". The scale factor is entered by setting the zero measured value, **Zero AD**, to the actual value when the measuring zero, **ZeroVal** (e.g. zero AD of 5 is 10 degrees C). Values measure below the zero AD is equal to zero val. The maximum values are similarly set in **Full AD** and **Full Val**, i.e. the value measured and to what it is equal to (e.g. 255 is equal to 35 degrees C), with values exceeding the full AD values taken as equal to full AD. Values measured in between zero and full are calculated as being a fraction (linear) of the zero and full values: $(\text{value} - \text{Zero AD}) * (\text{Full AD} - \text{Zero AD}) / (\text{Full Val} - \text{Zero Val})$.

- ↳ **Camera**, **Snap Tg**, **Snap Sg** and **Sequence Groups** will be included in future versions.

A **Count** is kept of each time the input changes to the **Level**, set to one of the five monitored status levels (e.g. every time the door opens). Count automatically increments by one when the input goes in to the set level, regardless to any time functions and can be edited to any start value (password permitting). The **Reset** time/date is when the count was last reset. Reset can be done manually by editing the count to zero and editing the reset to the real time, or can be done automatically by setting **TIMED EVENTS**.

Level x page

As described above, an input can be detected as being in one or another state, with digitally monitored inputs limited to two states (e.g. open or closed, on or off) and analogue inputs to a range of states. Up to 7 states can be set for each input, typically short circuit, contact closed, a maintenance level (e.g. low resistance between the chambers when ionisation smoke sensors become dirty or contaminated), contact open or open circuit. The seven states are set under **Level 1**, **Level 2**, **Level 3**, **Level 4**, **Level 5**, **Level 6** and **Level 7**, with the lowest level being level 1. Unused levels are from level 7 (e.g. when using only two levels use level 1 and 2). Monitored **access controlled** doors (5 or 7 level detection are described above). Each level is given a **Name** to describe the status (e.g. "closed", "fire", "normal", etc.). The current level is displayed in green in the Inputs Set-up list editor. The analogue value below which the inputs status is set in the **Trip** value. This value depends on the electronic measurement type (an 8 bit A to D measurement has a range of 0 to 255, and a 10 bit A to D is 0 to 1023), and on the cable, end-of-line and transducer resistance's. Typically, if no end-of-line resistors are used on a contact and the cable resistance is irrelevant, trip level 1 is set to 128 and level 2 to 255, assuming an 8 bit A to D (other levels are not used and data is irrelevant). A measured value is compared to trip level 1 and if equal or below, is reported as level 1, if not, the value is compared to trip level 2, then 3, 4 and 5. Trip levels for digital inputs are not used and the values are ignored.

Inputs are continuously monitored by the controllers and changes are reported according to the setting of **Report** and **Rep Tg** (report time group, i.e. when must a change to the level be reported). Clicking on the down arrow of the list box and selecting one of the report options sets the report parameter. This setting selects what must be done when the input changes to the level:

- Never** - nothing is done.
- Display** - displays are updated.
- Log** - the change is logged to file.
- Print** - the change is printed.
- Event** - the change can trigger other events (see **EVENTS**).

Any combination of the last four actions could be selected and each could be set to only occur then the time group is active (e.g. displays could be always updated, but logged only after hours, as set via the time group). Should the selection only contain actions when the time group is active, the list box abbreviated multiple selection with a 'T' for the time group option, "Dis" or 'd' for display, 'l' for log, "Prn" or 'p' for print and "Evn" or 'e' for event. For example, Tdis will result in displays only updated when the Rep Tg is active. As this time group is only used by the PC (not set to the controller), any of the time groups could be used, it is however suggested that one of the input time groups be used.

Rep Tg also sets when the input must be reported as an alarm. When the time-group selected is active (now is within the selected time-group), the xref section of the event is set to -1. This results in the events set to trigger on -1 to be triggered (e.g. switch on the PC buzzer) and if the input is displayed on a drawing, the drawing will flash, using the **alarm** icon set for the item. If the input must not be reported as an alarm (xref is 0), a time group that is never active must be selected (e.g. Input time never).

Cntrl Tg is the time-group that is sent to the controller and changes are only reported when the time group is active, reducing the data communication between controller and PC in non-active times. Note that this time group must be on of the input time groups.

The time out option **Tmout**, is an optional time in seconds, after which the input is reported again as being in the level. On time out, the PC interrogates the controller on the status of the input, and if still in the same level (regardless of the report setting), the input is reported as being set with a time-log-print-control status. Input count, is not affected if the first change to the level did increment the count, if count was not incremented, it is incremented if the count level is set to the timed out level. When the time out function is not used, the value is set to zero seconds.

Inputs can be set to count in the controller (currently only DF350 and CR355, first 5 levels only). This is done by setting the **Input counter** to the required system counter (not counter 0) for the level that needs to count. When the input changes to a level set with a counter and the **Cntrl TG** is active the counter is incremented in the controller. The level change is not reported to the PC, the current count value is reported after the levels set **Count delay** (in seconds). Count changes with a count delay of 0 are

reported when the counter changes. E.g. with a count delay of 10 seconds, if the count changes to 100 at 8:00:00 and to 101 at 8:00:05, 101 is reported at 8:00:10. Count values are reported with a count event count minimum, count available or count maximum, e.g. **t6 n10 s70 x10 v101 z13** (counter 10, system input 10 level 3, count maximum now 101). Counters can be set to a value with the event **t6 ncounter-ref s50 x0 vcount-value**. Counters in the controller are set with the PC values when the controller is reset or sent a set-up. Levels that need to be reported as level changes must be set with input counter 0 and levels that must not be reported as counters or level changes must be set with input counters counter 0 and Cntrl TG of input never. For example report short circuit (level 1) and open circuit (level 4) as level change 24hr and count contact close (level 2) at night: set level 1 and 4 to input counters to counter 0 and Cntrl TG to input 24hr; level 2 input counter to the required counter and the Cntrl TG to input night; set level 3 input counter to counter 0 and the Cntrl TG to input never.

11.1.14 **MAG Programmer**

Setting for a printer with MAG programmer when an integrated [Card Maker](#) is installed.

11.1.15 **MAG TRACK**





Setting for data to be programmed when a MAG programmer when an integrated [Card Maker](#) is installed.

11.1.16 **MUX SET-UP**

Up to 4 **Softcon** mux cards can be installed in a PC. The mux number is set 1 to 4, matching the link set-up of the card. The SW must be enabled to communicate with more than 1 mux, via the site.dat file (please contact Softcon). A **Name** is given to the card to identify the card. The **PC** the card is installed in, is selected from the list of PCs set in the PC set-up menu.

For details of Mux drivers that must be installed and settings on the cards, see [Mux Cards](#).

Presently three **Types** of Mux card are available, namely **ISA** and **PCI** bus cards and **modems**. **USB** units will be available in the future. The **port** sets the address of the card and depends on the links installed on the card. The port options are listed below. Each PC installed with mux cards start with the 1st port (i.e. no link).

ISA	624	608	592	576		
PCI	1	2	3	4	PCI revision <3	All other PC cards
					

Every server needs to be linked to a mux card that has the ID/site type information. The server is set in **ID to Server**. The server will not run if it is not linked to a mux. This also sets which PC runs **events** in a system. See [Security Keys](#)

The **Status** of the Mux card is automatically changed to **on-line** (in green) or **off-line** (in red). On start-up of the SCS_Client, the version of the Mux card is read from the card, this indicates the type and the version of the card.

Dial-up **Modems** can be used to connect directly to Softcon CR351/2/4/5/7 controllers when the mux type is set to modem. Modem communications is an option that is protected by security keys and requires that the Softcon client program **SCS_CntrlModem.exe** be installed and running on the PC where the modem is installed. The modem name is selected for the mux when type is modems. Modem set-up is via menus in SCS_CntrlModem, help files are available. Data for controllers connected to mux type modem are stored by SCS_Client in files in c:\softwin3\controller\data\tx?????zzz.scl (were ????? is the controller reference number and zzz a running number for the controller). Once sent by SCS_CntrlModem, the file is deleted. Similarly, data received by SCS_CntrlModem from controllers are stored in c:\softwin3\controller\data\tx?????zzz.scl and deleted when processed by SCS_Client.

Similar to dial-up modems, CR355 controllers can be tied directly to COM port of PCs by setting the mux type to **Serial**. Serial is functionally the same as modem with the exception of dialling. When serial is selected, a modem must be selected to reference serial port setting data (see SCS_CntrlModem set-up).

PCI mux EPROM Version 3.05 and later can accommodate the following modifications in EPROM (default in **blue**):

*LAN baud rate.	0FFFFH	0=19k2 (requires 22M xtal), 1=9k6 , 2=4k8, 3=2k4.
LAN repeat delay.	0FFFEH	1. Multiple of delay when repeat (2=2x, 3=3x, etc.)

*LAN bit type. 0FFFDH 0=9 bit, 1=8 bit.
uP Xtal. 0FFFCH 0=11M, 1=22M.

* Can be changed by settings in SCS_Client (version 1.01.50 or later) – LAN baud and LAN bits. Only CR355 (version 1.43 or later) capable of matching the changes – comms type for 8 bit is 3=PC.

11.1.17 OUTPUT SET-UP

A variety of devices can be controlled by the system, e.g. opening of a door and are referred to as outputs (to the system). Output devices are units that require a contact closure (or opening) or a voltage supply or electrical current. Outputs are controlled in response to operator request or automatically as a result of timed functions (output time group - i.e. at certain times in the day) or as a result of input monitoring (input to output) or card movement (output groups).

The number of outputs is limited by the SW version - see SECURITY settings. Although outputs exceeding these limits can be set-up, they will not be functional.

Presently, the system controls the output logically, i.e. on or off (open or closed, 0 or 12V) and not as an analogue outputs which would be a range of voltages (or currents), e.g. 0 to 10 volt in steps of 1 volt. Monitoring of output line is a function of the HW, with such monitoring being configured as inputs (refer to the particular HW for details).

The number of outputs available in the system depends on the size of the output database and is set in the set-up database. Data is accessed via the search function or selecting the output reference number.

Each output in the system needs to be configured before it can be controlled. This is done via the OUTPUT SET-UP menu.

Room sets the location of where the output is installed. The rooms are set in the Rooms menu.
Equipment set the type of output, e.g. Latch, barrier, MAG-lock, etc. This data is used for identification, reporting and list sorting.

General page

A Description is given to the output for easy identification, e.g. "Front door". The output is allocated to the hardware it is connected to by selecting the Controller it is connected to by clicking on the down arrow key on the list box and selecting the controller name by clicking on it. The Port of the controller to which the output is tied must also be edited and the port number depends on the controller type (see the appropriate controller for details). CR351, COM350 and MD350 ports are reserved.

Status Level indicates the current level of the output, i.e. level 1 or level 2 (see below).

The operational status of the output is set by clicking on the down arrow of the Operational list box. The status is one of the following:

NORMAL	The output is controlled normally according to the settings (in to out, time group, etc.).
MAINTENANCE	The output is controlled normally, but no logging is done.
ISOLATE	The output is disabled and cannot be controlled.

Certain Softcon controllers such as the CR355 (in CR355 mode), allows outputs to be configured as special function outputs. Outputs set to Output Type Aux Output, function a normal outputs that are controlled by the controller on time groups, or by the PC. Special functions available are:

Booth busy	When in booth mode, the output is active while a booth sequence is in progress.
Buzzer	Buzzer 1 or 2. With CR351/5 buzzer set, the output is active when alarms occur, and /or buzz on card accepted, rejected.
Capture output	When cards are set with a capture group and the reader is set with a capture bin, this output opens the capture bin.
Isolate	A reader is isolated (not functional) by PC SW control. These outputs can be virtual outputs, i.e. the physical ports need not exist – the controller has two virtual ports for this purpose (port 13 and 14 if no front modules are used).
Latch	Latch 1 or 2.
Leds	Yellow (ready), red (access denied) and green (access granted) LEDs indicate access statuses.

Units page

«**Camera**, **Snap Tg** and **Snap Sg** will be included in future versions.

A «**Count** is kept of each time the output changes to the «**Level**, set to one of the two monitored status levels (e.g. every time the door is unlocked). Count automatically increments by one when the output goes in to the set level, regardless to any time functions and can be edited to any start value (password permitting). The «**Reset** time/date is when the count was last reset. Reset can be done manually by editing the count to zero and editing the reset to the real time, or can be done automatically by setting **TIMED FUNCTIONS**.

Level x page

As described above, an output can be controlled to one or of two states (e.g. open or closed, on or off). The two states are set under «**Level 1** and **Level 2**. Certain outputs in the system can be switched to **Level 3** or **Level 4**, which set specific functions, e.g. the outputs allocated to door latches in the **CR351** controller set to levels 3 and 4 unlock and lock the latch permanently. Each level is given a «**Name** to describe the status (e.g. “closed”, “fire”, “normal”, etc.). The Softcon MD350 mimic driver controller uses a level 3 to set a mimic LED (output) to the flashing state. **Level 5** is used in certain events.

«**Output Tg** selects time when the output is automatically switched to the level. Switching is done when the time becomes active, and is not re-switched if the level is changed by the operator or by an in to out command. For access controlled latches, level 1 time group sets when the latch is open. The latch output must be linked to the **READER**. Door open time groups must be selected for access controlled latches, selecting an output time group will not function correctly.

Outputs changed by the controllers and changes are reported according to the setting of «**Report** and «**Rep Tg** (report time group, i.e. when must a change to the level be reported). Clicking on the down arrow of the list box and selecting one of the report options sets the report parameter. This setting selects what must be done when the input changes to the level:

Never	- nothing is done.
Display	- displays are updated.
Log	- the change is logged to file.
Print	- the change is printed.
Event	- the change can trigger other events (see EVENTS).

Any combination of the last four actions could be selected and each could be set to only occur then the time group is active (e.g. displays could be always updated, but logged only after hours, as set via the time group). Should the selection only contain actions when the time group is active, the time-group is sent to the controller and changes are only reported when the time group is active, reducing the data communication between controller and PC in non-active times. The list box abbreviated multiple selection with a ‘T’ for the time group option, “Dis” or ‘d’ for display, ‘l’ for log “Prn” or ‘p’ for print and “Evn” or ‘e’ for event.

«**Pulse** is a value in half seconds that the output will close (level 1 only) the output before automatically changing back. The controller must be capable of this option (Softcon controllers do have this option).

11.1.18 «**Parking Fare**

When using readers in the **parking** pay on exit mode, the parking prices are set in the parking fare table. The fare set is in money units (e.g. cents or pennies) and the minutes are for the period below which the fare is applicable. For a zero fare, the parking is free for the minutes or less. A zero period is required as this is the period available after the card is presented to the pay reader. If the time present (time after entered at the reader set as pay entry) exceeds the largest set period, the largest set period is used.

