

TQ600

User Manual



**Proximity
Time Clock**



**Fingerprint
Time Clock**



**Magnetic Stripe/
Barcode Time Clock**

FCC Warning:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 Du Canada.

Lithium Battery Caution:

The circuit board on this time clock is populated with a lithium battery to protect data or programs stored in the Random Access Memory (RAM). Do not, under any circumstances, attempt to replace the lithium battery in the time clock. Failure to comply may invalidate your warranty. Battery replacement should be done by qualified personnel wearing the proper eye protection.

CAUTION: Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instruction.

<p>This product utilizes a battery that contains Perchlorate Material. Perchlorate Material – special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate</p>
--

Declaration of Conformity According To EMC Directive 89/336/EEC

We declare under our sole responsibility that the U600 Finger Print reader and/or U600P Proximity reader and/or data recording equipment to which this declaration relates are in conformity with the following standards: EN61000-6-1, EN55022-2006, EN55024-1998+A1:2001+A2:2003. I, the undersigned, hereby declare that the equipment specified above conforms to the above directive and standards.

Raleigh, North Carolina USA

February 15, 2012

All Rights Reserved. © COPYRIGHT 2008

Acroprint Time Recorder Company



Contents

Getting Started	1
Time clock Configurations	1
Operator Panel LEDs	2
Menu Tree	3
Basic Concepts	7
User Enrollment: Fingerprints	7
User Identification / Verification	7
Threshold	8
User ID (PIN number)	9
Privilege Levels	9
Start-up	10
Enrolling – Fingerprint Time clocks	11
Fingerprint Enrollment Tips	11
Enrolling Users – Fingerprint Time clocks	13
Fingerprint Enrollment	13
Testing a Fingerprint Enrollment	15
Enrolling Auxiliary Fingerprints	15
Password Enrollment	16
Fingerprint & Password	17
Change Password	19
User Verification Types	20
Fingerprint Verification	20
Password Verification	22
Enrolling – Badge Time clocks	24
Badge/Card Enrollment	24
Password Enrollment	25
Proximity Badge & Password Enrollment	26
Change Password	27
Privilege Levels	28
Enroll w/ Privilege Level	28
Delete User Data	30

Options.....	31
System Options	31
Set Date & Time	32
Changing the Time Format	32
Changing the Language.....	32
Changing the Date Format.....	33
Daylight Savings Time (DST)	34
Advanced Options.....	35
Power Management.....	37
Communication Options.....	38
Log Options	39
Auto Test	40
System Information.....	41
View Time and Attendance Records	43
Review All Attendance Records.....	43
Review Individual Attendance Records.....	44
Browsing Attendance Records	44
Cleaning the TQ600	46
Troubleshooting.....	47
Appendix	49
USB Flash Drive Management.....	49
Bell Schedule	49
Reserve Battery (Mini-UPS)	49
UPS Operational State:	49

Getting Started

Important!

Do not attempt to service the TQ600 yourself. Opening the time clock will void the warranty. Always follow the instructions in the user guide.

- Do not place the time clock in direct sunlight. Bright light may significantly affect fingerprint reads or cause fingerprint verification to fail. The time clock is designed for indoor use in a temperature range of 32-104° F (0-40° C). Keep the time clock away from heat sources such as radiators.
- The time clock warranty does not cover defects or damages arising from improper installation, improper storage, abuse, ordinary wear or unauthorized service.

Time clock Configurations

The TQ600 is available in four reader options: fingerprint, proximity badge, magnetic stripe badge and barcode card reader. The fingerprint reader provides the most secure user verification as it uniquely identifies each user. The badge is a faster method of verifying a user since you only need place your proximity badge near/in front of the reader or slide your barcode/magnetic stripe badges through the reader.

This manual provides information for all TQ600 time clock configurations. Sections specifically about fingerprint verification or proximity/magnetic stripe/barcode badge verification will pertain only to the corresponding time clock.

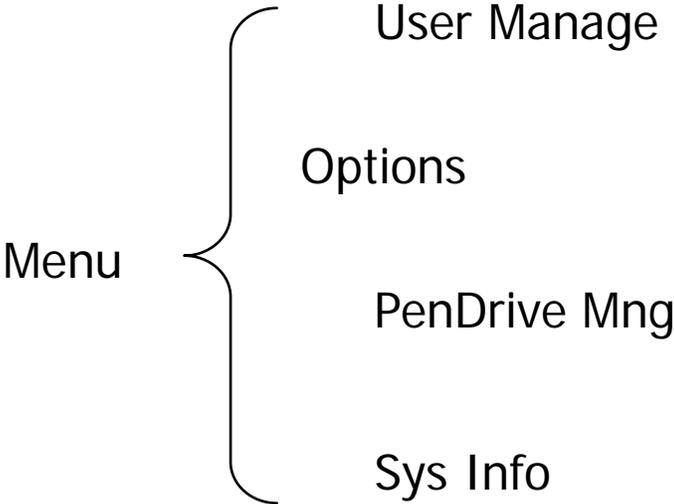
Note: There are Menu variations between models since features and options are different between models.

Operator Panel LEDs

- 1) Normal Operation.
Green light blinks each second.
- 2) Error Condition (Fingerprint or Badge not Enrolled)
Red light shines for 2 seconds
- 3) Transaction (Fingerprint or Badge Read) successful
Green light shines for 2 seconds

Note: Contact Acroprint support if you receive any LED sequence other than those listed above.

Menu Tree



Menu Level 1

Menu Level 2

Menu Level 3

User Manage

Enroll User

Reg Badge
Enroll FP (FIU)
Enroll Pwd
Reg Badge&Pwd
FP & Pwd (FIU)

Enroll Admin

Reg Badge
Enroll FP (FIU)
Enroll Pwd
Reg Badge&Pwd
FP & Pwd (FIU)

Delete User

Browse ATTLogs

Menu Level 1

Menu Level 2

Menu Level 3

Menu Level 4

Options

System Opt

Date Time
12H or 24H
Language
Fmt
DST

Adv Option

Reset Opts
Del AttLogs
Clear All Data
Clr Admin Pri
Voice On?
Upd Firmware
Work Code
Button Beep
Adj VOL (%)
Print Mode (Not Supported)
Show Score (FIU)
Match Thr (FIU)
Mst Input ID (FIU)
1:1 Thr (FIU)
Display Info

Power Mng

Shutdown
PowerOn
Sleep
Idle
Idle Min
Bell Delay
Scheduled Bell
Lock Power

Comm Opt

BaudRate
Dev Num
IP Addr
Net Speed
NetMask
Gateway
Ethernet
RS232
RS485 (Not Supported)
USB
COMM Key

Log Opt

Alm SuperLog
Alm AttLog
ReCheck Min

VERType

RF
PW&RF
PW/RF
PIN
PW

Auto Test

Run All Test
FLASH Test
LCD Test
Voice Test
FP Reader (FIU)
Key Test
RTC Test

Menu Level 1

Menu Level 2

Menu Level 3

PenDrive Mng

DwnLoad AttLog
DwnLoad User
UpLoad User

Sys Info

User Cnt
FP Cnt (FIU)
Att Log
Admin Cnt
Pwd Usr (FIU)
S Logs

Free Space Info

User Cnt (*Prox*)
FP Cnt (*FIU*)
Att Log
S Logs

Dev Info

Users (100) (*Badge*)
FPCnt (100) (FIU)
AttLog (10k)
S Logs
Mfg Date
Serial Num
Vendor
Device Name
Alg Version (FIU)
Firmware Ver
View MAC
MCU Version

Basic Concepts

Fingerprint identification concepts:

- User Enrollment: Fingerprints
- User Identification/Verification
- Threshold
- User ID (PIN Number)
- Privilege Levels
- Start-up

User Enrollment: Fingerprints

Enrollment is the process of capturing a user's fingerprint and storing it as a "template" in the TQ600 along with a unique five (5) digit user ID. The user's fingerprint template is created by taking three sample fingerprints on the TQ600.

