

USER MANUAL

Countertop TA Terminal

Version: 1.1

Date: 2017.11



Contents

1 Instruction for Use	1
1.1 Recommended Operation Steps	1
1.2 Finger Placement	1
1.3 Verification Modes	1
1.3.1 Fingerprint Verification	1
1.3.2 Password Verification	2
2 Main Menu	3
3. User Management	4
3.1. Add a User	4
3.1.1 Enter a User ID and Name	4
3.1.2 Enroll a Fingerprint	4
3.1.3 Enroll a Password	5
3.1.4 Select Department and Privilege Settings	5
3.2 User Management	5
3.2.1 Search a User	6
3.2.2 Query a Record	6
3.2.3 Edit a User	6
3.2.4 Delete a User	7
3.2.5 Add a User	7
4 Department Set★	8
4.1 Add a Department	8
4.2 Edit a Department	8
4.3 Delete a Department	8
5 Shift Set★	9
5.1 Attendance Rule	9
5.2 Shift Setting	9
5.3 Schedule	10
5.3.1 Department-based Scheduling	10
5.3.2 Individual-based Scheduling	10
6 Report Management	12

6.1 Download Att. Report	12
6.2 Download Att. Setting Report	13
6.3 Set Setting Reports	15
7 System Setting	16
7.1 System Setting	16
7.2 Date/Time	17
7.3 Timing State Switching Setting	17
7.4 Bell Settings	18
7.5 Update firmware	18
7.6 Reset Opts	19
8 Data Management	20
8.1 Download/Upload	20
8.2 Delete/Clear	20
9 Record Query	21
10 System Information	22
11 Appendix	23
USB Client	23
T9 input	23
Quick Query of Attendance Records	23
Self-Service Attendance Terminal FAQs	24
Statement on Human Rights and Privacy	29
Environment-Friendly Use Description	30

1 Instruction for Use

1.1 Recommended Operation Steps

- Step 1: Set a department (not required if the default department is used). For details, see 4 Department Set.
- Step 2: Enroll users. For details, see 3 User Management.
- Step 3: Set attendance rules (not required if the default rule is used). For details, see 5.1 Attendance Rule.
- Step 4: Set shifts (not required if the default shift is used). For details, see 5.2 Shift Setting.
- Step 5: Arrange schedules of employees (not required if the default schedule is used). For details, see 5.3 Schedule.
- Step 6: Record employees' attendance. Check that the device time is precise and start attendance.
- Step 7: Download and review reports. For details, see 6.1 Download Att. Report.

1.2 Finger Placement

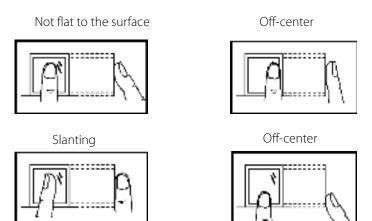
Recommended fingers: The index finger, middle finger or the ring finger; the thumb and little finger are not recommended (because they are usually clumsy on the fingerprint collection screen).

Proper finger placement:



The finger is flat to the surface and centered in fingered guide.

Improper finger placement: 2)



1.3 Verification Modes

1.3.1 Fingerprint Verification

1: N Fingerprint Verification

The terminal compares current fingerprint collected by the fingerprint collector with all fingerprint data on the terminal. Press your finger on the fingerprint collector by adopting the proper finger placement. For details, see 1.2 Finger Placement.



When verification successful, an interface shown above.



When verification failed, an interface shown above.

1:1 Fingerprint Verification

In the 1:1 fingerprint verification mode, the terminal compares current fingerprint collected through the fingerprint collector with that in relation to the user ID entered through keyboard. Adopt this mode only when it is difficult to recognize the fingerprint.



Enter the user ID using keypad on the initial interface. Then press OK. Place the enrolled finger properly on the fingerprint sensor.



When verification successful, an interface shown above.



When verification failed, an interface shown above.

O_{Notes:}

- 1. If it says that the enroll number is wrong, it means that there is no such number
- 2. If the device says "Please press again", place the finger on the fingerprint sensor again. You can try another 2 times by default. If it fails after 2 times, return Step 1 for second operation.

1.3.2 Password Verification

In the password verification mode, the terminal compares the password entered with that in relation to the user ID.



Enter the user ID and PWD using keypad on the initial interface. Then press OK.



When verification successful, an interface shown above.



When verification failed, an interface shown above.



If the device says "Invalid ID", enter the password again. You can try another 2 times by default. If it fails after 2 times, return Step 1 for second operation.

2 Main Menu

The self-service attendance terminal that integrates the prevalent SSR technology in Europe and America is launched to reduce management costs effectively, provide convenience for employees, and minimize the requirement for computer skills of users. The device allows setting attendance rules, shifts, and schedules for employees, without the need for attendance software. Users can download attendance reports for review and statistics.



This menu item allows you to add, browse, and manage user information, including the employee ID, name, fingerprint, password, card ID, department, and rights. You can add, edit, or delete basic information about employees.



This menu item allows you to browse department information, add, edit, or delete department IDs or names.



This menu item allows you to set attendance rules and required shifts and to arrange schedules for employees. The device supports a maximum of 24 shifts.



This menu item allows you to download statistical reports of attendance or attendance setting reports to a USB flash drive or SD card, or to upload attendance setting reports in which shifts are set and employees' schedules are arranged. The device gives priority to the schedules in an attendance setting report.



This menu item allows you to set system-related parameters, including the basic parameters, Date/Time, Timing State Switching Setting, SMS Setting and so on, to enable the terminal to meet user requirements to the greatest extent in terms of functions and display.



This menu item allows you to upload or download user data or attendance data, delete attendance data and all user data, and revoke management rights.

Through an SD card or a USB disk, import user information and attendance data from the attendance machine to related software or other fingerprint recognition devices.



This menu item allows you to easily query the attendance records saved on the device.



This menu item allows you to check the storage status as well as version information of the device.

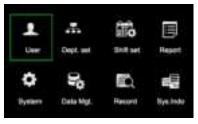
3. User Management

3.1. Add a User

Through this submenu, you can browse the user information stored on the terminal, including the user ID, name, fingerprint, password, department, and user role.



Press M/OK on the initial interface.



Select **User** and press **OK**.



Select Add user and press OK.

3.1.1 Enter a User ID and Name

The terminal automatically allocates an ID starting from 1 for every user in sequence. If you use the ID allocated by the terminal, you may skip this section.



Select User ID. Enter the user ID using keypad, then press OK.



Press M/OK to open input method. Press ▲/▼ to switch input

method and enter the Name.

For details of operations on keyboard interface, see T9 input. The terminal supports the 23-character names by default.