11.1.19 «**PC**

A system can consist of more than one PC, with controllers being tied to any PC in the system. PC's interconnect via a PC network (e.g. an Ethernet coax cable). Each PC is allocated a unique number. The number of connections is a **Limited option** - see **SECURITY** settings.

The **Name** is the PC network name. If only one PC is used, the name can be set as **Localhost**, selecting the local PC. «**Room** sets the location of the PC from the room list. «**Equipment** identifies the type of equipment from the equipment list and is used in reporting and list sorting.

When using card expire, the PC that performs the «**Expire processing** is set by checking the field and the period of checking is set in the «**Expire processing period**.

⌘ **IP address** is used for documentation purposes only (the name is used to find the PC). ⌘ **TG Buzzer** selects a time group for when alarms will sound the PC buzzer. When requiring no sound, a time group of never is set.

When ⌘ **Card select** and ⌘ **Employ select** are checked, POS and visitor capture can point to the card database by entering the card reference number or the employee numbers respectively. When not checked, the card can only be selected via a serial reader connected to the PC.

⌘ **Video** is checked if a video camera is connected to the PC (used in visitor capture). This enables the video capture drivers.

⌘ **POS Vender** selects the vender that used by the PC.

⌘ **POS DPay** selects the type of pole display used by the PC. The amount due is displayed. Type PolyComp or PosiFlex can be selected. Displays with different communication protocols could be added on request (please contact Softcon).

⌘ **Edit Mask** will be used in future updates, limiting what area zones may be edited in area groups.

⌘ **Card R/W** sets the serial reader/programmer type connected to the PC for finding cards in a card or POS menu, or for edit card numbers. The PC port is set in [PC I/O set-up](#). The reader/writer types are (additional types can be added – contact Softcon):

Softcon.	Reader manufactured by Softcon that gives the card number in ASCII followed by CR. Baud rate is 9600, no parity, 8 bits, 1 stop, no HW flow control.
AMC.	Reader/writer by American Magnetics Corporation. The baud rate is 9600, 7 characters, odd parity, 1 stop, no HW flow control.
MAGTEK	Reader/writer by Magtek. The baud rate is 4800, 7 characters, odd parity, 1 stop, no HW flow control.

⌘ **Master DT** sets the PC from which time/date is synchronised. See [Date/time properties](#).

⌘ **CD Changed period** sets the period the PC that has enabled ⌘ **CD Changed procedure** checks the access cards for set changes (card data has been changed by an external system and set the changed field to 1). The changed cards are down loaded to all controllers and the changed fields cleared.

⌘ **Photo-Width, hight**. The photo capture block size (in pixels) used in the visitor capture (SCS_Visitor), card maker (SCS_CardMake) programs and in the SCS_Client card menu. When set to zero, the settings in the general set-up menu are used. Non-zero allows PCs to have different settings. **Photo display** is an option - see [SECURITY](#) settings

EXE events starts programs via the program SCS_RunSvr, enabling a program to run on other PCs (SCS_RunSvr is run on the target PC). SCS_Client connects to SCS_RunSvr via TPC, requiring a port number, the default is 2669. Should this need to be changed (port used by another program on the target PC), ⌘ **Run Port** allows the changing of the port address. SCS_RunSvr must then be started with the port as parameter (e.g. SCS_RunSvr.exe:1234).

11.1.20 ⌘ **PC I/O SET-UP**

Serial (via COM ports) and parallel (via LPT ports) interfaces can be connected to PCs, connecting card reader/writers, barcode readers, inputs (monitored inputs to the systems) and outputs (controlled outputs) to the system. For serial COM devices, the bit per second (⌘ **Baud**), ⌘ **DataBits**, ⌘ **Parity**, ⌘ **StopBits** and ⌘ **Flow** is set via list selections. The ⌘ **Application** (SoftWin3 program) and ⌘ **PC** where the programs runs are selected from lists. The ⌘ **Source** selects the type of function the I/O data is referenced and is selected from one of the following:

Bar Code	Serial data from item reader - POS, asset track.
Barrier Entry	Output to entry barrier PPOS.
Barrier Exit	Output to exit barrier - PPOS.
Card	Serial data from card reader - card edit.
M2M Controllor	Serial data to/from controllor.
Park Entry	Serial data from entry reader – PPOS.
Park Entry/Exit	Serial data from entry/exit reader – PPOS.
Park Exit	Serial data from exit reader – PPOS..
Payment	Serial data to pay display –POS, PPOS.

«**Type** selects the PC interface (COM1 to COM8, LPT1 to LPT8). Softcon serial interfaces have 3 outputs and parallel interfaces have 8 outputs, the appropriate output of an interface is selected via the «**Port** number (1 to 3 for serial and 1 to 8 for parallel) for the item (see item set-up).

«**LPT_Address** base settings vary on certain PCs. When using a LPT device, the address must be set to match the PC setting in: Settings\ Control Panel\ System\ Hardware\ Device Manager\ Ports LPT?\ Properties\ Resources.

11.1.21 «**PRINTERS**

Sets the printers in the system and allocates the «**Windows Name** of the printer and the number of «**Slip Copies** the printer on POS must print on a sale.

11.1.22 «**READER SET-UP**

All readers in the system have to be configured to be of the required type and in what area the reader gives access to and from.

«**Room** sets the location of where the reader is installed. The rooms are set in the Rooms menu.

«**Equipment** set the type of reader, e.g. HID prox, MAG, etc. This data is used for identification, reporting and list sorting.

Each reader is optionally set to generate a «**RANDOM** card search event. This is by allocating a non-zero setting to «**Random %** and a «**Random output** port. An optional «**Random input** can be set to override setting.

The «**number** of readers and «**random** search are options - see «**SECURITY** settings

General page

A «**Description** is given to each reader, identifying it, and it is linked to the «**Controller** and «**Port** (e.g. controller 5, port 1) to which it is connected. The port is the reader number of the controller, e.g. 1 or 2, depending on the number of readers the controller can have.

Depending on the controller and reader type, the functionality of the reader is set via «**Operational** setting, which can be «**Normal**, or «**Isolated**. Most controllers only function in the normal state, with the other selections being ignored. In Maintenance State, the reader functions normally, by no data is logged. The reader is disabled in the Isolate State. The isolate function requires EPROM version 6.20 or later installed in the Softcon CR351/4 access controllers. The operational setting can be changed with event status 52.

«**Report Event** sets what happens to normal reader events (not reader alarm events). These can be logged, printed, trigger other actions and be displayed (or combinations thereof). «**Event TG** sets when normal events are alarms or when the time report event are used.

«**Report Alarm** sets what happens to alarm reader events (out-of-area, disabled, expired, out-of-time, out-of-count, duress). These can be logged, printed, trigger other actions and be displayed (or combinations thereof). «**Alarm TG** sets when these events are alarms or when the time report event are used.

«**Camera**, «**Snap Sg** and «**Snap Tg** will be included in future versions.

«**Last Card** and «**Last Time** displays the reference number of the last card that was granted access at the reader and the time it occurred. «**Count** is a running number of the number of cards that was granted access via the reader since the last «**Reset**.

«**Ext Access** sets the reader to send cards set with Ext Access to the external linked system for access requests. These cards are not stored in the controller and access is granted or denied by the external system.

Area/Type page

Each reader is optionally allocated to a «**Door (input)** and a «**Latch (out)**, but must be set so the door status is known (e.g. open or closed), and if the door latch is to be controlled via the operator, or automatically in time groups or as a result of input to output functions.

The area zone is located in - **Area In** and the area zone the reader grants access to - **Area To** is set by selecting the down key of the list box and selecting a zone name from the list as set in the [AREA ZONE/GROUP SET-UP](#). The area settings are used in calculating whether access cards have access and are used in controlling APB functions.

Anti-passback (**APB**) and Anti-timeback (**ATB**) settings control the re-use of a card at the same reader. APB is set to **Enable**, **None** or **Logical**. When enabled and the card is not set as a passback card, then access is denied if the current location of the card (see the current location of the card in the [CARD SET-UP menu](#)) is the same as the Area to set for the reader. None disables the APB function for the reader. The logical option links a monitored input to the reader, typically a vehicle detection loop, and the passback detection is only done when the input is active (vehicle on the loop). This option is only available in certain controller types and is only used in vehicle type applications where the exit from the area without the vehicle does not allow entering with another vehicle (the APB stays with the vehicle, but the cardholder can exit and enter on foot). When a card is used at the other reader, APB for the card is reset on the first reader.

Whereas APB requires entry and exit readers from an area, **ATB** only requires readers to an area (free or push button exit). The ATB period is the time in minutes that the card cannot be re-used at the reader. The option is disabled when the person is set to zero and the maximum is dependent on the controller. Softcon CR351,2,4,5 have a maximum setting of 9 minutes and applies ATB to the last 20 cards at each reader. CR355 controllers have the option to set **ATB linked**. Access through a linked reader clears the ATB of that card at the other reader – when not linked, the ATB does not clear ATB of card of the other reader. CR351-4 controllers clear ATB of card at other reader, i.e. regarded as linked. In controllers that do not have ATB features, the parameter is ignored.

Strictly from set to **strictly**, will disallow the use of a reader if the area in which the reader is in (from), is not the same as the area the card is in, and therefore forces the cardholder to strictly use all readers and not miss certain readers. With correct area zone configuration, this will force the cardholder to use a certain route. **Disabled** allow the cardholder to use the reader if the area to is valid, and area from is ignored.

A reader is set to an **Accumulate Clock-in, Cock-out** or as a **Normal** reader (not an accumulation reader). See [ACCUMULATION](#).

In applications where access is granted in accordance to time/value requirements (time is deducted for the periods within certain areas (e.g. in parking areas), a **Free Value** time can be set, which is a time in minutes below which no deduction is made, thus free. This is typically set when an area may be full, and thus exit before the minimum time has expired (say 5 minutes), is free. **Limited** option.

Certain controller type can be set to function with different data modes (**dB mode**); depending on whether PIN codes are used and if random card numbers or following numbers is used (dependant on the card type used). **Softcon** CR351/4 controller are set to one of the following modes:

- FAC,XREF(02)** - running numbers, with facility code.
- FAC,XREF,PIN(06)** - running numbers, with facility code, PIN codes.
- FAC,NUMBER(08)** - random numbers, with facility code.
- HEX-NUMBER,PIN(10)** - random numbers (also hex numbers), no facility code, PIN codes.

Most controllers can be configured to use different reader and **Card Types**. The selection for the **Softcon** controllers is (note that some selections may require changing EPROMs in controller):

- WIEG-40(00)** - 40 bit **Wiegand**.
- WIEG-30(02)** - 30 bit **Wiegand**.
- WIEG-26(04)** - 26 bit **Wiegand**.
- WIEG-27(06)** - 27 bit **Wiegand**.
- MAG-11(08)** - **MAG** cards with **Softcon** format 11.
- MAG-FE(10)** - **MAG** cards with **Softcon** format FE.
- MAG-ISO 6/7(12)** - **MAG** cards with 6 or 7 character **ISO**.
- MAG-ISO BCD(14)** - **MAG** cards with up to 8 characters **ISO** (other characters are ignored).
- TOUCH(18)** - **Dallas** touch tags.

Certain controllers can be configured to have an **LCD** at the reader, displaying the time of day, the reader's transaction activity, and the holders name and entry count:

- NONE** - no LCD.
- NAME** - Displays data defined in general set-up, [LCD mask](#).

COUNT - Not enabled.

This is set at **Reader Type**.

DB Location selects where the card data for the reader must be located and is set to **Ctrl-all** (all card data is sent to the controller and access control is done by the controller) or to **PC-all** (no card data is in the controller and all access control functions are done by the PC, i.e. the controller report out of area for all cards). When access control is done via the PC, events need to set-up, which open the door when out of area is received. Control by the PC is generally when additional states need to be tested before granting access, e.g. access is only granted when the card is enabled and certain counter(s) are within limits or certain input(s) are in certain levels. Additional options to allow certain cards in the controller (or not), e.g. not count group or visitor cards, will be added to later versions of the SW.

Two cards can be allocated to a user. **Use card** sets which card is used at the reader.

Report Frame sets that framing errors (incorrect number of bit or parity errors) are reported to the PC. This option is only available in CR355, other controllers do not report framing errors (simply ignored).

11.1.23 **ROOM TYPE**

Room type allocates descriptions that are used to identify rooms. This is used in identification purposes in reports.

11.1.24 **ROOMS**

Equipment such as readers, input, outputs and controllers can be set to be in specific rooms in order to set the location. The rooms menu sets the rooms, the building in which it is and the type of room. These options are used in reports.

11.1.25 **TIMED EVENTS**

Events can be set to be automatically generated at certain time(s), for example do APB reset at midnight or clear totals on month end. The events are set via the TIMED EVENTS menu.

Description. The event is given a descriptive name by clicking on the name and overwriting (the drop down box must be closed before the data can be edited. By selecting the down key of the drop down box, the timed event to be displayed/edited is selected by typing in the name (with the drop down box open) or scrolling to the timed event required.

Next. The time and date when the event must be generated next time. This time is used for the start and is used to synchronize the date-time of when to do (e.g. if set to 08:00, it will always be done at 08:00). The data is in the format yyyy-mm-dd hh:mm (year-month-date space hour:minute).

Repeat. The event can be repeated after the start. The period is in the same format as start. To repeat once a day set the repeat period to 0000-00-01 00:00. To repeat every month on the last day of the month, set the start date to 31.

End. The last time and date the event is generated automatically. A year of 0000 sets no end.

Last. The time and date of the last executed event. Note that this is when it was done and may not be synchronized at the time indicated in next (e.g. when a skipped event was done).

Skipped. Events that should have been executed while the program was not running can be set to be **all missed done**, **only last done** or **none done**.

Type, Item, Status, Value, Xref, Alarm. Define the event that must be generated. See [Events](#) for more details.

The **PC** that performs the event is selected from the list of PCs.

11.2 **Time group zone**

Most time related functions (e.g. when is access granted) are set via a time group. The time parameter selection menu allows the selection of the time function (e.g. access control or doors open - when doors are automatically open) and the group for the function. There are numerous groups per function (typically 15) with

a group being allocated to a person (e.g. when is access allowed) or item (e.g. to a door). The number of groups per function depends on the HW limitations. Groups in the PC are not limited, i.e. any of the groups can be selected.

The groups have been configured into function groups matching existing Softcon HW (which uses 15 groups per function).

The function list includes:

- ↳ **Access control** When access is allowed in to area zones to cardholders.
- ↳ **Doors latch** Access controlled door are automatically open. For this function to be activated, readers must be set with the latch output to be controlled (see [READER SET-UP](#)).
- ↳ **Inputs active** When inputs are monitored in non-true states (see [INPUT SET-UP](#)).
- ↳ **Outputs active** When outputs are automatically controlled (see [OUTPUT SET-UP](#)).
- ↳ **PC Buzzer active** When the PCs bleeper must be sounded for exception alarms.
- ↳ **System_1..4** Additional time group available to the PC.
- ↳ **Use Pin** When PIN readers must be used for access request.
- ↳ **User Reader** When card/tag readers must be used for access request.

