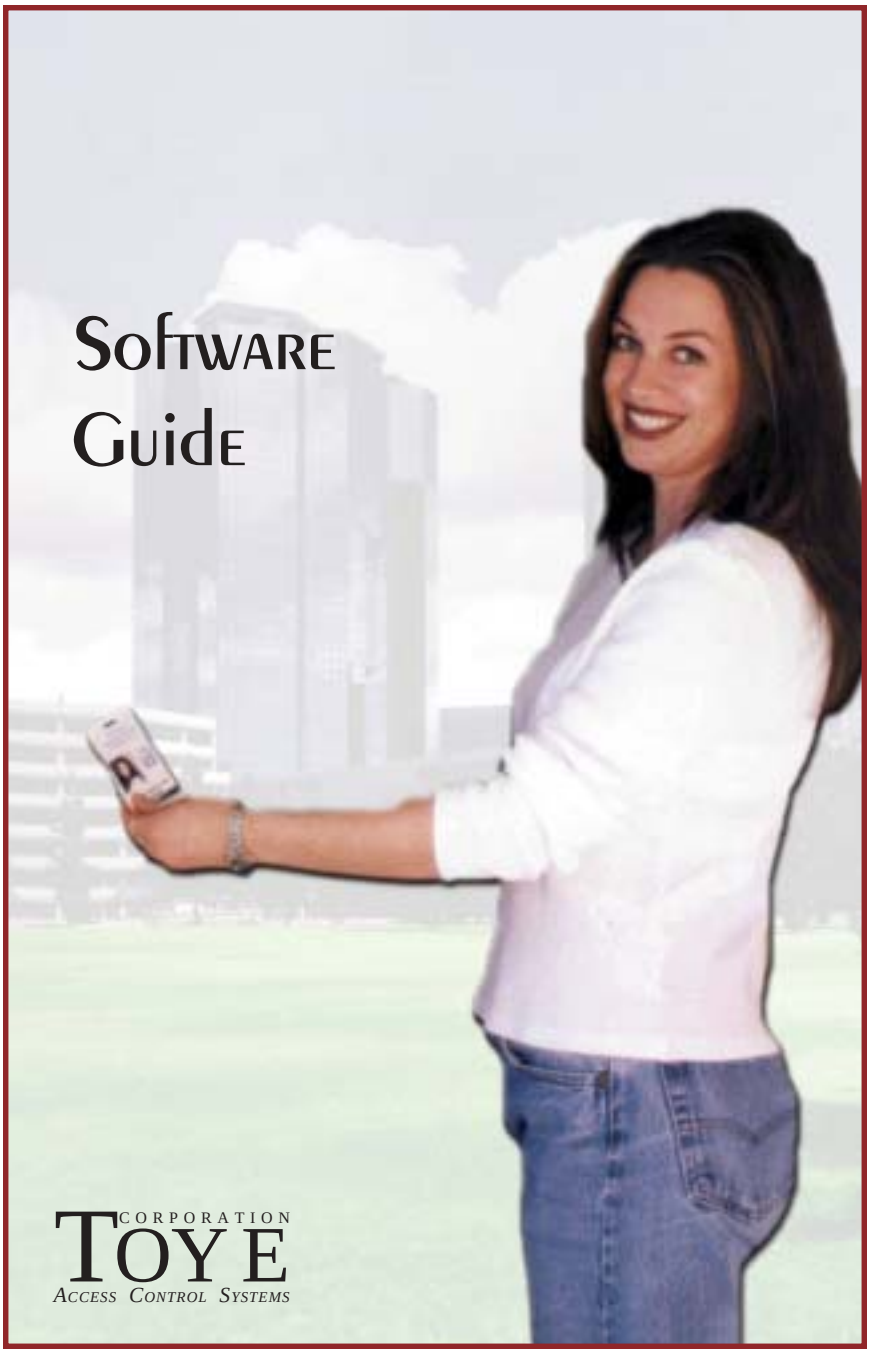
Access Anywhere



Software Guide

CORPORATION
TOYE
Access Control Systems

Quick Start

1. Place the installation disk in the CD drive. Start Windows Explorer if it did not open automatically. If there is a readme.txt file on the CD, it will contain information specific to your installation.

2. Run The Setup file: TCSETUP.BAT and close the dialog box when the installation is complete.

3. Using Windows Explorer, located the subdirectory: c:\tc85dir.
   Locate the Shortcut Icon: Access Central.mdb and move it to your Windows Desktop.

Define Readers

4. Click the Shortcut Icon to start the program. Note: Access Central and Access Anywhere are essentially the same program depending on whether or not network options are required.

5. Read the opening dialog box to select the kind of configuration you will be using.

6. After making the selection above, a new dialog box will appear for setting up the field communication background program if your field bus is connected to this PC. If your system's Host Processor is a Network Controller, or another PC, you will need to determine its network address, and configure your Host Software to link to it.


Define Levels

7. Log On to the program using the following Password: user

8. Define at least one reader
   Reader 01 has been predefined (Reader Module Definitions)

9. Define at least one Security Level
   Define level 1, name it Master, check all days, and 24 hours.

10. Program a card
    One record has been predefined. Go to the cardholder form and click on the Program This Card Button (Cardholder Management)

Access Central/Access Anywhere

Host Software

Access Central/Access Anywhere is a Microsoft Access application, and as such, it behaves exactly like any other Microsoft program. The software is very user friendly, but you must become accustomed to MS Access. There are a few simple things to keep in mind about Access:

1. Be sure to enter a return (enter) after entering data in each field.
2. If you enter something invalid, and cannot get out of it press the ESC key twice.
3. If you do something to cause an error message in MS Access, be sure to immediately shut down the program and restart it.
4. Be sure to do a Compact of the Database at least once a week if you are doing a lot of database changes. (Go to Tools, Database Utilities, Compact Database.
5. If the database stops working properly, i.e., the data becomes scrambled, do a Database Repair (Tools, Database Utilities, Repair Database) Note: In some versions of Access, the Compact and Repair functions are combined.
6. Be sure that all Toye software is in the Tc85dir directory on the C: drive, and that you do NOT rename any of the files.
7. Be sure to make frequent backups of the Tc85dir directory in case some files become damaged. If you follow the above steps, you will find our software very easy to use.