3.1.2 Enroll a Fingerprint



Press ▼ select **Enroll FP** and press M/OK.



Place your finger on the fingerprint sensor properly. For details, see 1.2 Finger Placement.



Place the same finger on the fingerprint collector for three consecutive times correctly until enrollment succeeds.

Note: If the enrollment fails, the system will display a prompt message and return to the [Enroll Fingerprint] interface. In this case, you need to repeat the operations of step 2.

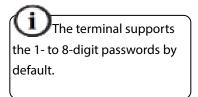
3.1.3 Enroll a Password



Press ▼ to select Enroll PWD. Press **OK**.



Enter a password using keypad and Re-enter the password, press M/OK.



3.1.4 Select Department and Privilege Settings

Administrators: An administrator is granted rights to operate all menus in addition to the fingerprint- and password-based attendance recording.

Ordinary users: An ordinary user is only allowed to record attendance through fingerprint and password verification and query attendance records.



Press ▼ to select **Dept.**. Press **OK** to select **department**.



Press ▼ to select **Purview**. Press **OK** to select **Purview**.

Finally, press ▲/▼to select M/OK and press M/OK. Till now, a user is added.

3.2 User Management

Generally the user information stored on the device needs to be modified in the wake of the personnel changes in a company. To facilitate modification of user information, our device allows users to add, delete, query and modify user information conveniently.



Press M/OK on the initial interface.

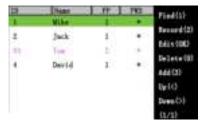


Select **User** and press **OK**.

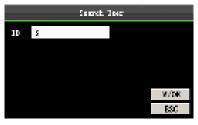


Select User Mgt. and press OK.

3.2.1 Search a User



User Mgt. interface Press 1 to enter



Enter the user ID, such as 3, and press **OK**.



The cursor to the user to be queried.

Note: "#" as shown in the figure above means the user is an administrator, and "*" means the user has already enrolled a password or card.

3.2.2 Query a Record



Press $\blacktriangle/\blacktriangledown$ to select a user and press 2.



Press ▲/▼ to scroll the attendance record row by row.

Press ∜► to scroll the attendance record page by page.



Press **M/OK** to query detailed information of an employee:



Notes displayed at the bottom of the screen explain all letter meanings.

Verification: validation status.

F: fingerprint verification. P: password verification I: Card verification

Status: attendance status.

0: check-in 1: check-out 4: overtime check-in 5: overtime check-out

3.2.3 Edit a User

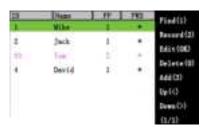


Press ▲/▼ to select a user and press M/OK.



The User ID cannot be modified, and the other operations are similar to those performed to add a user.

3.2.4 Delete a User



Press ▲/▼ to select a user and press 0.



Press M/OK to delete the user or **ESC** to return without deleting.

The option "**Delete user**" is in either of the following cases to delete all information of an employee from the device:

- 1) The fingerprint or password of this employee is no longer required.
- 2) This employee has resigned.

Note: Deleting a user will not result in the deletion of the user's attendance records which can be downloaded to related software for query.

3.2.5 Add a User

The Add user option is used to facilitate administrators to add users. For details, see 3.1. Add a User.

4 Department Set ★

Browse department information. Add, edit, or delete department IDs or names.



Press M/OK on the initial interface.



Select **Dept.set** and press **OK**.



Enter **Department set** interface as shown as figure.

4.1 Add a Department



Press 1 to enter Add Dept. interface.



Enter the department name using the T9 input method. Press **◄/▶** to select **Shift** Name and press M/OK.

No.: The attendance machine automatically assigns work IDs for departments that start from 1 and increase sequentially.

Dept.: Enter the department name using the T9 input method. (For detailed operations, see **T9 input**.)

4.2 Edit a Department



Press **▲**/▼ to select a department to be edited and press M/OK.



The **Edit department** operations are similar to those performed to add department.

4.3 Delete a Department



Press ▲/▼ to select a department and press 0.



Press M/OK to delete the user or ESC to return to the User Mgt. interface without deleting.

5 Shift Set★

This menu item allows you to set attendance rules and required shifts and to arrange schedules for employees.







Select **Shift set** and press **OK**.



Select Attendance Rule and press OK.

5.1 Attendance Rule

All attendance statistics are collected based on attendance rules. Attendance rules regarding how to calculate late arrival and early leave and how to arrange schedules need to be set first. Once set, they should not be modified from time to time because a modification may cause deviation in attendance record and a modification in the middle of a month may even disarrange the schedules.

Schedule Type: Department-based scheduling and individual-based scheduling are supported. If a company uses one timetable, only one department needs to be set and department-based scheduling is recommended. If departments have their respective timetables, department-based scheduling is recommended. If employees may take different shifts, individual-based scheduling is recommended.

Default Shift: When individual-based scheduling is used, employees who are not scheduled take the default shift. Set attendance rules by referring to the instructions in the text box on the right.



Press ▲/▼ to move the cursor to a desired option. Enter a desired value in the entry box using the numeric keypad. Press **◄/▶** in the scroll box to switch to the desired value. After finishing the setting, press **OK** to save your settings and go back to the previous interface.

Press **▲**/▼ to select **M/OK**. Press **M/OK** for saving.

5.2 Shift Setting



Press ▼ to select Shift setting, Press M/OK



Press ▲/▼ to select a shift from the list, and press ▶ to display the **Edit shift** interface



Press ▲/▼ to choose corresponding shift attributes. Enter the time using the numeric keypad. Press M/OK

Note: The device supports a maximum of 24 shifts including two default shifts (shift 1 and shift 2). All shifts can be edited and a single shift includes three time ranges at most.

5.3 Schedule

As the basis of attendance calculation, shifts should be set based on the actual condition of a company. If no shift is set, the system makes attendance calculations based on default shifts set in attendance rules.







Select Shift set and press OK.



Select **Schedule** and press **OK**.

5.3.1 Department-based Scheduling

The Schedule type in Attendance Rule is Department shifting.

1.Scheduling Records Query



Press 1 to enter **Scheduling** records Query 2.Edit Schedule



Press ▲/▼ to select a shift then press M/OK.



Enter a No. and press OK. Enter 1 as shown as in figure.



Press **1** to select **Shift Name**, like: Shift2, Press M/OK.



The department's scheduling records as shown as in figure.



When editing successful, an interface shown above.

5.3.2 Individual-based Scheduling

The Schedule type in Attendance Rule is Personal shift.

1. Add Schedule



Press 3 to enter Add Schedule interface.



Enter an ID. The device automatically displays the name. Press ▲/▼ to select Shift Name and then press M/OK.