The eight **Time Zones** for the function (common to all groups in the function) down the left column. Note that changing a zone (by moving the cursor via the mouse, tab or enter keys and entering new data), changes the zone for all the groups in the function. A time zone is a time slot in the day, with a start and end time in hour and minute (seconds are ignored) and may wrap around mid-night (e.g. 23:00 to 07:00). Ignoring seconds results in the full minute being part of the zone (e.g. setting the end at 07:00, only ends at 07:00:59). A time zone of 00:00 is ignored, while any zone in which start and end times are the same (except 00:00) is taken as a 24hr zone (e.g. 08:00 to 08:00).

Each time zone is enabled for the **Time Group** by checking the days of the week and / or holiday. When the check is on, that time zone is selected for the day. Holidays have precedence over normal weekdays, i.e. if a day is a holiday (set via the [HOLIDAY MENU](#)), and the holiday check is not on, the zone is not selected (even if the day of week is selected). When a zone is active, the other zones are irrelevant (e.g. if the real time is now 07:23 and to-day is a Monday and not a Holiday, and the first time zone is 07:00 to 13:00, and the zone is checked for Mon., then the group is active. If the first zone is not active the next is checked).

To set up a time group for each area zone selected in an area group (↳**Time in Area**), refer to [AREA GROUP SETUP](#).

11.3 ↳ **Event-Event Set-up**

Select the **event** to be viewed or edited with the down key on the list box of the **event name**. The name can be edited with the list box closed.

The **PC** and **Program** that has to receive and process the event generated are selected from the lists. Selection of '↳**Resolve**' sets that the PC generating the event must process the new event.

The **algorithm** is set with the event **trigger** reference numbers, indicating "ands" and "ors" (e.g. trigger 1 or 3 can trigger the event: 1+3, trigger 2 and 4 must be valid for the event to be generated: 2*4, 1 or 2 or 5 and 10: 1+2+(5*6). The status of a **time group**, i.e. time group now active is true (or 1), or not now active is false (0) can be used in an algorithm and is defined as a T followed by the group number (e.g. 2*4*T10).

The event generates when the algorithms of triggers are valid, and are set in the row above the triggers. This is the event message, which is posted on the notice board when the triggers match (and algorithm passes). **Value** and **Xref** can be set to values for further matching on other events or counters, or if set to a negative value equal to the trigger reference value (e.g. -5 for trigger ref 5), the value of that triggers value or xref is set for the event value or xref. The PC and application (program) to which the event must be sent are selected from the lists as specific or all. The PC selection of Resolve sets the current program.

When generating event 19 – **Set card parameters** (type system), the following field of the event generated are:

- ↳ **Value** sets the card's **status** (0=disable, 1=enable, 2=capture). Values above 2 leaves the status unchanged.
- ↳ **Z1** sets the card's **area group**. 0 leaves the group unchanged.
- ↳ **Z2** sets the card's **time group**. 0 leaves the group unchanged.

The changed cards are automatically sent to the controllers and the changes are logged in the audit file.

As example of an event generated: open front_door if a card at reader_in with trigger group 50 is enabled and count_1 is available; update the card location and APB:

Event: Open_door: algorithm 1*5						
	Type output	system front_door	status level_change	value 1	xref -5	
ref 1	Type counter	system count_1	status available	value 0	xref 0	
ref 5	Type reader	system reader_in	status enabled	value 50	xref 0	

Event: Update: algorithm 2						
	Type reader	system reader_in	status entered	value 0	xref -2	
ref 2	Type output	system front_door	status level_change	value 1	xref 0	

Event **Open_door** triggers event **Update** and the card number is transferred from trigger 5.

11.4 **Exe Event**

On pre-set **events** (or combination of events), programs can be set to run. For example when an alarm triggers, start the Write text editor with the document "OCCURANCE.DOC", where the operator has to enter the actions taken in response to the alarm, of start a paging program to call a service technician when certain temperature alarms are detected.

To view or edit an EXE event set-up, click on the **EXE name** list box and select the required EXE event. The description of the EXE event is by clicking on the description (with the list box closed) and editing the name. For each EXE event, the program to be executed (**File name**) is entered with full path, extension and parameters (if required). The command line can include the trigger information by using ~t, ~n, ~s, ~x, ~v or ~a. The active trigger data is substituted in the string. For example:

C:\WINDOWS\WRITE.EXE C:\SOFTWIN\REPORT\OCCURANCE.DOC.
 C:\SOFTWIN\SOFTREP.EXE 14 NP AC p1:~x. sends the parameters 14 NP AC p1:xref

The PC on which the program is to run (**Run PC**) is selected from the list of PCs.

The **algorithm** is set with the event **trigger** reference numbers, indicating "ands" and "ors" (e.g. trigger 1 or 3 can trigger the event: 1+3, trigger 2 and 4 must be valid for the event to be generated: 2*4, 1 or 2 or 5 and 10: 1+2+(5*6). The status of a **time group**, i.e. time group now active is true (or 1), or not now active is false (0) can be used in an algorithm and is defined as a T followed by the group number (e.g. 2*4*T10).

For example, start a paging program to all a technician when a temperature alarm occurs:

File: C:\page\pager.exe CLIVE temperature_alarm_computer_room
 algorithm : 1+5

ref 1	Type input	system computer_1	status level_change	value 2	xref 0
ref 5	Type input	system computer_2	status level_change	value 2	xref 0

11.5 **General Set-up**

The parameters set via this dialog, are general to the system:

Main page

- Site / client code.** Access cards generally contain certain digits, which are unique to the specific installation, and these digits are grouped in to the client and site codes. Some cards may have only client code (no site code) and others may have neither, and this is dependant on the **card number** selection. The CR351 only allows one card type per controller. When client and/or site codes are no used or are to be ignored, the values must be set to zero.
- Site2 / client code2.** Controllers that have reader 1 (port 1) set to use card number 2, use site code 2 and client code 2.
- Site ID.** Site description used on reports.
- Last APB reset.** This date and time, in the format yyyy-mm-dd hh:mm:ss is the last time an APB reset was done (via a timed option, a push-button or simply by editing this data/time. When a card is reported as being out of area, and the card normally may enter, but access is denied because the card is requesting access to the

- area it last moved to (i.e. APB is being violated), the APB reset time is checked. Should this time be after the last time the card moved, access is granted.
- Card offset.** The physical card numbers (the number coded in to the card) at a site may not start at 1 (e.g. card number 1 by be coded with the number 1001). The card offset option is used to refer the coded numbers back to another number and it is simply deducted off the coded number by the controller (card number = coded number - offset). Setting a negative number, adds the number to a card, e.g. setting -10 results in card 50 being read as 60.
 - ISO MAG LRC.** When using access cards with MAG stripe ISO coding, an additional data checksum may be encoded on to the card. In order that the controller checks this sum, the LRC check must be enabled.
 - ISO facility start/end.** When using ISO encoded MAG cards, the position of the site and client codes (together known as the facility code) must be set. When no facility code is used, the start and end are both set to zero.
 - ISO number start/end.** The position of the card number on ISO encoded MAG cards must be set. The CR351 allows a maximum of 8 digits for the card number.
 - Printer On.** On-line printing (as events occur) is enabled to the default Windows printer.
 - Z-count UP.** When zone counting card in to an area, counting is normally down. Checking the up option results in counting up and when a count period restarts, the now value is cleared.
 - Expired Mask, Fixed.** When editing a visitor or active card, the expiry is automatically set to a fixed period (e.g. 4 hours) or to a certain time (e.g. to 23:00), referred to as a mask. Any character yyyy-mm-dd hh:mm not changed to a number, uses the date time of present. To set to 23:00 if the same day, set mask and yyyy-mm-dd 23:00. Separate card and visitor settings allow for different settings.
 - Password period.** Passwords can be set to auto expire by entering period in the format yyyy-mm-dd hh:mm, for example to set monthly set 0000-01-00 00:00 or every 8 hours, set 0000-00-00 08:00.
 - Auto log-off period.** Auto log-off is set in hours : minutes, after which the default is automatically logged on. The event is logged (status 157). 00:00 sets no auto log-off. Any operator function on any Softcon application restarts the time-out.
 - LCD Mask Line 1,2.** Readers that are set to reader type name display the data for line 1 and line 2. Data can be referenced by the fields name in { }, e.g. to display the card value and subsidy as "VALUE=12345 SUB=32", set the mask as VALUE={F_CD_VALUE_REMAIN} SUB={F_CD_SUB_REMAIN}.

Accumulation page

- Accumulate hour.** The hour of day (0 to 23) when daily accumulation totals are logged and cleared (see accumulation). When not set to 0 to 23, no accumulation is cleared.
- Accumulate week.** The week day (1 to 7, with Monday=1) when weekly accumulation totals are logged and cleared. This is done on the accumulation hour. When not set to 1 to 7, the week totals is not cleared.
- Accumulate month.** The monthly date (1 to 31) when monthly accumulation totals are logged and cleared. This is done on the accumulation hour. Selection of a value exceeding the month end (e.g. 30th is selected and the month is February), will be done on the last day of the month. When not set 1 to 31, the monthly totals is not cleared.
- LastDayDone.** The last date/time the accumulation was calculated. This is automatically updated by the system and cannot be edited.

Photo page

- Photo-Width, hight.** The general photo capture block size (in pixels) used in the visitor capture (SCS_Visitor), card maker (SCS_CardMake) programs and in the SCS_Client card menu. Should PCs require capture blocks that differ from this general setting, non-zero setting in PC set-up are used (blank or zero in PC setting use the general setting).
- Visitor Photo Folder.** The local folder where the photos are stored when captured.
- Default Photo Folder.** The folder where the photos are stored. When photos are displayed, the local folder is searched and if not found or is older than the photo in the default folder, the local folder is automatically copied and the local photo is used (speeding up the display and minimizing network traffic).
- Default Photo Ext.** The file default of the photo. This is any popular type, typically .jpg or .bmp.

☛ **Card Photo Field.** The default file name used for card photos can consist of fixed data and data linked to fields, e.g. {%-5%F_CD_REF}01 for 5 characters from card reference and 01. The field reference name is one of the IDs for table DBT_CD (card_data table) as defined in table FIELDS in c:\config\database.mdb and are generally selected from one of the following: F_CD_DESCR, F_CD_EMPLOY, F_CD_IDNUM, F_CD_NAME, F_CD_NUM, F_CD_NUM2, F_CD_REF. If the field used is not unique to the card, the photo will be overwritten when a card the same data is captured.

☛ **Visitor Photo Field.** The default file name used for visitor photos can consist of fixed data and data linked to fields, e.g. {F_VISITOR_ID} used the visitor ID number. The field reference name is one of the IDs for table DBT_VISITOR (visitor table) as defined in table FIELDS in c:\config\database.mdb and are generally selected from one of the following: F_VISITOR_CD_NUM, F_VISITOR_DESCR, F_VISITOR_IDNUM, F_VISITOR_NAME, F_VISITOR_REF. If the field used is not unique to the card, the photo will be overwritten when a card the same data is captured.

☛ Cards Mask page

Data to and from readers connected to controllers can be compiled from fixed data and card data fields. This is set for the two card numbers that can be used in the system, **Card1 Mask** and **Card2 Mask**. **The total of the digits must be 12** (maximum that can be sent by a controller). Ignored characters can be set with ? The mask is used by the controller as the **card number** in **db mode 10** and the controller (**card number location**) must be set to include all the characters in the mask.

The fields are enclosed in curly brackets { } and the number of characters are indicated with a % character. The % character could be followed by a minus (fill in the front) or plus (fill at the back) character.

For example: ?{% -8%F_CD_NUM}{%-2%F_CD_ISSUE1}0.

Ignores first character, selects 8 characters from the card number field (filled with 0 at the front), 2 characters from the issue field (filled with 0 at the front) and the fixed number 0.

On receiving data from the controller, the card is searched for using **all the set fields**, if not found, a card unknown event is generated with the data set in the value field, i.e. all data must match (including the fixed data).

For example MAG cards programmed ;ffffnnnniiF (4 characters facility code = client code*256 + site code, 5 characters card number, 2 characters issue number). Settings required are:

Card 1 mask: {% -10%F_CD_NUM}{%-2%F_CD_ISSUE1}.

Facility location 2 to 5.

Card number location 6 to 12. The issue number is part of the card number in the controller.

e.g. in database card number 12345, issue 67 is used as card 1234567 in the controller.

e.g. in database card number 123, issue 4 is used as card 0012304 in the controller.

The ☛ **COM reader mask** sets the format of the data read from the serial reader connected to the PC and the ☛ **Keyboard card mask** for a reader integrated with the PC keyboard. Integrated MAG readers have a leading ; and end with ?. These characters are used to identify a reader string.

Setting ☛ **Auto Increment card issue**, automatically increments the issue number when a card is programmed. This prevents the duplication of cards (disable the editing of the issue number).

☛ Vending page

See the Vending help files.

☛ Counter page

Card period counter reload is synchronized to time and date/day as set.



11.6 ☛ SoftReport

Reports are generated using Crystal reports, a product from Seagate. Reports consist of designing a report and executing the report. Details are given in SoftRep help.

11.7 **Area Zone Group, Set-up Zone Group**

The area zones to which **area groups** have access to are set by selecting the group from the list via **AccessGroup** and checking the **area zones**. **Reference** is the area zone number. **Time out** limits the time (in minutes) that the card has access to the area zone after entering. If the card does not enter another zone before the time has expired, the card becomes disabled. In installations where **Zone EPROMS** are installed in controllers, access can be denied at different times at different readers (generally only one time group is allocated to a card), requiring the setting of the time group used in each area zone. This is done by setting the card's time group to zero and selecting a **time group** for each zone in the card's time group.

.Batch load is used to add or delete area zones from area groups by selecting the zones to be added (or deleted), selecting batch and moving all groups that are changed to the right list box. The data can be sorted by column by clicking on the reference or name heading.

Records can be ordered by clicking on the column. Password groups are set to have rights to change the area zones that have access. Administrators right click anywhere on the dialog, select the user group and allocate the zones that can be selected to the user group by moving the groups to the visible (right) or invisible box (left). The zone can be made selectable or view only by clicking on the editable  or not editable  icon.

Set-up Group is a separate set of groups used to set zones for certain control functions. Capture groups and count area groups are selected from set-up groups. Capture group is used to set the area zones where cards are captured and count area groups set the area zones that are used for zone counting.

11.8 **Event Print Setup**

Events can be printed as they occur (set for each reader and input). The **Print Font**, the **Printer** used and the **Print Column** are set.

11.9 **Buzzer On/Off**

When events occur that are set for alarms, the PC bleeper is sounded if the bleeper is set for that PC (by a time group in the PC set-up). When sounding, the buzzer icon is displayed as depressed. By clicking on the button, the bleeper is silenced.

