TOYE
CORPORATION
ACCESS CONTROL SYSTEMS

Toye Network Controller Manual

Model 4200-PEN
Model 5200-VIA
Model 5300-AMD
LINUX Version
Quick Start Guide

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Contents

A. Getting Started (Important, Please Read!)

1. Keyboard Lock – If the keyboard is not used for a minute or so, it will become locked. To unlock the keyboard, press the Ctrl (Control) key once.

2. During Startup – Be sure the power supply to the data converter is unplugged while the Network Controller (N.C.) is starting up. There must be NO activity on the com port while the Toye software is starting up. If there is excessive activity on the com port, the unit may keep restarting until the com activity is stopped.

3. **DO NOT power down the N.C. while it is booting up.**

4. If you are installing a NEW system, proceed to Section **B**. If you are UPGRADING an EXISTING system, read through the manual for an overview, and then go to section **N**. If you are updating N.C. software with a new Flash card, go to Section **M**

5. There are two Network Controller (N.C.) configurations:

a. Access Central (Model # ACNC-SYS) For a SINGLE PC with a SINGLE N.C. The Computer Name is NC1, and the IP Address is 192.168.1.127, DHCP disabled. All these settings are fixed and cannot be selected.

b. Access Anywhere (Model # AANC-SYS) This is the full network version. All network settings are selectable, and are normally programmed at the factory prior to shipment. The network software does not limit the number of workstations and N.C.'s in the system. If you have Access Anywhere software with the full network license, please refer to the Access Anywhere Networking Manual for additional information on how to set up multiple N.C.'s and workstations, and how to configure IP addresses.

6. This manual covers three different models of N.C.'s:

     a. Model #4200 is TAN in color, and is the smallest in size. It is now obsolete, and no longer available. It uses flash cards version 9.x and 10.11 and up.

     b. Model #5200 is rectangular and BLACK in color, and has a small plastic door in the front panel for access to the flash card. It is also now obsolete, and no longer in production. It uses flash cards version 11.x.

     c. Model #5300 is square and BLACK in color, and has a small slot opening in the front panel for access to the flash card. It uses flash cards version 12.x.

B. Access Central Networking with a Single PC

1. To create a network connection in Windows with a single PC, use a Crossover cable, or a network switch or hub.

2. In the PC, go to Start, My Network Places. In the panel to the left select "Create a New Connection."

3. Follow the Wizard to establish the connection to the network card that will serve the N.C. Name your connection whatever you wish such as Network Controller Connection or Access Control System.

4. Right Click the new connection, and click on Properties.

5. Under "This Connection Uses the Following Items," click on "Internet Protocol [TCP/IP].

6. Click on Properties. Under the General Tab, click on "Use the Following IP Address."

7. Enter the following in the IP address field: 192.168.1.128, and the following in the Subnet Mask field: 255.255.255.0.

8. Click O.K.

9. This completes the networking setup on your PC. You can now close all the networking windows.

10. Follow the steps in Section **C** and **E** below to map a drive to the N.C.

C. Access Central Networking Configuration

1. You must set up a network login as follows:

Login Name: Toye

Password: acs10

Note: Names and passwords are case sensitive.

2. All workstations must use a password in order to gain access to the N.C. over the network. You can map a drive with "connect using a different user name," but that drive will have to be refreshed with the network login and password each time the workstation is restarted. To set up an automatic Toye login under a different user name, see section **E** below. To map a drive, use the following path: \\Name\tmp\tc85dir (Name is the N.C. Name). The default name is NC1. If there are multiple N.C's, default names are NC2, NC3… etc.

3. Occasionally you may not see the Linux N.C. on your network, but you can always manually map a drive to the above path. Only one mapped drive is needed. We no longer use the Logfiles path. If you use the method outlined in section **E** below, it is not necessary to map a drive. If you get any network problems or errors, it may be better to map drives with the IP address rather than the name, i.e. \\192.168.1.127\tmp\tc85dir . This is only necessary on large networks with gateways that may not pass the N.C. name through the switch.