Each user should enroll at least two different fingers so that if an enrolled finger is injured an alternate finger can be used. The TQ600 allows each user to enroll 1-10 fingerprints.

User Identification / Verification

User identification is the process of comparing a user's fingerprint against a fingerprint template stored in the time clock. When a user's fingerprint matches a fingerprint template stored in the TQ600 the time clock will show a successful match, thus verifying the user's identity.

Threshold

Threshold means a value that is set to ensure the minimum accuracy required to confirm a match with a finger template stored in a biometric system.

The threshold setting establishes a balance between False Acceptance Rate (FAR) and False Rejection Rate (FRR). FAR means the probability that a biometric system will incorrectly identify a user or will fail to reject an impostor. FRR means the probability that a biometric system will fail to identify an enrolled user.

The threshold value is a global setting applied for all users. The default threshold is set at 35. Raising the threshold value increases security but increases the probability of a false rejection. Lowering the threshold reduces security by increasing the possibility of a false acceptance. The correct balance is vital for maximum security as well as usability. It is possible that adjustments to the threshold value will be needed as you begin using the biometric system.

If some users have persistent problems being accepted by a biometric time clock, sometimes acceptance rates can be increased by first inputting a User ID, then reading the finger. This is called a (1:1) "one to one" verification. Greater success rates can be achieved because the system now knows which specific finger template to compare.

Alternatively, the time clock can be set to the "one to one" verification mode which then will require all users to input a User ID, followed by a finger reading. The default threshold value for the "one to one" setting is 15, but it too can be adjusted as necessary.

Table 1-1 shows some suggested threshold values to try but the others can be set to achieve desired user acceptance rates.

Table 1—1 Suggested Threshold Settings

FRR	FAR	One-to-Many (1:N)	One-to-One (1:1)
High	Low	45	25
Middle (Default)	Middle (Default)	35	15
Low	Low	25	10

User ID (PIN number)

Before beginning fingerprint enrollment, a user is assigned a User ID number (sometimes referred to as a PIN number). This User ID number is used to recall fingerprint templates or passwords each time verification is requested.

Privilege Levels

Privilege levels are the levels at which users are authorized to access time clock functions. These levels define the authority of a user to access specified administrative functions including the ability to view, edit, add, or renew specified information categories.

Privilege levels are built-in time clock functions that can be set as required. The TQ600 has four user privilege levels: User, Enroller, Admin (administrator) and Supervisor.

- **Users** are people whose identity must be verified to record time such as punching in/out or the time spent working on a job or working in specific departments.
- **Enrollers** can enroll supervisors, administrators, enrollers and users. Enrollers can delete users. Enrollers can access "User Manage" and "System Information" menus.
- **Administrators** (Admin) can enroll supervisors, administrators, enroller and users. Administrators can delete enrollers and users. Administrators can access all operations, except "Advanced Options".

-
- **Supervisor** is the highest authorization level. Supervisors can enroll supervisors, administrators, enrollers and users. Supervisors can delete administrators, enrollers and users. Supervisors can access all functions and change all setups.

Note: If no user has administrative privileges (enroller, administrator or supervisor) in the time clock, ALL users will be enrolled with "Supervisor" privileges.

To change a user that is currently enrolled as an administrator or enroller, delete the user and then re-enroll the user with the new privilege level.

Start-up

Press the power button (⊙) to turn the TQ600 on. The Start-up" window will appear. Press and hold the power button (⊙) for 2 seconds to turn off the TQ600.



Enrolling – Fingerprint Time clocks

This chapter describes how to enroll and verify users on the TQ600.

The following topics are included:

- Fingerprint Enrollment Tips
- Enrolling User
- Testing an Enrollment
- Enrolling an Auxiliary Fingerprint of User
- Verifying Your Identity

Fingerprint Enrollment Tips

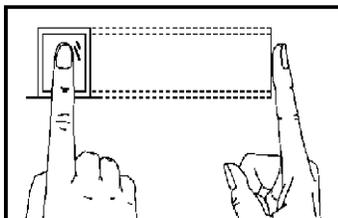
It is recommended that you use your index or middle finger for enrollment. If the fingerprints on your preferred hand are worn or damaged try using your other hand.

The TQ600 will require three (3) sample fingerprints to enroll a user. Place your finger in the middle of the sensor. To ensure better fingerprint reads take each fingerprint sample with slightly different positioning; one centered, one rolled slightly to the left and the last rolled slightly to the right. The different angles will help account for different finger positioning during actual use.

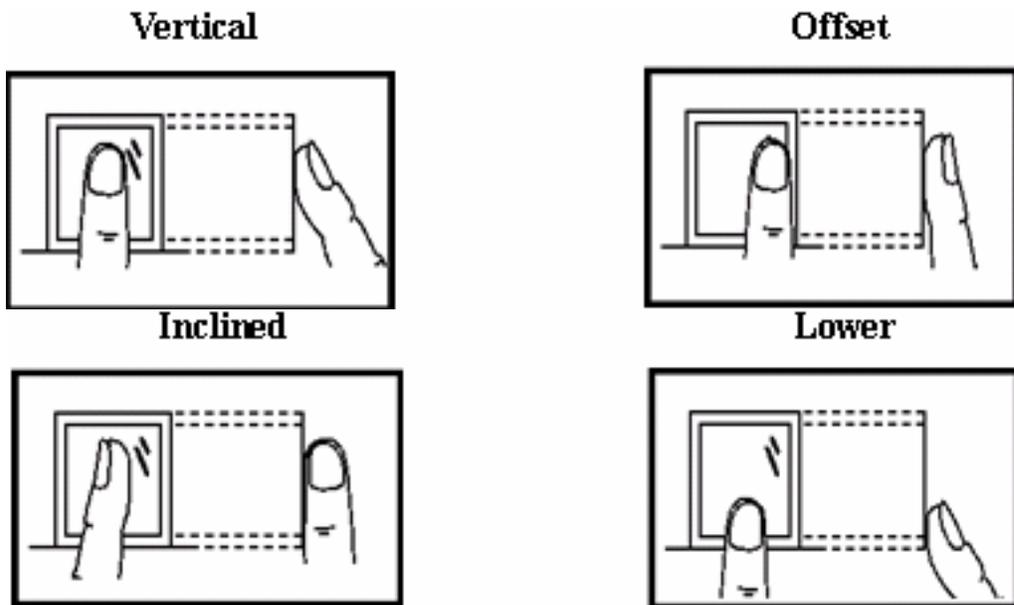
CORRECT finger positioning:

Place finger flat on the sensor surface

Place finger in the center of the sensor surface



INCORRECT finger positioning:



Tips for improving the quality of finger print reads:

Issue	Correction
Dirty or Dry Finger	Clean finger with moisturizing soap or wipe with a pre-moisturized tissue (alcohol-free wipes preferably, enriched to hydrate the skin)
Not enough pressure	The user should place finger firmly and flat on the sensor surface.
How to select finger?	Use the index or middle finger to enroll; try the left hand fingers if the right hand fingerprints are worn, damaged or missing. If the user's fingers are small, select the thumb.
How to position the finger?	Place finger in the middle of the sensor; keep finger flat on the sensor and apply pressure while covering as much of the sensor window as possible; DO NOT touch the sensor in an angled or tilted position, DO NOT slide finger.

Fingerprint pattern change	For a user with a worn or injured finger, the identification can be affected. Use an alternate finger or select password verification.
Poor Fingerprint Definition	A few people's fingerprint quality is too poor to verify. Use the User ID & Fingerprint verification, and lower the 1:1 Threshold. Otherwise use Password verification.

