Parking Software Manual

This manual is base on the standard ONE entrance and ONE exit project.

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1. Computer configuration requirements:

1). Windows XP. Windows 7 (32bits)

2). 40GB or above hard disk

3). 256MB or more internal storage

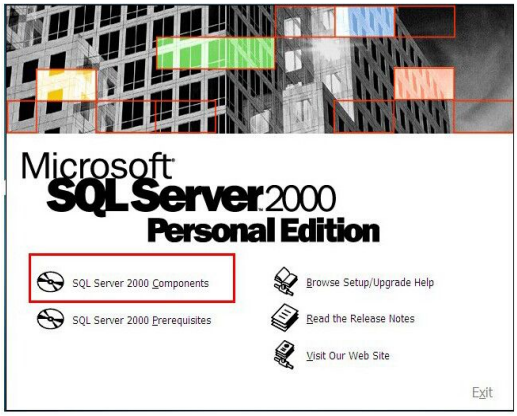
4). Support resolution ratio up to 800*600、1024*768 or above,32 bites XGA TFT LCD。

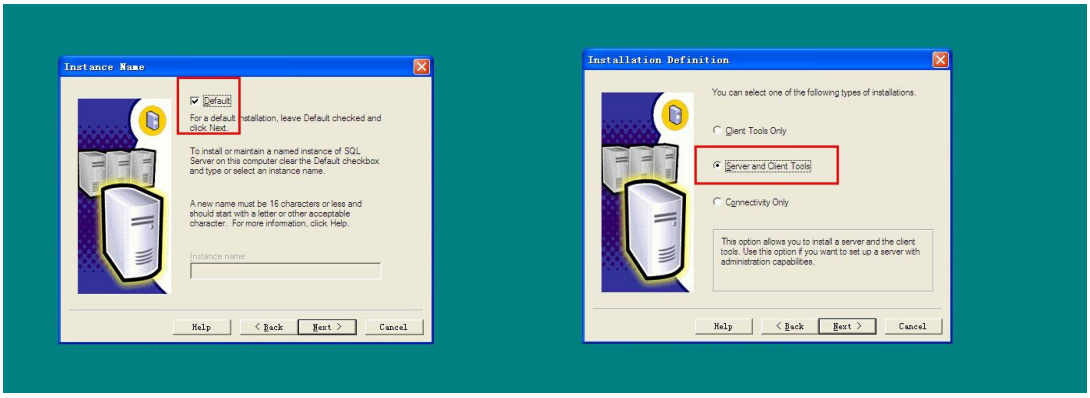
2. Installation steps

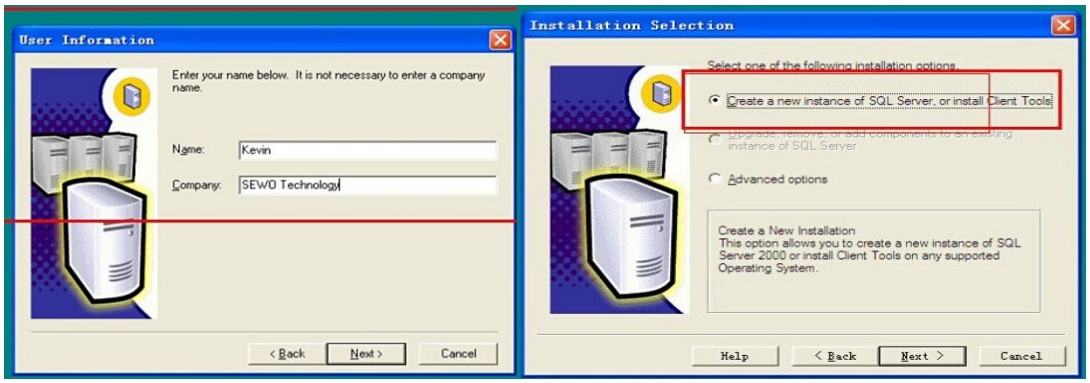
2.1 Database installation

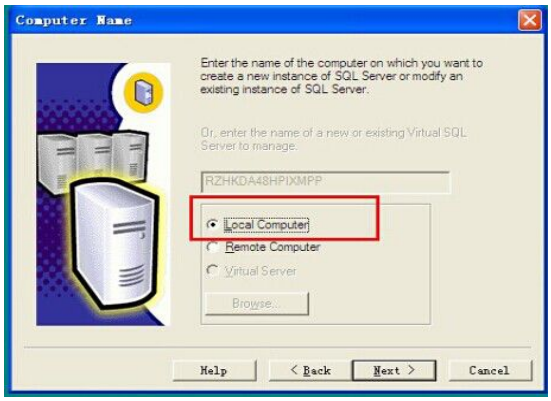
Before install the parking software. Customer should install the SQL2000 database well.

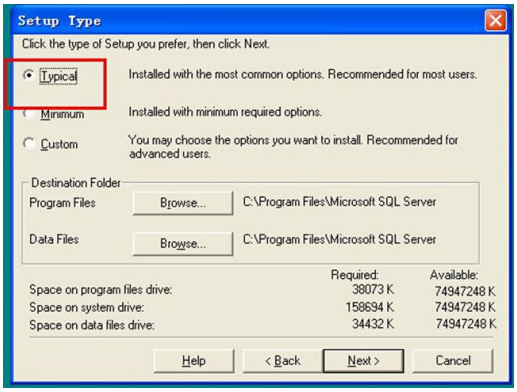
---. Open the disk with the SQL2000 database. Then set as below:

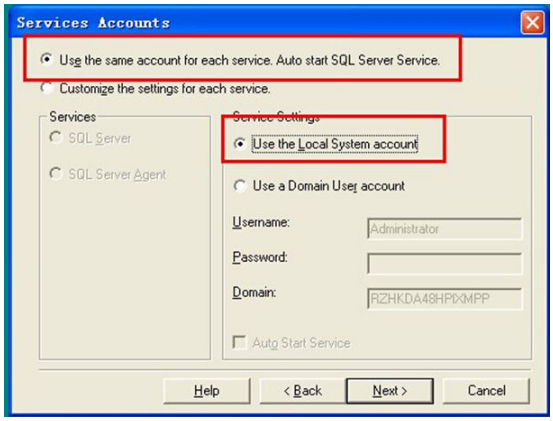


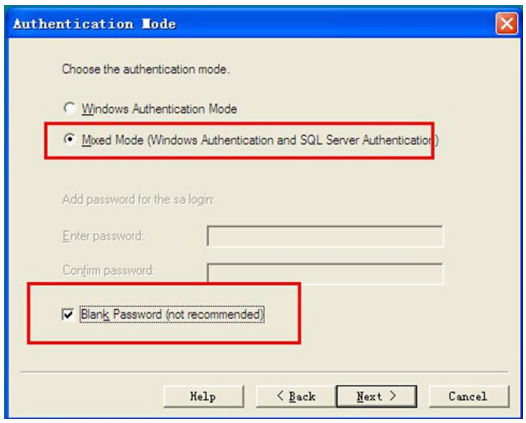












After install the Database. Running the database. Please check the picture below.

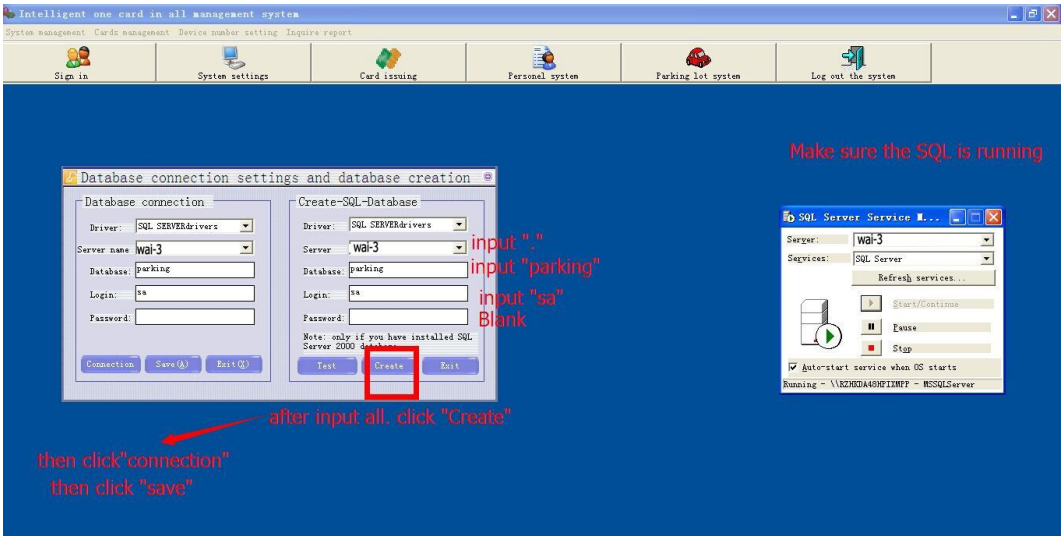
---1. Make sure the database is running.

---2. Make the server names are same. If the database and software are installed in the same computer. Click "." is ok

---3. Suggest do not set the database password and the log in "sa"

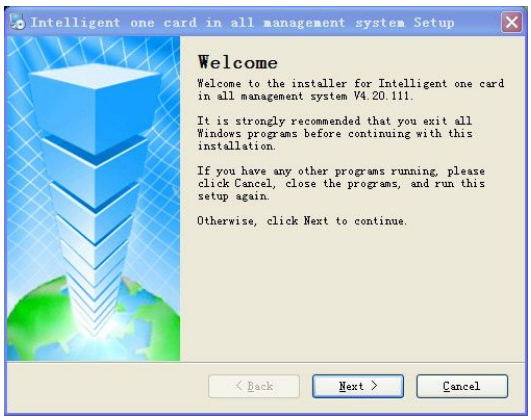
---4. Input "parking" in the database and click " Create"

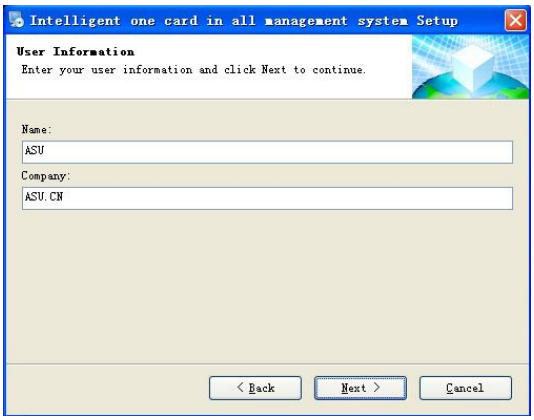
---5. After create the parking database. Click " communication" ----- "Save"-----" Exit "