11.10 **External System Link**

Set-up and card data residing in databases are generally kept in RAM look-up tables that are read by client programs when started, hence changing of SoftWin3 data residing in databases by external systems generally only takes effect when the SoftWin3 starts running. Set-up changes that have to be sent to controllers are sent when a controller is reset, card data is sent to controllers when the controller is reset or when the data is edited via a SoftWin3 program. Data in the card database edited by an external system and setting the field **F_CD_CHANGED** to 1 for records changed, will result in the card being re-sent to all controllers (the period that this field is checked in set in the PC set-up menu).

11.10.1 **EXTERNAL SYSTEM**

SCS_Client can connect to systems via TCP or a serial link, passing events such as card entering at reader to these systems and receiving data from the systems for control and display (e.g. display the card's accumulation status at the reader).

Data that can be access externally is:

- **Cards.** The local card data is not used and all data is access via the external system.
- **Vending.** The value of subsidy and value is not read from the local card data and is read from the external system.
- **Vend Item.** The local item data is not used and all item data is obtained from the external system.
- **Use Card number.** When checked, the card number is used, when not, the card reference number is used (i.e. the card number is found in the local database and the reference number is used).

The card data used to identify a card in the communication string, is set via the card mask for the two card numbers (**Card1 Mask** and **Card 2 Mask**) that can be used per card holder. The data can be compiled from fixed data and card data fields. The fields are enclose in curly brackets { } and the number of characters are indicated with a % character. The % character could be followed by a **minus** (fill in the front) or **plus** (fill at the back) character, followed by a fill character. Characters set with ? are ignored.

For example: ?{% -7%F_CD_NUM}{%-2%F_CD_ISSUE1}0.

Ignored first character, selects 7 characters from the card number field (filled with 0 at the front), 2 characters from the issue field (filled with 0 at the front) and the fixed number 0.

When selecting a **TCP** talk link, **TCP/IP** is the address of the PC where the guest system is running. It could be on the same PC. The **Port** is the port required by the program to identify it and must be greater than 7000. Softcon programs use port addresses 2555 to 2560. Certain protocols (e.g. Tsogo) require **Routing** and **Terminal** data in the messages, these are set as required.

When selecting a **Serial** talk link, the **COM port number**, **Bits per second**, **Parity**, **Data bits**, **Stop bits** and **Flow** type are selected.

A green circle on the bottom left of the display indicates that communication is established. A red circle indicates no connection.

The type of protocol defines the contents of the data is selected from a list. New protocols could be added upon request. Protocols available are defined in a separate communications document.

Softcon card reader controllers CR351 and CR355 can be set to send special data strings to the PC when guest cards are read, typically **MVG** and **SGM** cards. These stings are converted to event status s40 (guest request), with Z2 (1st 6 digits), Z3 (2nd 6 digits), Z4 (3rd 6 digits) and Z5 (last 2 digits). The digits are converted to number. The access request is sent to the external system, with the reply generating the event with status s41 and value set with the error code. A value of zero results in the barrier (or door) opening automatically. The card holders name and error message as received from the

external system are displayed at the reader. To correctly log and report the event requires the setting Z1 to Z5 in the tables fields and log_fields in softwin3\config\database.mdb, and in softwin\config\access.cfg (CONFIG MAX_MSG_PARM 5, and DB_ITEM DBI_LOGGING_PARM1 to 5). Guest reports with details and totals are available.

For debugging purposes, all external events can be set to be logged in a text file by entering a **Log File** name, with path. The file name could contain date digits by setting YYMMDD in brackets { } as required.

11.10.2 **EXTERNAL FILE**

Clock in and out events can be recorded in special files or databases. Only events from readers that are set to Clock-in or Clock-out are recorded in to these files.

The files are created using the directory and file name as set in the file setting in the menu set-up/external system link/external file. If the file name is based on the date (i.e. a file per day is automatically created when a card clocks, if not existing), data DDMMYY in brackets { } is replaced with date and time. For example:

C:\clock\Cf{YYMMDD}.txt becomes C:\clock\Cf030131.txt (for 2003-01-31).

C:\clock\AB{DD-MM-YYYY}cd.txt becomes C:\clock\AB31-01-2003-cd.txt (for 2003-01-31).

The format of these files or databases depends on the **Type** selected, the available options are listed below (more types could be coded – please contact Softcon):

• **ClockWatch**. The data is store in a flat ASCII text file, one transactions per clock (ending in CR LF). The fields are separated by commas. The length of the variable length fields is the length of the field, until null character or until 2 consecutive spaces are read – which ever if the shortest (spaces at the end are not included).

Employee number (variable number of characters).

Date (10 characters DD-MM- YYYY).

Time (8 characters hh-mm-ss)In / Out (1 letter I=clock-in, O=clock-out).

Reader name

Surname (variable number of characters).

First name (variable number of characters).

Typically:

12,10-08-2002,07-01-00I,Clock In,Smith,John

123,10-08-2002,07-01-34O,Clock Out,van der Merwe,Koos

• **Eds**. The data is store in a flat ASCII text file, one transactions per clock (55 characters, ending in CR LF). The fields are separated by space. The fields in the file are:

Date (10 characters, YYYY-MM-DD).

Time (8 digits, hh:mm:ss).

Reader number (4 digits 0001 to 9999).

Event code (1 letter I=clock-in, O=clock-out).

Employee number (8 characters, filled with leading spaces).

Card reference number (5 digits, filled with leading zeros).

Card ID number (13 digits, filled with leading zeros).

Typically:

2000-01-31 09:02:01 0012 I 123456 01234 5506025123089

2000-01-31 09:10:32 0012 O P0123456 01234 5506025123089

• **Lavie** The data is store in a flat ASCII text file, one transactions per clock (30 characters, ending in CR LF). The fields are:

Reader number (2 digits 01 to 63).

Length indicator (1 digit, always 1).

Employee number (10 digits, filled with spaces at the end).

Filler (1 digit, always 0).

Date (8 characters, DD-MM-YY).

Error code (1 digit, always 0).

Transaction code (2 digits, always 01).

Time (4 digits, hhmm).

Event code (1 letter B=clock-in, E=clock-out).

Typically:

```
2310000123456012-07-020010745B
0610000654321012-07-020010750E
```

Sentri. The data is store in a flat ASCII text file, one transaction per clock (32 characters, ending in CR LF). The fields are:

```
Start (3 digits 010).
2 spaces
Employee number (8 digits, filled with leading zeros).
Sync (1 digit 0).
Date (10 characters YYYY:MM:DD).
Time (5 characters HHhmm)
Space
In / Out (1 letter I=clock-in, O=clock-out).
Space
Sync (2 digits 00)
Space (version 1.01.48 and later)
HH:mm:ss (version 1.01.48 and later)
```

Typically:

```
010 0000000102000:06:13 15h37 I 00 15:37:23
```


ECO. The data is store in a flat ASCII text file, one transaction per clock. The fields are separated by comma, a transaction ends in CR LF. The field maximum lengths are:

```
Record type (1 character C for clock).
Site (4 characters), usually blank.
Card number (10 digits).
Employee number (10 digits).
Date (10 characters DD/MM/YYYY).
Time (8 characters hh:mm:ss).
In / Out (1 letter I=clock-in, O=clock-out).
Reader name (8 characters).
```

Typically:

```
C,,123,Emp123,22/06/2004,08:55:05,I,Main Entrance
```

File sets the path and file name. If the file does not exist, it is created. If exists, data is appended.

The Softcon program  **SCS_ExtFile.exe** regenerates the clock file from the log files (using the clock-in and clock-out settings of the readers). Start and end date-times are set. If existing in the log files, the card data (e.g. employee and ID numbers, name) are obtained from the log file (not from the card database), else from the card database.

11.11 Main mux set-up

Display and setting of the options enabled for the systems via the [security keys](#).

11.12 Log fields

The optional fields that are logged are enabled by ticking the appropriate fields in the log fields set menu. Field description lists the general events that have data in these fields. See [logging](#) for more details.

11.13 Date and time properties

Changing the time and date of the local PC via this menu results in the change being sent to all PCs running linked Softcon SoftWin3 programs (connected to the same SCS_Server.exe application). The changed date/time is also sent to all controllers. PCs date/times are synchronised with the PC set as the **Master DT (PC set-up)** when the applications start and every 90 minutes thereafter. When PCs connect via the distribution server, date/time is set to that of the PC set as Master DT.

Note that changing the date/time via Windows applications will not result in the immediate sending of the changes to controllers or other PCs – this will only be done when the controllers are sent a set-up, become on-line, when applications start or when the automatic periodic synchronizations occur (once an hour for controllers, 90 minutes for PCs). The Windows time/date set applications should thus not be used and should be disabled via policy editors.

12 **PROGRAMS**

Programs are **Limited options** - see [SECURITY](#) settings.

12.1 **SCS_Asset**

Starts the Asset management program.

12.2 **SCS_CardMake**

External Softcon Card Maker program.

12.3 **SCS_Cash**

Starts the add cash program which is used to add value to cardholders for vending and Point Of Sale Applications.

12.4 **SCS_CntlModem**

Starts the Controller Modem driver – dials controller on a schedule.

12.5 **SCS_DistServer**

Starts the distribution server programs which synchronizes the Softcon databases on different systems.

12.6 **SCS_Draw**

Starts the active drawings program.

12.7 **SCS_Email**

Starts the email control program, sending emails on event activation.

12.8 **SCS_Pos**

Starts the Softcon Point Of Sale program.

12.9 **SCS_PPos**

Starts the Softcon Parking Point Of Sale (pay on entry) program.

12.10 **SCS_SMS**

Starts the SMS control program, sending SMS messages on event activation.

12.11 **SCS_Visitor**

Starts the visitor register program.


12.12 **SoftRep**

Starts the report program.


13 TOOLS



13.1 PASSWORDS



Menus and items on menus are set accessible to any number of password **groups**. Any number of **users** are set to be members of users groups, i.e. a users can belong to more that one group – e.g. Peter can belong to the Control Group and to the Vending Group and has access to any menu and item these groups are set for. Adding or deleting users and groups is described below.


When logging on, a user must enter an identification name (not case sensitive) and a password (case sensitive). Passwords can be changed via the  [change password](#) selection by the user and can be set to automatically **expire** and to **auto log-off** (reverts to the default log-on) after time periods in the [general set-up](#) menu.

Administrators in the [menu access](#) menu set access to menus.

Groups are given access to [lists](#) by administrators opening the list, right clicking on any column name and selecting the group access option , and selecting the groups that have access to the list. When saving a list using save as, the groups can also be selected. A logged on user whose groups do not have access to a list, does not see the list in the list selection box. If a user only has access to one list in a list selection box, the list is automatically opened.

Administrators can set **items** in lists and in property sheets as invisible, visible and editable. For [lists](#), this is set by right clicking on the column name and selecting properties, moving the item to the visible box and changing to editable  or not . For [property sheets](#), administrators right click on the item (defaults to the item) or anywhere on the sheet, select the item and set the groups that have access and set editable or not.

The  option enables selection of an item of the list box, but not editing the description of the list item (combo box).  Allows for selection and editing (when the item list is a combo box).

The right to select **area zones** when setting a access or set-up area group is set by administrators. If the zone cannot be added or deleted from the area group, clicking on the zone does not change the setting. To allow the selection of the zone, the administrator selects any zone group display via the set-up menu [AreaZoneGroup](#) or Set-upZoneGroup, or via a card property sheet, via any AreaZoneGroup selection . Right clicking on the zone and selection of Access to Item displays the groups that have access to the item. Items are made visible by moving the group(s) the visible box and changing the item to editable or not.

When [FP log-on](#) is enabled (see FP logon), a password is not required.

13.2 Logon/off




Changed the logged on user.

13.3 Change Password

Changes the password of a user. The old password must be entered and the new password must be confirmed. Passwords are displayed with *. Passwords can be set to expire automatically, see [password period](#).




13.4 User Groups



Adds or deletes users to a group. All users who do not belong to the group are displayed in the **Not member of** box on the left. Users that belong to the group are displayed in the **Member of** box on the right. User are moved to the left or right box by highlighting the names by clicking on the user (shift or control click allows for multi-selections) and clicking on the left or right arrows.

Edit allows the **adding** of new groups by selecting  and entering a group name.  **deletes** the selected group(s). To **rename** a group, select the group and select . Alternatively, click on the group name, pause and click again.

13.5 Users

Adds or creates new users.

Edit allows the **adding** of new users by selecting  and entering a user name.  deletes the selected group(s). To **rename** a user, select the user and select . Alternatively, click on the user name, pause and click again.

A user is **linked** to a cardholder by clicking on the user and selecting . Operator events that are logged with the linked cards, facilitating the reporting of operator name for the event. The password of a user is changed by clicking on the user and selecting the **change password** icon .

13.6 Menu Access

Access to menus are set for user groups by operators that have access to the **Menu Access** option. Menus are made accessible by selecting the group and moving the to the appropriate menus to the accessible box on the right.

13.7 Activity

Displays activities as they occur. Selecting the run option in the tools menu can stop the displays. The display is in the same format as a list editor, allowing the change of column width, order and sort by clicking on the column names and drawing as required. Columns are enabled or hidden or colour changed as described for list editors above. Records can also be filtered as described for list editors. Multiple activity windows can be created, typically one window showing all transactions, another only showing card events.

Two activity menus are shipped as standard, **Alarm Activity** (filtering alarms only) and **Main Activity**. Main activity displays all events with red for alarms, **blue** for Access events, **turquoise** for input events and all other events in **black**.

13.8 Event Printer

Events can me printed as they occur. This required the printer set-up and column set-up as described in this document.

13.9 Print cards

With the **Card Maker** option enabled, card can be printed via the card property menu or as a batch via the print cards in the tools menu. The **card references** are separated by commas and ranges are separated by dash, e.g. 1-10,14,18 (cards 1 to 10 and cards 14 and 18). A **delay** in milliseconds sets the time between prints and prevents the printer buffer from overflowing. The **label file** sets the card label to be used for print, if not set, the labels as set for each card is used. The **last card** printed is updated when the print is completed (sent to buffer).

14 TEST TOOLS

A number of test tools are available to aid in the installation and debugging of problems encountered on site. The use of these tools requires special advanced training and the details are not listed in this manual. These options are generally not enabled for the user. Details are available from Softcon. The options available are listed here for completeness. Right click on a window lists clear, cut, copy and paste options.

Simulator data is edited and set in text files, by default in the c:\softwin3\test database (sample files are shipped). Default file extensions are:

- .smo - Mux out.
- .smi – Mux in.
- .sim – event simulator

// is used to mark the start of comments – till the end of the line. Special commands available are:

- def** xx yy. Defines xx equal to yy for following data follow, e.g.:
DEF node 01 where node used, replaced with 01.
- label** xx. Goto jumps to the label, e.g. label aaa.
- goto** xx. E.g. goto aaa.
- speed** xx. Sets the time in msec before executing next line, e.g. speed 10000 sets 10 seconds.
- wait** xx. Waits xx msec before executing next line, wait 15000 waits 10 seconds.
- @D @h @m @s.** Use the current PC date, hour, minute and second.