Enrolling Users – Fingerprint Time clocks

After configuring the TQ600 you are ready to enroll users. If there are no users on the system all users will have a privilege level of supervisor, if an administrator (Admin) is enrolled on the system they will be the only one allowed to enroll a new user.

The TQ600 provides three ways to enroll, Fingerprint Enrollment, Password Enrollment, or Fingerprint with Password Enrollment. Fingerprint Enrollment is preferable for personnel with good fingerprint definition; Fingerprint with Password is preferable for users that have difficulty verifying their finger print. Password Enrollment is necessary for users whose fingerprints are too worn or damaged for the time clock to read their fingerprint.

To start the enrollment process, identify yourself. Press **[MENU]**, enter your ID number or fingerprint, and verify your identity.

Note: If this is the first enrollment in a new or empty system, you will not be prompted for verification.

Fingerprint Enrollment

Notes on Buttons:

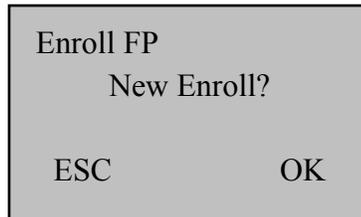
F1 = ESC, use to back up in the menu or quit

F2 = ▲, use to scroll up in the menu

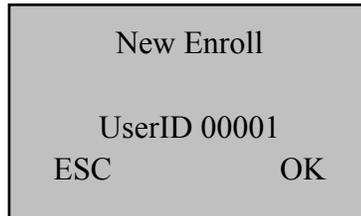
F3 = ▼, use to scroll down in the menu

F4= OK, use to select a menu item

1) Press [MENU], select "User Manage", press [OK], select "Enroll User", press [OK]. Three enrollment methods are displayed, select "Enroll FP", press [OK]. The following screen is displayed:



2) Press [OK]. The following screen is displayed:



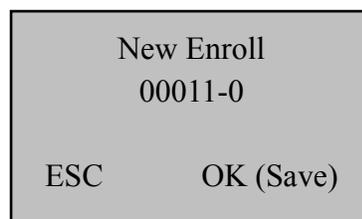
Note: The User ID (PIN number) is a 5 digit number. If you input less than 5 digits the time clock pads the User ID with 0's in front of the User ID, i.e., if you enter 11 the User ID 00011 is displayed on the time clock.

3) Input the User ID (range is 1 to 65534), press [OK]. The following appears:



Note: 00011-0
The dash number (-0)
indicates the first
fingerprint.

4) You will be prompted to take (3) samples of your fingerprint. If the test is successful three times in a row, the following appears:



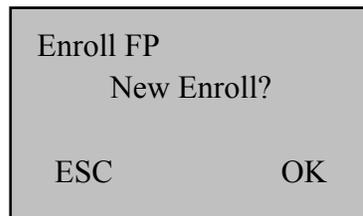
5) Press [**OK**], the previous message continues to be displayed while the template is created. If your identity cannot be verified, you are prompted to try again and you must restart the verification procedure (Refer to Step 2).

Testing a Fingerprint Enrollment

Ask the user to place their finger on the fingerprint sensor. If the test was successful the enrollment is complete. If the time clock cannot read the fingerprint or if several attempts are required for the time clock to verify the fingerprint, the user should try 1:1 verification (refer to page 25).

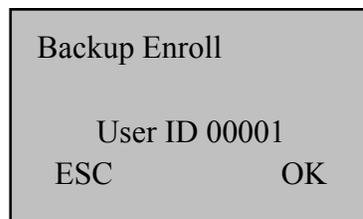
Enrolling Auxiliary Fingerprints

It is a good practice to enroll at least two fingers for each user. Press [**MENU**], select "User Manage", press [**OK**], select "Enroll User", press [**OK**], select "Enroll FP", press [**OK**], the following appears:



```
Enroll FP
  New Enroll?
  ESC          OK
```

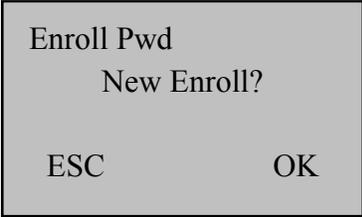
Press [**ESC**] to cancel the new enrollment, enter the User ID (PIN number) of the user you wish to enroll an additional fingerprint for:



```
Backup Enroll
  User ID 00001
  ESC          OK
```

Password Enrollment

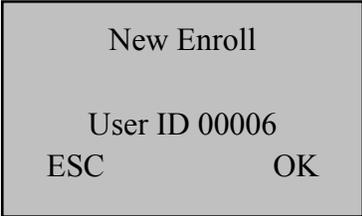
1) Press [**MENU**], select "User Manage", press [**OK**], select "Enroll User", press [**OK**]. Three enrollment methods are displayed, select "Enroll Pwd", press [**OK**]. The following screen is displayed:



```
Enroll Pwd
New Enroll?

ESC          OK
```

2) Press [**OK**] to enroll new user, the following screen is displayed:

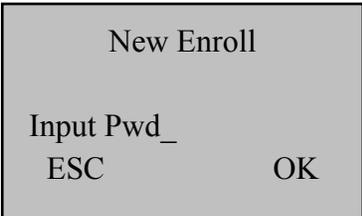


```
New Enroll

User ID 00006

ESC          OK
```

3) Note: The next available User ID is displayed. Press [**OK**] to choose this ID or enter a User ID (range is 1 to 65534) & press [**OK**]. The following screen is displayed:

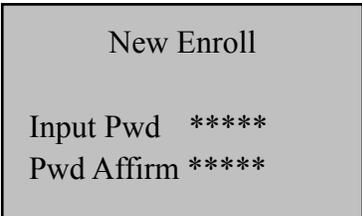


```
New Enroll

Input Pwd_

ESC          OK
```

4) Input the password and affirm:

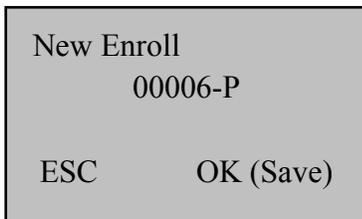


```
New Enroll

Input Pwd *****
Pwd Affirm *****

ESC          OK
```

5) Press [**OK**], the following screen is displayed:



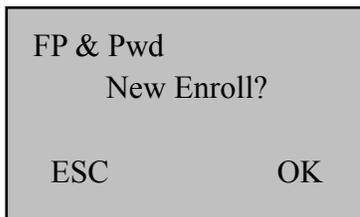
New Enroll
00006-P
ESC OK (Save)

Note: 00006-P
“-P” means password enrollment

6) Press [**OK**]. Press [**ESC**] to exit user enrollment or press [**OK**] to continue Password enrollment.

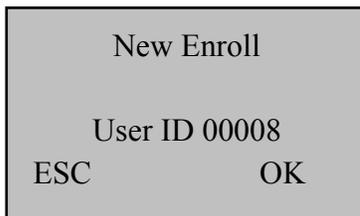
Fingerprint & Password

1) Press [**MENU**], select “User Manage”, press [**OK**], select “Enroll User”, press [**OK**]. Three enrollment methods will be displayed, select “FP & Pwd”, press [**OK**]. The following screen is displayed:



FP & Pwd
New Enroll?
ESC OK

2) Press [**OK**], the following appears:



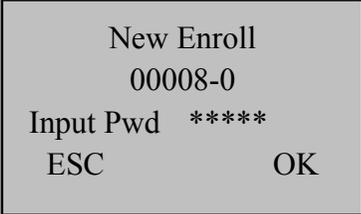
New Enroll
User ID 00008
ESC OK

3) Press [**OK**], the following appears:



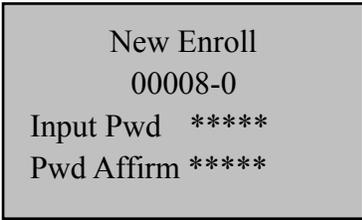
New Enroll
00008-0
Place Finger...
ESC/Exit

-
- 4) If the test is successful three times in a row, the following appears:



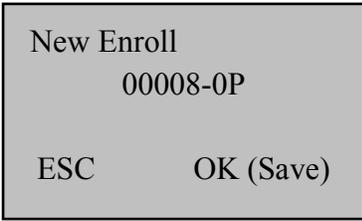
```
New Enroll
00008-0
Input Pwd *****
ESC          OK
```

- 5) Input your password, the following appears:



```
New Enroll
00008-0
Input Pwd *****
Pwd Affirm *****
```

- 6) Input the password again, press [**OK**], the following appears:



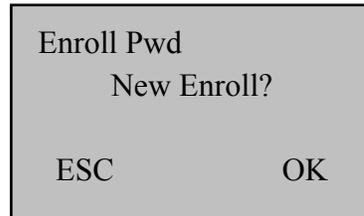
```
New Enroll
00008-0P
ESC          OK (Save)
```

Note: 0000-0P; “-0P” indicates first fingerprint and password.