4. In the event that the network connection is lost to the Linux N.C., restart the Windows workstation. There are settings in Windows that can cause the network connection to go to sleep. In Windows XP the following settings are recommended:

In Control Panel, System, Click the Hardware Tab. Click The Device Manager Button. Right Click Network Adapters, and select Properties. Click the Power Management Tab. UNcheck ALL boxes under Power Management.

D. Procedure for Updating the Toye Data files in a New N.C.

1. After the drive to the N.C. is mapped, browse the tc85dir folder in the N.C. to be sure the files are there.

2. Load Access Central. If you have been given a new version of Access Central, you must import the data from your old version. (See section **O** below). If you are upgrading from a PC system to a N.C., you must go to the main menu of Access Central, and select the last item "Add or Edit Network Paths." Add a new path with the drive letter of the mapped drive to the N.C., i.e., F: That new path will serve both as the Monitor Path,   and as the Programming Path.
3. Go to Cardholder Database Management, and select any card record, and press the UpdateNC button, double click the proper path to the N.C., and click the Send button.
4. Go to Define Levels, Holidays, Emergency Mode, and Select Cardholder Security Levels. Select any Security Level record. Click the UpdateNC button, double click the path to the N.C., and click the Send button.
5. The Toye data files are now fully updated, and the N.C. can be connected online to the card readers.
6. When changes are made in Access Central, they do not take effect until you do an UpdateNC. Each time you do an UpdateNC all changes made in Access Central since the last update will take effect. Card data is updated from any Cardholder record, and all other data is updated from the Levels menus.
7. Always be sure that each form in Access Central shows a path of c:\tc85dir in red. This is called the Active Programming Path at the bottom of the Cardholder database form. When you click the UpdateNC button, be sure that the Active Path and Current Startup Path are both c:\tc85dir. Also, be sure that the FIRST available path to choose is "This PC", which is always the default startup path. You then double click an N.C. path form the list, click send, and then the software returns to the opening screen "Select Path to Monitor" so that it always returns to the default path of c:\tc85dir. This process assures redundancy of the data. The data is programmed in the PC, and then sent to the N.C., so it is in both places.
8. Occasionally if you drag the mouse across a path list during the UpdateNC process, the order will become scrambled, and the "This PC" path is no longer at the top of the list. This MUST be fixed before any further updates are attempted. With your mouse on top of the list, right click and select Sort Ascending, and the list should be re-sorted to put "This PC" back to the top of the list. Be sure to repair any and all scrambled UpdateNC path lists that you encounter in this manner.

E. Procedure to Make the Toye Network Login Automatic Even if Logged in as a Different User
 NOTE: With this setup, you DO NOT have to map a drive to the N.C. You usually have to be logged in as an Administrator in the PC to do this setup.

1. With Windows 2000 Professional.
a. Go to Control Panel, Users.

b. Add Toye as a user with password acs10.

c. Make user Toye an Administrator

d. Go to the Advanced Tab, and click the Advanced Button. Click the Users folder.

e. Double Click the user Toye, and check Password Never Expires, and User Cannot Change Password.

f. Select the third Tab, and go to Profiles.

g. Under the Home Folder Select () Connect, and specify an unused Drive Letter.

h. Type in the path of the mapped drive, i.e. \\NC1\tmp\tc85dir, and click Apply, and OK

2. With Windows XP Professional

a. Go to Control Panel, Users

b. Select a User

c. Under Related Tasks, select Manage My Network Passwords

d. Click ADD

e. Under Server: type the N.C. name, i.e. NC1

f. Under User Name: Type N.C.Name\Toye, i.e. NC1\Toye

g. Under the Password type: acs10, and click OK.

h. NOTE: With this setup, you have to map a drive once to the N.C. and check the box Reconnect at Login.

F. Changing the System Date and Time

1. The date and time for your time zone is preset at the factory. In order to change the system date or time you must use the date command in Linux, or it can be changed in the CMOS setup of the N.C. The Toye PC software menus relating to date, time and daylight savings no longer work, since Linux controls the date and time. You must be logged into Linux on the second screen as an Administrator to set the date and time. To obtain an Administrator password, contact your installing dealer, or the factory. Follow these steps:

      Press Ctrl-Alt-F2

      Login as an Administrator

      Type: date <enter>

      Note if the year is correct. If it is, you can omit the year form the date command.