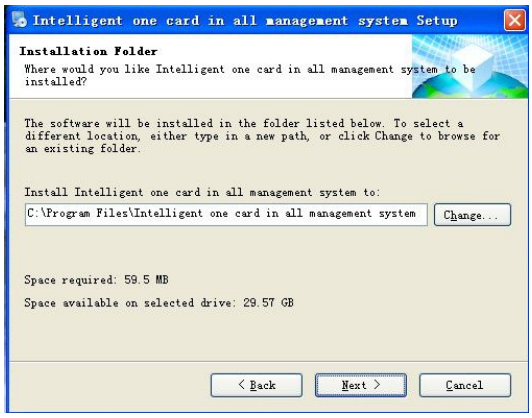


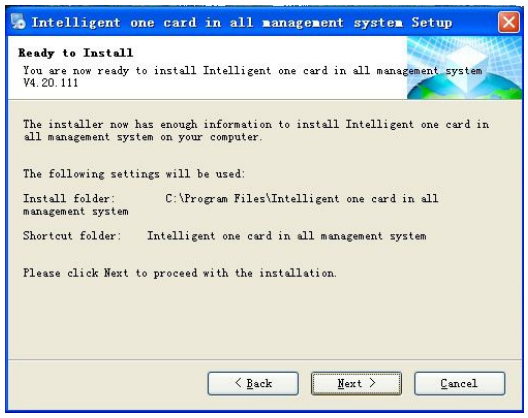
2.2. Parking Software installation

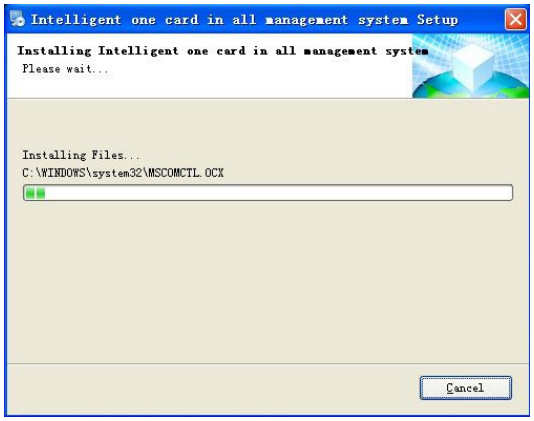
Open the CD disk and operating as below

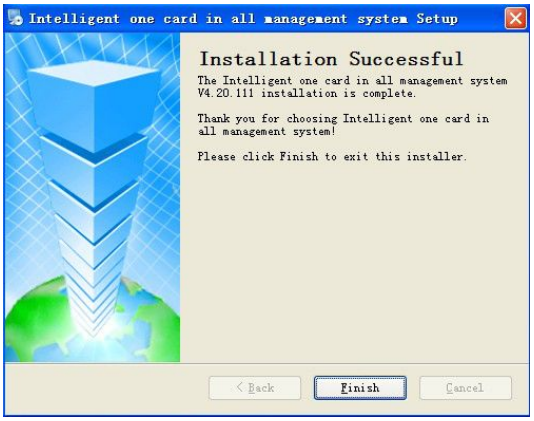


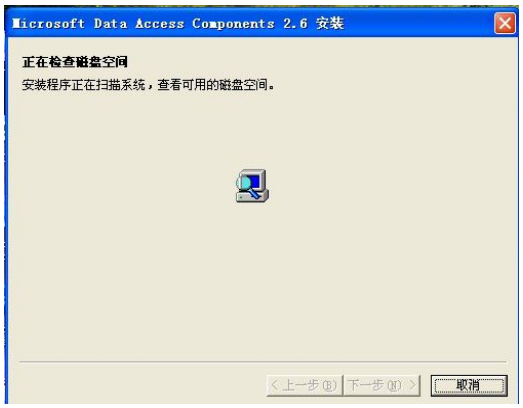


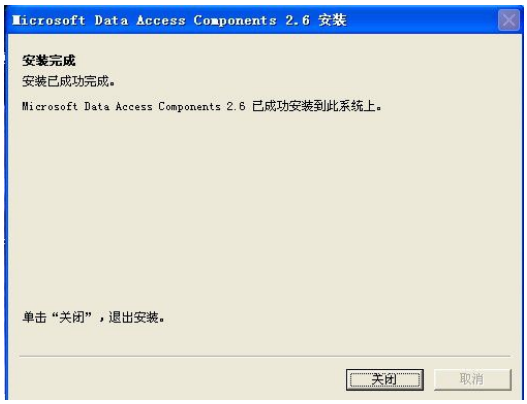






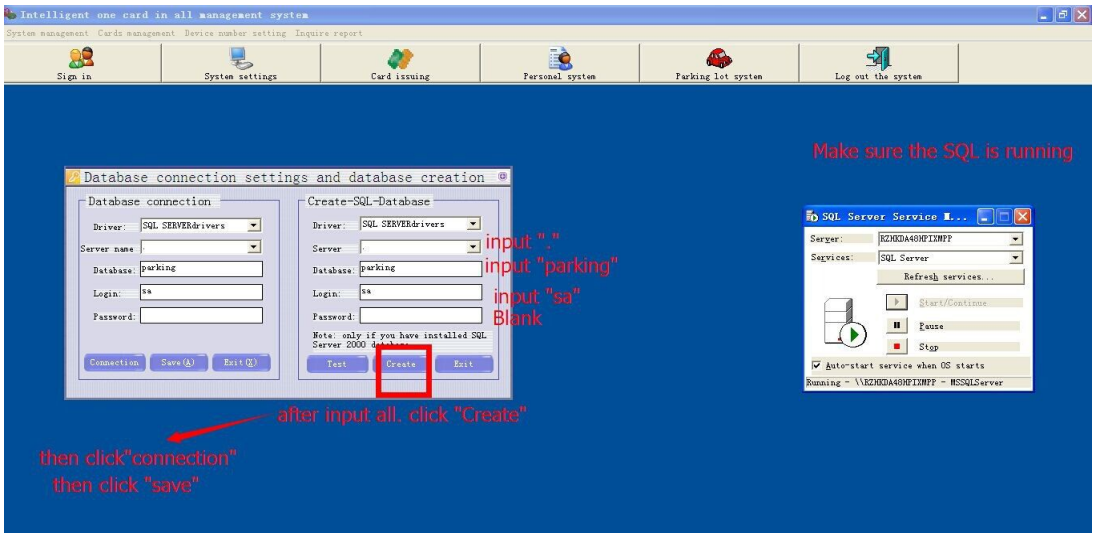


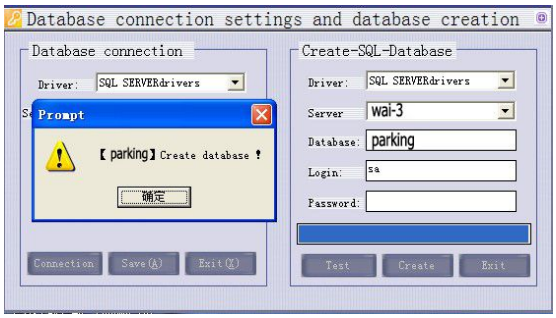


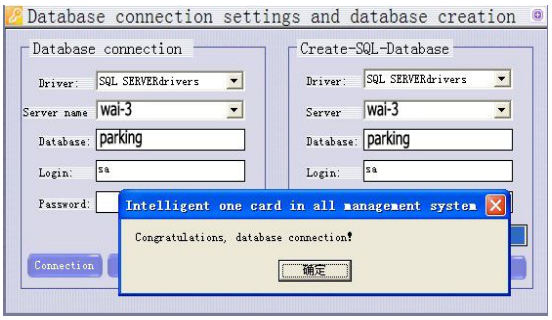


After Install the Parking software. It will show below.
(This means you did not connect the SQL2000 Database.)