Passwords

Access Central opens to the Real Time Events screen which does not require a password. To open the Main Menu, you must log on and enter a password. The initial default password is: "user" (lower case without the quotes).

To add, delete, or change log on passwords, press the Password Tool bar button to open Password Manager. Password Manager is also password protected, and its initial default password is: "admin" (lower case without the quotes.

The best way to get started is to explore the menu items. After you define card reader locations and program one or more cards, you will be up and running with a complete operational system, and you may not need to consult this manual unless you have a specific technical question.

How The System Works

Following is a description of the components and elements of the Access Control System:

The Card Readers
A card reader is actually the read head that captures the card or tag data. Virtually all industry standard card technologies are supported including vehicle ID and biometric devices.

The Command Modules
The Command Module is the access point device to which card readers are connected in the field. They receive data from the readers and communicate with the host processor. In addition to supporting one or two readers, they also have binary inputs for monitoring door status and other alarms. Command Modules control Entry/Exit devices with programmable relays.

Utility Modules
A full featured system can include expanded alarm monitoring, elevator control, and programmable outputs. Modules for these functions may be connected to the Access Control System Bus and controlled by the host processor.

The Communication Bus
The field communication bus consists of a two twisted shielded pair using RS-422 signals. All Command and Utility Modules connect to this bus. It is possible for the bus to include other communication methods such as fiber optics, short haul and phone modems.

The Host Processor
The Communication Bus ultimately terminates at a Host Processor which can be a Network Controller, or a standard PC. The Host Processor performs all the real-time system functions such as access decisions and activity logging.

The Communication Software (Access On-Line)
The Host Processor contains a "Memory Resident" machine language program named SR.COM that talks directly to the Communication bus on a real-time basis. The Communication Bus connects to the Host Processor via a standard RS-232 serial port.

When an event occurs on the access controls system bus, the Host Processor can respond in less than 30 milliseconds because of the power and speed of SR.COM. Because SR.COM is a memory resident program, no disk access is required to process system events. The status of every card and every active security level is maintained in RAM memory to facilitate instantaneous

processing.

Access On-Line must be running at all time. It runs continuously and automatically when the system is controlled by a Network Controller. When the Host Processor is a PC, it must be running at all times, and is configured to load automatically when the computer boots. An icon located in the Windows Task Tray indicates its status.

The Access Central/Access Anywhere "Host Software"
Access Central/Access Anywhere software is the user interface to SR.COM. Access Anywhere is the same as Access Central, but with additional network connectivity options. Access Central is a Microsoft Access application using the off-the-shelf version of MS Access. This means that it behaves exactly the same as any other Microsoft Windows product making it easy for users to program and control their systems.

The "Host Software" may be installed on any Windows based computer regardless of the version. This computer may be the one serving as the Host Processor, or another computer linked to the Host Processor via ethernet. As previously noted, the Host Processor may be an actual PC or a Toye Corporation Network Controller.

At all times, system programming data is maintained in the "Host Software". When programming changes are made, those changes are instantaneously transmitted to files located in the Host Processor's subdirectory. When changes have been made to these files by the Host Software, SR.COM picks them up instantly and modifies its RAM memory accordingly.

The Host Software is available in a "runtime" stand-alone version, or as a full featured Microsoft Access application requiring Microsoft Access to be pre-installed on your computer.

Networking
An Access Anywhere system permits full utilization of in-house networks, or dedicated access control networks. Any PC connected to a network can be authorized to monitor activity, run reports, and program the system. If a system requires more than one field device bus, each can be part of the network, and run in a mutually exclusive environment using a common cardholder database. The Toye Corporation Network Controller is equipped with a standard 10/100 ethernet connector.

Access Central/Access Anywhere Host Software

The Host Software is comprised of three programs which must reside in the following subdirectoiry on the Host Computer: **c:\tc85dir**.

1. **Access Central or Access Anywhere** (Access Central.mdb)
   This is a Microsoft Access Application called *Access Central or Access Anywhere.* All day-to-day programming and system maintenance is performed with this program. Place a shortcut icon on your desktop to start this program. This program need not be running for the access control system be fully on-line.

2. **Report Manager** (Log.mdb)
   This is a Microsoft Access application called Report Manager, and you can run it any time you need activity reports. To insure that your reports contain the most up-to-date transaction data, always begin by pressing the Refresh Button. This brings all data from the large transaction log file into the Microsoft Access environment. The amount of time it takes to bring this data in depends on the size of your log file (tclog.dta), and the speed of your computer.

3. **Password Manager** (Password Manager.mdb)
   Password Manager is a separate program accessible from the Access Central Tool bar button. This program is used by administrative personnel to enroll work station operators who are to be granted access to the programming functions contained in the Host Software.

Converting Existing Systems

If you have an existing Toye Corporation Access Control System, you may upgraded it to the latest version of Host Software using the Programming Utilities/Data Import Utilities features.

Tool bar Buttons

Tool bar buttons are provided for quick access to the most frequently used functions. The function of each button will display when you place the cursor over the button.