      Type the date command as explained below

      The correct date and time should now be displayed.

      Type: savetime <enter>

      Type: logout <enter>

      Type: Ctrl-Alt-F1 to return to the Toye Program

The syntax for the date command is: date MMddHHmm[YYYY] <enter> (You can omit the YYYY if the year is correct). Time must be in the military format

from 0001 to 2359. There must be a space after the command date, and no other spaces or punctuation in the command. Example: date 10271305 <enter> sets the date to 10/27/YY, 1:05 PM. Daylight Savings time is automatically configured in Linux for your time zone. Be sure your unit has been set for the correct time zone. When you type the date command the time zone is displayed as three letters just after the time, i.e. EST =Eastern Standard Time. If the time zone needs to be changed, see section **R** below.

2. Versions 9.1s and Later

The time is saved automatically to CMOS once a day. After you have set the date and time, you can type the command: **savetime** to immediately save the time to CMOS.

3. Versions 9.2s and Later

If your network has Internet access, there is an option in Linux to automatically update the time and date from the Internet or from a local time server. This is an important option if you have a large number of N.C.'s so that the time will be in sync system wide. This option is suggested for more advanced users. The following commands toggle between the two possible timekeeping modes:

localtime - Time is set manually and saved automatically to CMOS once a day. This is the default time.

internettime - Time is updated automatically once a day from the Internet or a local time server. A local IP address must be set and kept up to date for this function to work. If the Internet or local time server is not available, the time is not updated. You must locate a Stratum 2 NTP Server to synchronize time from the Internet. If the NC is on a LAN, the IP address of the main file server can usually be used to update the time. To set the time server address, login as an administrator in Linux, and type the following:

cd /bin <enter>

copy IPtime IPtimeBK <enter>

pico IPtime <enter>

Scroll down to the last three lines of the script. The third line from the bottom has the IP address of a Stratum 2 NTP server. These Stratum 2 addresses change at least every 10 months, so they must be updated. The default address is for Southern California. It is best to choose a server close to your location. Enter the new IP address, and press Ctrl-X, Y, <enter> to save. Follow the instructions below to locate an NTP server near you :

a. Go to the web site: http://ntp.isc.org/bin/view/Servers/StratumTwoTimeServers

b. Scroll down the long list to find a server near you. The server name is in the second column form the left. Be sure to choose one designated "OpenAccess".

c. Click on the HostName link and write down the IP address displayed. If you cannot find the IP address, open a command prompt on a web-enabled PC, and PING the server name. Be sure it responds 4 times with an IP address. Write down the IP address and enter it into the file IPtime.

d. To test your setup, set the date and time to be off one day, and a few hours from the correct time with the Linux date command. Then type: IPtime <enter>. This will update the date and time from the Internet or local time server. Type: date <enter> and verify that the date and time is now correct. If the date and time is not correct, try a different NTP server or local time server IP address.

4. Versions 11.3 and Later
Internet time sync. is automatic, if the operating system is allowed access to the Internet or a local time server, if it is not, the process is skipped. Time is updated every day at 02:00 hours. To update the IP address of the NTP server, edit the file /var/spool/cron/crontabs/root. Version 11.3 and later has the new Daylight Saving time schedules that were implemented in 2007. To upgrade Model #4200 N.C.'s, to the new Daylight savings Time, use version 9.8s or higher flash cards.

G. Restarting and Shutdown of the Network Controller
1. If it is necessary to restart the N.C., you can press the small black button on the rear of the N.C. next to the plug for the monitor. (In the 5200 and 5300 series, unplug the power). This procedure is not recommended, since some data changes made within the last hour may be lost. A graceful shutdown is preferred if you have a monitor and keyboard connected to the N.C. To do a graceful shutdown, follow these steps:
a. From the Toye Menus, press the F key (for the function menu) [If the keyboard is locked, press the CTRL key once].
b. Press the X key to exit to DOS. (If there is a password required, the factory default is acs10).
c. Press the space bar to begin the shutdown process. You will see several messages. Wait until you are given the choice of entering 1 or 2 to restart or shutdown.
d. Press 1 <enter> to restart or 2 <enter> to shutdown. If you do not make a selection within 10 seconds, the unit will automatically restart.
e. If you chose shutdown, wait a few minutes for Linux to shut down. If you need to power down the unit, wait for the message "Power Down" to appear. Only then is it safe to disconnect power from the unit. CAUTION: DO NOT power down an N.C. while it is booting up. This could cause severe damage to the flash card. If you need to power down an N.C. after it has started booting up, be sure to let if complete the boot up process with the Toye software menus showing before you power it down. Doing a graceful shutdown rather than just powering down the unit is always preferred.
2. Offline Mode
a. When the N.C. is shut down, all of the readers all go offline. When the readers are offline, they go into either of two modes, depending on how each reader is set. If switch # 9 on the reader module is turned on, the reader goes into automatic degraded mode.