Please connect the database as below







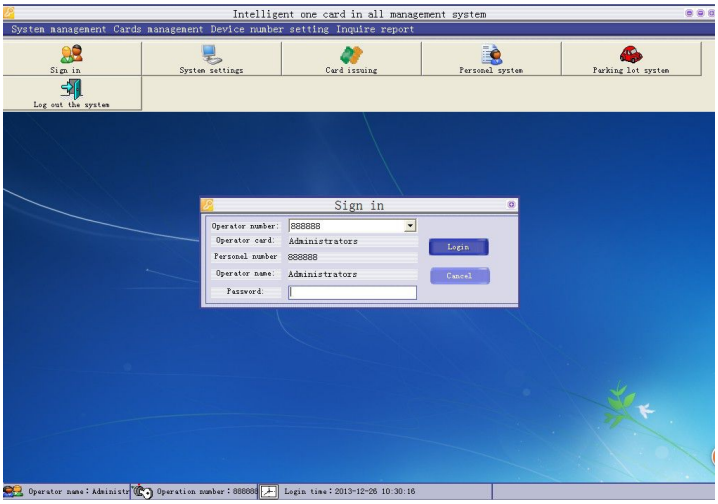
Parking System Modules

Module name	Remarks
System log in	Choose the operator's card number, and enter the password to login
IC card issuing	Issuing the operating cards, value cards, month cards, free cards and temporary cards of the parking management system
ID card issuing	Issuing the ID monthly cards, free cards and temporary cards of the parking management system
Operator Management	Set up the access authority of the operators in the parking system
Device number setup	Set the number of the parking lots and their location
Online monitoring	Monitoring the status of vehicle access, barrier gates, card dispensers, loop detectors, and the data inside the parking lots
Extract records	Load the records of the control machine, and upload them to the database of
Parking lots system	Set the number of control machines, the status of barrier gates, image storage path, parking fee discounts, and information like total number of parking lots, card dispensers, available lots, etc.
Control settings	Upload/ read the time and charging standards of the control machines, clear the card issuing devices, rewrite blacklist, and upload the user-defined LED caption
Card number download	When the number of the card under uploading is valid, the month cards or free cards issued must be downloaded into the control machine for normal use. In this case, the card validity is extendable without the card being available
Card test	Test the information of the IC cards
Card loss report	Report the loss of the IC cards
Parking fees query	Query information like the time that all vehicles go in and out, parking charge, operator, etc.
Query of the records inside the parking lots	Query information like the time when each vehicle goes in, the card number, category, etc.
Summary report	Keep daily, monthly and yearly statements
Delete record	All the tracks can be cleared up when the records are in a mess
Record filing	Transfer the tracks to a backup portfolio after a period
Documented cleaning	Delete backup archives

3. Operating the software

3.1 Connect the hardware with the software

Open the software and logo in. No password ID. Click " Log in" you can see



3.1.1 **Click " system settings "**

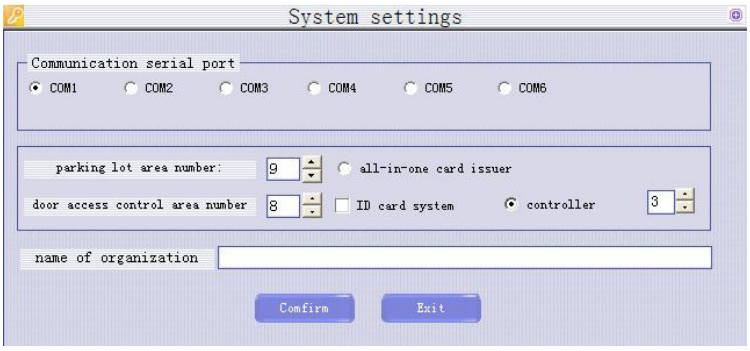
---1. Communication serial port. Please double check your computer's RS232 port.

(click "My computer" -- "Management" -- "Device management" -- "Port")

If not RS232 port. You can use the RS232--USB converter.

---2. Parking lot area number and door access number are default. Do not change again

---3. Controller ID. The default DIP setting is "3". We will change it base on your project before shipping



3.1.2 **Set the Equipment Number**

Click " Device number setting " --- " Parking lot machine"

Remarks

1). Before shipping. We have set the Machine number well.

3.1.3 **Parking settings**

3.1.3-1 Convention setting

Click "

" --- "

" . Input the password "**123546**".

1). For the Charges setting/Other settings. Please double check all the items
2). For the Photo setting. If you use our video capture card. Please set as follow
3). ID system setting

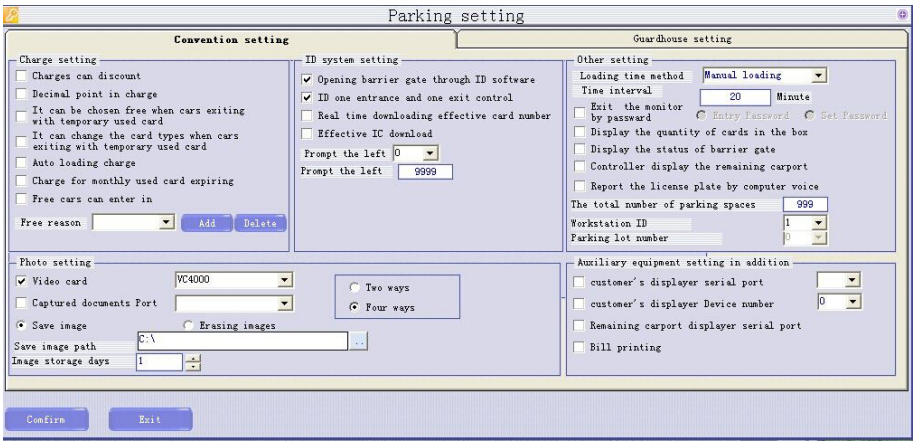
If tick "Opening barrier gate through ID software", it's the software to judge whether to give open command to the barrier gate on the "Online monitoring" interface; if exit the "Online monitoring" interface, it's the control machine to give the command. When the ID temporary cards are used, the opening command can only be given by the software after confirming the charge. If there's temporary cards or image comparison in the ID card system, "Opening barrier gate through ID software" is necessary.

