

Access Central 4.2

Tenant Billing

Software Package

Access Central/Tenant Billing is comprised of four executable programs which all must reside in the subdirectory named: c:\tc85dir

1. ACCESS CENTRAL.MDB

This is a Microsoft Access Application called *Access Central*. All system parameters such as Level Definitions, Entry Point Definitions, Holidays, Anti-Pass-Back, etc. are defined in this database. It loads when you click the Access Central.mdb shortcut icon on your Windows Desktop. You may also view Real Time System Events from this program.

Note: The setup program places the Access Central.mdb icon on your Windows Desktop. If your Desktop is a personal Desktop and not the actual Windows Desktop (c:\windows\desktop), you must move the icon to the Desktop you are using.

2. TENANT.MDB

This is a Microsoft Access Application Module designed to manage all aspects of cardholder programming management, tenant account management, and tenant invoicing. This program loads and runs from Access Central when you press the Tenant and Cardholder Programming button on the Main Menu.

3. 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 data, always begin by pressing the Refresh Button. This brings all data from the large background files 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.

4. ACCESS-ONLINE

This is the background communication utility that controls all the access control system field devices, and makes the actual decisions to grant or deny access. It runs in RAM memory so that it can respond instantly to all field events. Because it resides in RAM memory, it is fast and can unlock a door in less than 70 milliseconds when a card is presented. It responds to alarm events with the same speed. When you run this program from the Access Central Welcome Screen, it will load on your Windows Task Bar. You must keep this program running at all times, and you must be certain that you have only one ACCESS-ONLINE on your Task Bar.

It is highly recommended that you start ACCESS-ONLINE automatically when your computer boots up, this way if power should fail to your computer, the Access Control System will restart without human intervention. To do this, go to Explorer, and move the PC.BAT shortcut icon to your Windows StartUp folder:

C:\WINDOWS\START MENU\PROGRAMS\STARTUP

Installation:

Tenant Billing Software is customer specific. It must be customized so that the customer's name and address appear on the invoices and past due statements. The reports must be opened in the design view in order to make the changes. To modify the Invoice so that it reflects your name and address, do the following:

1. From Tenant.mdb, press the F11 key to bring up the Database Window.
2. Select the Reports Tab

3. Select **Invoice**
4. Open **Invoice** in the Design Mode
5. Scroll to the bottom of the Invoice form, and click the box with the sample address: “Plaza Parking”
6. You should now be able to click your text cursor in this box and change the name and address.
7. Save the changes, and exit Tenant.mdb. When you re-load Tenant.mdb, your changes will be made.

About Tenant.mdb

Tenant Billing software is designed to simplify the programming and billing of garage tenants who are billed monthly for one or more spaces, or by the number of trips in the parking lot. All cardholders assigned to any given tenant are programmed as a group (Active Group Level), so that a tenant group can be automatically validated and voided depending on the status of the tenant’s account. When payment is posted for a tenant, all cards can be enabled for the next period. If payment is not received, all cards assigned to that tenant can be automatically disabled at a specific date and time.

Level Definitions are used to control group card validation. Level 1 for example, might be defined with a start date of January 1, and have an end date of January 31. Or if a grace period is desired, Level 1 could have an end date of February 5. Level 2 through 12 would be similarly defined to reflect the start and end dates for those months.

When payment is posted, a new Active Group Level number may be entered on the same screen so that every cardholder assigned to that tenant is automatically validated for the next period.

Individual cardholders may be programmed into other levels that are not related to the Group level such as building and elevator access. Those levels will appear on the cardholder’s form Level Tab.

Note: The Active Tenant Group Level does not show in the cardholders list of levels when you press the Levels tab.

Main Menu Items:

Tenant Management

Each tenant to receive an invoice must be entered here. The tenant may be a single cardholder, or it may be a company with many cardholders. Use this screen to enter billing information, and assigned cardholders. The STATUS field is used only to remove that particular cardholder from the system. Select the word VOID in this field and press the Program This Card button to de-program a cardholder. To put this cardholder back in the system, remove the word VOID, and press the Program This Card button.

Double click on any cardholder record to bring up a special screen for that cardholder which allows you to enter more comprehensive data.

To delete an entire tenant, and all the cardholders assigned to that tenant, simply use the selection bar along the left side of the tenant form to select the record, then hit the delete key. To remove an individual cardholder from a tenant record, use the selection tab on the left side of the cardholder record, select then delete it.

Cardholder Management

Here you can add additional information about each cardholder, and you can list as many vehicles as you wish.

Invoices/Reports

Selecting this button allows you to preview one or more invoices exactly as they will be printed. If the invoices appear as expected, simply hit the printer icon to print all the invoices at one time.