Degraded mode means that the module checks only the site code on the card, and then grants access. This means that any card from your facility will work in all of the doors, 24/7. Even a voided card from your facility will work. You can tell when a reader module is in degraded mode, because it takes about 3 seconds to open the door, instead of the usual one second.

b. To disable the automatic degraded mode, you turn switch # 9 OFF on any reader module. You would normally only do this for doors going to high security areas. With the automatic degraded mode off, NO ACCESS can be granted when the reader is offline. Other arrangements must be made for such doors when you are doing system maintenance, such as having a mechanical key override, or leaving the door propped open.

c. If you have elevator security in your system using the # 4190 panel, these units will not function when the system is offline. These panels must be bypassed when the system is offline. Consult your installer for instructions on how to put the elevators in security bypass in the event that the system is offline.

H. Backup Directory

1. A directory in the N.C. called Backup1 is refreshed every hour. By design, all Toye data files are duplicated in the PC, except the history log, called Tclog.dta. It is a 10 MB file, and contains all the transactions history. It is strongly recommended that his file be backed up regularly with a network synchronization program. Map a second drive to \\Name\backup1 and program your synchronization program to back up either all files or at least Tclog.dta from this directory. Use the same login and password as show in section C1 above. If power is lost to the N.C., you can lose up to one hour of history. It is therefore very important to back up Tclog.dta, and have a reliable UPS (Battery Backup) for the N.C. SmartSync Pro is an excellent synchronization program available at http://www.smsync.com/ .

I. Power Requirements for the N.C.

1. A UPS (battery backup) with a minimum of 1600 Joules surge protection is REQUIRED for all N.C.'s. Bad power, especially fluctuating power, will damage the flash card in the N.C., and it may no longer function at all. If you have bad power, ordering a spare flash card is strongly recommended.

J. New Opto-Isolated Data Converter

It is very important that the converter #485OI9TB be used to replace the old data converter in all N.C. upgrade installations. Many problems will result if the old

data converters for PC's are used. Please verify the revised wiring below, and be sure the correct value of pull-up resisters are installed:

```
            Converter
            Terminal         Connects
            Block            to

            D ---------------- Bus - D **

            C ---------------- Bus - C **

            A ---------------- Bus - A

            B ---------------- Bus - B

       Shield/12V rtn --------- Bus - shield
          "    "    --------- External 12 VDC power Negative, and Earth ground

        + 12VDC -------------- External 12 VDC power Positive

      ** IMPORTANT NOTE: At any one command module on the bus,

            One 1k resistor must be connected between:
               +5 VDC (H3-1) and Bus-C (H2-3), new 412x modules
               +5 VDC (Tb22) and Bus-C (Tb26), old 4110 modules

            A second 1k resistor must be connected between:
               system common (H3-4) and Bus-D (H2-4), new 412x modules
               system common (Tb23) and Bus-D (Tb27), old 4110 modules

            Connect the Bus Shield to earth ground at ONLY ONE place, close to the
            converter.

        Jumper Setting (Echo): ON
```

Note: The 220 Ohm end of line resistor across the C-D pair on the last module on the bus must NOT be used with this converter. If you are upgrading an existing system and the 220 ohm resistor is installed, the voltage across the C-D pair will very likely be well below the 3-5 VDC required specification, so the 220 ohm resistor must be removed.