When adding successful, an interface shown above.

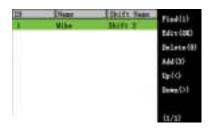
2. Edit Schedule



Press ▲/▼to select a shift then press M/OK.



Press to select Shift Name, like Shift 2, press ▲/▼ to select M/OK then press M/OK.



When adding successful, an interface shown above.

Note: The User ID cannot be modified, and the other operations are similar to those performed to add a shift.

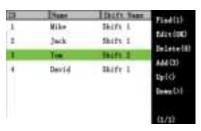
3. Scheduling Records Query



Press 1 to enter **Scheduling** records Query

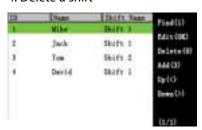


Enter an ID number and press OK. Enter 3 as shown as in figure.



The user's scheduling records as shown as above.

4. Delete a shift



Press ▲/▼ to select a shift then press **0**.



Press M/OK to delete. Press **ESC** to exit

6 Report Management

- 1. The schedules in attendance setting reports have priority over those set on the device in attendance calculation.
- 2. The attendance machine downloads information onto the USB disk when a USB disk and an SD card are inserted simultaneously.



Press M/OK on the initial interface.

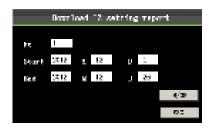


Select Report and press M/OK.



Select Download Att. Report and press M/OK.

6.1 Download Att. Report



Enter the start and end dates using keypad then press OK.



Downloading.....



Data download succeed! Press M/OK to take out the USB disk or SD card.

The SSRTemplateS.xls shall be stored in the USB disk or SD card. The schedule information, statistical report of attendance, attendance Record Report, Exception Statistic Report and card report can be viewed on a PC. The following reports show the preceding information:

To make reports more understandable, a report containing two-day attendance records of four employees is provided as an example.

Schedule Information Report: The report allows you to view schedule records of all employees.

			S	c	ne	d	ul	e	ln	fo	rn	na	tie	or	F	łе	po	or	t													
Stat Date:	2013-01-0	4 - 2013-01	-03																	Sp	ecia	Shi	15:2	bΑ	sk to	rilea	we,	26 C	out, f	til I	Holio	lay
U	Name	Panadmant	1	2																												
- 10	1441112	Department	пов	Wit																												
1	Joe	company	- 1	- 1																												
2	David	company	- 1	- 1																												
9	Mark	company	- 1	- 1																												
4	lom	company	- 1	- 1																												

Statistical Report of Attendance: The report allows you to query attendance of each person in a specified period. Salaries can be calculated directly based on this report.

Note: The unit of Work hour and Overtime hour in the Statistical Report of Attendance is HH:MM. For example, 17:50 indicates that the on-duty time is 17 hours and 50 minutes.

	e 201 he	or or -2012 et	107			S	tat	isti	ical	l Re	por	t o	f /	\tte	ndance				
n		Providence	Free Comment	_	La Transit		Learn	mail-	Assets assets	n liva Inorne	an toyt	100 (100) 1	Larent Talenta	1 MI	Additions a smeath	De Lagrana	destancement in	of page	Sale
	Acres	company	p. ex	1000	5				00.00	00.00	55	5							
	Himsel	to sail said.	D or	17:5		13	2	*	0.00	0.00	N.	-							
			Rent Rock	10.00	3	3	2	31	00.00	00.00	20	3							

Attendance Record Report: The report lists the daily attendance records of all employees within a specified period.

	Attendance Recor	rd Report
Att. Time: 2013-01-01-2013-01-02	Labulation 2013-01-02	
1 2		
ID: 1	Name: Joe	Dept.: company
07:06 07:54		
12:25 12:56 12:31 12:51		
17.50 18.52		
U: 2	Name: David	Dept.: company
07:36 (0F12)		
12:26 15:50		
1201 1551		
IB31 [B32] ID: 3	Name: Made	Dant: company
U: 3	Name: Mark	Dept.: company
12/30 05/05		
17:50		
ID 4	Name Jack	Dopt company
07.46 08.11		
12:50 17:55		
18.31 18.06		

Exception Statistic Report: The report displays the attendance exceptions of all employees within a specified period so that the attendance department handles the exceptions and confirm them with the employees involved and their supervisors.

		E	Excep	tion	Sta	tist	ic F	Repor	t			
Stat.Date:	2013-01-4	M 2013-01-03										
ID	Name	Department	Date		on duty	Second I On duty		Late time(Min)	Leave early(Min)	Absonce (Min)	Total(Min)	Note
1	Joe	company	2010-01-01	07.28	17.50			U	10	0	10	
2	Devid	сопряпу	2013-01-02	09:12	18:52			12		0	12	
9	Mark	company	2013 01 01	07.50	17.50			U	10	0	19	
4	Tom	сопряпу	2013-01-02	09.05				5	0	535	540	

Card Report: The report can substitute for clock-based cards and can be sent to each employee for confirmation.

						Car	rd Re	epor	t				
All Date	2013-01-01 - 2013-01	1-03	lab	diation:	2019 01 0	02							
Dept	company	Name	Joe	Dept		company	y .	Name	David	Dept	compan	y Name	Hark
Date: 201	(H01-01 - 2013-H14E)	10	1	Date	20104-01-0	1 - 2013	401405	ID.	2	Date	2010-01-01 - 2013	SHIFT ID	3
t(Doy) (Day	L Out On Eventney () (Day) duty when was 0 2 0.0 00	s (times) (Min)		t(Day)	(Day) (Da	g) duty v	Arrister Holling	(linea) ()	Hino (Imas) (Vin)	t(Day)		Arrive Helly (Intex)	Offic (Imax) (Vin)
	Att. Re	port					Att. Rep	ort				Att. Report	
Week F	iral time zone Second	diffine zone	Overtime	Week	Firettin	no zone	Seconds	ime zone	Overtime	Week	Fire! I me cone	Second time zone	Overtime
Date on	duty Off duty On duty	y off duty On	eck in Cheek-Out	Date	On duty	Off duty	On duty	Off duty	Check in Check-Da	Date	On duty Off duty	On duty Off duty	Check in Check-O.
mees 07	7:26 17:50			IN FEE	07:36	18:31				In ees	07:50 17:50		
ETHINA 07	7:54 18:52			THEFT	09:12	18:52				DIRECT	09:05		

6.2 Download Att. Setting Report

If shifts are complex or the shifts of a person are not fixed, it is recommended that the attendance setting report be downloaded and shifts and schedules be set for employees in the attendance setting report.



Press ▼to select **Download Att.** Report then press OK.



Downloading.....