- 7) Press [**OK**], the previous message continues to be displayed while the template is created.

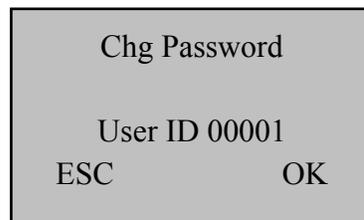
Change Password

- 1) Press [**MENU**], select “User Manage”, press [**OK**], select “Enroll User”, press [**OK**]. Three enrollment methods are displayed, select “Enroll Pwd”, press [**OK**]. The following screen is displayed:



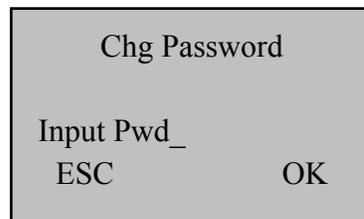
```
Enroll Pwd
  New Enroll?
ESC           OK
```

- 2) Press [**ESC**], the following screen is displayed:



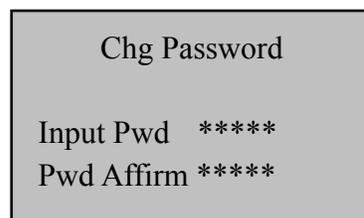
```
Chg Password
  User ID 00001
ESC           OK
```

- 3) Enter the User ID and press [**OK**]. The following screen is displayed:



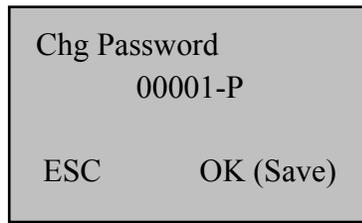
```
Chg Password
Input Pwd_
ESC           OK
```

- 4) Input the password and affirm:



```
Chg Password
Input Pwd *****
Pwd Affirm *****
```

5) Press [OK], the following screen is displayed:



Note: 00006-P
“-P” means password enrollment

6) Press [OK]. Press [ESC] to exit user enrollment or press [OK] to continue changing passwords.

User Verification Types

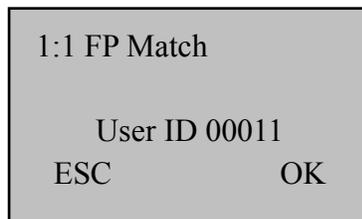
Fingerprint Verification

There are (3) fingerprint verification (“authentication”) types:

1:1 Verification (“One to One” Verification)

In this mode, a user enters their 5-digit User ID and takes a fingerprint reading. The TQ600 compares their fingerprint to the fingerprint template of the User ID that was entered, thus a 1:1 comparison. The 1:1 verification method is the fastest verification method since it only has to compare the user’s fingerprint to one template stored in the time clock.

1) In the initial interface, enter your ID number and the following appears:

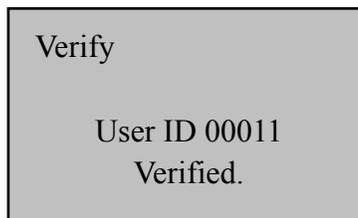


Note: The User ID is 5 digits. If you enter a number with less than 5 digits the TQ600 adds 0’s in order to create a 5 digit User ID, i.e., if you enter “11” the TQ600 will Enroll “00011”.

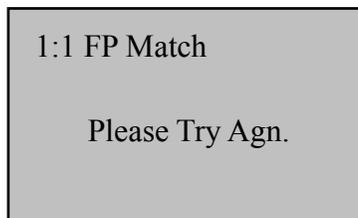
2) Press [OK] and the following appears:



3) It continues for about 0.5 seconds. If the test is successful, the following appears:



4) If your identity cannot be verified, you are prompted to try again, the following appears:

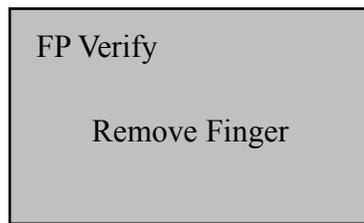


It continues for about 0.5 seconds then returns to the start-up window.

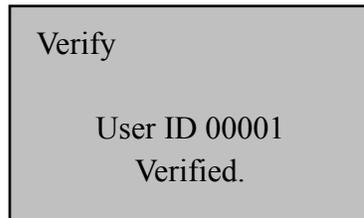
1:N Verification (“One to Many” Verification)

In this mode, a user simply takes a fingerprint reading. The TQ600 compares their fingerprint to all of the fingerprint templates stored in the time clock. 1:N verification takes more time than 1:1 verification. The verification time is dependent on the number of fingerprint templates stored in the time clock.

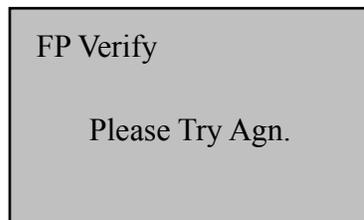
1) Place finger on the sensor surface, the following appears:



2) It continues for about 0.5 seconds. If the test is successful, the following appears:



3) If your identity cannot be verified, you are prompted to try again, the following appears:

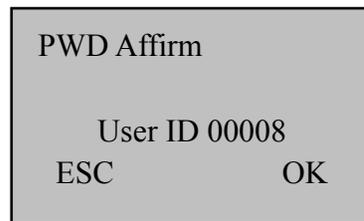


It continues for about 0.5 seconds, return to the start-up window.

Password Verification

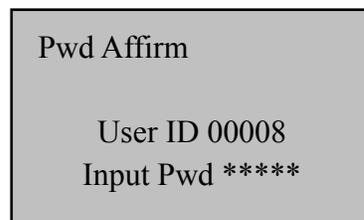
A password 1 to 5 digits long is used to validate authentication. Password verification can be used in special cases, i.e., when all of a user's fingerprints are damaged. This method of verification does not provide the security of biometric identification and should only be used when absolutely necessary. **Note:** when a user with an enrolled password attempts (1:1) verification the TQ600 will ask for the User's password and the user will not have the option of taking a fingerprint reading.

-
- 1) To verify a password, enter your ID number, the following appears:



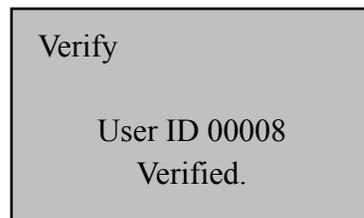
PWD Affirm
User ID 00008
ESC OK

- 2) Press **[OK]**, the following appears:



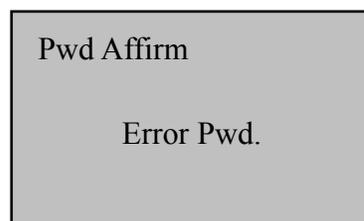
Pwd Affirm
User ID 00008
Input Pwd *****

- 3) Input correct password, press **[OK]**, the following appears:



Verify
User ID 00008
Verified.