K. Installing an Optional KVM Switch

1. If the N.C. is in a secure area, it is suggested that a keyboard and monitor be connected to the N.C. to facilitate servicing the system. Although all programming changes should be made from the PC workstation, it is helpful to monitor activity on the N.C. If the N.C. is near a PC, and you do not have an extra monitor and keyboard, or if space is at a premium, use a 2 port KVM Switch. An excellent unit is the IOGear MiniView Micro, model GCS62, which costs about $30.00 (http://www.iogear.com). The KVM Switch allows you the share a single keyboard and monitor with a PC and the N.C. You should also go into the Password menu in the N.C. and set up a password to access the menus. The system

is shipped with a default password of acs10. This password will be erased if you have an existing system, once you do an UpdateNC. To add the password, go into the PC Workstation to the Tc85dir directory with Windows Explorer, and double click the PC.bat file. This will load the Toye program on the PC. Go into the menus there and set the password. Then go to menu item 3.3 (Main Menu 3, sub-menu 3) and save your settings, then press the ESC key twice, then press X <enter> to exit the program. To transfer the password to the N.C. you must do and UpdateNC of your Security Levels (see Section **D** above). Note: You cannot load the Toye program on your PC unless it has a com 1 port.
2. WARNING: The use of a KVM switch with the Model 5300 is NOT recommended. It will cause numerous problems including failure of the unit to boot up, and freezing of the keyboard. Using a separate keyboard and monitor is strongly recommended. If there is not room for a second monitor, it is better to just move the VGA cable to the NC when you need to view the NC screen and to normally leave it connected to the PC.

L. Repairing Damaged Linux Files in the N.C.
1. If the N.C. does not boot up correctly, it can hang or keep restarting over and over. This is almost always because of a power dip or surge. If this happens, you must connect a keyboard and monitor to the N.C. and do the following:
a. If you see a prompt of boot: simply press the [enter] key, and the unit should start up normally.
b. If you see a number of lines in red, and messages saying that files are damaged, follow these steps:

> (1) If you have a login prompt, you must login as an Administrator
> (2) After the software has paused, type the following:
> For Models 4200 and 5200:
> e2fsck –vy /dev/hdc1 <enter>
> For the model 5300:
> e2fsck –vy /dev/hda1 <enter>
> If there is a prompt to repair files, answer Y for yes.
> (3) After this process, you will normally be left with a Linux prompt.
> (4)Type: hboot <enter> to reboot.
> (5) If the repair process was successful, you should see the Toye software loading up automatically. If you continue to get errors, try steps L1b(1) through L1b(4) again. If the repair process fails again, contact the factory for a replacement flash card.

2. In order to avoid damaged files, follow the instructions in section **I** above.

3. Fixing Errors 55 and/or 75

There are two possible reasons for the above errors. If you have a 4200-PEN, you need to first check the RAM setting to be sure it is correct. Follow these steps:

1. Connect a monitor and K.B. to the N.C. Disconnect the converter or converter power supply to put the card readers offline.
2. Press CTRL-ALT-F2 to get to the second screen.
3. Login as an Administrator
4. Type: cd /etc/rc.d <enter>   [You need a space between cd and /]
5. Type: pico rc.EBSconf <enter>
6. Type: Ctrl W <enter>
7. Type: ramdrive <enter>
8. Type: Ctrl W <enter>
9. Type: Crtl W <enter>
10. You will see a list of RAM size selections. Edit RAMDRIVE=24567, or whichever entry does NOT have a # symbol in front of it.
11. Change the value to 40960.
12. Type: Ctrl X, Y, <enter>
13. Press Ctrl-Alt-F2 and Type: hboot <enter> The N.C. should shut down

gracefully, and restart with the software running correctly. Reconnect the converter or converter power supply to put the card readers online.