14.1 New Mux Out Simulator

14.2 Open Mux Out Simulator

14.3 New Mux In Simulator

14.4 Open Mux In Simulator

14.5 Mux Messages

Data sent to and received from the Softcon Mux cards are displayed in HEX code. The code depends on the controller type selected in the [controller Set-up](#) menu and on the message type. Messages are given in tabular format in the [controller](#) section. The Mux messages option can only be selected when the tools/test options/mux log messages option is enabled. Right clicking on the red window provided options to dis/enable data to/from, filter only specific node, not show FA (idle), ID and node messages.

14.6 New Event Simulator

14.7 Open Event Simulator

14.8 Event Messages

14.9 Run Line F8

14.10 Run... F9

14.11 Test Options

When using the simulators and monitors listed above, certain options are available and are listed here for completeness. Details are available from Softcon.

- ⌘ **Test without hardware** Test of the system without connection to controllers. Enabling this option results in data being given to the mux card (and displayed in the Mux Messages) even if the controller is off-line. When starting SCS_Client and the message "You are in the ⌘mode 'TEST WITHOUT HARDWARE' "
- ⌘ **MuxLog Messages** Displays the data sent and received from the mux code. The data displayed is in hex code.
- ⌘ **Event Log Messages** Events generated in the system.
- ⌘ **All Activity Messages** When enabled, event from any client connected to SCS_Server are displayed in activity. If not enabled, only locally generated message are displayed. If all are not required, this option should be switched off, limiting unnecessary messaging between PCs.

15 **VIEW**

15.1 **Toolbar**

En-disables the hotkey toolbar.

15.2 **Simulator Bar**

En-disabled the simulator toolbar.

15.3 **Vend ToolBar**

En-disabled the vend tollbar.

15.4 **Status Bar**

En-disables the status bar.

15.5 **Refresh F5**

Redraws the selected window.




15.6 **Find... Cntrl+F**

Opens the find dialog box as described above.

15.7 **Find Next F3**

Find next record after Find was selected.

16 **WINDOW**

Normal Windows ordering of multiple open windows is by the selection of  **Cascade**,  **Tile Horizontally** and  **Tile Vertically**

17 **HELP**

Access to this file is by selection of the help option or selecting F1. Topic help is currently only via the help menu.

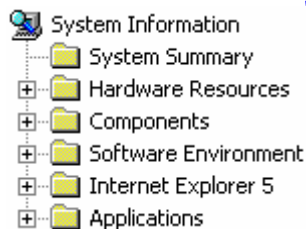
17.1 **HELP Topic**

17.2 **About Softcon Client**

Displays general information on the program, with parameters available when starting the program.



17.3 **System Info**



17.4 **RAM Dump**

Data in RAM can be viewed via this menu, which is only available to Softcon development staff. Access is via passwords.

17.5 **dB10 Files**

SCS_Client keeps tables for controllers that have readers that use the random number database dB10 (card number is not the reference). These are lookup tables that reference the card database reference (card.reference) to the controller database reference and stores the last time/date the card reference in the controller was used/updated. These files are Softcon .sys binary files (enhanced speed and less susceptible to corruption) and are stored in softwin3\temp\db10, with a file for each controller (cntrlx.sys where x is the

controller reference number). Should this file be deleted, a new file is automatically created, data is entered when the controller is reset or when card data is sent to the controller. The data in the .sys file can be viewed via the menu help\db10 files. The data can be sorted by clicking on the column name. Viewed data can be printed.

18 ACCUMULATION

Accumulation and link to **external systems** are Limited to certain versions - see [SECURITY](#) settings.

The SoftWin3 system can be set to perform an overall time accumulation of how long each cardholder was "on site". Full time and attendance is available by linking to T&A systems.

The provided accumulation functions as follows:

When a card enters via any reader in the system which is set as a **clock-in** reader (see [READER SET-UP](#)), accumulation for that card start and ends when the card enters (exits) via any reader set as a **clock-out** reader.

Three totals are kept: a **daily**, **weekly** and a **monthly** total. The daily total is cleared at the end of the day, the weekly at the end of day and the end of the week, and the monthly total on the day end, and at the end of the month (see [GENERAL SET-UP](#) for day, week and month end set-up). On week or month end, all cards with totals for the week or month respectively, are logged and cleared of daily and weekly or monthly totals. On other day ends, only cards with daily totals are logged and cleared of daily totals.

Before any total is cleared (at day end), an accumulation log file is created, which is loaded with all cards which have accumulation totals. These accumulation files contains the card number, and the current day, week and month totals and are used in generating [ACCUMULATION REPORTS](#)

The following must be noted: Cards that equal 24 hr accumulation for the day (which indicates that the card did not clock out), are given a total of 0.

T&A SYSTEMS

Numerous Time and Attendance and payroll systems interface to Softcon Access systems and vary on functionality and features. Generally the Softcon system provides the clock in and out times to such systems which then calculate the effective hours worked and what salaries and wages are to be paid out. See [external file](#).

Clock in and out times. As all events are stores in log files, the clock times can read in the daily log files. The clock in/out events have the following data in the fields as indicated:

date	yyyy-mm-dd.
time	hh:mm:ss.
type	1 (reader).
sysno	reader number (specific readers are set to clock in/out, referenced to ACCESS.MDB reader_status.reference). Field reader_status.accume set to 1 for clock in, 2 for clock out.
status	22 (card entered).
xref	card reference number (reference field in the card database ACCESS.MDB card_data.reference).
employ	employment number (requires specific set-up).

Additional data for the card is available in ACCESS.MDB card_data, e.g. employ, ID, department, etc.

As an alternative, a special SW driver can be set which logs the clock in/out events in dedicated file(s). A variety of drivers are available (see [external file](#)). which have been specifically tailored to the T&A system requirements. These log files are typically "flat ASCII" files, with a line per clock in/out. A typical format of the line is:

```
010 space space employ_ ment_nr 0 yyyy-mm-dd space hh:mm x 00 crlf
```

where the employment number is 8 characters and x=I for clock in and x=O for clock out. The characters 010, 0 and 00 are used as check/synchronisation characters. The employment number can be replaced by the card number. Separating character can also be changed. Typically:

```
010 0000000102000:06:13 15h37 I 00
010 0000000202000:06:13 15h37 I 00
010 0000000202000:06:13 17h37 O 00
010 0000000102000:06:13 15h42 O 00
010 0000000202000:06:14 05h15 I 00
010 0000000202000:06:14 15h42 O 00
010 0000000302000:06:15 08h22 I 00
```

The file name and path into which the clock data is written is set in the file ACCESS.CFG. If the file does not exist, a new file is created when a card clocks in/out. The T&A system renames the file before reading the data.

Data sharing. In order to eliminate the duplicate entry of data in the Softcon Access system and the T&A system, the data can be shared in one of two methods:

Shared database. The common fields of data are located in a central database, which is accessed by both systems. The Access system must be able to access this data in real time, i.e. the database must always be available when card transactions take place. The database type can be of any type for which an ODBC driver exists. Where networks and servers are not always available, the database should be located on the Access PC which acts as server.

Updated database. Systems have been implemented where the T&A system updates the Access database directly when changes are made. This is transparent to the Access system, which simply uses the latest data in the database. Changes to access related fields (e.g. card enable status, start/expiry times) are automatically checked against the last known copy (the period of setting is set in the file ACCESS.CFG), resulting in the update of remote access controller databases.

Changes to the cardholder data can be reported to the Access system via a comms ("communication") file. The format of this file is adapted to the specifications of the T&A system. A typical format in a "flat ASCII" file is:

"Bond, James", "1042563", "012 3487301", "1"

A set-up file contains the following (this file is created once):

Delimiter type (i.e. the character used as separator between the fields of data – in the example a comma is used);

Destination data table source name.

Destination field name for each data section (e.g. name, employ, phone, status);

Field name for the reference field (e.g. employ).

The Access system renames the comms file (the path and file name is set in the file ACCESS.CFG) and overwrites the fields (the record is found using the reference file) with the data in the comms file. If the record is not found, an unused record is used or a new one is added.

19 **BACKUP**

Backup of data files is done by running .BAT files, via external schedulers, exe events, operator exe buttons on drawings or by simply executing the bat files via Windows Run or explorer selection of the file.

C:\SoftWin3\Backup_c.BAT is provided that makes compressed (zipped) backups of the following files:

To C:\SoftWin3\Backup**Config.ZIP**:

C:\SoftWin3\Config\Config.mdb

C:\SoftWin3\Config\Database.mdb

To C:\SoftWin3\Backup**Database.ZIP**:

C:\SoftWin3\Database\Access.mdb

C:\SoftWin3\Database\Area.mdb

C:\SoftWin3\Database\Card.mdb

C:\SoftWin3\Database\Drawing.mdb

C:\SoftWin3\Database\Report.mdb

C:\SoftWin3\Database\Symbol.mdb

C:\SoftWin3\Database\Vend.mdb

C:\SoftWin3\Database\Visitor.mdb

Four backup copies are kept in C:\SoftWin3\Backup, the latest copy has the file extension .ZIP, followed by .1, .2 and the oldest is .3.

A default timed event is set to run an exe event that executes backup_c.bat at midnight every day.

20 CONTROLLERS

Softcon controllers or panels that can be connected to the system are:

20.1 COM350

The COM350 is the MUX card installed in the PC. The card also has I/O that can be used. This has not been activated in SoftWin3.

20.2 CR351/4

In the dB10 mode, the controller database is 2400 and 20000 for dB2. Transactions are only time stamped (not date) and the off-line buffer is 400. The port functions are fixed. See [CR351 set-up](#).

CR351 TABLE: DATA TO CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	Description	Event
02h	00h	1or0											Buzzer on or off	t3 p6 s50 v1 or 2
02h	01h	1or0											Open or close latch 1	t3 p1 s50 v1 or 2
02h	01h	3or2											Open or close latch 1 per	t3 p1 s50 v3 or 4
02h	02h	1or0											Open or close latch 2	t3 p2 s50 v1 or 2
02h	02h	3or2											Open or close latch 2 per	t3 p2 s50 v3 or 4
03h	03h	1or0	pulse 1,2										Open or close aux 1	t3 p3 s50 v1 or 2
03h	03h	3or2	pulse 1,2										Open or close aux 1 per	t3 p3 s50 v3 or 4
01h	09h												I/O request	t4 n? s6 v0
01h	18h												LED R1 flash	t3 p7 s50 v1
01h	19h												LED R2 flash	t3 p8 s50 v1
05h	20h	xLs	xMs	status	tg 2								Card set-up dB2	t4 n? s27 xref
08h	20h	xLs	xMs	status	Pin 1	Pin 2	Pin 3	Pin 4					Card set-up dB6	t4 n? s27 xref
0Ch	20h	xLs	xMs	status	B10	B32	B54	B76	PinL	PinM	tg2	B98	Card set-up dB10	t4 n? s27 xref
01h	F0h												Version request	t4 n? s6 v0
04h	F1h	0	0	0									Controller type CR355	t4 n? s4 x100
03h	F1h	1	click										Latch click	t4 n? s4 x100
03h	F1h	2	complete										Action complete	t4 n? s4 x100
03h	F1h	3	booth										Booth	t4 n? s4 x100
03h	F1h	4	latch										Latch NOC	t4 n? s4 x100
03h	F1h	5	doors										Doors	t4 n? s4 x100
03h	F1h	6	capture										Capture	t4 n? s4 x100
04h	F1h	7	r1 ena	r2 ena									Rd enable on loop	t4 n? s4 x100
03h	F1h	8	APB res										APB reset	t4 n? s4 x100
03h	F1h	9	aux out										Aux out	t4 n? s4 x100
03h	F1h	0Ah	dB mode										DB mode, own tg, PIN dB	t4 n? s4 x100
03h	F1h	0Bh	client										Client code	t4 n? s4 x100
03h	F1h	0Ch	Site										Site code	t4 n? s4 x100
04h	F1h	0Dh	APB r1	APB r2									Reader APB	t4 n? s4 x100
05h	F1h	0Eh	10H+H	date	mon								Set holidays	t4 n? s4 x2
03h	F1h	0Fh	Bits										Card type	t4 n? s4 x100
07h	F1h	10h	00H-07H	Shr	Smin	Ehr	Emin						Set access tz 1-8	t4 n? s4 x3
07h	F1h	10h	08H-0FH	Shr	Smin	Ehr	Emin						Set reader tz 1-8	t4 n? s4 x3
07h	F1h	10h	10H-17H	Shr	Smin	Ehr	Emin						Set pin tz 1-8	t4 n? s4 x3
07h	F1h	10h	18H-1FH	Shr	Smin	Ehr	Emin						Set latch tz 1-8	t4 n? s4 x3
07h	F1h	10h	20H-27H	Shr	Smin	Ehr	Emin						Set input tz 1-8	t4 n? s4 x3
07h	F1h	10h	28H-2FH	Shr	Smin	Ehr	Emin						Set output tz 1-8	t4 n? s4 x3
0Bh	F1h	10h	40H-4EH	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set access tg 1-15	t4 n? s4 x10
0Bh	F1h	10h	4FH,50H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set R1, R2 tg	t4 n? s4 x11
0Bh	F1h	10h	51H,52H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set P1, P2 tg	t4 n? s4 x12
0Bh	F1h	10h	53H,54H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set D1, D2 latch tg	t4 n? s4 x13
0Bh	F1h	10h	55H-63H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set input tg 1-15	t4 n? s4 x14
0Bh	F1h	10h	64H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set AUX out tg	t4 n? s4 x15
03h	F1h	11h	LRC										Card type	t4 n? s4 x100
03h	F1h	12h	offset Ls	offsetMs									Card offset	t4 n? s4 x100
06h	F1h	13h	S fac	E fac	S nr	Enr							Facility, nr start, end	t4 n? s4 x100
03h	F1h	14h	beep										Beep mode	t4 n? s4 x100
04h	F1h	15h	Long Ls	long Ms									Door open too long	t4 n? s4 x100
03h	F1h	16h	latch										Latch time	t4 n? s4 x100
03h	F1h	17h	Try										Illegal attempts	t4 n? s4 x100
03h	F1h	18h	disable										Disable time	t4 n? s4 x100
03h	F1h	19h	ATB										ATB	t4 n? s4 x100
03h	F1h	1Dh	Leds										Led type	t4 n? s4 x100
04h	F1h	25h	isolate r1	isolate r2									Isolate readers	t4 n? s4 x100
06h	F1h	26h	p3L3tg	p3L3tg	p4L3tg	p4L3tg							Door illegal time groups	t4 n? s4 x100