Real Time Events Button

When you click this button, a Dynamic Display of incoming card and alarm

events will be displayed as they occur. You can click on an incoming cardholder's name to jump to that cardholder's database record (except Tenant Billing) . You can also filter all records to show just the transactions of one cardholder by highlighting the name, right mouse click, and select filter by selection. You can also change the display order to anything you want, and remove the filter with another right mouse click.
Note: Only system transactions that occur while Real Time Events is open will be displayed. If you close this window using the exit button, and then reopen it, the transactions that occurred while it was closed will not be available for display. They will still be on the master log for reports. If you want to insure that the Real Time Events window reflects all transactions, just leave it minimized on your task bar. The Real-Time Events log displays the most recent 100 events.

The following are special status codes that indicate each type of transaction exception:

A Hard Anti-Pass-Back violation, no access granted
a Soft Anti-Pass-Back violation, access was granted
s Wrong system code, access was not granted
- Invalid card, access was not granted
k Keypad violation, access was not granted
***** **Alarm**
N Hard Nesting violation
D Debit card violation (out of uses)

Transactions without one of the above symbols are valid card transactions which do not involve exceptions.

Menu Button
Displays the Main Switchboard Menu.

Cards Button
Displays the Cardholder Database.

Binoculars Button
When you click in any field (except cardholder memory number), you can search for any other record.

Manual Button
Displays the entire contents of the Software Instruction Manual. You can use keyword search to locate the topics you want to find.

Unlock Button

This function provides instantaneous release of any door or gate. A beep indicates that the unlock message was transmitted.

Locate Button

Use this button to locate the owner of a vehicle

About Button

Shows the configuration parameters of your system.

Report Manager Button

This button takes you to another Microsoft Access Database named log.mdb. All system transactions are stored in a large file named: tclog.dta. When you press the Refresh button, you are actually copying all the data from tclog.dta into the Microsoft Access environment.

Alarm Button

Extinguishes Alarms that have been programmed for audible annunciation.

Background Print Button

For line at a time Real Time Event printing on a dot matrix printer

Password Manager Button

Password Manager allows you to add, delete, or modify log on passwords. There is no limit to the number of individuals you can enroll with unique names, and unique passwords. When individuals are enrolled, their password is invisible, and known only to them. When log on reports are generated, it shows the name of the individual, the date and time they logged on to the system.

Menu Items

Following is a listing of all Menu Items for reference. Most choices are self-explanatory, and when not, the Form for that function normally provides more detail. Additional details follow this listing.

Main Menu

Cardholder Database Management
Reader, Module, and Alarm Point Definitions
Define Levels, Networks, and Holidays
Anti-Pass-Back Controls
Unlock or Relock Doors

- Enable Background Printing
- Real-Time Event Options
- Start Up/Network Setup

Define Levels
- Cardholder Security Levels
- Reader Module Level Definitions
- Transaction Activated Levels (Elevator)
- I/O Module Levels
- Enter Holiday Exceptions
- Define Networks

Reader, Module, and Alarm Point Definitions
- Reader Module Text Definitions
- Alarm Point Text Definitions
- Input and Output Module Text Definitions
- Designate Readers To Be Subject To Debiting

Utilities
- Empty All Tables
- Smart Cartridge Program

Programming Utilities
- Create a Sequence of New Card Records
- Assign a Level to a Sequence of Card Numbers
- Inactivate Random Card Numbers
- Inactivate a Sequence of Card Numbers
- Activate Random Card Numbers
- Program All Cards at Once
- Data Import Utilities

Data Import Utilities
- Import Data from Previous Version of Access
- Create New Records from Background TSR
- Create New Records from PC Central dBase III
- Empty Tables for New Database
- Load Default Database Example

Cardholder Management Choices
- Cardholder Database Records
- Card Debiting Management
- Special Cardholder Programming Utilities

Real-Time Event Options

Display Events Without Photo Display

Display Real-Time Events With Cardholder's Photo

Card Programming Procedures

To program a card, you must minimally enter a name, a valid card memory number (which may differ from the number shown on the outside of the card), and a security level assignment. Once entered, you can program the card by clicking on the PROGRAM THIS CARD button. Only those levels displayed will be programmed. *Note: Do not use the apostrophe character when entering names. Use a space instead of an apostrophe, otherwise an error will occur while scrolling through transactions.*

If you make a mistake and generate error messages, just hit the Escape Key and start over.

You can change the TAB order of your form so that the cursor jumps only to the fields you wish to populate with data. To do this, select FORM DESIGN from the View Menu, and then select Tab Order.

To delete a record, you must first program that cardholder out of the system. Type VOID in the box provided, and Program This Card. Now the number is safely out of the system, and you can delete the record by using the "Record Selector Bar" that runs vertically along the left side of the record.

Note about searching records: The cardholder record form contains subforms for entering vehicles and security levels. These subforms reflect only the information about that particular record. So if you use the search utility in either subform, you will be seeking information pertaining only to that record. If you want to find a cardholder's record based on a license plate number, you must use the Locate Tool bar button.

You cannot search in the Memory Number field. If you need to locate a record using the Memory Number as the search criteria, you must press the *Open Report Of Search For Another Record* button provided on the Cardholder form.

Open Report Or Search For Another Record

You can view the cardholder data in a columnar format. You can change the order of the displayed records, and you can filter records to be displayed by highlighting any value. If you want to display all cardholders currently

programmed into level 5, just highlight the 5, and do a filter by selection (right click). *Microsoft Access* provides many tools for searching, filtering, and displaying data. Most of these capabilities can be explored without reading any manuals. Just click help, and enter a topic.