If tick "ID one entrance one exit control" and enter "Online Monitoring" interface, the ID card has to abide by the principle of entering first and then exit. This function works together with "Opening barrier gate through ID software".

If tick "Real-time downloading effective card number", it can download the cards issued into the control machines in the "Online Monitoring" interface automatically. If not, then it needs to download the cards issued manually through "Parking lot system"---"Online operation"---"Card download".

If tick "Effective IC download", all the IC month cards and free cards issued must be downloaded into the control machines for normal use. This function has to be in line with the code switch setting of control boards.

"Prompt the left": at the interface of "Online Monitoring", the ID cards can only be read again for entry after the time interval set following the exit. This setting can prevent the ID long reading range cards from being read by the entrance control machine where the entry and exit are close to each other.



3.1.3-2 Guardhouse setting

Based on the entrance or exit control machines connected to the workstation, choose lane number (lane number 01, lane number 02 etc.), set up the entrance or exit mark, entrance or exit name, machine number, opening number, opening barrier gate method. Please note that machine number must be consistent with the number of the equipment in the real situation. Generally, the machine number is in line with opening number.

There are many options for opening barrier gate method, like "All automatic opening" All confirmation opening" and the other combined ways of various card types. When choose "All automatic opening, the barrier gate will open automatically once the cards are swiped; When choose "All confirmation opening", it will pop up a window on "Online

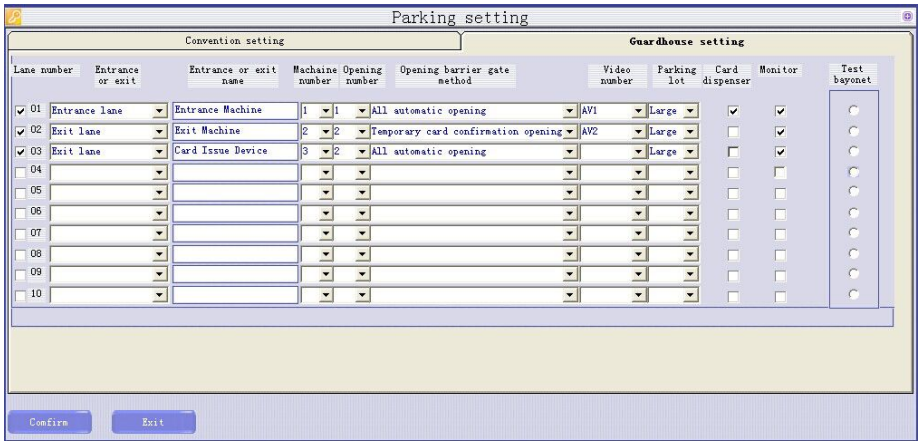
Monitoring" interface, inquiring the operator whether to release the car or not. It's determined by the operator if the barrier gate will open. Notice: It can be use normally only when the software and the entrance or exit control machines have been set.

There are two choices "Large" and "Small" of the parking lot set the four working modes of the parking lot by the code switch on the main control boards: 1) Large parking lot entrance; 2) Large parking lot exit; 3) Small parking lot entrance; 4) Small parking lot exit. The car can exit directly after entering, and if it has been authorized, it also can enter the small parking lot. If it enters the small parking lot, it can either exit the small parking lot and enter again. or exit directly the large parking lot. However, there is no image comparison in the small parking lot.

Choose card dispenser if there are card dispensers at the exits (3 card dispensers at most). Then it will show the status of the card dispensers in the "Online Monitoring" interface, there are functions like card default detection alarm, card under capacity alert, card capacity display and no card reminding.

Tick "Monitor" or not means whether to collect the real-time data and give management commands at the entrances/exits in the "Online monitoring" interface.

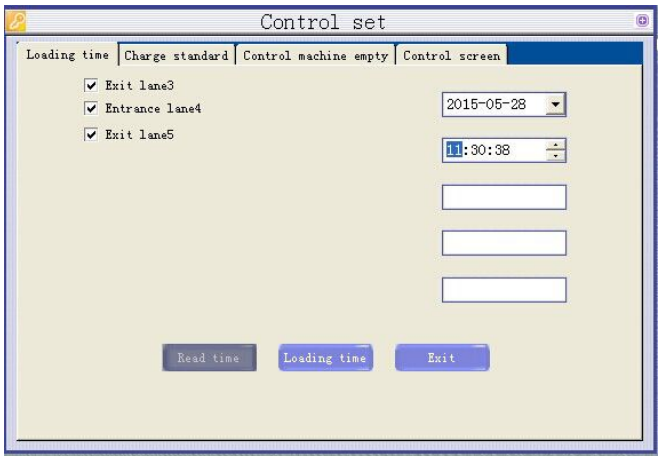
"Test bayonet" means to choose which port to test IC card.