- 4) If the password cannot be verified, the following appears:



Pwd Affirm
Error Pwd.

Enrolling – Badge Time clocks

This chapter describes how to enroll users on the TQ600 Proximity, TQ600 Barcode and/or TQ600 Magnetic Stripe time clocks.

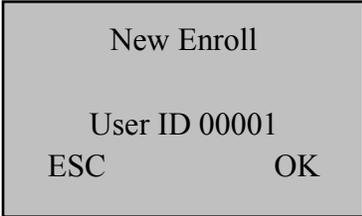
Badge/Card Enrollment

- 1) Press [**MENU**], select "User Manage", press [**OK**], select "Enroll User", press [**OK**]. The following screen is displayed:



Enroll User
▶ Reg Badge
Enroll Pwd
Reg Badge&Pwd

- 2) Select "Reg Badge", press [**OK**]. The following screen is displayed:



New Enroll

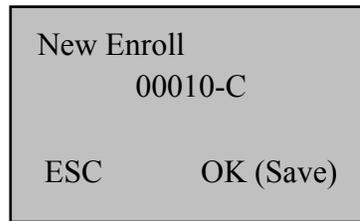
User ID 00001
ESC OK

- 3) Enter a User ID (PIN number) and scan a badge that is not currently assigned to any other user. The following screen is displayed:



New Enroll
CARD: 0001234567
User ID 00010
ESC OK

4) Press **[OK]** to complete the enrollment. The following screen appears:

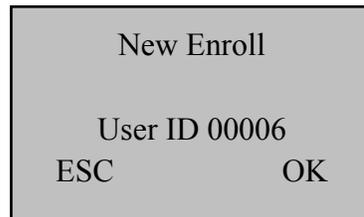


New Enroll
00010-C
ESC OK (Save)

5) Press **[OK]** to save enrollment. Press **[ESC]** to cancel the new enrollment.

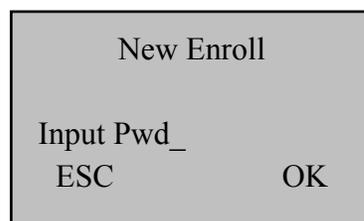
Password Enrollment

1) Press **[MENU]**, select "User Manage", press **[OK]**, select "Enroll User", press **[OK]**. Three enrollment methods are displayed, choose "Enroll Pwd", press **[OK]**. The following screen is displayed:



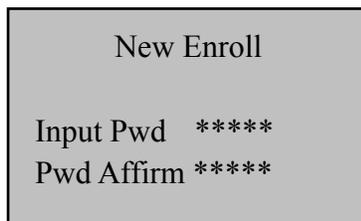
New Enroll
User ID 00006
ESC OK

2) The next available User ID is displayed. Press **[OK]** to choose this ID or enter a User ID (range is 1 to 65534) & press **[OK]**. The following screen is displayed:



New Enroll
Input Pwd_
ESC OK

3) Input the password and affirm:

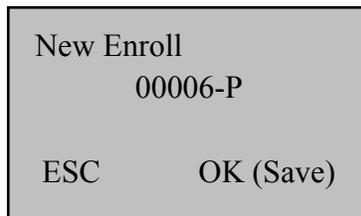


New Enroll

Input Pwd *****

Pwd Affirm *****

4) Press [OK], the following screen is displayed:



New Enroll

00006-P

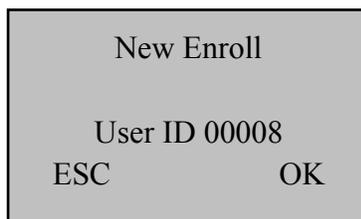
ESC OK (Save)

Note: 00006-P
“-P” means password enrollment.

5) Press [OK]. Press [ESC] to exit user enrollment or press [OK] to continue Password enrollment.

Proximity Badge & Password Enrollment

1) Press [MENU], select “User Manage”, press [OK], select “Enroll User”, press [OK]. Three enrollment methods are displayed, select “Reg Badge&Pwd”, press [OK]. The following screen is displayed:

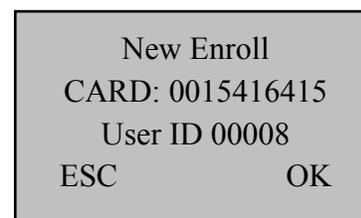


New Enroll

User ID 00008

ESC OK

2) Enter a User ID (PIN number) and scan a badge that is not currently assigned to any other user. The following screen is displayed:



New Enroll

CARD: 0015416415

User ID 00008

ESC OK

3) Press [**OK**], the following appears:

```
New Enroll
CARD: 0015416415
Input Pwd  _
ESC          OK
```

4) Input your password, press [**OK**], the following appears:

```
New Enroll
CARD: 0015416415
Input Pwd  *****
Pwd Affirm _
```

5) Affirm your password, press [**OK**], the following appears:

```
New Enroll
      00008-P
ESC          OK (Save)
```

Note: 00006-P
“-P” means password enrollment.

6) Press [**OK**] to save. Press [**ESC**] to cancel the enrollment.

Change Password

To change the password in the Proximity time clock, the password, Proximity Badge (if used) and user must be deleted and reenrolled. See Chapter 7 for details on deleting users.

Privilege Levels

The TQ600 has four user privilege levels: User, Enroller, Admin (administrator) and Supervisor.

- **Users** are people whose identity must be verified to record time such as punching in/out or the time spent working on a job or working in specific departments.
- **Enrollers** can enroll supervisors, administrators, enrollers and users. Enrollers can delete users. Enrollers can access "User Manage" and "System Information" menus.
- **Administrators** (Admin) can enroll supervisors, administrators, enroller and users. Administrators can delete enrollers and users. Administrators can access all operations, except "Advanced Options".
- **Supervisor** is the highest authorization level. Supervisors can enroll supervisors, administrators, enrollers and users. Supervisors can delete administrators, enrollers and users. Supervisors can access all functions and change all setups.

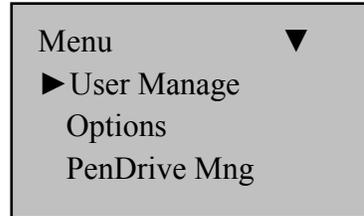
Note: If no user has administrative privileges (enroller, administrator or supervisor) in the time clock, ALL users will be enrolled with "Supervisor" privileges.

To change a user that is currently enrolled as an administrator or enroller, delete the user and then re-enroll the user with the new privilege level.

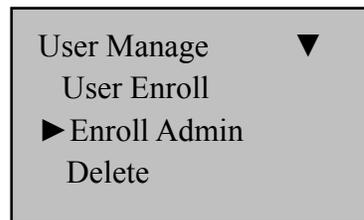
Enroll w/ Privilege Level

Important! Until you enroll a user with at least Administrator privileges, all users will automatically be entered with Supervisor privileges even if they were entered as users. In order to prevent unauthorized personnel from making changes to the TQ600 you should enroll a user with Administrator password security.

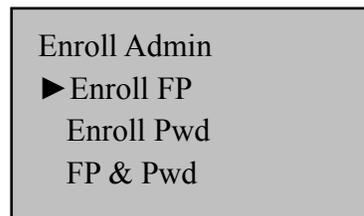
-
- 1) Press **[MENU]**. Select "User Manage", press **[OK]**.



- 2) The User Manage screen appears:



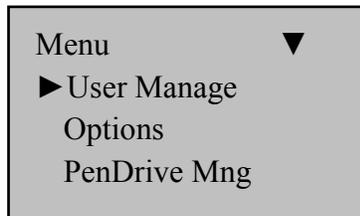
- 3) Select "Enroll Admin", press **[OK]**, the following appears:



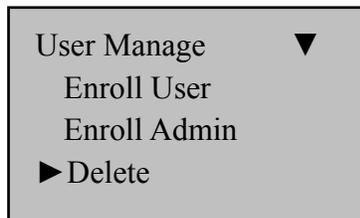
You can enroll an employee with (3) possible levels of time clock privileges:
(1) "Supervisor", (2) "Admin" or (3) "Enroller".