You can quickly locate a record by clicking in either the name or number field. Use the binoculars to enter the record you want. Once you've found the record, simply double click the record, and the cardholder's full record will be displayed.

Nine Digit Social Security Number Systems Only

There is a special version of our ***Access Central*** Interface for nine digit systems. To enroll cardholders, you must begin by entering a nine digit number. The first record is a sample record, but you may type over the sample information to enroll your first cardholder. At the bottom of the record there is a field called: Internal Memory Location. You will notice that this number increases consecutively as you add new records. Each system is specifically configured for a certain number of cardholders, and you can see what that capacity is by clicking on the ABOUT button. You must not attempt to enter records that exceed this capacity.

At any time, you may reuse a memory location previously occupied by a voided card. To void a cardholder, simply type the word VOID, and click the PROGRAM THIS CARD button. Now you may enter a new cardholder into this Internal Memory Location. Be sure to remove the word VOID, and be sure to reassign new levels to the new cardholder.

Make I.D. Badge

Because *Microsoft Access* supports linked photos, the ability to include photographs in the database or to create a first quality photo I.D. card is virtually a free bonus of the system. You may use any low cost consumer digital camera, but you must turn the cameras sideways so that the subject is portrait oriented, not landscape orientation which is normal.

As photos are taken, most digital cameras assign a serial number automatically. Be sure to maintain a log showing each serial number and the person represented by that number.

Download the photos from the camera into the subdirectory: c:\tc85dir\images

To link each photo to its respective cardholder, click the Personal Tab on the cardholder's record, and enter the file name of the photo. When you click to

another record, then return, the photo will be displayed.

There are two ways to make a badge; print directly on the surface of a plastic I.D. card using a Fargo printer, or create a fully laminated I.D. card using the following process:

To make the badge, you will need the following equipment and supplies

1. Table top roll laminating machine and carriers
2. High resolution Inkjet printer
3. Special Image Transfer Paper
4. Scissors

The complete process requires the following operations:

1. Load the Special Image Transfer Paper into the printer.
2. Print the desired employee record from the Access Print I.D. form.
3. Using your scissors, trim out the image to a width that will fit through your laminator.
4. Position the clear overlay over the image so that it frames the I.D. badge the way you want it.
5. Place the image and overlay into the laminating carrier pinching it together securely so it won't shift.
6. Tear the clear overlay away from the paper.
7. Place the clear overlay (now with I.D. image) onto the badge blank and run it back through the laminator.

This process permits a center core of any thickness, and back overlays with pressure sensitive adhesive for attachment to access cards. In addition, the badge blanks may be ordered with badge clip slot pre-punched.

Cardholder Debiting Management (Optional feature)

If Access Central was ordered to include this feature, you can designate any cardholder that is to be subject. Each cardholder may be charged a unique fee for each trip, and the status of the account is always displayed. Each the cardholder uses one of the designated debiting readers, the account is debited according to the per trip charge.

You must stipulate which readers are to be used for debiting under Reader Definitions. Cardholders who are programmed to use these readers, but who are not subject to debiting will not be affected.

Cardholder Programming Utilities

Create a Sequence of New Card Records

This utility makes it easy to initialize a system without having to enter each cardholder individually. Simply enter the beginning and ending number of your card deck range, and the records will be created automatically. You can personalize each record later by entering the actual cardholder's name in each record.

Assign a Level to a Sequence of Card Numbers

If you have created new records using the utility above, you can assign one or more levels to these records.

Inactivate Random Card Numbers

Inactivates a list of cards without deleting the records

Inactivate a Sequence of Card Numbers

Inactivates a range of card numbers without deleting the records

Activate Random Card Numbers

Activates random cards

Program All Cards at Once

Use this utility to program every cardholder into your database at once. This utility would be useful for initializing a database where no cardholders had been programmed when the record was populated.

Note: This process can take several minutes depending upon the speed of your computer and the number of cardholders to program. It can take as much as one second or so per record.

Data Import Utilities

Use these utilities to import data from previous versions of Toye Corporation software.

READER, MODULE, AND ALARM POINT DEFINITIONS

Define Reader Modules

In order to view transaction records and perform module programming, you must define each hardware device in the system . Use the two digit code you set on the Module, and the text description you want.

Alarm Point Descriptions

An alarm will not report unless it is initialized by entering an alarm description. Up to 32 characters of text may be entered for each alarm. This text will be displayed and logged each time the input changes state, and is not shunted. The actual display will also include either the text: ALARM OPEN, Or Alarm Secure.

Alarm inputs may originate from a Command Module, a Dual I/O Module, a Multi-Point I/O Module, or a 16 Input Alarm Module.

For monitoring alarms originating from a Command Module, or Dual I/O Module, simply enter the two digit Module code followed by 71 or 72 depending upon which input you are monitoring. See data sheet for programming a Multi-Point I/O Module.

To define text originating from a 16 Input Module, enter the two digit module code followed by the two digit input. When using both Command Modules, and Dual I/O Modules, you must not duplicate Module Codes since they are essentially the same type of device. You may however assign these same two digit module codes to 16 Input Modules without conflict.

Device Supervision Alarms

Alarms may be defined to annunciate device supervision problems. Each minute, on the minute, each module on the bus is poled. If a module fails to respond to this pole, an alarm can be annunciated. To make device supervision errors report as alarms, use the following address codes:
Command Modules: XX67
I/O Modules: XX17

XX=Two digit Module Code

Alarm Input Options

ALARM BATch.FILE OUTPUT
This feature allows incoming alarms to cause the computer to execute predefined BATch files. A BATch file may be defined to load another program such as Procomm for example. Procomm would be configured to dial a pocket paging service to annunciate alarms.