3.1.4 **Control Settings**

3.1.4-1 Loading Time

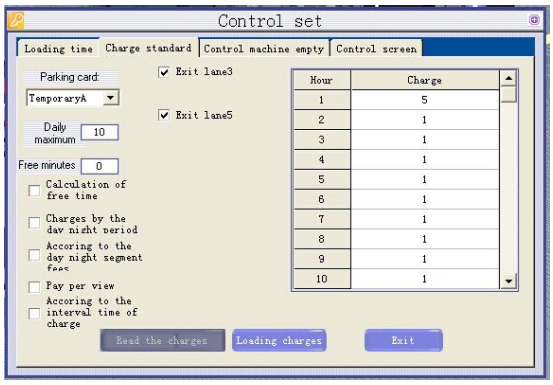
Click "Control settings" . It will show



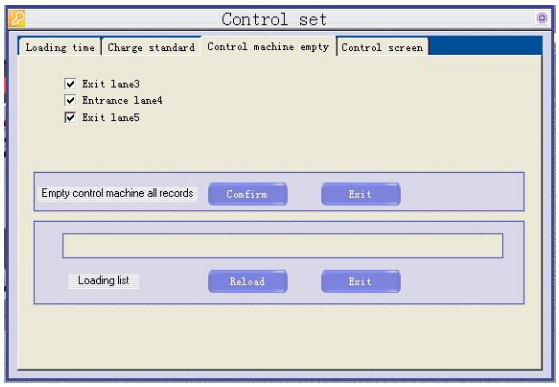
3.1.4-2. Charge standard

The charge is calculated by hour, and the maximum charge refers to the charge calculation when the parking exceeds one day. There are 4 types of temporary cards and value cards respectively, that is Type A, Type B, Type C and Type D, press the Space to shift among the card types.

When reading the charge standard of control machines, it can only read the charge standard in one control machines at a time. When uploading the charge standard to the control machines, it can upload to all the control machines connected to the computer.

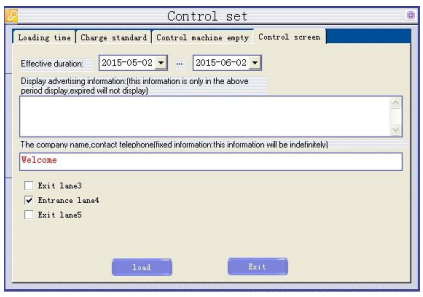


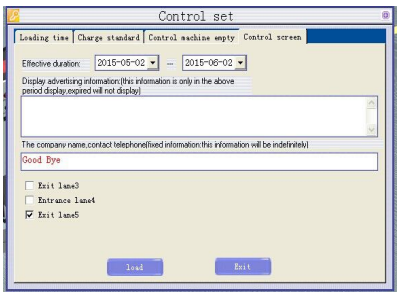
3.1.4-3 Control Machine Empty



3.1.4-4 Control Screen

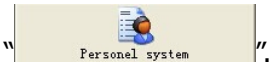
1). In the Entrance LED display. You can set "Welcome"
2). In the Exit LED display. You can set "Good-bye"



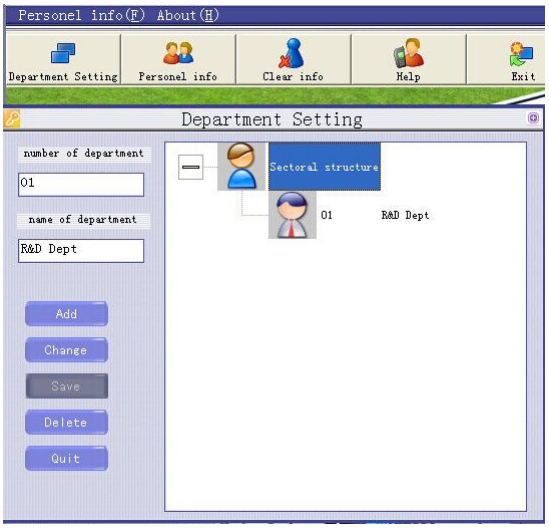


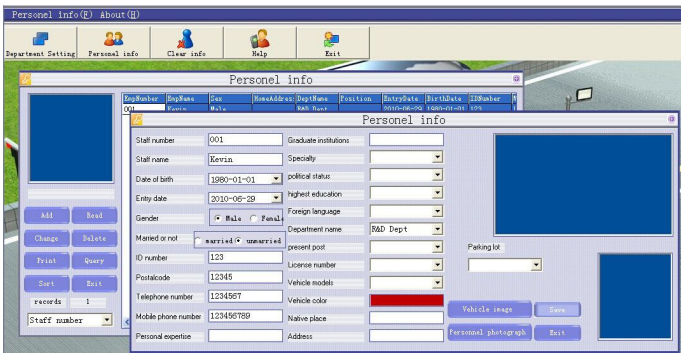
3.1.5 **Person System**

3.1.5-1. Register the monthly users

Click " 

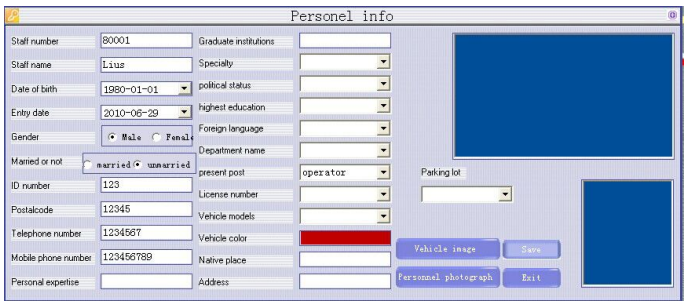
". Register the department and monthly users as below





3.1.5-2. Register the Operators

Remarks: **For operator the Staff Number is "80001. 80002. 80003. 80004.."**

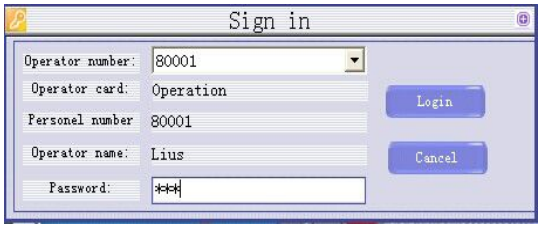


3.1.5-3 Change the operator and operator password

---. Click “System management” --- “Operator management”

---. Click “System management”-- “Change password”

Remark: The old password is empty. Input the new password directly

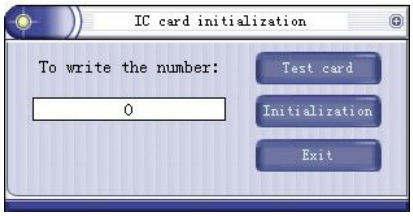


3.2 **Cards Management**

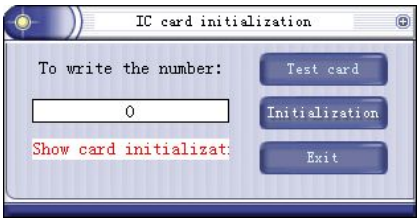
3.2.1 IC card management (All-in-one card)

3.2.1-1 IC card initialization

This function can reset or change the card number. Put the card on the card issuer, click “Test card” and then input the card number in the edit box.