0Ah F1h 27h p5L1tg	p5L2tg	p6L1tg	p6L2tg	p7L1tg	p7L2tg	p8L1tg	p8L2tg	Aux input time groups	t4 n? s4 x100
0Ch F1h 60h 0,1	name..	..	..	..	..	..	..	1,2 half10 chars R1 name	t4 n? s4 x100
0Ch F1h 61h 0,1	name..	..	..	..	..	..	..	1,2 half 10 chars R2 name	t4 n? s4 x100
09h F4h s M	h	DOW	D	M	Ys	YMs		Set the time	t4 n? s4 x1
03h 03h 3or2	pulse 1,2							Open or close aux 1 per	t3 p3 s50 v3 or 4
02h 00h 1or0								Buzzer on or off	t3 p6 s50 v1 or 2
01h 18h								LED R1 flash	t3 p7 s50 v1
01h 19h								LED R2 flash	t3 p8 s50 v1

CR351 TABLE: DATA FROM CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	Description	Event
05h	01h	H	M	s	0or1								L1 closed or open	t3 p1 s1050 v2 or 3
05h	01h	H	M	s	0or1								L2 closed or open	t3 p2 s1050 v2 or 3
04h	10h	H	M	s									Open too long D1	t2 p3 s1050 v4
04h	11h	H	M	s									Open too long D2	t2 p4 s1050 v4
04h	16h	H	M	s									Open illegally D1	t2 p3 s1050 v3
04h	17h	H	M	s									Open illegally D2	t2 p4 s1050 v3
04h	34h	H	M	s									Door 1 open	t2 p3 s1050 v2
04h	35h	H	M	s									Door 2 open	t2 p4 s1050 v2
04h	36h	H	M	s									Door 1 closed	t2 p3 s1050 v1
04h	37h	H	M	s									Door 2 closed	t2 p4 s1050 v1
04h	30h	H	M	s									Egress 1	t2 p1 s50 v1
04h	31h	H	M	s									Egress 2	t2 p2 s50 v1
04h	40h	H	M	s									Aux 1 closed	t2 p5 s1050 v1
04h	41h	H	M	s									Aux 1 open	t2 p5 s1050 v2
04h	42h	H	M	s									Aux 2 closed	t2 p6 s1050 v1
04h	43h	H	M	s									Aux 2 open	t2 p6 s1050 v2
04h	44h	H	M	s									Aux 3 closed	t2 p7 s1050 v1
04h	45h	H	M	s									Aux 3 open	t2 p7 s1050 v2
04h	46h	H	M	s									Aux 4 closed	t2 p8 s1050 v1
04h	47h	H	M	s									Aux 4 open	t2 p8 s1050 v2
04h	4Bh	H	M	s									Aux out closed	t3 p3 s52 v1
04h	4Ch	H	M	s									Aux out open	t3 p3 s52 v2
0Bh	21h	H	M	s	xL	xM	b10	b32	b54	b76	b98		Card entered R1	t1 p1 s1022 xref vtrg
0Bh	22h	H	M	s	xL	xM	b10	b32	b54	b76	b98		Card entered R2	t1 p2 s1022 xref vtrg
0Bh	25h	H	M	s	xL	xM	b10	b32	b54	b76	b98		Duress PIN R1	t1 p1 s1039 xref vtrg
0Bh	26h	H	M	s	xL	xM	b10	b32	b54	b76	b98		Duress PIN R2	t1 p2 s1039 xref vtrg
0Bh	27h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out out time R1	t1 p1 s1021 xref vtrg
0Bh	28h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out out time R2	t1 p2 s1021 xref vtrg
0Bh	29h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out area R1	t1 p1 s1020 xref vtrg
0Bh	2Ah	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out area R2	t1 p2 s1020 xref vtrg
0Bh	2Bh	H	m	s	xL	xM	b10	b32	b54	b76	b98		Wrong PIN R1	t1 p1 s1026 xref vtrg
0Bh	2Ch	H	m	s	xL	xM	b10	b32	b54	b76	b98		Wrong PIN R2	t1 p2 s1026 xref vtrg
0Bh	32h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Door not opened R1	t2 p3 s1050 xref v5 or 7
0Bh	33h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Door not opened R2	t2 p4 s1050 xref v5 or 7
0Bh	58h	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card capture R1	t1 p1 s1032 xref vtrg
0Bh	5Ah	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card capture R2	t1 p2 s1032 xref vtrg
0Bh	5Bh	H	m	s	xL	xM	b10	b32	b54	b76	b98		ATB error R1	t1 p1 s1046 xref vtrg
0Bh	5Ch	H	m	s	xL	xM	b10	b32	b54	b76	b98		ATB error R2	t1 p2 s1046 xref vtrg
10h	60h	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	MVG request R1	t1 p1 s40 z1 z2 z3 z4
10h	61h	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	MVG request R2	t1 p1 s40 z1 z2 z3 z4
0Bh	F0h	ver..	..	..	..	..	..	..	..	..	..		Version	
04h	F7h	H	m	s									Powered up	t4 n? s3
01h	F8h												Off line	t4 n? s2
01h	F9h												On line	t4 n? s1
04h	FBh	3	node	stat									Node status	t4 n? s1-2

When the events are generated, P numbers are replaced with N numbers containing the reference numbers (e.g. for t2, n is the input reference number).

20.3 [#]CR355

The CR355 can be set to function as a [CR351](#) or as a CR355 by selecting the CR351 or CR355 translator in the controller menu. In the CR351 or CR355 mode, the number of transactions buffered when off-line is 1000 compared to 400 for CR351/4.

Using the CR355 controller type setting sets the number of cards in the controller to 64000 for dB2, 10000 for dB10 with PIN and 15000 for dB10 without PIN settings. CR355 also date stamps transactions.

I/O ports are set with functions (e.g. port 1 is Action complete) and the 16 inputs can be supervised. This is done by setting the input type and setting the number of levels per input (see [Input Set-up](#)). I/O ports are:

	INPUTS	OUTPUTS
Base PCB:	1 to 16	1 to 14
Front module 1:	17 to 20	15 to 23
Front module 2:	21 to 24	24 to 32

Outputs are:

Port	Name	Default
1	CR355 Relay 1	Latch 1
2	CR355 Relay 2	Latch 2
3	CR355 Relay 3	Buzzer 1
4	CR355 Relay 4	Capture 1
5	CR355 Aux 1	Aux out
6	CR355 Aux 2	Aux out
7	CR355 Rd 1, Green	Rd 1, Green
8	CR355 Rd 1, Yellow	Rd 1, Yellow
9	CR355 Rd 1, Red	Rd 1, Red
10	CR355 Rd 2, Green	Rd 2, Green
11	CR355 Rd 2, Yellow	Rd 2, Yellow
12	CR355 Rd 2, Red	Rd 2, Red
13	CR355 Virtual	Rd 1 enable
14	CR355 Virtual	Rd 2 enable
15	Front 1 Relay 1	Aux out
16	Front 1 Relay 2	Aux out
17	Front 1 Aux 1	Aux out
18	Front 1 Aux 2	Aux out
19	Reserved for future	
20	Front 1 Rd 1, Green	Aux out
21	Front 1 Rd 1, Yellow	Aux out
22	Front 1 Rd 1, Red	Aux out
23	Front 1 virtual	Aux out
24	Front 2 Relay 1	Aux out
25	Front 2 Relay 2	Aux out
26	Front 2 Aux 1	Aux out
27	Front 2 Aux 2	Aux out
28	Reserved for future	
29	Front 2 Rd 1, Green	Aux out
30	Front 2 Rd 1, Yellow	Aux out
31	Front 2 Rd 1, Red	Aux out
32	Front 2 virtual	Aux out

Output ports 13 and 23 are virtual (not available on a terminal) ports used to set reader 1 enable and ports 14 and 32 are virtual ports to set reader 2 enable. Certain versions of CR355 do not allow using the LED outputs as configurable outputs.

Message to/from the controller are:

CR355 DATA TO CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	Description	Event
04h	00h	port	Val		xpul								Control output	t3 p? s50 xpul vval
01h	09h												I/O request	t4 n? s6 v0
05h	20h	xLs	xMs	status	tg 2								Card set-up dB2	t4 n? s27 xref
08h	20h	xLs	xMs	status	Pin 1	Pin 2	Pin 3	Pin 4					Card set-up dB6	t4 n? s27 xref
0Ch	20h	xLs	xMs	status	B10	B32	B54	B76	PinL	PinM	tg2	B98	Card set-up dB10	t4 n? s27 xref
01h	F0h												Version request	t4 n? s6 v0
03h	F0h	0	uP										Version request uP	t4 n? s6 v0
03h	F0h	1	uP										ID request uP	t4 n? s6 v0
04h	F1h	0	0	1									Controller type CR355	t4 n? s4 x100
06h	F1h	0	1	port	type	levels							Input type, levels	t4 n? s4 x100
05h	F1h	0	2	port	type								Output type	t4 n? s4 x100
07h	F1h	0	3	F1	F2	F3	F4						Front processors	t4 n? s4 x100
0Ch	F1h	0	4	port	T1	T2	T3	T4	P1	P2	P3	P4	Input port type	t4 n? s4 x100
07h	F1h	0	5	port	level	cntLs	cntMs						Input port count	t4 n? s4 x100
03h	F1h	1	click										Latch click	t4 n? s4 x100
03h	F1h	2	complete										Action complete	t4 n? s4 x100
03h	F1h	3	booth										Booth	t4 n? s4 x100
03h	F1h	4	latch										Latch NOC	t4 n? s4 x100
03h	F1h	5	doors										Doors	t4 n? s4 x100
03h	F1h	6	capture										Capture	t4 n? s4 x100
04h	F1h	7	r1 ena	r2 ena									Rd enable on loop	t4 n? s4 x100
05h	F1h	0Ah	dB mode	own tg	pin								DB mode, own tg, PIN dB	t4 n? s4 x100
03h	F1h	0Bh	client										Client code	t4 n? s4 x100
03h	F1h	0Ch	Site										Site code	t4 n? s4 x100
04h	F1h	0Dh	APB r1	APB r2									Reader APB	t4 n? s4 x100
05h	F1h	0Eh	10H+H	date	mon								Set holidays 0+	t4 n? s4 x2
03h	F1h	0Fh	Bits										Card type	t4 n? s4 x100
07h	F1h	10h	00H-07H	Shr	Smin	Ehr	Emin						Set access tz 1-8	t4 n? s4 x3
07h	F1h	10h	08H-0FH	Shr	Smin	Ehr	Emin						Set reader tz 1-8	t4 n? s4 x3
07h	F1h	10h	10H-17H	Shr	Smin	Ehr	Emin						Set pin tz 1-8	t4 n? s4 x3
07h	F1h	10h	18H-1FH	Shr	Smin	Ehr	Emin						Set latch tz 1-8	t4 n? s4 x3
07h	F1h	10h	20H-27H	Shr	Smin	Ehr	Emin						Set input tz 1-8	t4 n? s4 x3
07h	F1h	10h	28H-2FH	Shr	Smin	Ehr	Emin						Set output tz 1-8	t4 n? s4 x3
0Bh	F1h	10h	40H-4EH	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set access tg 1-15	t4 n? s4 x10
0Bh	F1h	10h	4FH,50H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set R1, R2 tg	t4 n? s4 x11
0Bh	F1h	10h	51H,52H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set P1, P2 tg	t4 n? s4 x12
0Bh	F1h	10h	53H,54H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set D1, D2 latch tg	t4 n? s4 x13
0Bh	F1h	10h	55H-63H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set input tg 1-15	t4 n? s4 x14
0Bh	F1h	10h	64H-72H	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8		Set output tg 1-15	t4 n? s4 x15
03h	F1h	11h	LRC										Card type	t4 n? s4 x100
03h	F1h	12h	offset Ls	offsetMs									Card offset	t4 n? s4 x100
06h	F1h	13h	S fac	E fac	S nr	Enr							Facility, nr start, end	t4 n? s4 x100
03h	F1h	14h	beep										Beep mode	t4 n? s4 x100
04h	F1h	15h	Long Ls	long Ms									Door open too long	t4 n? s4 x100
03h	F1h	16h	latch										Latch time	t4 n? s4 x100
03h	F1h	17h	Try										Illegal attempts	t4 n? s4 x100
03h	F1h	18h	disable										Disable time	t4 n? s4 x100
03h	F1h	19h	ATB										ATB	t4 n? s4 x100
03h	F1h	1Dh	Leds										Led type	t4 n? s4 x100
04h	F1h	25h	isolate r1	isolate r2									Isolate readers	t4 n? s4 x100
0Ah	F1h	28h	Port	L1tg	L2tg	L3tg	L4tg	L5tg	L6tg	L7tg			Input time groups	t4 n? s4 x100
04h	F1h	29h	Port	L1tg									Output time groups	t4 n? s4 x100
0Ch	F1h	60h	0,1	name..	..	..	..	..	..	..	..	..	1,2 half 10 chars R1 name	t4 n? s4 x100
0Ch	F1h	61h	0,1	name..	..	..	..	..	..	..	..	..	1,2 half 10 chars R2 name	t4 n? s4 x100
09h	F4h	s	M	h	DOW	D	M	YLS	YMs				Set the time	t4 n? s4 x1

CR355 TABLE: DATA FROM CONTROLLER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	Description	Event
0Ch	21h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98		Card entered R1	t1 p1 s1022 xref vtrg
0Ch	22h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98		Card entered R2	t1 p2 s1022 xref vtrg
0Ch	25h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98		Duress PIN R1	t1 p1 s1039 xref vtrg
0Ch	26h	D	H	M	s	xL	xM	b10	b32	b54	b76	b98		Duress PIN R2	t1 p2 s1039 xref vtrg
0Ch	27h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out out time R1	t1 p1 s1021 xref vtrg
0Ch	28h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out out time R2	t1 p2 s1021 xref vtrg
0Ch	29h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out area R1	t1 p1 s1020 xref vtrg
0Ch	2Ah	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card out area R2	t1 p2 s1020 xref vtrg
0Ch	2Bh	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Wrong PIN R1	t1 p1 s1026 xref vtrg
0Ch	2Ch	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Wrong PIN R2	t1 p2 s1026 xref vtrg
0Ch	32h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Door not opened R1	t2 pport s1050 xref v5 or 7
0Ch	33h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Door not opened R2	t2 pport s1050 xref v5 or 7
05h	38h	D	H	m	s									Wrong card format R1	t1 p1 s1044
05h	39h	D	H	m	s									Wrong card format R2	t1 p2 s1044
05h	3Ah	D	H	m	s	cc	sc	b10	b32	b54	b76	b98		Wrong facility R1	t1 p1 s1045
05h	3Bh	D	H	m	s	cc	sc	b10	b32	b54	b76	b98		Wrong facility R2	t1 p2 s1045
0Ch	58h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card capture R1	t1 p1 s1032 xref vtrg
0Ch	5Ah	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		Card capture R2	t1 p2 s1032 xref vtrg
0Ch	5Bh	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		ATB error R1	t1 p1 s1046 xref vtrg
0Ch	5Ch	D	H	m	s	xL	xM	b10	b32	b54	b76	b98		ATB error R2	t1 p2 s1046 xref vtrg
11h	60h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	MVG request R1	t1 p1 s40 z1 z2 z3 z4
11h	61h	D	H	m	s	xL	xM	b10	b32	b54	b76	b98	bBA	MVG request R2	t1 p1 s40 z1 z2 z3 z4
07h	80h	D	H	m	s		port val							Input changed	t2 pport s1050 vval
07h	81h	D	H	m	s		port val							Output changed	t3 pport s52 vval
09h	82h	D	H	m	s		port level cntL cntM							Count changed	t6 nSys s70-2 xin vcnt z1lev
0Bh	F0h	ver..	..	..	..	..	..	..	..	..	..	..	..	Version	
0Dh	F0h	0	uP	ver..	..	..	..	..	..	..	..	..	..	uP Version	
0Dh	F0h	1	uP	ID..	..	..	..	..	..	..	..	..	..	uP ID	
05h	F7h	D	H	m	s									Powered up	t4 n? s3
01h	F8h													Off line	t4 n? s2
01h	F9h													On line	t4 n? s1
04h	FBh	3	node	stat										Node status	t4 n? s1-2

Pport is calculated from the port number or referenced via the input port type (e.g. action complete 1 from door not opened R1). When the events are generated, P numbers are replaced with N numbers containing the reference numbers (e.g. for t2, n is the input reference number).