Batch files can also be defined to display custom graphic or text screens that will appear automatically when there is an alarm. A commercial paint program can be used to create the graphics. For example, to display a graphic saved in the PCX format (16 colors 640x480) named FRNTDOOR.PCX, simply copy the graphic file into the TC85DIR sub-directory, and create a Batch file with the following command line:

SHOWPCX FRNTDOOR.PCX

The program SHOWPCX has already been installed in this directory during

installation of the access control program.

Batch files can be created using any text editor such as Word Pad. You can use different names for each Batch file such as ALARM1.BAT.

The Alarm Bat file feature can be applied to any alarm input, and that input can be automatically turned on and off in software using the shunt features described earlier. This restricts BAT.FILE responses only to specified times.

To cause a specific alarm to execute a BATch file, simply place an asterisk (*) in the first character position of the alarm text. The next 8 characters should contain the path and name of the BATch.file. Do not use the extension .BAT. For example:

***ALARM1**

This assumes that you have placed ALARM1.BAT in the access control working sub-directory: TC85DIR.

You may add any additional text you wish to describe the actual alarm IE:
***ALARM1 BUILDING 3 FRONT DOOR**

When adding additional text after the BAT file name, begin in position 10 or 11 to avoid any conflict regarding the name of the BAT file.

Transaction Activated Alarm Output
Incoming alarms can be programmed to pulse one or more relays contained on the 16 Relay Output Module. This is accomplished by selecting an available system memory number, and entering it into the Alarm Text field preceded by a back slash. For example, if you want a certain alarm to pulse an output relay, you simply select an unused system memory number, and enter it anywhere in the alarm text field as follows: \1234. You must then create a Transaction Activated Output Level, and then program number 1234 to be valid in that level.

You may combine both an Alarm BATch file and Transaction Activated Alarm Output from the same alarm input if you want to both display an alarm graphic and create a relay output. For example:

***ALARM1 BUILDING 3 FRONT DOOR \1234**

Audible Annunciation (Warble)

Note: This feature is only available when the bus is connected to the PC running the Host Software. For Network Controller based systems, an optional Annunciation software package is available that will annunciate alarms at any networked PC.

Any alarm can be programmed to warble by placing a caret symbol (^) in the first character of the alarm text:

^ ALARM TEXT

The caret symbol triggers the warble, and the text that follows defines the incoming alarm.

You may also want the incoming alarm to trigger a BATch file. If so, place the name of the BATch file next to the caret symbol beginning in the second text position. If you want to trigger the BATch file without setting off the warble, use an asterisk instead of a caret symbol.

DEFINE INPUT AND OUTPUT MODULES

You may enter text descriptions for each Module, and each relay on that Module. This will greatly facilitate final programming. For example, Module 01 Relay 1 might be defined as "First Floor Law Offices".

DEFINE LEVELS AND HOLIDAYS

Cardholder Security Levels

To simplify the selection of appropriate levels for cardholder programming, Access Levels you define may be fully described in ***Access Central***. The descriptions you make are displayed on each cardholder record form in the Level Library. When you assign a level to a cardholder, this description will automatically be displayed. For a level to be valid, it must have at least one reader, one day of the week, and one start and stop time (or 24 hours).

This function is the key to the system's ability to manage access authorization conveniently. Access levels may be defined by simply entering the desired location(s), applicable week day(s), and time parameters. After LEVELS have been defined, individual cards, or all cards can be quickly programmed into one or more of these levels.

Each LEVEL is independent of all other LEVELS (there is no hierarchy between levels). The number of available levels is determined by the size of the memory.

Reader Module Level Definitions
While Security Levels define the status of cardholders, Reader Module Levels define the status of Command Modules. Each Reader Module Level can be defined to perform one of the following commands:

- Timed Unlock
- Timed Alarm Shunt
- Timed Keypad activation

For entry points equipped with only a Keypad, a Command Level must be defined in order to activate it for use. If a Keypad Level is not currently active, the Keypad will not permit access. This insures against off-hour tampering.

Keypad Operation
Keypad Only
For entry points with a Keypad and no card reader, it is necessary to both create a Command Level to activate the Keypad as described above, and a Security Level To authorize Keypad use just as you would for cardholders. You must then program the active Keypad numbers into this Security Level. When an individual enters a valid Keypad number into the Keypad, entry will be granted.

A Keypad transaction begins with the star key (*), followed by the Keypad number, and ending with the pound key (#).
Keypad Or Card
If the Command Module firmware is set up to accept either the use of a Card or Keypad Code, the instructions above for *Keypad only* apply.
Card Plus Keypad
When the Command Module firmware is set up for Card Plus Keypad you must first enter a valid Keypad number when a Keypad Command Level is active. If a Keypad Command Level is not active, access will be granted based only on a valid card.

A detailed explanation of the Keypad option is contained in the Component Installation Instruction Manual.

CAUTION
Never disable a command level that is currently active by removing its module location code, unless that module is defined in another level. Doing so will

prevent the module from receiving a command to secure. In other words, if a door is unlocked, it will not re-lock until commanded to do so. Removing a location code from an active level will terminate communication to that module unless it is also defined in another level.

To disable a level that is currently active (relay(s) pulled in), first replace the current day with any another day of the week. Wait two minutes to insure that the secure command has been transmitted to the module. After two minutes, modules codes may be removed.

To define or change a command, you must select a Command Level number, and then choose either "U" for UNLOCK, "A" for Alarm, or "K" for KEYPAD ENABLE. When choosing UNLOCK, the defined command will both UNLOCK, and shunt the ALARM during the programmed period.

If ALARM is chosen, only the alarm will shunt during the programmed time period.