Delete User Data

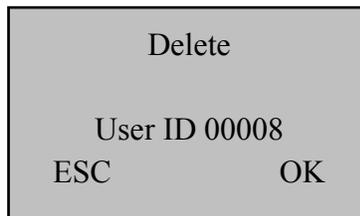
- 1) Press [MENU], the following appears:



- 2) Select "User Manage", press [OK], the following appears:



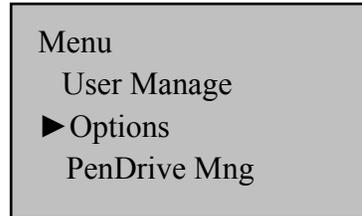
- 3) Select "Delete", press [OK], input the User ID, press [OK] to confirm, follow the prompts to delete user.



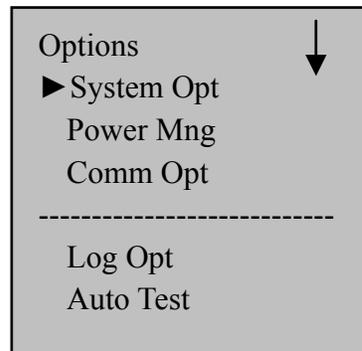
Note: You cannot delete a user with multiple enrolled fingerprints without deleting each fingerprint first. If the user has a password you will also need to delete it before you can remove the user from the time clock.

Options

Press [**MENU**] and verify your identity. The following appears:



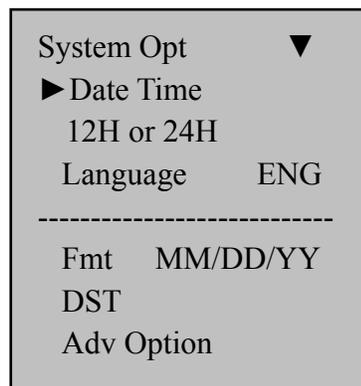
Select "Options", press [**OK**], the following appears:



The following topics are reviewed in this section: System Options, Power Management, Communication Options, Log Options and Auto Test.

System Options

Select "System Opt", press [**OK**], the following appears:



The System Options are: Date & Time, 12H or 24H time format, Language, Date Format, **Daylight Savings Time** and Advanced Options.

Set Date & Time

Select "Date Time", press [OK] the following appears:

YYYY-MM-DD	24H
2008-01-02	
08:24:35	
ESC	OK

To change the date & time, input the correct date, press [▲/▼], enter the time and press [OK].

Note: The time and date will update automatically when the time clock is connected to the network.

Changing the Time Format

Select "12H or 24H", press [OK], press [▲/▼] to change between 12 Hour and 24 Hour Format.

Changing the Language

Select "Language", press [OK], press [▲/▼] to select the language (the default language is English), press [OK].

System Opt	▼
Date Time	
Time Fmt	12H
▶ Language	ENG

Press [ESC] to exit system options. The system will prompt you to save the setup, press [OK]. Restart the time clock for the language change to take effect.

English

System Opt	▼
Date Time	
Time Fmt	12H
▶ Language	ENG

Spanish

Opc. Sistema	▼
Fecha y Hora	
Time Fmt	12H
▶ Idioma	ESP

Changing the Date Format

Select "Fmt YY-MM-DD", press [OK], press [▲/▼] to select the date and time format, press [OK].

System Opt	▼
Time Fmt	12H
Language	ENG
▶ Fmt	YY-MM-DD

There are ten formats: **YY-MM-DD**, **YY/MM/DD**, **YY.MM.DD**, **MM-DD-YY**, **MM/DD/YY**, **MM.DD.YY**, **DD-MM-YY**, **DD/MM/YY**, **DD.MM.YY**, **YYYYMMDD**.

E.g.: **YY/MM/DD** format (left) change to **YY-MM-DD** format (right)

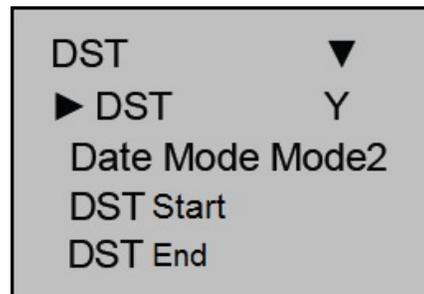
Welcome	
17:37	
08/06/18	WED

Welcome	
17:37	
08-06-18	WED

Daylight Savings Time (DST)

DST, also called Daylight Saving Time, is the practice of temporarily advancing clocks during the summertime so that evenings have more daylight and mornings have less. It has been introduced as a method of saving energy. Typically clocks are adjusted forward one hour near the start of spring and are adjusted backward in autumn. DST is currently observed in many countries, details vary by location.

1) Press **OK** to enter the DST setting interface. Press **Y** to enable DST, and then press **OK** to save. Selecting **N** disables DST.



2) Set the date mode for DST, there are two options, Mode1 and Mode 2
Mode 1: The default setting of the device. Its time format is shown as "Month-day hour: minute".

Mode 2: Its time format is shown as "Month-Weeks-week hour: minute". After setting, press **ESC** button, the device will prompt you to save, press **OK** to save and quit.

3) After you select the time format, you need to set the start and end time of DST. The allowed range is 1-16 for the number of weeks (WS), 1 means the first week, 2 means the second week, etc. The allowed range is 0-06 for each day of the week (WK), if you input 0, it represents the Sunday, 1 represents Monday, etc.

If we take 4:00 am on September 1, 2008 (Saturday, the first week in September 2008) as an example, the two display Modes need to be configured as follows:

Mode 1

MM-DD 24H
9-1 04: 00
ESC OK

Mode 2

MM-WS-WK 24H
9-1-6 04: 00
WK (0: Sun. 6:Sat.)
ESC OK

Note:

1. Let's take the following example: DST starts on 2007-9-1 4:00 and ends on 2008-4-1 4:00.
2. If **Mode2** is selected, as of 2007, DST is set up as follows: September Sunday, the sixth week of the month. However the next year, 2008, September only has five weeks rather than six. In this case the system will automatically adjust and apply DST on the last Sunday of September.
3. If we enter DST as September, 1st week, Monday, 2008 and then upon 2009, the first day is Tuesday, instead of Monday, the system will automatically adjust and apply DST to the first Monday on the month.

Advanced Options

Select "Adv Option", press [**OK**], the following appears:

Adv Option	▼
▶ Reset Opts.	
Del AttLogs	
Clear All Data	

Clr Admin Pri	
Show Score	N
Match Thr	35
Mst Input ID	N
1:1 Thr	15
Voice	Y
Upd Firmware	
Work Code	NO
Adj VOL(%)	67

Press [▲/▼] to scroll up or down to select the option.

- **Reset Opts.:** Restore all setup values to factory defaults.
- **Delete AttLogs:** Delete all transaction logs.
- **Clear All Data:** Delete all users and logs. **(Note: You will lose all information stored on the time clock.)**
- **Clr Admin Pri:** Change all privilege levels to User.
- **Voice On?** Turn voice prompts on or off.
- **Show Score:** Show the degree to which a fingerprint reading matches the stored template. 0 is the lowest score (no match) and 50 is the highest score (perfect match).
- **Match Thr:** Set the fingerprint match threshold level. The threshold value can be set 0 – 75 (default is 35). See Table 1-1.
- **Mst Input ID:** Turns 1:1 (one to one) fingerprint verification on or off.
- **1:1 Thr:** The minimum fingerprint read correlation needed to achieve a positive match for 1:1 verification.
- **Voice:** Set the voice prompts on or off.
- **Upd Firmware:** **The user cannot update the firmware unless this feature has been enabled by the manufacturer or an authorized dealer.**
- **Work Code:** Enables/disables the work code feature on the clock. If enabled, 4 Modes are available. Mode 1 and Mode 2 are not supported. Use Mode 3 if you have timeQplus software and want to use global list of work codes per company. Mode 4 allows using individually assigned work codes for employees (see timeQplus Software).
- **Button Beep:** Turn audible feedback on/off when pressing buttons on the keypad.
- **Adj VOL(%):** Adjust the volume level (0-99); “0” turns off the speaker.