20.4 [#]DF350

DF350 is an I/O controller with 16 analogue (8 bit) inputs (ports 1 to 16) and 8 outputs (ports 1 to 8). Output port 8 is a relay output and the others are open collector.

20.5 [#]DF355/6

These I/O controllers have 96 analogue (8 bit) inputs (ports 1 to 96) and 8 relay outputs (ports 1 to 8). The DF356 has an additional 8 analogue (12 bit) inputs (ports 97 to 104). Both use the DF355 controller type setting.

20.6 [#]DP350

The DP350 is a vending controller and uses the Vending controller type setting.

20.7 [#]MD350 MIMIC DRIVER CONTROLLER

The Softcon MD350 controller is an input/output (I/O) controller (using the same HW as the MD351) with special SW functions to drive 2 x 64 LED matrixes. Note that the controller requires a SW3 version EPROM (controller sends date and time with data on lamp test and accept).

The LED's are each defined as an output, with level 1 off and level 2 on. A virtual level of 3 is for flashing at a rate set for output level 3 pulse rate (500msec increments, generally set to 51). Each LED is switched via event to off, on or flashing, typically:

FLASH LED if door is opened illegally (value 3), too long (level 4) or not opened (level 5)

Event: LED 1 FLASH: algorithm 1+2+3

	Type	output	system	LED 1	status	level_change	value	3	xref	0
ref 1	Type	input	system	door 1	status	level_change	value	3	xref	0
ref 2	Type	input	system	door 1	status	level_change	value	4	xref	0
ref 3	Type	input	system	door 1	status	level_change	value	5	xref	0

LED ON if accept by PC (via DDE button on a SoftDraw drawing, generating the event t1, n0, s101,x0 v0 – being input 0 or all, operator accept); or input button and door is still in alarm state

Event: LED 1 ON: algorithm (4+5+6)*(7+8)

	Type	output	system	LED 1	status	level_change	value	2	xref	0
ref 4	Type	input	system	door 1	status	in_value	value	3	xref	0
ref 5	Type	input	system	door 1	status	in_value	value	4	xref	0
ref 6	Type	input	system	door 1	status	in_value	value	5	xref	0
ref 7	Type	input	system	all	status	operator_accept	value	0	xref	0
ref 8	Type	input	system	in button	status	level_change	value	0	xref	0

LED OFF if accept by PC or input (as described for LED ON) and input not in alarm; or was accepted and input goes out of alarm and LED is on.

Event: LED 1 OFF: algorithm ((10+11)*12*13)+(14*15)

	Type	output	system	LED 1	status	level_change	value	1	xref	0
ref 10	Type	input	system	in button	status	level_change	value	0	xref	0
ref 11	Type	input	system	all	status	operator_accept	value	0	xref	0
ref 12	Type	input	system	door 1	status	in_value	value	1	xref	0
ref 13	Type	output	system	LED 1	status	in_value	value	3	xref	0
ref 14	Type	input	system	door 1	status	level_change	value	1	xref	0
ref 15	Type	output	system	LED 1	status	in_value	value	2	xref	0

The MD350 can have an accept all input (e.g. a button on the mimic panel), this is input port 1. A lamp test can be connected which is input port 2. The LEDs are output ports 1 to 128.

Other outputs available are controlled with the following ports and levels:

Port 300	Level 1 Buzzer off
	Level 3 Buzzer on
Port 301	Level 1 Siren off
	Level 3 Siren on
Port 302	Level 1 Aux 1 off
	Level 3 Aux 1 on
Port 303	Level 1 Aux 2 off
	Level 3 Aux 2 on
Port 304	Level 1 Aux 3 off
	Level 3 Aux 3 on
Port 305	Level 1 Aux 4 off
	Level 3 Aux 4 on
Port 306	Level 1 Aux 5 off
	Level 3 Aux 5 on

20.8 *MD351 CONTROLLER

The Softcon MD351 controller is an input/output (I/O) controller, with 7 outputs and 48 virtual I/O ports. The virtual ports are configured as input or output, in groups of 8, giving combinations of 48 in; 40 in / 8 out; 32 in / 16 out; 24 in / 24 out; 16 in / 32 out; 8 in / 40 out; 48 out.

The controller is automatically programmed with which virtual ports are ins and outs. As these can vary per controller, a setting is required for the inputs in the [CONTROLLER SET-Up](#). Output setting is not required (ports not inputs are outputs).

Inputs are wired (connected) in the bottom ports, from input 1 (inputs and outputs cannot be mixed). This requires that number of inputs be set for each MD351 controller in the controller set-up menu – only values 0,

8, 16, 24, 32, 40, 48 are valid. Output values are not used in any calculation or set-up, i.e. the setting is ignored.

When the virtual ports are inputs and outputs, inputs always start at port 1 and run consecutively, with the outputs last. In the configuration of [OUTPUT SET-Up](#), the first output on the controller is set as port 1, i.e. inputs start at 1 and outputs start at number of inputs + 1. For example, for 24 inputs and 24 outputs, the inputs are 1-8, 9-16, 17-24 (set as input ports 1 to 24 for the controller) and outputs are 25-32, 33-40, 41-48 (set as output ports 25 to 48 for the controllers).

20.9 **MF350**

The MF350 is a vending controller and requires the Vending setting for controller type.

20.10 **SF350**

The SF350 is used as a sub-LAN controller, with node addresses restarting at 1 on a sub-LAN.

21 **FINGERPRINT INTEGRATION**

Limited options - see **SECURITY** settings.

Fingerprint readers can be integrated into the SoftWin3 system and are used to identify system operators and card holders on the PC (log-on or find card holders, visitors) and can be used to request access. When using fingerprint, cards are generally not used. In the system, certain readers can be card readers, others fingerprint readers.

Currently only **Sagem** type fingerprint readers are integrated into the SoftWin3 system – requiring no other PC Software. Other fingerprint readers could be integrated on request – generally these require additional PC SW to be used, with fingerprint readers installed between card readers and controllers.

Sagem MA300 has 16 (0 to 15) database blocks (databases) of 3000 finger templates each (two fingers per person). When enrolling or requesting access the database block number must be selected – only the selected block is search. No block selected sets block 0.

The main advantages of using fingerprint over card readers are:

- High security. Users / holders are positively identified.
- No need to carry cards – eliminating lost and faulty card problems.

The main disadvantage of using fingerprint readers are:

- Higher equipment and installation cost.
- Slower reading speed.

Integrated SoftWin3 functions provided are listed below. ** indicated functions under development and are included here for completeness (contact Softcon for further details):

21.1 **FINGERPRINT REGISTRATION**

Operators (users), cardholders and visitors** are registered in the SoftWin3 system via readers connected to PCs (serial** or USB) in the SCS_Client, SCS_CardMaker, SCS_Visitor**, SCS_POS** or SCS_PPOS** applications. In on-line visitor systems, the visitor registers at access control fingerprint readers linked TCP networks.

21.2 **LOG-ON**

Instead of entering an ID code and password, operators log-on to the system using fingerprint readers connected to the PC serial or USB port. No password is required when using fingerprint reader.

21.3 **CARDHOLDER IDENTIFY**

Cardholders are identified in card edit, asset track issue/return, POS** and PPOS**. Generally holders are found by lookup functions (**search** or list boxes) or by presenting access cards to card readers connected to the PC – using fingerprint readers connected to the PC, holders are found by reading fingerprint.

21.4 **CARDHOLDER ACCESS CONTROL**

Fingerprint readers are connected via TCP networks to a PC that loads the fingerprints to the readers.

Cardholders request access via fingerprint reader connected to access controllers (Wiegand interface). Access is granted / denied as for card readers. The card readers could be connected to the fingerprint readers, with holder's presenting card before finger – this facilitates smaller fingerprint databases (less data per print) and faster searches. Fingerprint data can be stored on smart prox cards** with fingerprint readers installed in off-line mode (no data stored in readers).

Cardholders request access via fingerprint reader not connected to reader** with the PC granting access via outputs in the fingerprint readers or in I/O controllers or modules. All access and time rules apply as in card based on-line systems.

21.5 VISITOR IDENTIFY**

The SCS_Visitor application registers fingerprint template and **searches** for registered visitor by fingerprint.

21.6 VISITOR ACCESS CONTROL

Two modes of control can be used:

21.6.1 Controller based

Visitors registered via SCS_Visitor** are granted access by transferring the data to the active card database, with access being granted for cardholders as described above.

21.6.2 PC based

Visitors register via access control (TCP) fingerprint readers (in enrol mode) connected to a PC. The fingerprint is automatically distributed to appropriate reader(s). When read, access is granted via controllers linked to the readers (as for controller based). Fingerprint templates can be automatically deleted when access is granted at set readers.

21.7 *FINGERPRINT EVENTS

Special * events are generated / available for fingerprint events / functions:

DESCRIPTION	TYPE	SYSNO	STATUS	XREF	VALUE	ALARM	Z1
FP Add Record*	1	RD_ref	510	xref	0	0	0
FP Add Record Done	1	RD_ref	511	xref	0	a	z1
FP Remove Record*	1	RD_ref	512	xref	0	0	0
FP Remove Record Done	1	RD_ref	513	xref	0	a	z1
FP Download dB*	1	RD_ref	514	0	vdb	0	0
FP Download dB done	1	RD_ref	515	0	vdb	a	z1
FP Clean dB*	1	RD_ref	516	0	vdb	0	0
FP Clean dB Done	1	RD_ref	517	0	vdb	a	z1
FP Enrol System*	1	RD_ref	518	0	0	0	0
FP Enrol System Done	1	RD_ref	519	0	0	0	z1
FP Enrol User*	1	RD_ref	520	xref	0	0	0
FP Error	1	RD_ref	521	xref	vdb	2	z1
FP Reader Setup	1	RD_ref	522	0	0	0	0
FP Reader Setup Done	1	RD_ref	523	0	0	a	z1
FP Logs	1	RD_ref	524	0	vdb	0	0
FP Logs done	1	RD_ref	525	0	vdb	a	z1

* Events must be generated by set event (event-event set-up). Others generated by the system.

RD_ref Softcon reader reference, links to finger print reader table. 0 for all finger print readers.

z1 Fingerprint reader error or status (see table below).

a Alarm set to 2 if finger print reader gives errors, in other case 0.

vdb Fingerprint reader database block. < 0 – for all finger print reader database blocks.

510 xref set with card reference of finger template to be added (xref <= 0 ignored). Database block is automatically set to xref/3000.

512 xref set with card reference finger template to be deleted (xref <= 0 ignored).

514 If vdb > -1 delete records from vdb database, else remove and recreate all fingerprint reader databases.

516 If vdb > -1 delete records from vdb database and download all card finger templates for vdb database, else recreate all databases and download all card finger templates for all finger print databases.

518 xref ignored. Xref taken from last unused record from card database, limits set in FP reader set-up (visitor min ref, visitor max ref).

- 519, 520** Generated by SoftSin3 system only if enrolment was successful. 519: If finger print reader has set-up to save biometric information to his database, than z1 equal to finger print reader reference. In other case z1=0.
- 521** Errors reported by fingerprint reader – listed in table below.
- 522-525** Reserved for a future development.

Sagem fingerprint errors and statuses:

ERROR	DESCRIPTION
1	A Bio Function is processing
0	Successful result
-1	Error occurred
-2	Input parameters are not valid
-3	Minutiae is not valid
-4	User ID does not exist in the database
-5	User data is not valid
-6	No response after defined time
-7	Protocol used is not valid
-8	Person is already in database
-9	Specified base doesn't exists
-10	Specified base already exists
-11	Bio Function in progress
-12	Command is already in progress
-13	Flash type invalid
-14	Insufficient memory for the creation of a database
-15	Administrator Mode in use
-16	Signature check failed
-17	Error occurred while reading the card
-18	Error occurred during execution of Serial Link Configuration
-19	Error occurred during execution of the output Wiegand/Dataclock Configuration
-20	Error occurred during execution of Network Configuration
-21	Additional field number > 8 or cumulated length of additional user data > 216 bytes

Sagem fingerprint statuses:

STATUS	DESCRIPTION
0	Successful
1	Authentication or Identification succeeded
2	Authentication or Identification failed
3	Security Protection Triggered
4	The database is full
5	The database is empty
6	Bad finger and/or enroll quality
7	The database is right
8	The Terminal is activated
9	The Terminal is not activated
10	The last database command is unsuccessful
11	Read error on Wiegand/Dataclock input
12	An error occurred during the access to the base

22 KS LOGGING

Events are logged in daily database files in the directory c:\softwin3\log. Changes to databases (KSaudit trail) are logged in the directory c:\softwin3\audit.

When a loggable event occurs and the day log file does not exist, a new file is automatically created with the name LGyymmdd.mdb (e.g. 011231.mdb) for events and AUyymmdd.mdb. System and vending events are logged automatically. Reader, input, output and counter events are only logged when set to be logged. This is done in the appropriate Reader, Input, Output and Counter set-up menus. KSReport. If the report selection is not one of the LOG options, the event is not logged.

The daily log database contains the fields **DATE, TIME, TYPE, SYSNO, STATUS, XREF** and **VALUE**. Optional fields can be set to be logged via the [log fields set-up menu](#). The optional fields are:

REF2 is only relevant when the event is a reader event and is set to the visitor data base reference if the card is a visitor card. For all other cases it is set to zero.