Any command can be changed from one type of command to the other by simply hitting "A", "U", or "K".

A command definition can include up to 127 entry points, one or more days of the week, and a specified time interval.

For increased security, the computer checks every programmed module once per minute to insure that its output relay is in compliance with the programmed parameters. When programmed commands are initiated, they will be transmitted to their respective modules on the minute.

Transaction Activated Levels (Elevator)
Selective programming of individual cardholder access to authorized floors can be accomplished with the 16 Relay Output Module. The Output module may be used for either continuous time programmable output commands, or for momentary activation in response to authorized cards.

For elevator control applications, when a card is inserted into the car's reader, all the relays applicable to that cardholder's authorization LEVEL will activate for a period of time pre-selected at the Output Module. When that time period expires, the Module will assume the relay matrix that was set before the Transaction activated event.

The time selected should give the cardholder time to select a floor button. A

separate timer adjustment screw is provided for each bank of 8 relays. If the button pressed matches an active relay, then the elevator control logic should provide the cardholder access to that floor. This system provides relay outputs only, and interfacing to actual elevator control circuitry should be coordinated with the manufacturer of the elevator equipment.

An output relay should be dedicated for each controlled floor per reader. For example: One elevator car with a reader serving 10 floors requires 10 relays. If two elevator cars access the same 10 floors, then 20 relays should be dedicated. If more than one elevator car has access to the same relay, a possible contention could exist when there are simultaneous card insertions in both cars. If this is not considered to be a problem, then up to 15 readers can be programmed to address the same relay.

You may combine Transaction activated Levels And Time Programmed Levels when certain floors are required to have free public access, and other floors require card activation.

Up to 63 Output Modules may be used providing 1008 relays each with a unique code. A relay output code is a four digit number consisting of the two digit Module code plus the specific two digit relay number indicated along the terminal strip. Any Module code may be selected from 00 to 3F except for the code 20 which cannot be used.

Transaction Activated Levels are used to define the various access categories of floor authorization in which cardholders will be programmed. There are typically 100 possible Transaction Activated Levels. The levels dedicated to elevator control must be numbered between 801-900 unless the system is custom, in which case the levels may begin at 601.

Programming these levels is similar to Access LEVEL Definitions used for entry control.

A Transaction Activated Levels is defined as follows:

- One Reader/Command Module Location Code (One elevator car except as noted)
- One or more days of the week.
- A time parameter.
- One to 78 Output Relay codes (Floors).
- A start and stop date if required.

As stated earlier, each car should have exclusive outputs, however there is no problem applying many different levels to the same Outputs. For example, a single output for a given floor may be included in a master level for top executives, and also included in a level intended for more restrictive card-holder use. Any cardholder may be assigned to one or more levels, or all the levels.

After at least one Elevator LEVEL is defined, individual cards may then be programmed.

Transaction Activated Levels Triggered by Alarm Inputs
As discussed earlier under Alarm Text, Transaction Activated Levels may be triggered by unused card numbers sent from incoming alarms. This feature is useful when specific alarm inputs must pulse specific relays for alarm panels, zoned alarm dialers or CCTV controllers. Setting up Transaction Activated Levels which are triggered by card numbers defined in alarm text is performed exactly as described above for elevator levels. Remember to choose memory numbers that are not assigned to cards, otherwise the use of those cards will trigger the output defined in the alarm text.

I/O Module Levels
I/O Modules include 16 Relay Output Modules, 16 Input Alarm Modules, and Multi-Point I/O Modules. These levels can be defined to determine the status of the modules by time and day. When relays should be pulled in, or alarms shunted.

Output LEVEL Definitions apply to the 16 relay Output Modules. These levels are handled exactly like the Remote Command Definitions used for Command Modules, except that a four digit number is used to define these levels instead of two. If both 16 Relay Output Modules, and Programmable 16 Input Alarm Modules are used on the same system, care should be taken not to duplicate module codes (See hardware installation instructions).

Output Levels defined for Relay Modules simply activate and deactivate the relays when programmed to do so. Output Levels defined for the Programmable 16 Input Alarm Modules deactivate or shunt the alarm inputs when programmed to do so. There are up to 100 available LEVELS numbered from 1-100.

An Output LEVEL consists of the following:

- One or more output address (Up to 78)

- One or more days of the week
- A time parameter
- A start and stop date if required

When each of these three parameters are entered, the command will be transmitted at the next one minute update. Every output in the system which is defined in at least one LEVEL, is automatically updated once per minute on the minute to insure maintenance of the programmed status in the event of a remote power interruption. Only locations programmed into properly defined levels (active or inactive) will receive the update, so a location should not be removed from an active level (relay pulled in or alarm shunted) unless it is also programmed into an inactive level, otherwise it will not receive a command to change states.

ALARM MODULE LEVELS: Programmable Shunting

Alarm Module Levels apply to the 16 Zone Alarm Input Modules with codes ranging from 00-3F for a total of 1008 shuntable alarms. Module code 20 is not usable.

These levels simply deactivate (shunt) alarm inputs when programmed to do so. Alarm Module Levels are handled exactly like Output Module Levels. If both 16 Relay Output Modules, and Programmable 16 Input Alarm Modules are used on the same system, care should be taken not to duplicate module codes (See hardware installation instructions).

An Alarm Module Level consists of the following:

- One or more input addresses (Up to 78)
- One or more days of the week
- A time parameter
- A start and stop date if required

When each of these three parameters are entered, the command will be transmitted at the next one minute update. Every input in the system which is defined in at least one LEVEL, is automatically updated once per minute on the minute to insure maintenance of the programmed status in the event of a remote power interruption. Only locations programmed into properly defined levels (active or inactive) will receive the update, so a location should not be removed from an active level (alarm shunted) unless it is also programmed into an inactive level, otherwise it will not receive a command to change states.