- **Print Mode:** not supported.
- **Display Info:** Turn display of employee hours worked on or off when punching.

Power Management

Select "Power Mng", press [OK], the following appears:

Power Mng	▼
▶ Shutdown	N
PowerOn	N
Sleep	N

Idle	SLP
Idle Min	0
Bell Delay	10
Scheduled Bell	
Lock Power	N

- **Shutdown:** Set a time the time clock will automatically turn off. The time clock can be turned on again with the power button.

Select Shutdown, press [OK], the following appears:

Shutdown	
Set Sch. Fun?	
ESC	OK

Press [OK] and enter the time the unit will shut off.

After setting the shutdown time, press [ESC] and then [OK] to save the settings.

- **PowerOn:** Set a time the time clock will automatically turn on.

- **Sleep:** Set a time the time clock will go into sleep mode. Pressing any button will awaken the time clock.
- **Idle:** Select "SLP" or "OFF" for the Idle mode. "SLP" – Sleep mode allows the time clock to be awakened by pressing any key. "OFF" - Turns the unit off and the power button must be pressed to turn the unit on.
- **Idle Min:** Set how many minutes of no use before the time clock goes into the selected "Idle" mode. Setting "Idle Min" to "0" turns off this feature.
- **Bell Delay:** Set the length of time the bell sounds. A setting of 5 sets the bell to ring for 10 seconds. A setting of 10 sets the bell to ring for 20 seconds.
- **Scheduled Bell:** There are 20 bell schedules. Enter the times you would like the bell to sound. The bell will sound at the scheduled times for the duration set in the "Bell Delay".
- **Lock Power:** If set to "Y" the time clock cannot be turned off using the power button. To turn the unit off with the power button locked, enter the "Power Mng" menu and scroll down to "Power Off".

Communication Options

Select "Comm Opt", press [OK], the following appears:

Comm. Opt	▼
▶ Baud Rate	115200
Dev Num	1
IP Addr	

Net Speed	AUTO
NetMask	
Gateway	
Ethernet	Y
RS232	N
RS485	N
USB	Y
COMM Key	0

The TQ600 Biometric and TQ600 Proximity fully support Ethernet, RS232 & USB communications. TQ600 Barcode and TQ600 Magnetic Stripe support Ethernet and direct connection to PC (cable not included).

- **Baud Rate:** The baud rate may be set to 9600, 19200 38400, 57600 & 115200.
- **Dev Num:** The time clock's unique Device Number, the range is 1 to 255.
- **IP Addr:** Defaults to IP address 192.168.1.201
- **Net Speed:** The default Net Speed is "AUTO", the other options are 10M-F, 10M-H, 100M-F and 100M-H.
- **NetMask:** The default Net Mask is 255.255.255.0
- **Gateway:** The default gateway is 0.0.0.0
- **Ethernet:** Turn Ethernet connectivity on or off.
- **RS232:** Turn RS232 connectivity on or off.
- **RS485: Not Supported**
- **USB:** Turn USB connectivity on or off. Note: This is a serial connection established via USB cable.
- **COMM Key:** Not utilized

Note: After setting, restart the time clock for the new configurations to take effect.

Log Options

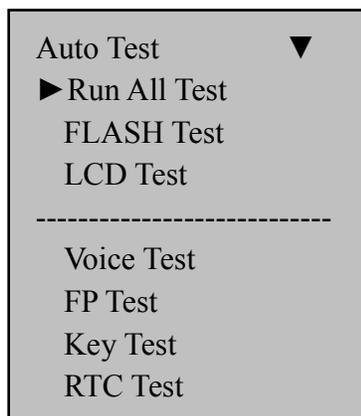
Select "Log Opt", press [OK], the following message appears:

Log Opt	
▶ Alm SuperLog	99
Alm AttLog	99
ReCheck Min	0

-
- **Alm SuperLog:** An alarm will sound to alert the supervisor that the logs are full. The set number is the remaining log capacity before the logs are full, set from 0-99.
 - **Alm AttLog:** An alarm will sound when the logs are full. The set number is the remaining log capacity before the logs are full, set from 0-99.
 - **ReCheck Min:** Set the number of minutes before another punch is accepted by the time clock. If a punch occurs within the ReCheck Minutes, the punch will not be logged. This reduces duplicate (accidental) punches.

Auto Test

Select "Auto Test", press [OK], the following appears:



These options allow the testing of each portion of the time clock in order to pinpoint failures.

WARNING: Do not disconnect or interrupt power while performing any of the tests (loss of power during testing may damage the hardware).

System Information

System Information allows review of the time clock information. Press [Menu], select "Sys Info", press [OK], the following appears:

Sys Info	▼
▶ User Cnt	206
FP Cnt	173
Att Log	8046

Admin Cnt	2
Pwd User	30
S Logs	263
Free Space Info	
Dev Info	

- **User Cnt:** The number of enrolled users.
- **FP Cnt:** The number of enrolled fingerprints.
- **Att log:** The number of punches stored in the system.
- **Admin Cnt:** The number of users enrolled with Supervisor, Admin and Enroller privileges.
- **Pwd User:** The number of users using a password for authentication.
- **S Logs:** The number of supervisor logs.
- **Free Space Info:** The remaining log capacity before reaching the set alarm point.

-
- **Dev Info:** Time clock information (see below)
 - ◆ **Users (100): 100:** Proximity Time clock: Maximum number of users (100 X 100 = 10,000).
 - ◆ **FPCnt (100): 15:** Biometric Time clock: Maximum number of fingerprints (15 X 100 = 1,500).
 - ◆ **AttLog (10k): 5:** Maximum number of transaction (5 X 10,000 = 50,000).
 - ◆ **S Logs: 4096:** Maximum number of supervisor logs (tracks menu access).
 - ◆ **Mfg Date:** Time clock's date/time of manufacture.
 - ◆ **Serial Num:** Time clock serial number.
 - ◆ **Vendor:** Acroprint
 - ◆ **Device Name:** TQ600B (Biometric), TQ600P (Proximity), TQ600BC-M (Barcode or Magnetic Stripe).
 - ◆ **Firmware Ver:** The version of the time clock firmware.
 - ◆ **MAC Address:** The MAC address of the time clock.
 - ◆ **Alg Version:** The version of the fingerprint identification algorithm.
 - ◆ **MCU Version:** The firmware version of the microcontroller.

View Time and Attendance Records

Time & attendance records stored inside the time clock can be reviewed.