X_EMPL contains the card holder's employee number for card related events.

X_Name contains the card holder name for card related events.

Z1 to Z9 contains additional data as required by certain events (see field descriptions in the log fields set-up menu). Z1 and Z2 are typically used to log operator actions (e.g. card printed/programmed), cards not found. Z1 to Z9 are used by vending/POS events.

The optional additional fields are set (via log fields set-up menu) in data in set-up database c:\softwin3\config\database.mdb, table FIELDS and table LOG_FIELDS. Data set as USE Yes is automatically set from log_fields to table fields. Note that should X_EMPL and X_NAME be type text, the number of characters to be logged are set in the size field. The event types (T_COND) sets the events that require the optional fields to be logged and LINK_REF sets the field used as reference (using the parameter in the EVENT) field. For example, event types 1 (Reader), 10 (System), 11 (Vend base), 12 (Vend Item), 14 (Vender) and 15 (Asset tag) will log 20 characters of the card holders name (data in field F_CD_NAME) obtained by using the X parameter of the event to reference the data in field F_CD_REF.

LOG_FIELDS									
FIELD_ID	EVENT	LINK_NAME	LINK_REF	T_COND	FIELD_NAME	TYPE	SIZE	USE	FIELD_DESCR
F_LOGGING_ALARM	A			0	ALARM	Number		Yes	
F_LOGGING_DATE	DT			0	DATE	Date/time		Yes	
F_LOGGING_REF2	X	F_CD_REF2	F_CD_REF	1,11,12,14	REF2	Number		Yes	
F_LOGGING_STATUS	S			0	STATUS	Number		Yes	
F_LOGGING_SYSNO	N			0	SYSNO	Number		Yes	
F_LOGGING_TYPE	T			0	TYPE	Number		Yes	
F_LOGGING_VALUE	V			0	VALUE	Number		Yes	
F_LOGGING_X_EMPL	X	F_CD_EMPLOY	F_CD_REF	1,11,12,14,10,15	X_EMPL	Text	20	Yes	
F_LOGGING_X_NAME	X	F_CD_NAME	F_CD_REF	1,11,12,14,10,15	X_NAME	Text	20	Yes	
F_LOGGING_XREF	X			0	XREF	Number		Yes	
F_LOGGING_Z1	Z1			0	Z1	Number		Yes	All Applications
F_LOGGING_Z2	Z2			0	Z2	Number		Yes	CM,Ppos,ExtL,SMS,Cash,Asset,Db10,PPay,Pump,V,Dist
F_LOGGING_Z3	Z3			0	Z3	Number		No	Cash,Db10,PPay,POS,Ppos,Asset,V,Pump,Dist,ExtL
F_LOGGING_Z4	Z4			0	Z4	Number		No	Pos,Ppos,Vend,Db10,ExtLink,Ppump,Dist
F_LOGGING_Z5	Z5			0	Z5	Number		No	Pos,Ppos,Vend,Ppump,Db10,Dist,ExtLink
F_LOGGING_Z6	Z6			0	Z6	Number		No	Pos,Ppos,Vend,Ppump,ExtLink,Dist
F_LOGGING_Z7	Z7			0	Z7	Number		No	Pos,Ppos,Ppump,Dist
F_LOGGING_Z8	Z8			0	Z8	Number		No	Pos(token),Ppos(card type)
F_LOGGING_Z9	Z9			0	Z9	Number		No	

When running event reports via SoftReport, data is copied from the daily event log files to LOGGING.MDB (automatically set to contain fields marked as Yes in table LOG_FIELDS). Should the daily log files contain optional fields now not set as Yes (thus not contained in LOGGING.MDB), SoftReport cannot copy the fields and an error is displayed.

23 KS MUX CARDS

Details on the set-up of the mux cards and the links, see [Set-up Mux Cards](#).

Windows requires drivers to be installed on the PC that communicates to the Mux cards. Normally, the install will correctly install the drivers. Should problems occur, the steps given below must be followed.

PCI

When updating SoftWin3 systems with installed SW older than version 0.51, **uninstall** the mux drivers as follows:

Right click on My Computer, select Properties, Hardware, Device drivers.

Select View, Shown hidden devices.

Right click on WinDriver Virtual device and select uninstall.

Right click on Jungo driver SCS_MUX_PCI and select uninstall.

Do not restart the PC.

Check that the following files exist (if not check for copies in C:\softwin3\mux, else re-install or call Softcon):

C:\softwin3\mux\wdreg_gui.exe

C:\softwin3\mux\wd_virtual.inf

C:\softwin3\mux\SCS_mux_pci.inf

C:[windows directory]\system32\drivers\windrvr.sys (17-DEC-2002)

C:[windows directory]\system32\drivers\wdpnp.sys (17-DEC-2002)

Run the batch file C:\softwin3\mux\install_sys.bat, this executes:

```
wdreg_gui -inf c:\softwin3\mux\wd_virtual.inf install
```

When running client and the mux card status is RED (no comms with mux card), ensure that the [PC-setup](#) for the local PC name is set to localhost or the PC network name. Check that the [Mux-setup](#) is set to the local PC and that the type is PCI, port 1, 2, 3 or 4 (depending on the link installed).

24 **PARKING**

Limited options - see [SECURITY](#) settings.

SoftWin has three specialized parking options:

- [Visitor Parking](#). Pre-booked visitor option (future versions).
- [Parking POS](#). Pay on entry system SCS_PPOS (contact Softcon).
- [Pay on exit](#). Entry via parking entrance reader sets entry time, exit via park exit readers only possible if the card's free time has not expired.

PARKING PAY ON EXIT

When presenting a card to a reader set as **Park Entry**, the entry time is recorded (card must be enabled for the area zone) in the card field [PARK_START](#).

Presenting the card to a **Park Display** reader, displays the time since entry and the amount due on the LCD at the reader.

Presenting the card to a **Park Pay** reader, displays the time since entry and the amount due on the LCD at the reader. The data is logged as an event (date/time, reader, card, amount) and the entry time is set to current time.

When a card is presented to a **Park Exit** reader and the time present is less than the free time set for the reader, the latch/barrier is opened. If the card is set for capture, the card is first captured. The park start time is cleared.

Reader types are set in the [reader set-up](#) menu, **accumulate** setting.

Parking fare or prices is set in the [parking fare](#) set-up table. Exit is only possible when the period since the park start time/date is a free fare (zero fare). Readers must be set to **db Location, PC-all** in the [reader set-up](#) menu.

25 **RANDOM SEARCH**

Limited option - see [SECURITY](#) settings.

Random search of cards is available on SoftWin version 2.20 or later and functions as follows:

The random search function is triggered automatically on the reader event type **entered** (22). If the reader does not have a control output set, no random event is generated (normal reader). With an output set, the system checks the random setting of the card and if not zero the card setting is used as random setting, else the readers random setting is used and a random or normal event is generated.

Each reader requiring random search, must have an allocated **control output**. A setting of 0 (All outputs), sets the reader as a normal reader (no search). This output may be a virtual output not existing on a controller, generating only internal events. When search is required, the output is set to level 1 (search), else the output is set to level 2 (no search). An output in the search level is only changed to level 2 when a card is not required to be searched enters. If required to return to level 2, the output must be set with an event (e.g. via the reading of an input or drawing button linked to set the control output to level 2). The event generated contains the card reference in XREF.

Cards have a random setting of 0 to 100%. If set to 0, the random setting of the reader is used, else the card setting is used, regardless of the reader setting.

Readers are set with a random percentage and are only used if the card setting is 0%. A reader 0% results in no search, 100% results in all cards generating search events and 1 to 99% it the random chance of being searched.

The random result is calculated by using the PC system tick when the card is reported as entered (event 22) at the reader, MOD 100 (remainder after dividing by 100), and if the result is greater than the random setting, no search event is generated.

Each reader has the option of a random search **control input**. If the input is set to zero (all inputs), the input option is ignored. The input could be a virtual input that does not exist on a controller – but only set via an event, e.g. from a drawing, or timed event. When an input is allocated, the level of the input sets the following:

- Level 1. Search all cards regardless of settings (100%).
- Level 2. Random search, using the card or reader setting (if card setting is 0%).
- Level 3. Disables all searching (0%).

26 VIDEO INTEGRATION

Limited options - see [SECURITY](#) settings. Two video functions are currently available in SoftWin3 systems:

26.1 CARD PHOTOS

Card maker, card edit and visitor registration use Windows video sources (e.g. USB cameras, video capture / frame grabber cards) to capture photos for cardholders and visitors. Photos are saved to file in any of the popular formats (.bmp, .jpg, .tif, etc.) with selectable data field used in file name (e.g. id, reference or employee number). Photos can be cropped / resized from file.

The photos are printed on cards or labels. For positive identification, the photos can be displayed linked to the card use in POS, PPOS and graphical display applications.

26.2 SNAPSHOTS (CAPTURE FRAME)

The SoftWin3 system links to external video systems (e.g. Reditron Rediview) capturing snapshots (picture, frame) to file. All snap shot functions are controlled by event triggers set in event-event set-up (e.g. out of area – after hours) that generate appropriate capture commands (with camera number) to the external system. The file names include date/time and reference to readers / card holder / input / output as appropriate, in the format VCYMMDD_hhmmss_s_x_v_a_z1_z2_z3.jpg.

With VC indicating a video capture file and Year, Month, Date, hour, minute, second, camera system reference number, xref, value, alarm, z1, z2. Parameters s, x v Z and z do or not have leading zeros???

26.3 VIEWER

A video viewer displays (and scrolls) stored snap shots – snap shots selected with a start and end date/times and optionally with s and (parameter set with 0 selects all).

Future viewer:

The viewer is set with display criteria, setting the number, size and position of view windows. Each window has a search criteria, setting what are to be displayed. These setting can be saved (save as) as a view project to a file (flat ASCII file with extension .vpj or database ???), reused (file open), new created (new) – starts with a cleared set-up or deleted (dialog asks 'are you sure'). If any of the settings were changed, a dialog box asks 'do you want to save' before closing.

MAIN WINDOW

A main window (general) set-up displays a list edit that sets the following for each window (add button adds a view window):

- **Window** number. 0 is the main window, 1 to 64 are view windows.
- Window **Description**. Displayed in window header. E.g. Visitor entrance, member exit 1.
- **Size** and **position** of window (view windows are not limited within the main window). **X-pos**, **Y-pos**, **Width**, **Height** (in pixels to top left corner). When a window is dragged or stretched, these values are updated.
- Search criteria on file name (8 parameters in file name - see file name structure above), file location and search order. When a field is edited in the main window, all corresponding window fields checked for overall update are overridden (e.g. date/time fields are set to be updated). Search order can be set 1 (highest) to 9 (lowest).
 - **Dir** – where files located. Ending in * selects all sub-directories (e.g. c:\softwin3\snap*).
 - **Dir_update** – update when main parameter edited.
 - **DTstart**, **DTend** – start and end date/times. **DTstart_update**, **DTend_update** when main parameter edited. **DT_sort** order.
 - **Cam** – Camera reference number. **Cam_update** when main parameter edited. **Cam_sort** order.
 - **Xref**. **Xref_update** when main parameter edited. **Xref_sort** order.
 - **Value**. **Value_update** when main parameter edited. **Value_sort** order.
 - **Alarm**. **Alarm_update** when main parameter edited. **Alarm_sort** order.
 - **Z1**. **Z1_update** when main parameter edited. **Z1_sort** order.
 - **Z2**. **Z2_update** when main parameter edited. **Z2_sort** order.
 - **Z1**. **Z1_update** – update when main parameter edited. **Z1_sort** – sort order.
 - **Z3**. **Z3_update** when main parameter edited. **Z3_sort** order.

- Window **Status** – frozen (window does not change as pictures are viewed), unlocked, hidden, minimized.
- Window **reserved** – position and size not changed or overwritten by cascade and tile.
- **File name** (with directory) of locked picture.
- **Aspect** ratio fixed. Stretching or editing the window width or height, adjusts the other according to the current aspect ratio if aspect on.

Multi-lines can be selected by clicking on a line (becomes highlighted) and selecting shift (for a range) or Ctrl (for specific lines) – all appropriate lines become highlighted. Editing a field updates the corresponding field in all selected lines – **this option to be possible on any list editor.**

In order to have more than one search criteria in a view window, search parameters marked with are strings, allowing multiple selections 1,2,5 or range selections 1..4, or both 1,2..4,7. For example: there are 2 entry lanes, each with a vehicle camera (1 and 3) and each with a driver camera (2 and 4); Window 1 is to display entry vehicle pictures and Window 2 the entry driver pictures. Window 1 Cam field is set to 1,3 and Window 2 Cam field to 2,4).

To simplify setting of reference number (numbers are not generally known), a help list (similar to a trigger set-up) is provided:

Type	Number	Status	Xref	Value	Alarm
Camera	zCAM 1				

All fields are lists that change according to type selected (e.g. number displays camera names when type is camera, or reader names when type is reader – xref displays card holder's names).

For example: To set window 1 CAM search field to 2,4 – on the help list select type camera, scroll the number to camera 2, click on number and drag (or right click copy) to window 1 CAM search field and drop (or right click paste) – 2 is displayed. Similarly select camera 4 in the help number field, drag and drop – 2,4 is displayed.

The main window provides options to cascade and tile view windows.

VIEW WINDOW

When viewing, right clicking on a view window displays the following options:

File

- Delete (with are you sure message box) - deletes the file on display.
- Rename rename file on display (via directory box).
- Save As copy file on display to another (via directory box).
- View select a file to display (via directory box).

Window

- Delete (with are you sure) – removes from set-up.
- Set-up displays set-up for the view window as described above.
- Aspect on or off. When on, changing the width or height changer other according to current ratio.
- Full screen or minimize, size or hide. To unhide, go to main window set-up.
- Un-/Fixed View size and location fixed - not changed or overwritten by cascade / tile selections.
- Un-/Freeze View does not change if frozen.

26.4 VIDEO CAPTURE EVENTS

DESCRIPTION	TYPE	SYSNO	STATUS	XREF	VALUE	ALARM	Z1	Z2	Z3
Video Capture frame	5	Cam_ref	530	Xref	v	0	z1	z2	z3
Video Capture Done	5	Cam_ref	531	Xref	v	0	z1	z2	z3
Error Video Capture	5	Cam_ref	532	Xref	v	2	z1	z2	z3

Xref, value, z1 and z2 are set with values as required or transferred from event triggers, typically:

- z1** Event type that triggered capture (1=reader, 2=input, etc.).
- z2** Event sysno that triggered capture (reader reference, input reference, etc.).
- z3** Event type that triggered capture (out of area, illegal open, etc.).
- xref** Xref field of trigger , e.g. card reference when z1 is reader.
- v** Value field of trigger, e.g. input level.

SoftWin3 system generates "Error Video Capture" when picture file does not exist or file size equal to 0.