Data download succeed! Press M/OK to take out the USB disk or SD card.

Open the setting "AttSettingE.xls" in the USB disk or SD card on a PC. Set the Shift in the Attendance setting report. The shifts that have been set on the attendance machine shall be displayed. (For more details, see 5.2 Shift Setting) You can modify the 24 shifts and add shifts. After modification, the shifts shall prevail on the attendance machine. For more details, see "How to arrange schedules using the attendance setting report" in the "Self-Service Attendance Terminal FAQs."

Att	end	ance	e Se	tting	Report
	Per dia		400	The same	Contine
Number					and a very our
÷	100	Of the party	19.00	i caractery	314 1 1315
1	100	12:00	1000	10:00	
	10	Tribi	1.100	1100	
-	++	1.0	10.00	110	
:	100	12:00	10:00	10:00	
- 1	12	170	1000	1.0	
	5.00	12:00	1000	10:00	
*	2.8	TO DO	100	110	
•	* *	Differen		IX Day	
11	500	12:00	1000	10000	
12	2.8	TORS	1.17	1101	
11	* *	100	16.50	I K Day	
11	5.00	12:00	1000	10000	
- 15	2.8	TORS	10.00	TIE	
15	4.8	L. D.	16.50	IX Day	
17	5.00	12000	10000	10000	
10	2.8	TORY	1127	1101	
- 11	9.80	17.0	16.50	IN Day	
20	5.00	12:00	1000	10000	
22	2.8	TORS	1.124	1101	
177	4 🛣	D/De	16.50	IN Day	
20	5.00	12:00	1000	10000	
571	5.00	TORS	1.12	110	

er the on/off duty time in the corresponding columns, where the **First time zone** shall be the on/off duty time of Time 1 5.2 Shift Setting in and the Second time zone shall be the on/off duty time of Time 2. For the correct schedule time format, see "What is the correct time format used in the setting reports" in the "Self-Service Attendance Terminal FAQs."

Set a schedule setting report

Enter the ID, Name, and Department respectively on the left of the Schedule Setting Report. Set shifts for employees on the right of the Schedule Setting Report, where shifts 1–24 are shifts those set in the Attendance setting report and shift 25 is for leave and shift 26 is for out.

					S	ch	ıe	d	ul	e	S	ei	tti	n	q	R	er	00	ri	t														
Specials	shifts 25-Ask fo	leave, 26-Out,	Null-Huliday														•																	
	Sched	lule date		201	31	1																												
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
, D	Name	Department	Card number	TIP	APT.	THE	PR 1	es:	Alla	LW36	TIP	MPT)	THE	P#1	eur	Also	WW.	TI P	APT)	ž	PR 1	est.	Alte	MON.	TI P	WED	THU	PRI	eve-	Alle	WW.	TI P	MPT)	THU
1	Joe	company		Г	Г	Г	Г	Г	Т	Т	Г	Т	Г	Г		П		П							Г	Г	Г	Г	П		П	Г	Г	Г
2	David	company						L		L																					Ш		L	
3	Mark	company		Γ	Γ	Γ	Γ	Γ	Τ	Τ	Γ	Τ	Γ	Γ				Γ							Γ	Γ	Γ	Γ	Γ					
- 4	Jack	company						L		L																					Ш		L	



- 1. The shifts of only 31 days can be arranged in one schedule setting report. For example, if the scheduling date is 2012-1-1, the schedule setting report contains the schedules of 31 days after 2012-1-1, that is, schedules from 2012-1-1 to 2012-1-31. If the scheduling date is 2012-1-6, the schedule setting report contains the schedules of 31 days after 2012-1-6, that is, schedules from 2012-1-6 to 2012-2-5.
- 2. If no schedule setting report is set, all employees use the report 1 by default from Monday to Friday.

6.3 Set Setting Reports







Select **Upload Att. Setting Report** then Uploading table..... press **OK**.

Data upload succeed! Press M/OK to take out the USB disk or SD card.

The employee information, shifts, and departments in the setting reports can be viewed after you select User, Dept set, and **Shift set** respectively on the initial interface.

Then you can view the information of employees, shifts, and departments either on relevant interfaces or in downloaded standard reports.

Note: If the schedule time format is incorrect, an interface shown in the following figure will be displayed:



For the correct schedule time format, see "What is the correct time format used in the setting reports" in the "Self-Service Attendance Terminal FAQs."

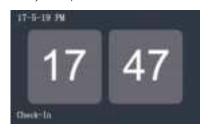
Press M/OK.

Re-upload the attendance setting report after modification.

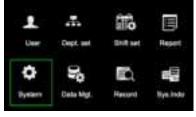
7 System Setting

7.1 System Setting

Set system parameters to meet user requirements to the greatest extent in terms of functions and display.



Press M/OK on the initial interface.







Select System and press M/OK.



Move the cursor to the desired option by pressing \triangle/∇ . Enter a desired value in the entry box by using the keypad. Press F in the scroll box to switch to the desired value. After finishing the setting, press M/OK to save your settings and return to the previous interface. Press ESC to cancel your settings and return to the previous interface.

Set system parameters.

Threshold (1:1): This option is used to set the extent of matching between an input ID/fingerprint and that stored in templates in the ID and fingerprint identification mode.

Threshold (1: N): This option is used to set the extent of matching between an input ID/fingerprint and all those stored in templates.

The recommended thresholds are as follows:

			Match threshold
FRR	FAR	1:N	1:1
High	Low	45	25
Medium	Medium	35	15
Low	High	25	10

Date Format: This option is used to set the time format displayed on the initial interface of the device.

Select a desired date format by pressing ►. The device supports 10 date 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 and YYYYMMDD.

Key Voice: Set whether to generate a beep sound in response to every keystroke by pressing . Select Y to enable the beep sound, and select N to mute.

Voice prompts: Set whether to generate a voice prompt in response to every operation by pressing **•**.

Retry Period: If a user's attendance record already exists and the user signs in again within the specified period (unit: minute), his/her second attendance record will not be stored. (Value scope: 0-60. 0: Save all the records passing the verification.)

Log Alert: When the available space is insufficient to store the specified number of attendance records, the device will automatically display a warning message. (Value scope: 1—99. 0: No warning message is displayed when the free space

Lan: You can select a language for the device based on your requirements.

Sensitivity: Set the fingerprint collection sensitivity. It is recommended to use the default value Medium. When dryness results in slow reactions of the fingerprint collector, you may set this option to High to enhance the fingerprint collector's sensitivity. When high humidity results in illegible fingerprint images, you may set this option to Low.