Click “Initialization”:

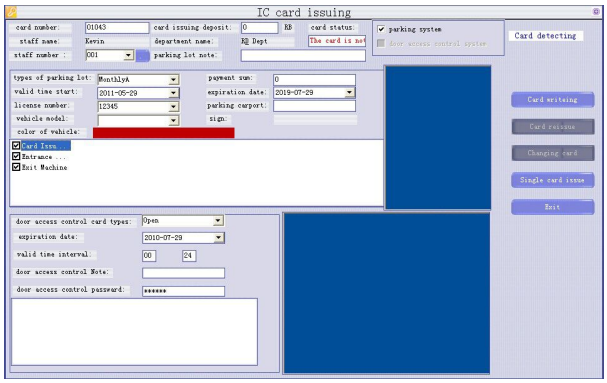


Sweep the card on the card issuer to initialize the card.

Notice: After hearing the tick sound, move away the card after. If not, the system will initialize the card by pulsing 1 to the number in the existing edit box after 3 seconds.

3.2.1-2 IC card issuing

Enter the IC card issuing interface, if the card issuing device work normally, the blue font "card detecting" will flashing all the time, then put the IC card onto the reading area, it will pops up a window as shown below, after a tick, then you could move away the card.



There is IC card number in "card number", choose the owner number, then the info of the this owner will show up in the corresponding prompt bar, such as department name, staff name, types of parking lot. Then input the info in these bars, choose the equipment number for this card. The card will be valid as long as you click the choosing box of the equipment, it means you can use this card on this equipment after the choosing box show "☑"

Then click the "card writing", the blue font" card detecting" turn to "show the card issued", move the card away from the reading area when you hear the tick. If you don't need to issue the card, please click" give up", and come back to the status of IC card detecting. If the issuing card is not the same card as the one in the last step, the system will prompt that "Please show the card", click for sure, put the same card onto the reading area.

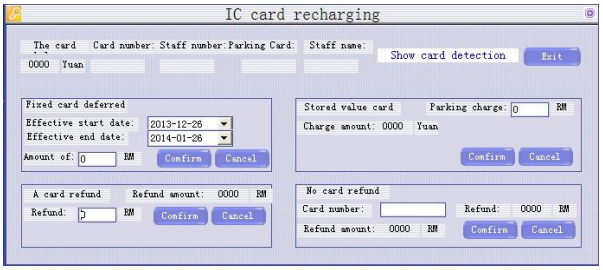
If you need to revise the info of the card to be issued, there is the rewritable function. After detecting, click "Changing card", input the changing info, then put the card to the reading area, the system will finish the info revision. When it's done, the system prompts that card rewriting is done.

For the IC cards that have been reported loss, there is the card reissue function. Input the owner's number and his card number click "Card reissue", swiping the card, then it's done.

For the card issuing, you can use the card issuing device to issue the card if the card is just used in parking system. Use All-In-One card issuer to complete the card issuing if the card is used in parking system and door access control as well.

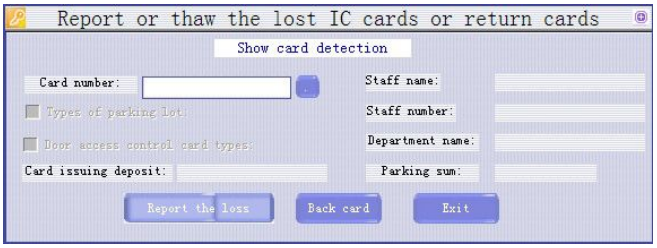
3.2.1-3 Recharge, extension and refund if IC cards

You will see the picture shown below. First, you need to detect the card, if all done,the information of the card will be showed on the interface. Operations of IC month cards, value card and free cards are supported on this interface, and others not.



3.2.1-4 Report or thaw the loss of IC cards or return the cards.

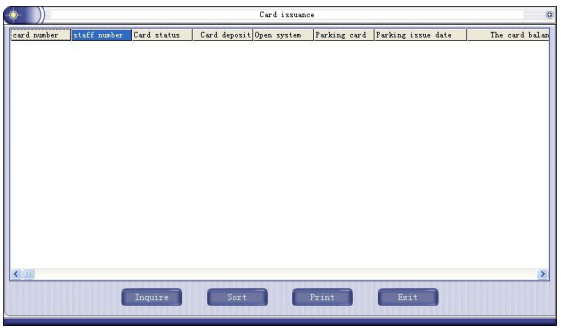
Entering the interface of "Report or thaw the loss of IC cards or return the cards", input the number of the lost card, if the info of the card still exists, it will show on the interface, then click "Report the loss" button, and the loss report is done. If you need to return the card, put the card to the reading area, click the "Back card" , and swipe it again, the system will empty the info.



3.3 Inquire Report

3.3-1 Card issuance report

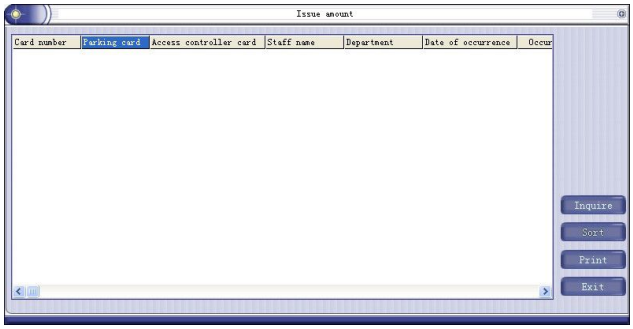
This function enables the users to inquire and get the statistics of all the cards issued, and support the print of reports. Please refer to the following picture:



The system provide functions of inquire ,sort and print.