Occasionally, due to power dips or surges, the Toye data files in the N.C. can become damaged. The result can be a blue screen displaying Error 75 or Error 55 (or both) and the message "Waiting to log files…" Follow these steps to fix the problem:

1. Disconnect the converter or converter power supply to put the card readers offline.
2. Press ctrl-alt-F2 to go to the second screen, and login as an Administrator.
3. Type: pa <enter> and press the space bar twice.
4. About 6 lines up from the bottom of the screen in the center column, you will see the words /bin/tdos, and two entries for /bin/dosemu.
5. Look all the way over to the left of each line with tdos and dosemu, and write down the 4 digit PID number on the far left column. This number will be different each time you type pa.
6. Type: kill -9 xxxx xxxx xxxx <enter> Where the 3 groups of 4 x's are the three PID numbers that you wrote down for tdos and dosemu in Step 5. There must be a space between each 4 digit number.
7. Press ctrl-alt-F1. You should see a prompt such as NC1~$. If you do not see this prompt, repeat steps 3 thru 7 again. After you receive the prompt, proceed to step 8.
8. Press ctrl-alt-F2
9. Type: cd /tmp/tc85dir <enter> [Be sure the new prompt includes /tmp/tc85dir#]   (You need a space between cd and /)
10. Type: rm * <enter> (You need a space between rm and *)
[Type: dir <enter> and be sure the directory is empty]
11. Type: cd /system <enter> [Be sure the new prompt includes /system#]
12. Type: rm * <enter> [Type: dir <enter> and be sure the directory is empty]
13. Type cd / <enter>
14. Type: cp /backup/* /system <enter>
15. Press: ctrl-alt-F1
16. Type: tdos <enter> Wait for the Toye software to start up.

17. Press: ctrl-alt-F2
18. Type: fixpermi <enter>
19. Type: logout <enter>   Type ctrl-alt-F1 to return to the first screen.
20. The system has now been restored with all empty data files, so all of the cards are void. See Section **D** of this manual to send the current data files to the N.C. After this process has been completed, you can re-connect the converter and/or converter power supply. **NOTE**: It is important to have the converter powered down and the card readers offline until the NC software finishes booting up and the NC data has been updated from the PC.

M. Installing a New Flash Card Replacement or Upgrade

Model #4200
If you have been sent a new flash card to install, follow these steps:
1. The system will have to be put into degraded mode, so notify the appropriate personnel. If a keyboard and monitor are available, do a graceful shutdown (see section **G** above.)
2. Disconnect the power supply form the N.C. and unplug the Opto-Isolated Data Converter from the 110 VAC source.
3. Disconnect all the other cables from the N.C.
4. Remove the top cover of the N.C. using a Phillips head screwdriver. This will require removing 2 screws from the back and one from each end, for a total of 4 screws.
5. Remove the bottom cover from the N.C. by removing the screws on the four corners of the circuit board, and the two screws on the ends screwed into the rear faceplate. The rear faceplate, with most of the connector plugs, does not need to be removed form the circuit board. Be VERY CAREFUL handling the bare circuit board. You must not expose the bare board to static electricity. Be sure to touch a large piece of grounded metal such as the metal case of a PC to ground yourself prior to handling the circuit board.
6. Turn over the circuit board, and carefully remove and replace the old flash card. The card can be inserted ONLY one way, usually with the flash card logo facing up. Return the old flash card to the factory. Be sure the flash card is FULLY inserted into the socket.
7. While you have the N.C. open, verify that the RAM next to the flash card is 128 MB, and not 32 or 64MB. If the RAM is not 128 MB, it must be replaced. When you install new RAM, be sure it is fully seated in the socket with the two spring clips locked in place.
8. Carefully re-assemble the N.C. with ALL of the screws.
9. Re-connect all the cables, connecting the N.C. power cable last. Do not power up the Converter power supply.
10. Go to the PC workstation and follow the steps in Section **D** above.
11. Re-connect the Opto-Isolated Converter power supply to 110 VAC.

12. Observe the transactions in the N.C. to be sure everyone is being granted access. If the transactions are RED, and there is a dash (-) after the time, then people are being locked out. Disconnect the Opto-Isolated Converter power supply from the 110 VAC supply, and follow the procedure in Section **D** again to be sure the N.C. is updated with both cards and levels. Then repeat step M11 & M12 again.