Tenant Billing / Posting

Billing dates are assumed to be the date applicable to the current invoice. When the invoice is generated, the customer's account is automatically updated. It is best to print invoices several days before the end of the month. Additional charges occurring on the remaining days of the month will appear on next month's invoice.

Print Past Due Report

Only those accounts showing past due balances appear. You can preview each past due record prior to printing. Past due reports are formatted like invoices for mailing.

Program All Cards

Each time the master level has been changed for a tenant group, you must use the Program ALL Cards utility.

Define Parking Rates

You may define as many different rates as you need. Rate type "0" is for fixed monthly rates, and Rate type "1" is for per trip billing. You must define at least one entry, and one exit reader in Access Central in order to use the per trip charge feature.

Tax Rates

You may define tax rates which will appear on the invoice if applicable.

Define Entry Points For Reports

When invoices contain per trip charges, the invoice generator needs to know which readers are for entry and exit. The selection of entry and exit readers here has no affect on anti-pass-back definitions which must be defined in Access Central.mdb

Getting Started

The Tenant Billing Software contains sample data so that you can see how the program works. You will need to remove the sample data prior to setting up your own database.

Several different tables comprise this database, and they can be found in the Database Window which you can display any time you hit the F11 Function Key located on the top row of your keyboard. From the database window, you can open the reports in the design mode in order to modify the invoice and past due reports.

Access Central Programming

Microsoft Access version 97 or higher must be pre-installed on your computer. Access Central is a database that will not execute with out it. If you are using Access 2000, you must use the utility in Access 2000 to convert Access Central.mdb, Tenant.mdb, and log.mdb. The converted databases must have the same names as before.

What To Do First

Three basic steps are necessary to initialize the system .

1. Define at least one entry point in Access Central.mdb.
2. Define at least one security level in Access Central.mdb.
3. Program at least one cardholder in Tenant.mdb.

That's it. If the field bus is connected to your PC's serial port properly, the access control system will go on-line.

Loading Access Central

Click the *Access Central* icon, and a Welcome screen will appear. Load ACCESS-ONLINE if it is not already loaded from your Startup directory.

Your program may or may not load with the special *Access Central* Toolbar displayed. To display the correct Toolbar, Select View/Toolbars from the pull down menu. Scroll down to *Access Central* and place a check in the box. Be sure there are no other Toolbars that are checked.

Tool Bar Buttons

Tool Bar buttons are provided for quick access to the most frequently used functions.

Real Time Events

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. 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.

MAIN MENU

Cardholder Database

This opens Tenant.mdb

Reader And Module Definitions

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. For elevator systems, you may enter text descriptions of 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

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).

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 16 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 cardholder 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 using FUNCTION 3.1.

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.

MAKE I.D. BADGE

Because *Microsoft Access* supports linked or embedded 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 such as the Casio QV-10A.

You may place a photo onto the cardholder form using any of three methods. You can create a link (BMP or PCX files only) to an existing photo, you may copy a photo image from your application into the Windows clipboard and paste it, or you may drag and drop a photo from your photo imaging application. To make the choice, simply right mouse click the photo area of the form.

Which ever method you use, the original size of the photo is not important since *Access* will re-size it to fit the I.D. badge form provided the proportions of the photo showing just head and shoulders is maintained for each image. If the photos you take are not confined to a portrait showing only head and shoulders, you can rotate and crop the image in your application, then copy and paste it into your cardholder database.

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 (Epson 720 DPI)
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.

Mass Program 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. You might also use this utility to make sure that the *Access Central* database matches what's in Background-P2 in case you have combined Direct To Memory Programming and *MS Access* Programming. To do this, first use P2's direct To Memory Programming to void all cards in all levels. Save it, then select Update System from *Access Central*. 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 a second or so per record.

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.

Cardholder History Report

This is a pre-defined 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.

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.

Access Central Database Properties

All tables, queries, forms, reports, macros, and modules are contained in a single database. You may name or rename this database as desired, but you must not rename any of the data contained in it. 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.

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 hitting the F11 key. 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. One of the tables (tclog.dta) has an arrow indicating that it is linked to an outside table. It assumes that the tclog.dta table is in a subdirectory named: c:\tc85dir. If this file is located elsewhere, the import definition must be modified in Linked Table Manager.

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. Other macros allow you to clear all

of your tables in case you want to start from scratch. There are three macros defined to import data from external sources in order to automatically populate the Access Central Cardholder Database. They are:

ImportP2Programming. This utility can be used if your Background-P2 is already programmed with cardholders. It will extract the names and security level assignments of each cardholder, and create a record in Access Central.

ConvertDBF: This utility is designed to import data from previous versions of where the data is contained in the built-in dBase III utility.

ConvertMDB: This utility is designed to import data from earlier versions of Access Central

Empty Tables: This utility removes all data from the system.

Modules

Modules contain the actual Visual Basic Code needed to link with Background-P2. 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.