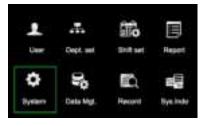
Volume: This option is used to adjust the volume of sound. Select a desired volume by pressing **\bigsiz**.

7.2 Date/Time

This menu item allows you to calibrate the date and time of the device.



Press M/OK on the initial interface.



Select **System** and press **M/OK**.



Select Date/Time and press M/OK.



Enter the desired value by using the keypad. Press M/OK to save.

Note: The date and time of the device must be set accurately to ensure the accuracy of attendance time.

7.3 Timing State Switching Setting

When it comes the set times, the attendance machine will automatically switch its attendance state. The current attendance state is shown on the initial interface.

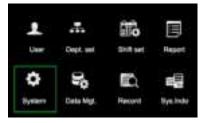
Note: The attendance status is downloaded together with attendance records. Users can view the attendance status by using attendance software. The attendance status does not affect attendance calculation, which is based on the preset shift time.



Press M/OK on the initial interface.

No.	Beltshitte	Statement of the last	Tatt
	10, 10	0-1-1	
2	00+ 00-	Check-Out.	4
2	00, 00	Street Out.	4
4	99x 90	firest-In	4
15			
6			
1			
W .			

Press ▲/▼ to select the item and press M/OK.



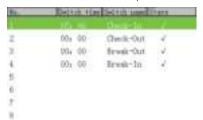
Select System and press M/OK.



Set parameters by referring to the instructions in the following text box and press M/OK.



Select Auto Switch and press M/OK.



As shown in the preceding figure, when the time reaches 07:00, the attendance status switches to Check-In.

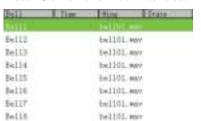
Press ▲/▼ to switch among the entry boxes. Enter the switch time using the numeric keypad and the switch name using the T9 input method. Press **◄/▶** to choose a state. After the setting is complete, press **M/OK** to save and go back to the previous interface. Press ESC to cancel the setting and go back to the previous interface.

7.4 Bell Settings

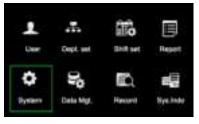
Lots of companies need to ring their bells to signal the start and end of work shifts, and they usually manually ring their bells or use electric bells. To lower costs and facilitate management, we integrate the time bell function into the FRT. You can set the alarm time and duration for ringing the bell based on your requirements, so that the attendance machine will automatically play the selected ring tone, and stop playing the ring tone after the set duration.



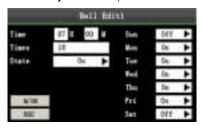
Press M/OK on the initial interface.



Press ▲ / ▼ to select a bell then press M/OK.



Select System and press M/OK.



Press ▲ / ▼ and M/OK to select items. When the setting is completed, press **OK** to save the setting and exit.



Select Bell and press M/OK.

E(1)	Line	Time	\$ State
MILL	0.36	1-1115	America d
Bulli		bel101.	POY
Bell3		tel101.	MAY
Bell4		bel101.	Mor
Bel15		b=1101.	MAY
Se116		b=1101.	Harc
Bull?		be1101.	PAY
Fell?		t=1101.	MICC

When editing successful, an interface shown above.

Time: Set a time point of one day or several days from Sunday to Saturday when the attendance machine automatically plays a bell ring tone.

Times: Set the alarm times.

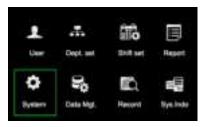
State: Set whether to enable the bell.

7.5 Update firmware

You can upgrade the firmware program of the FFR terminal by using the upgrade file in the USB disk through this parameter.



Press M/OK on the initial interface.



Select **System** and press **M/OK**.



Select **Update firmware** and press M/OK.



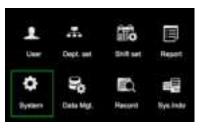
If you need such upgrade file, please contact technician. Usually, firmware upgrade is not recommended.

7.6 Reset Opts.

Make device's communication option, system option and so on reset to the state of factory.



Press M/OK on the initial interface.



Select **System** and press **M/OK**.



Press ▲/▼to select **Reset Opts**.



Press M/OK to reset, Press **ESC** to exit.

8 Data Management

The device allows downloading user data and attendance data to a USB flash drive so that the data can be processed by proper attendance software. It also allows user data from other devices to be uploaded to this device.







Select Data Mgt. and press M/OK.



Select **Download Attlog** and press M/OK.

8.1 Download/Upload

Download Attlog (Download attendance data): Download all the attendance data from the popular color-screen FRT to the USB host or SD card.

Download User (Download user data): Get all the equipment user information and fingerprint saved to the USB host or SD card.

Upload User (Upload User Data):Upload the user information and fingerprints from the USB host or SD card to the

The following uses attendance data as an example to describe how to download user data:

1.Insert an USB host or SD card into the USB host or SD card slot on the device.



Select **Download Attlog** then press M/OK.



Downloading...



Data download succeed.

8.2 Delete/Clear

Delete Attlog: Delete all the attendance records.

Delete all Data: Delete all the information of enrolled personnel, including their fingerprints and attendance records.

Clear Purview: Set all the administrators to ordinary users.

The following uses attendance data as an example to describe how to delete user data:



Press ▲/▼to select **Delete Attlog** then press M/OK.



Press M/OK to delete, Press ESC to exit.

9 Record Query

Employees can view their saved attendance records by entering any query conditions. According to the entered query conditions, records that meet the specified guery conditions will be displayed on the screen.



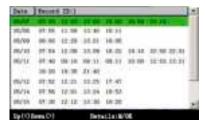
Press M/OK on the initial interface.



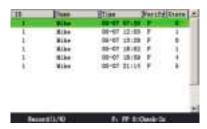
Select Record and press M/OK.



Press finger/input ID/Punch Card, enter the Start and End using keypad, then press OK.



Showing records above



Press M/OK to view the details of the attendance records. The attendance details of the employee with user ID of 1 on May 7 are as in figure:

Note: For the other two record query modes, see "Quick Query of Attendance Records."



Notes displayed at the bottom of the screen explain all letter meanings.

Verification: validation status.

F: fingerprint verification. P: password verification I: Card verification

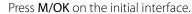
Status: attendance status.

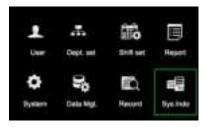
0: check-in 1: check-out 4: overtime check-in 5: overtime check-out

10 System Information

You can check the storage status as well as version information of the popular color-screen FRT through the Sys.Info. menu item.







Select Sys. Info and press M/OK.

Free Space: The number of enrolled users, administrators and passwords is displayed on the Free Space interface. The total fingerprint storage capacity and occupied capacity as well as the total attendance storage capacity and occupied capacity are graphically displayed respectively, as shown below:

Device: The equipment name, serial number, version information, manufacturer and date of manufacture are displayed on the **Device** interface.