Model #5200
If you have been sent a new flash card to install, follow these steps:
1. The system will have to be put into degraded mode, so notify the appropriate personnel. If a keyboard and monitor are available, do a graceful shutdown (see section **G** above.) Disconnect power from the N.C., and form the Converter.
2. Open the small door on the front of the N.C. and carefully remove and replace the old flash card. The card can be inserted ONLY one way, usually with the flash card logo facing up. Return the old flash card to the factory. Be sure the flash card is FULLY inserted into the socket.
3. Power up the N.C.
4. Go to the PC workstation and follow the steps in Section **D** above.
5. Restore the power to the converter.
6. Observe the transactions in the N.C. to be sure everyone is being granted access. If the transactions are RED, and there is a dash (-) after the time, then people are being locked out. Disconnect the Converter power supply from the 110 VAC supply, and follow the procedure in Section **D** again to be sure the N.C. is updated with both cards and levels. Then repeat steps M5 & M6 again.

Model #5300 - Old Style Case with Flash Card Slot in the Front
1. Unplug the power from the unit.
2. Remove the four screws and the top cover.
3. Slide out the old flash card through the hole in the front face plate.
4. Slide the new flash card through the hole in the front face plate into the slot in the circuit board, with the flash card logo facing UP. Gently seat the flash card all the way into the socket. DO NOT USE FORCE.
5. Replace the top cover and the four screws.
6. Follow steps 9 thru 12 in the Model #4200 section above.

Model #5300 – New Style Case with no Flash Card Slot in the Front
1. Unplug the power from the unit.
2. Remove the four screws and the top cover.
3. Slide the old flash card out from the back of the circuit board.

4. Slide the new flash card into the slot in the rear of the circuit board, with the flash card logo facing UP. Gently seat the flash card all the way into the socket. DO NOT USE FORCE.

5. Replace the top cover and the four screws.

6. Follow steps 9 thru 12 in the Model #4200 section above.

N. Procedure to Upgrade Old PC Software for an N.C.

1. Make a full backup of your existing Tc85dir directory under a new name, i.e. Tc85BAK.

2. Insert the Toye software CD and run the batch file Update or Setup using Windows Explorer.

3. If you have an existing old system, be sure you still have your old data files in Tc85dir from the backup folder. Verify all of the files listed below from your backup directory are the same name and size as in the Tc85dir:
defs.bas, cardtext.dta, cardx.dta. For older systems: defs.bas, cardtext.dta, card1,2,3,4.bas, and elev1,2,3,4.bas.

4. We have a new convention that all Toye data files must be LOWER CASE for Linux compatibility. Included on the CD we sent will be a universal batch file called chgcase.bat. Double click the file chgcase.bat. The program will change all of the old data files to lower case. It is very important that you follow this procedure BEFORE you do an UpdateNC in the software, or you may encounter serious problems with the N.C.

5. WARNING: Linux file names are case sensitive. Defs.bas and defs.bas are DIFFERENT files as far as Linux is concerned. If you are overwriting ANY files, it is best to delete all the old files first, and then copy in the new files. Using Windows Explorer to copy files into the Linux N.C. is NOT RECOMMENDED, and is NOT necessary. To send the customer's data files to the N.C., see section **D**. There should be no problem copying files FROM the N.C. into Windows, however. There are problems in Linux with the DOS RENAME command, so it should NOT be used. If you wish to rename a file, do it in Windows before you copy it into the N.C.

6. Proceed to section **O** to complete the upgrade.

O. Procedure in Install a New Version of Access Central or Access Anywhere

All Network Controllers using Linux require Access Central Version 8.x. If you were given a new version of Access Central, and have an existing copy with Card and Levels data in it, use the following procedure to import your data from the old Access Central into the new one:

1. Make a complete backup of the Tc85dir directory if you have not already done so.

2. Rename your existing Access Central.mdb file to Access Centralold.mdb.
3. Install the Software upgrade from the CD with the instructions provided. If you manually copy the files from a CD, you must change the attributes of the files, since they will be Read Only when copied from a CD. To remove the Read Only attribute, right click the file in Windows Explorer, go to Properties, and uncheck Read Only).
4. Load the new Access Central.mdb. If it asks to convert the file, follow that process, and save the file, normally called db1.mdb, to the Tc85dir folder. Be sure to rename db1.mdb to Access Central.mdb after the conversion is complete.
5. Log in with password: user.
6. Select the Cardholder and Database Management menu.
7. Select the Special Programming and Restoration Utilities submenu.
8. Select the Data Import and Restoration Utilities submenu.
9. Select the Import Data from Previous Version of Access submenu.
10. Change the path in the Old Data File window to C:\Tc85dir\Access Centralold.mdb, and click OK.
11. Verify that the Card and Level data has been properly imported into the new software.
12. After you load the new Access Central, login and select Reader, Module & Alarm Point Definitions, then select Reader Module Text Definitions, and assign a Level/Group No. to each reader. You can use group 1 (one) for all readers if you don't need to group the readers. A group number must be assigned to all readers in order for the new Report Manager to work.
13. Follow the steps in section **D** to set up network paths and do an updateNC.
14. The software upgrade is now complete.

P. Displaying the Linux Version Number
The version number is displayed on newer versions of the N.C. at the top of the second screen. (Press CTL-ALT-F2). You can also display the version number on the second screen after you have logged in by typing: version <enter>.

Q. Using Windows 98 as a Workstation
The default version of the N.C. will NOT work with Windows 98 as a workstation. Windows 98 is not recommended on a LAN, since the network security is not adequate. Windows 98 can be used on a private LAN with only the access control workstation(s) and the N.C. If you have Linux version 9.3s or higher, you can change the N.C. to work with Windows 98. If you have an older version, you must request an upgrade form the factory. To change the N.C. configuration for Windows 98 networking, follow these steps:
1. Go to the second screen, and login as an Administrator.

2. To change to Windows 98 configuration, type: win98net <enter>. To change back to the standard configuration for newer versions of Windows, type: winNTnet <enter>. After you make either of these changes you must do a graceful shutdown and restart the N.C. (See Section **G**).
3. To map a drive with Windows 98, the path must be \\Name\tmp. You must then add a network path in Access Central to include the drive letter and \Tc85dir, i.e. F:\Tc85dir, instead of just the drive letter. No login and password is required with Windows 98. Be sure to check Reconnect at Login.

R. Setting the Time Zone
Note: The time zone is normally set at the factory, and is displayed using the date command. It is not normally necessary to change the time zone. You must have the time zone set correctly for Daylight Savings time rollover to occur properly. The procedure to set the time zone follows.
1. Connect a keyboard and monitor to the N.C. and login as an administrator on the second screen. (CTL-ALT-F2)
2. Type: date <enter>
3. Verify that the three letters following the time are correct for your time zone (i.e., EDT means Easter Daylight Time). If the time zone is not correct, it should be corrected by following these simple steps:
a. Type: timeconfig <enter>
b. Press <enter> which will select OK (NO: Hardware clock is set to local time)
c. Scroll down first by country, and then by time zone (The list is in alphabetical order). With your country and time zone highlighted, press <enter>.
d. Type date <enter> and verify that the time zone is correct.
e. If the time or date is not correct, enter the correct time and date. (See Section **F** for more details on setting the date and time.)
f. If you changed the date and time, verify that the new date and time are correct.
g. Go to the first screen (CTRL-ALT-F1) and do a graceful shutdown and restart of the N.C., (see Section **G** above for more details). The N.C. must be restarted for the new time zone to take effect.

S. 5300 BIOS Update
1. Some older 5300 NC's may have the following BIOS issues:
   a. Clock does not keep good time.
   b. Keyboard locks up
   c. Unit locks up during boot up with message "Detecting IDE Drives…"
The new BIOS update appears to have fixed items (a) and (b) above. Be sure that you have a current version of the BIOS in your unit.

2. To check the BIOS version, follow these steps:

a. Press the DEL key repeatedly as you power up the unit. You should receive a blue CMOS setup screen

b. Press <enter> with the first menu item (Standard CMOS Features) highlighted.

c. The BIOS version date will be displayed at the bottom of this screen. The latest good BIOS version is: 7/19/2010. Any older versions must be updated. Press ESC, ESC, Y and <enter> to exit. If your unit needs a BIOS update, please contact your dealer or the factory for an update.

3. The only current workaround for issue S1(c) above (unit lockup during boot up) is to unplug the VGA monitor, let the unit start to boot (listen for the "beep") and then plug the VGA monitor back into the unit.