If an Alarm Level expires when its input is open (in alarm), that alarm will be annunciated, and will display as an open alarm.

Enter Holiday Exceptions
You may define up to 32 holiday exceptions at one time. You may replace expired holiday dates with future dates.

Anti-Pass-Back Controls
Any reader in the system may be defined as an entry point or an exit point for the purposes of detecting multiple entries by a single card. If the Anti-Pass-Back feature is enabled, a card will be denied passage if an attempt is made to use it for a second entry if it has not first passed through an exit reader, and vice versa. For Anti-Pass-Back to be enabled, you must define at least one entrance reader, and one exit reader.

Timed-Anti-Pass-Back
Timed Anti-Pass-Back is designed to control entrance tailgating where there are no on-line exit readers. In addition, the Timed Anti-Pass-Back feature may be used for automatic once per day resynchronization with or without on-line exit readers.

When timed Anti-Pass-Back is enabled, all cards are resychronized at the time interval specified. You may select a resynchronization interval from 1 minute to 2400. For resynchronization every 15 minutes, simply enter 15. For once per hour, enter 60. For automatic resynchronization once per day at 1 AM, simply enter 0100. To disable Timed Anti-Pass-Back, enter 0.
If Timed Anti-Pass-Back is to be used without an exit reader, you must select a bogus exit reader location in order to initiate Anti-Pass-Back.

The icon header will show T-APB for Timed Anti-Pass-Back, and D-APB for Daily resynchronization. The icon will also show whether APB is enabled on entrances, exits, or both.

Hard and Soft Anti-Pass-Back
When any reader module code is entered as either an entrance or exit location, all cards using that reader automatically become subject to anti-pass-back detection. If anti-pass-back is disabled, “soft” anti-pass-back will be in effect which means that violations will be logged as exceptions, but passage will not be denied. If anti-pass-back is enabled, “hard” anti-pass-back will be in effect denying passage to violators. It is possible to invoke “hard” anti-pass-back at exits, and “soft” anti-pass-back at entrances, or any combination.
Valet and Special Anti-Pass-Back Exceptions
Specific cardholders can be programmed to be exempt from anti-pass-back control. Simply define the highest available Transaction Activated level.

Transaction Activated levels are not subject to Anti-Pass-Back control, so any cardholder programmed into these levels will be exempt. Transaction activated levels require an Output to be defined. Enter 2001 for the output code.

Hard Nesting

Nesting is the term used to describe enforcement of special area parking. The nest is the special area into which designated vehicles are to park. Nesting software is designed to detect vehicles which fail to park in the special area, but instead remain in a premium area. The software permits the selection of a grace period (up to 255 minutes) within which nested vehicles must vacate the premium parking area.

Hard nesting actually denies use of the card for exiting the premium area if the nesting grace period has been exceeded. In order to avoid a hard nesting violation, the vehicle must enter the nest, or exit the parking facility within the grace period. If the grace period is exceeded, the card will not operate any nest entrance reader, and will not operate any premium area exit reader.

For the purpose of nesting enforcement, any reader that permits entry to the premium area is considered an ENTRANCE reader. Any reader that can be used to exit the premium area is considered an EXIT reader. Therefore, the entrance to the nest must be defined as an EXIT reader. The nest exit reader must be defined as an ENTRANCE reader.

For systems with hard nesting, the highest security level is used as a special nesting level. If the system has 100 Security Levels, Level 100 is used to define the nesting level. The use of a level to control nesting permits the operator to designate specific times and days when hard nesting will be active. There may be certain days, times, or holidays that may not be subject to hard nesting.

Any ENTRANCE READER, and any EXIT READER to be used in conjunction with nesting must be so defined using the Anti-Pass-Back Definitions. Hard, Soft, or Override Anti-Pass-Back may be invoked without affecting hard nesting. In either mode, hard nesting will prevail.

Any cardholder to be subject to hard nesting must be programmed into the nesting level. This makes it convenient to program any card in the system in or out of hard nesting.

Reviewing the steps:

1. Define any reader that places the vehicle into the premium area as an entrance reader. Define as an exit reader any reader that exits the premium area. A reader that provides access to the nest is an exit reader. Select the nesting grace period.
2. Define the highest Security level. You can determine what the highest level is by clicking the **About** Toolbar Button. Under Location, ENTER ONLY EXIT READERS. Select the days and times hard nesting is to be invoked. In addition to this nesting level, you must also define at least one normal security level which contains both entrance and exit readers.
3. Program any cardholder to be subject to nesting as valid in the nesting level, and the normal security level.

To quickly override Hard Nesting, simply remove the current day from the Nesting Level.

Capacity/Limitations

Hard Nesting is accomplished by calculating the time lapse between an exit request and an entrance transaction. The transaction data on which the calculations are made are contained in a memory buffer with a total capacity of 1,000 entrance transactions. For Hard Nesting to work properly, the total number of entrance transactions can not exceed 1,000 transactions per grace period. To calculate this capacity, divide 1,000 by the minutes in the grace period. A grace period of 10 minutes would provide a capacity of 100 entrance transactions per minute, or almost 2 per second. A 15 minute grace period would accommodate a capacity of about 67 entrance transactions per minute or more than one per second. Higher memory buffer capacities are available on special order, and are subject to the limitations of the host computer.

Unlock or Relock Doors

This button loads the first Command Level record in case you want to use this record as a master Unlock Level. Set the time and day parameters, then simply select or unselect the entry points to be locked or unlocked respectively.