Free Space



Device

Note: The figure above is for reference only. Please refer to the actual object.

11 Appendix

USB Client

The device can communicate with computers. You can connect it to a computer through a USB cable to view the attached quick start guide.

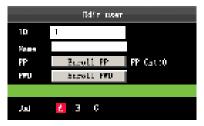
T9 input

T9 input (intelligent input) is quick and high efficient. The device support T9 Chinese, T9 English and symbol input. There are 3 or 4 English letters on numeric keys (0-9), for example, A, B, C are on numeric key 1. Press the corresponding key once, and the program will generate effective spelling. By using T9 input, names, SMS content and some symbols can be input.

The T9 input method is used to enter texts such as employee names, department names, and shift names.



Press the M/OK key to enable the T9 input method.



Press ▲/▼ to switch to the English or character mode. Enter 2 and press the keys from 3 to A.



Enter letters Angel in the same manner

Quick Query of Attendance Records

This function allows ordinary users to query their attendance records of current day to make sure whether there are any missing records or time errors so as to inform administrators to record exceptions in time.

Operation description

Mode 1: Save the attendance records and query quickly:

For example, after successful fingerprint matching, the employee with user ID of 1 can view his/her attendance records of current day after pressing M/OK.



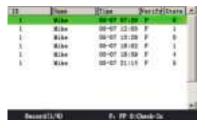
Verified!



Press M/OK within 10 seconds.



View all attendance records of an employee on current day.





Press M/OK to view the details of the attendance records.

Mode 2: Query directly and quickly without saving the attendance records *:

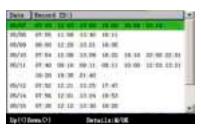


Press 0 on the initial interface to display the **Record** interface.



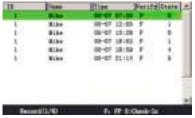
Press finger/input ID/Punch Card, enter the Start and End using keypad, then press OK.

Verification: validation status.

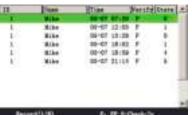


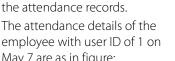
Showing records above

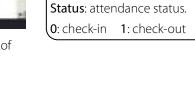
4: overtime check-in 5: overtime check-out



Press M/OK to view the details of the attendance records. The attendance details of the employee with user ID of 1 on May 7 are as in figure:







F: fingerprint verification. P: password verification I: Card verification Status: attendance status.

Notes displayed at the bottom of the screen explain all letter meanings.



1. Three ways for entering the query conditions: 1) Press the enrolled finger. The user ID and the name corresponding to the fingerprint will be automatically displayed. 2) Enter the desired employee information in ID and Name. 3) Sweep the enrolled card. The employee ID and name corresponding to the card will be automatically displayed. 2.1,000 records can be displayed on this interface.

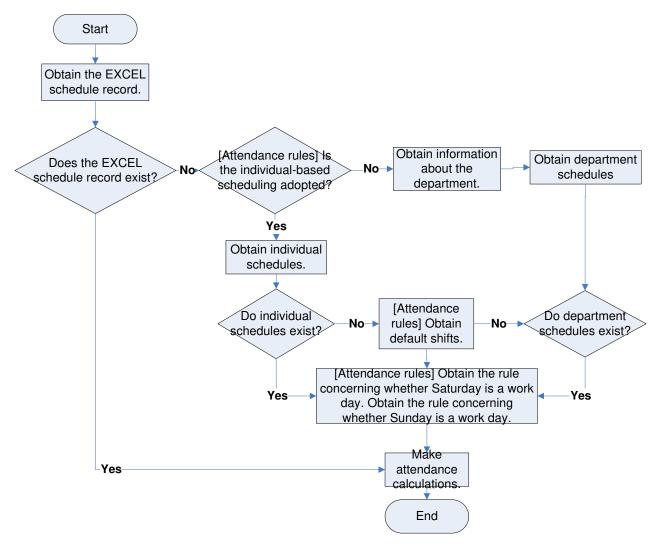
Self-Service Attendance Terminal FAQs

- 1. Does self-service attendance terminal support scheduling based on every other days? A: No.
- 2. Can the setting records downloaded from the device be edited on WPS software?

A: Yes. Setting records are supported in Microsoft Office 2003, Microsoft Office 2007, and WPS Office 2012 Personal.

3. What is the attendance calculation flow adopted by the self-service attendance terminal?

A. SSR attendance calculation flow.



4. How to calculate special overtime hours?

The following cases are deemed special overtime:

- When an EXCEL schedule record exists and attendance reports are used for attendance calculation, there are check-in and check-out records though there is no schedule (or rest is arranged) for the current date.
- When no EXCEL schedule record is available, there are check-in and check-out records though Saturday and Sunday are non-work days.

Overtime hours refer to the duration counted from the first check-in time to the last check-out time on the current day.

5. How to arrange schedules using the attendance setting report?

Step 1: Insert a USB flash drive into the USB port or SD card into the SD port of the device and download the Attendance Setting Report.xls to the USB flash drive or SD card.

Step 2: Open the Attendance Setting Report.xls on a computer.

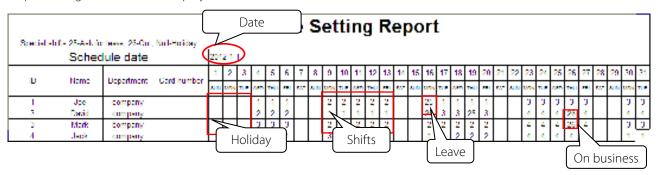
Step 3: Set shifts in the Attendance Setting Report.xls.

Attendance Setting Report

Shift										
Numbe	First tin	ne zone	Second t	ime zone	Overtime					
r	On-duty	Off-duty	On-duty	Off-duty	Check-In	Check-Out				
1	9:00	18:00								
2	9:00	12:00	13:30	18:00						
3	9:00	12:00	13:00	18:00						
4	9:00	12:00	14:00	18:00						

Data enclosed by a red rectangle is new shifts (shift 3 and shift 4). To add a shift, enter a time directly, in the range of 00:00 to 24:00.

Step 4: Arrange schedules for employees.



Note: Dates must be set correctly. For example, if the scheduling date is 2012-1-1, the schedule setting report contains the schedules of 31 days after 2012-1-1, that is, schedules from 2012-1-1 to 2012-1-31. If the scheduling date is 2012-1-6, the schedule setting report contains schedules of 31 days after 2012-1-6, that is, schedules from 2012-1-6 to 2012-2-5.