Review All Attendance Records

- 1) Press [**MENU**], select "User Manage", press [**OK**], select "Browse AttLogs", press [**OK**] and the following appears:

```
Browse AttLogs

User ID 00000
ESC          OK
```

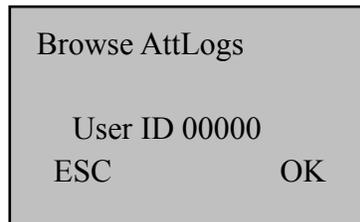
- 2) Press [**OK**] with User ID as "00000" and all time clock attendance records will be displayed. Scroll through the records using [**▲▼**].

```
1/380
00001 05-27 18:46:21I
00012 05-27 18:32:09I
00217 05-27 18:30:52I
00031 05-27 18:29:01I
00016 05-27 18:27:55I
00029 05-27 18:22:08I
```

- 3) Press [**ESC**] to return to normal operation

Review Individual Attendance Records

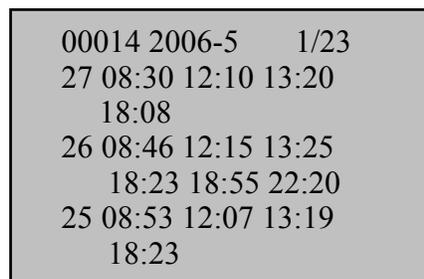
- 1) Press [**MENU**], select "User Manage", press [**OK**], select "Browse AttLogs", press [**OK**] and the following appears:



```
Browse AttLogs

User ID 00000
ESC          OK
```

- 2) Enter User ID ("00014 for example), press [**OK**] and the individual attendance records will be displayed. Scroll through the records using [**▲ ▼**].



```
00014 2006-5 1/23
27 08:30 12:10 13:20
18:08
26 08:46 12:15 13:25
18:23 18:55 22:20
25 08:53 12:07 13:19
18:23
```

- 3) Press [**ESC**] to return to normal operation

Browsing Attendance Records

The table below details additional commands for browsing attendance records:

Key	Description
▲	Scrolls display content up
▼	Scrolls display content down
1	Scrolls display content left
3	Scrolls display content right
OK	Restores right and left scrolling to initial position
2	Move up a line
5	Move down a line down

4	Toggles between compact display and complete display.	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: right;">1/380</p> <p>00001 05-27 18:46:21I</p> <p>00012 05-27 18:32:09I</p> <p>00217 05-27 18:30:52I</p> <p>00031 05-27 18:29:01I</p> <p>00016 05-27 18:27:55I</p> <p>00029 05-27 18:22:08I</p> </div> <p style="text-align: center;">Compact</p> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: right;">1/380</p> <p>00001 27 18:46IF</p> <p>00012 27 18:32IF</p> <p>00217 27 18:30IF</p> <p>00031 27 18:29IF</p> <p>00016 27 18:27IF</p> <p>00029 27 18:22IF</p> </div> <p style="text-align: center;">Complete</p>
6	Toggle between Small and Large fonts.	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>00014 2006-5 1/23</p> <p>27 08:30 12:10 13:20</p> <p>18:08</p> <p>26 08:46 12:15 13:25</p> <p>18:23 18:55 22:20</p> <p>25 08:53 12:07 13:19</p> <p>18:23</p> </div> <p style="text-align: center;">Small Font</p> <div style="border: 1px solid black; padding: 5px;"> <p>27 08:30 12:10</p> <p>13:20 18:08</p> <p>26 08:46 12:15</p> <p>13:25 18:23</p> <p>18:55 22:20</p> </div> <p style="text-align: center;">Large Font</p>
9	Scrolls to the newest record	
0	Scrolls to the oldest record	

Cleaning the TQ600

1. Cleaning the Keypad and Display

Use a soft damp cloth to remove dirt. Wipe dry.

2. Cleaning the Optical Sensor

Clean the optical sensor as follows:

(1) Use a can of compressed air to blow off any loose dust or dirt particles on the sensor.

(2) Lightly press a small strip of adhesive tape to the sensor surface and slowly peel it off to remove dust & dirt particles.

(3) Use a soft, non-abrasive dry cloth to wipe the sensor surface. Be careful not to scratch the surface of the sensor. If there are lint particles on the sensor surface, use clear adhesive tape to remove particles.

Caution:

Do not use any cleaners on the sensor or it could be damaged. Cleaning products that contain alcohol or other strong chemicals may discolor or crack the time clock housing.

Troubleshooting

1. Q: Fingerprint cannot be verified.

A: Possible Causes: The following conditions could result in a failed read.

- 1) Fingerprint is damaged or smooth
- 2) Finger is dry

Correction: Use 1:1 matching (see page 21). Moisturize finger. Enroll a different fingerprint.

2. Q: Time clock fails to communicate.

A: Possible Causes:

- 1) The communication port configuration is not correct; insure proper ports are connected.
- 2) Baud rate of the computer port and the time clock port are different.
- 3) The time clock has failed to connect with the power source or the computer;
- 4) The time clock is connected but failed to start.
- 5) The serial number of the linked time clock is not correct.
- 6) Data line or converter fails to communicate.
- 7) Failed computer COM port.

3. Q: The display does not work or parts of it do not work.

A: Possible Causes:

- 1) Motherboard is defective
- 2) The LCD display is defective.

Correction: Contact your dealer or Acroprint for repair.

4. Q: How do I remove a Supervisor?

A: Call Acroprint Technical Support.

5. Q: The time clock beeps when the communication connection is made.

A: When using the RS-232 connection insure that the baud rate of the PC and time clock are matched.

6. Q: Fingerprints have a high rejection rate.

A: Possible Causes:

- 1) Dirty sensor
- 2) Damaged sensor prism
- 3) Loose fingerprint reader connection
- 4) Damaged chip on PCB

Correction:

- 1) Clean sensor (see Cleaning instructions, Chapter 10)
- 2) Contact dealer or Acroprint for replacement of the prism.
- 3) Contact dealer or Acroprint.
- 4) Contact dealer or Acroprint.

7. Q: The time clock is communicating, but the attendance records are not correct in the system.

A: Lower the baud to 19200 or 9600 and confirm if the records are correct.

Appendix

USB Flash Drive Management

See “Remote Time clock Functionality” in the Documents folder of the timeQplus CD.

Bell Schedule

The TQ600 has a bell signal that can be programmed for different times during the day. The bell schedule and bell duration can be set based on user requirements. A total of 20 bell schedules can be set.

The TQ600 has an internal electronic bell, see Chapter 5, “Power Manage”.

TQ600 Magnetic Stripe/TQ600 Barcode time clocks have relay contacts for access control/external bell function. It requires purchasing and connecting a relay box and external bell. For more information see “TQ600BC-M External Bell Connection.pdf” in the timeQplus Documentation folder.

Reserve Battery (Mini-UPS)

In order for the TQ600 to function during power interruptions an optional 12V Mini-UPS (p/n 74-0169-000) is available. Contact your dealer or Acroprint to purchase.

UPS Operational State:

The UPS remains idle as long as AC Power is available but will automatically supply power to the TQ600 the instant AC Power is interrupted. When AC Power is restored the UPS will automatically charge until fully charged.

Connection



Note: Connect the Mini-UPS to the TQ600 first, then plug the UPS in and turn the power on.

Battery Storage:

Store batteries in a cool/dry place 50-86° F (10-30 ° C). DO NOT store batteries for over 3 months and do not store them in direct sunlight, high temperature or high humidity. **Charge the batteries at least once every three months** in order to maintain 50% of the rated capacity of the battery. Keep the batteries away from chemicals and heat sources.

Warning:

Batteries may leak, overheat, catch fire or explode if you don't follow proper safety & handling:

- DO NOT get batteries wet
- DO NOT place batteries near heat sources
- DO NOT use any charger other than the original charger
- DO NOT inverse polarity connection
 - NEVER throw batteries into fire. Properly dispose of batteries according to local rules and regulations.
 - DO NOT allow anything to short circuit the batteries (connect the positive and negative time clocks of the battery)
 - Dropping a battery may damage the battery. Replace the battery if you suspect that it is damaged.

Fingerprint Privacy:

1. The TQ600 merely captures points of the fingerprint but not the actual fingerprint image.
2. The fingerprint points cannot be used to re-create a fingerprint image.
3. Acroprint will not be liable for any direct or the indirect damages resulting from the use or inability to use our equipment.
4. If you have a question about privacy concerning the use of our equipment you should have your employer contact Acroprint.