Enable Background Printing

Use this utility to print real time events. It is best to use a dot matrix printer which will print a line at a time. Please observe the on screen instructions.

REPORT MANAGER

Transaction activity may be viewed and printed using Report Manager. To insure that your report is based on the most recent data, always begin by pressing the Refresh Data Button on the main menu.

Following is a list of Menu Functions:

Main Menu
- REFRESH TRANSACTION DATA
- REPORTS
- CARDHOLDER DATABASE
- VIEW CARD TRANSACTIONS
- VIEW COUNTER VALUES

Reports
- History Report (User Filtered)
- Cardholder Reports
- Alarm Report
- Time Management Reports
- Run DOS Reports
- Report By Reader Location

Time Management Report
- Define Entry/Exit Locations For Report
- Run Time Management Report

Counters
- View Counter Log
- View Specific Counter Log
- View Specific Counter By Date
- Return To Main Menu
- Cardholder Level Assignments
- Cardholders Assigned To A Level
- All Level Assignments
- Cardholder Roster by Number
- Cardholder Roster by Name

Custom Reports

You can use Microsoft's powerful built in Report Wizard to generate new report formats. To specify the data on which to base the report, select the **query** named: **LogRcdTblTransactions.** *Note: To create custom reports, you must familiarize yourself with Microsoft Access by taking the tutorial and reading your Microsoft Access Manual. No phone support is available for customizing your system.*

Cardholder History Report

This is a predefined report that lets you enter the search parameters. You can

enter a start date and time, and an end date and time. The default is today's activity. All cardholder transactions are automatically included unless you specify a search string. This search string can be the name of a cardholder, or a code that is contained in the text field of a number of cardholders.

Alarm History Report

This is the same report as above, but for alarms. Use the text string to filter alarm descriptions.

Cardholder Database

You can review cardholder records from Report Manager.

View Transaction Log

This is a quick way to search, sort, and print transaction activity without waiting for a full report to format.

Time Management Report

This utility creates a report based on "IN" and "OUT" time calculations. You must designate which entry points are entrances, and which are exits for the purposes of this calculation. Select "Define Entry Points" to make these designations. The default report contains a column for Revenue Time which is the actual time rounded up to the next 30 minutes. For Time & Attendance applications, you can ignore this column, or delete it Report Design.

You can run the report by individual, or by groups. If you want the report to be grouped by department number, or by tenant group, simply place unique descriptors on each cardholder's text, such as Dept 123. When you run the report, simply enter this unique string.

Password Manager

Password manager is a separate program that controls log-on authorization, creates log-on reports, and tracks card programming activities so that programming actions can be traced to a specific operator when a programming change was made.

The Password manager Program, **PASSWORDMANAGER.MDB** has its own password. The factory assigned default password is: "admin" without the quotes.

To change this password, you need to open it from Access Central.mdb using the file menu, not the tool bar button. From the file menu, you must locate

PASSWORDMANAGER.MDB located in c:\tc85dir. Before opening it, you must place a check mark in the ***exclusive*** box. Now you can open the database and go to Tools/Security/Change Password.

Main Switchboard

Add New Password

Edit Existing Passwords

Run Log On Report

Cardholder Programming Log Report

Level Programming Dates

Clear Log In Table

Database Properties

All tables, queries, forms, reports, macros, and modules are contained in a single database. All definitions and properties are available for user modifications utilizing the full capabilities of Microsoft Access, however Toye Corporation is only able to provide support for those features it has included in the mdb file, and which have not been modified. Be sure to keep a back up of Access Central.mdb if you plan to make modifications so you can restore the original files if necessary.

Certain procedures assume that ACCESS CENTRAL.MDB, and LOG.MDB are located in your TC85DIR subdirectory even though you have a shortcut icon on your desktop.

You may explore the database structure at any time by un-hiding it using the Windows Tool Bar item. Never close this Database Window or you will shut down the database. When you are finished examining the Database Window, select Window from the File Menu Bar, and Hide the Database Window. Following is an overview of this structure:

Tables

Tables are the basic raw building blocks of a database. The tables you find here are used in combination with other tables to create meaningful information.

Queries

Queries combine information from one or more tables or other queries to create relational data. For example, when you display transactions, the information comes from two different tables; tclog.dta, and entry points.

Forms

Forms are created to display the information from tables, or from queries.

Reports

Reports format data when they require formatting or calculations, such as the Time Management Report.

Macros

Macros perform sequential tasks. For example, the macro name “autoexec” initializes the program so that the Access Central Main Switchboard Menu appears when you load the program. If you don't want the Opening Welcome screen to appear, open this macro in the design mode, and delete the last item in the macro.

Modules

Modules contain the actual Visual Basic Code needed to link with ACCESS-ONLINE The module named *Global* sets the directory paths, so if your software is not running in C:\tc85dir, you will need to change the path statement in this code module. It only appears once at the top.

Backing Up Data

Programming files are maintained both in the Host Software database, and in certain files located in the Host Processor. You may backup the entire Host Software database by right clicking the Access Central.mdb file located in c:\tc85dir, selecting copy, then paste. A backup copy will be created.

Data contained in the Host Processor should be backed up periodically as well. The files to back up use the following extensions: .BAS, .DTA, and .MDB. It is wise to maintain a backup of these files in the event of a computer failure. If you are backing up your transaction data on a regular basis, there is no need to maintain a separate backup of TCLOG.DTA which is the large file used for transaction storage. Should you experience a computer failure, or you wish to move your system to another computer, simply use the original installation program to set up the system, and then copy all the .BAS, .MDB and .DTA files (except tclog.dta) from your backups into the TC85DIR sub-directory. When you initialize the system, a new TCLOG.DTA file will be created.

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