Step 5: Insert a USB flash drive into the USB port or SD card into the SD port of the device and upload the Attendance Setting Report.xls to the device. Then, schedules in the Attendance Setting Report can be used.

6. What is the correct time format used in the setting reports?

A. The correct time format is shown in the following table.

First Time Rar		e Range	Second Time Range		Overtime Range		
No.	On-dut	Off-dut	On-dut	Off-dut	Check-in	Check-out	
	У	У	У	У			
1	09:00	18:00					
2	09:00	12:00	13:30	18:00			
3	9:5	18:00					

Incorrect time formats are as follows:

- A time value is beyond the time range, such as 24:00.
- A time value contains Chinese characters, for example, 9:00, which differs from 9:00.
- A time value is preceded by a space. As shown in the following table, there is a space in front of 09:00 in shift 1.

Shift	First Time Range		Secon Rar	d Time nge	Overtime Range	
No.	On-dut y	Off-dut y	On-dut y	Off-dut y	Check-in	Check-out
1	09:00	18:00				
2	09:00	12:00	13:30	18:00		
3	9:5	18:00				

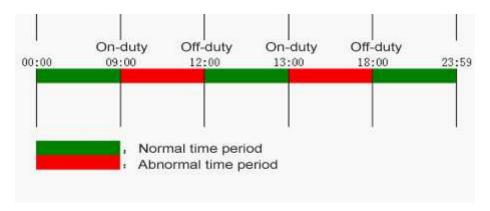
A time value contains special characters, for example, _9:00 and 09:-1.

The device performs validity check and error tolerance for other formats.

7. How does the self-service attendance terminal collect the correct attendance time based on the preset shift time?

A: The device collects attendance time based on the following principles:

- Adopt the earliest time for normal attendance and the nearest time for abnormal attendance.
- b) Adopt the normal attendance time if the normal attendance time and abnormal attendance time coexist.
- Adopt a median in the attendance time range.



The following uses four examples to describe the preceding principles.

Example 1: normal attendance

Attendance Time	09:00 — 12:00		13.00	- 18:00			
Range	09.00 =	- 12.00	13.00 -	- 10.00			
Attendance time of #1	0.20 0.25 11.55 12.01 12.50 10.02 10.00						
employee	8:30, 8:35, 11:55,12:01, 12:50, 18:02,19:00						
Statistical result based	8:30	12:01	12:50	18:02			
on attendance rules	8:30	12:01	12:50	18:02			

Description: The attendance time 8:30 and 8:35 are earlier than the on-duty time 9:00 and they are within the normal attendance time range. Therefore, 8:30 is adopted for the on-duty time 9:00 based on the principle of adopting the earliest time for normal attendance. 18:02 and 19:00 are later than the off-duty time 18:00, and therefore, 18:02 is adopted based on the same principle.

Example 2: Late arrival

Attendance Time	09:00 — 12:00					
Range			13:00 –	- 18:00		
Attendance time of #1	0.01 0.04 12.01 12.50 10.00					
employee	9:01, 9:04, 12:01, 12:50, 18:00					
Statistical result based	9:01	12:01	12:50	18:00		
on attendance rules	9.01	12:01	12:50	16.00		

Description: Employer 1 checks in for work at 9:01 and 9:04 and he/she is late based on the preset on-duty time. Based on the principle of adopting the nearest time for abnormal attendance, the correct check-in time is 9:01 rather than 9:04 because 9:01 is nearer 9:00.

Example 3: Early leave

Attendance Time	09:00 — 12:00		13:00 — 18:00			
Range			13.00 –	— 16.00		
Attendance time of #1	0.50 11.40 11.55 12.50 10.01					
employee	8:50, 11:40,11:55, 12:50, 18:01					
Statistical result based	8:50	11:55	12:50	10.01		
on attendance rules	0.50	11:55	12:50	18:01		

Description: The attendance time 12:50 is adopted based on the principle of adopting a median in the attendance time range. For the attendance time range from 9:00 to 12:00, the normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the calculated time of attendance is shown in the preceding table.

Example 4: Absence

Case 1:

Attendance Time Range	09:00 — 12:00		13:00 — 18:00			
Attendance time of #1 employee	8:50, 12:50, 18:01					
Statistical result based on attendance rules	8:50		12:50	18:01		

Description: The attendance time 12:50 is adopted based on the principle of adopting a median in the attendance time range. For the attendance time range from 9:00 to 12:00, the normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the check-out time is blank. The normal check-in time range for the on-duty time 13:00 is from 12:30 to 13:00. The calculated time of attendance is shown in the preceding table.

Case 2:

Attendance Time Range	09:00 — 12:00		13:00 — 18:00				
Attendance time of #1 employee	8:50, 11:55, 12:20, 18:01						
Statistical result based on attendance rules	8:50	12:20		18:01			

Description: The time 12:20 is adopted based on the principle of adopting a median in the attendance time range. The normal check-out time range for the off-duty time 12:00 is from 12:00 to 12:30 (that is, 12:00 + (13:00 - 12:00)/2). Therefore, the check-out time of the employee is 12:20. The normal check-in time range for the on-duty time 13:00 is from 12:30 to 13:00. Therefore, the check-in time of the employee is blank. The calculated time of attendance is shown in the preceding table.

Statement on Human Rights and Privacy

Dear Customers:

Thank you for choosing the hybrid biometric products designed and manufactured by us. As a world-renowned provider of biometric technologies and services, we pay much attention to the compliance with the laws related to human rights and privacy in every country while constantly performing research and development.

We hereby make the following statements:

- All of our fingerprint recognition devices for civil use only collect the characteristic points of fingerprints instead of the fingerprint images, and therefore no privacy issues are involved.
- The characteristic points of fingerprints collected by our products cannot be used to restore the original fingerprint images, and therefore no privacy issues are involved.
- We, as the equipment provider, shall not be held legally accountable, directly or indirectly, for any consequences arising due to the use of our products.
- For any dispute involving the human rights or privacy when using our products, please contact your employer directly.

Our other police fingerprint equipment or development tools will provide the function of collecting the original fingerprint image of citizens. As for whether such a type of fingerprint collection constitutes an infringement of your privacy, please contact the government or the final equipment provider. We, as the original equipment manufacturer, shall not be held legally accountable for any infringement arising thereof.

Note: The law of the People's Republic of China has the following regulations regarding the personal freedom:

- Unlawful arrest, detention or search of citizens of the People's Republic of China is prohibited; infringement of individual privacy is prohibited.
- 2. The personal dignity of citizens of the People's Republic of China is inviolable.
- 3. The home of citizens of the People's Republic of China is inviolable.
- The freedom and privacy of correspondence of citizens of the People's Republic of China are protected by law.

At last we stress once again that biometrics, as an advanced recognition technology, will be applied in a lot of sectors including e-commerce, banking, insurance and legal affairs. Every year people around the globe suffer from great loss due to the insecurity of passwords. The fingerprint recognition actually provides adequate protection for your identity under a high security environment.

Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

Environment-Friendly Use Description



The Environment Friendly Use Period (EFUP) marked on this product refers to the safety period of time in which the product is used under the conditions specified in the product instructions without leakage of noxious and harmful substances.

The EFUP of this product does not cover the consumable parts that need to be replaced on a regular basis such as batteries and so on. The EFUP of batteries is 5 years.

Names and Concentration of Toxic and Hazardous Substances or Elements

0	Toxic and Hazardous Substances or Elements							
Parts Name	Pb	Hg	Cd	Cr6+	PBB	PBDE		
Chip resistor	×	0	0	0	0	0		
Chip capacitor	×	0	0	0	0	0		
Chip inductor	×	0	0	0	0	0		
Chip diode	×	0	0	0	0	0		
ESD components	×	0	0	0	0	0		
Buzzer	×	0	0	0	0	0		
Adapter	×	0	0	0	0	0		
Screws	0	0	0	×	0	0		

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.

x: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials for this part is above the limit requirement in SJ/T11363-2006.

Note: 80% of the parts in this product are manufactured with non-hazardous environment-friendly materials. The hazardous substances or elements contained cannot be replaced with environment-friendly materials at present due to technical or economical constraints.

FCC Regulatory Compliance

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Unique Identifier Trade Name: Smart Identification Terminal, Model No.: D1

Responsible Party - U.S. Contact Information US Company Name: ZK Technology LLC DBA ZK Teco

Address: 200 Centennial Ave, Suite 211 Piscataway, NJ 08854, US

Telephone: 732 412 6007



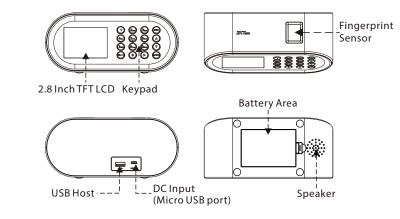
Quick Start Guide

Countertop TA Terminal (Standard Version)

Version: 1.0

The images in this manual may differ from the real product.

1. Dimensions



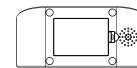
2. Power Supply

1. Power Connection



2. Battery Supply

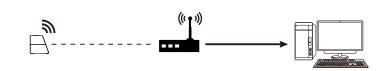
Build in battery upto 8 hours standby.





3. Communication

WLAN Mode



We recommend that the indoor communication distance between the device and the router should be within 20 meters. The number, thickness and location of walls, ceilings, or other objects between device and the router may affect the Wi-Fi signal.

Hotspot Mode

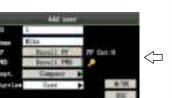


We recommend that the communication distance between the device and the mobile phone should be within 15 meters. Complex environmental condition may have a negative effect on range.

2

4. Add User

Press M/OK on the initial interface. Select User and press OK. Select Add user and press OK.



ID: Enter the user ID. Name: Use T9 to enter name(supports 23-character names).

FP: Place your finger on the fingerprint collector for three consecutive times correctly until enrollment succeeds. **PWD**: Enter a 1 to 8 digit password.

Dept: Select department. Purview: Select purview(User and Administrator).

Finally, press ▲/▼to select M/OK and press M/OK. A new user will be added.

5. T9 input

In the text input box such as Name, Dept., etc., press button M/OK to switch to T9 input method.



Press the [M/OK] key to enable the T9 input method.



Press **▼**/**▲**button to switch English or Symbol mode.

While in Symbol mode, press **d**/▶ button to see more symbol.

6. Wi-Fi setting

Our terminal is equipped with Wi-Fi. It supports either built-in or external Wi-Fi module to implement wireless data transmission over the Wi-Fi.



Press M/OK on the initial interface. Select System and press M/OK.Press **▲**/▼ to select Ethernet. Select Wi-Fi setting and press M/OK to enable the

Wi-Fi setting method.

1.USB download

on the device.



Press **▼**/**▲** to select network, enter to Wi-Fi (OK).

The device allows downloading user data and attendance

data to a USB flash drive or mobile phone so that the data

Insert an USB host or SD card into the USB host or SD card slot

can be processed properly by attendance software.

7. USB download/Mobile APP download



Select the connected network and press password to connect M/OK, you may see the IP address of the connected network.

Press M/OK on the initial interface. Select Data Mgt. and press M/OK.Select Download Attlog/User then

No: Device number. Download Attlog: Download the full attendance data from device to USB disk or SD card.

Download User: Download the full user information and fingerprint data to USB disk or SD card.

Note: SD card is an optional

2.Mobile APP download★(★stands for optional feature)



initial interface then select System and press M/OK. Press ▲/▼ to select Ethernet then select PC Connection and press M/OK.

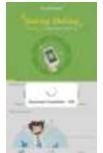


Press **◀/▶** to then select hotspot and press M/OK.



select Network Mode and press M/OK then set hotspot configuration and press M/OK.







On the Application, administrators can manager employee shifts and download monthly attendance report. Just add device and shake mobile to download data. It's very convenient for a simply attendance company or shops without PC Requirement.

8. Reset Opts.

To restore all the setting of the device as default, including communication option, system option, shift option and so on.



Press M/OK on the initial interface. Select system and press M/OK.Press ▲/▼to select Reset Opts. Press M/OK to reset. Press ESC to exit.

Notes:

After restoring factory reset, system parameters, timer state switch, alarm settings, DST, Wi-Fi settings, attendance parameters, shift, etc. will be restored to default values. The user data and attendance records will remain unchanged.

9. Technical Tips

1. Setting up Multiple Super Administrators. Two or more administrators are recommended to set up to ensure that relevant device operations are handled in a timely manner even if an administrator is absent.

2. Difficulties in Fingerprint Matching When a user presses a finger on the device, the device prompts "Please try again".

- Verify whether the fingerprint has been enrolled on the device or not.
- Try 1:1 verification. Specifically, enter the user ID and then press the registered finger on the device to increase the matching success rate.
- Enroll two fingerprints with high quality again.

ZK Building, Wuhe Road, Gangtou, Bantian, Buji Town Longgang District, Shenzher China 518129 Tel: +86 755-89602345 Fax: +86 755-89602394

www.zkteco.com



© Copyright 2017. ZKTeco Inc. ZKTeco Logo is a registered trademark of ZKTeco or a related company. All other product and company names mentioned are used for.