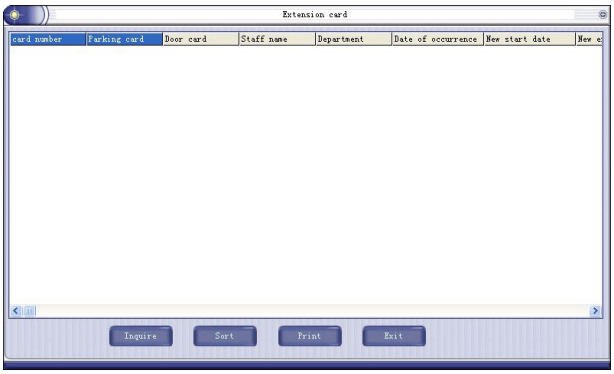
3.3-2 Issue amount report

This function enables the users to inquire and get the statistics of the amount of all the cards issued , and support the print and sort of reports. Please refer to the following picture:



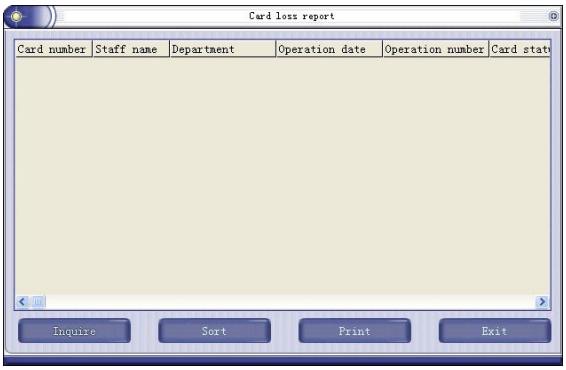
3.3-3 **Extension card report**

This function enables the users to inquire and get the statistics of all the cards postponed, and support the print and sort of reports. Please refer to the following picture:



3.3-4 **Card loss report**

This function enables the users to inquire and get the statistics of all the cards reported loss, and support the print and sort of reports. Please refer to the following picture:

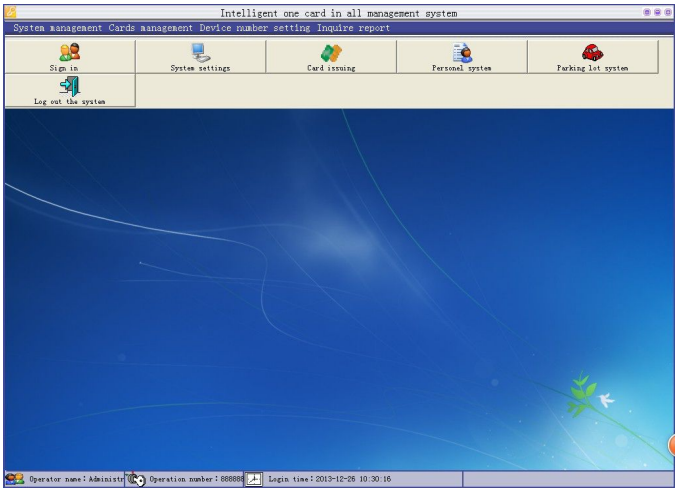


4.0 Monitoring Management

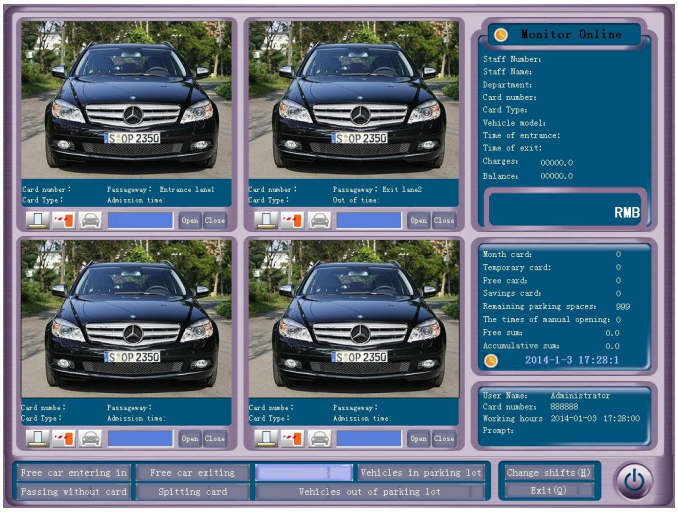
4.1 On line monitoring

Under the management system interface, click the icon [parking lot system]

, enter the parking lot management interface, as shown below:



Click the "Online monitoring" the online monitoring interface shows as following:



If there is card dispenser in the entry control machine, set up the card dispenser in the "Car set", then you can see the current state of card dispenser at the top right corner of "Online monitoring" interface.

Click the button" spitting card", the card dispenser in default dispenses one card and read it. If the system has many entries, choose the entry which needs to dispense cards, confirm it, and

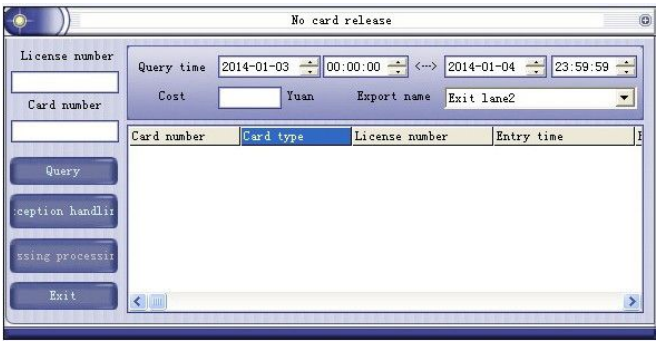
then the corresponding entry control machine will dispense the card. This function can not be used when the parking lots is full.

When cars enter the parking lot, the drivers can have the cards read through entry control machine, and the system will record images of cars automatically. All the relative reading information in the cards and images will be transmitted to the workstation, then the information like entry and exit cars images, card number, card type, charges and balance, entry and exit date and time, license number, user name, card number, vehicles in parking lot etc.will show on the screen.

When cars exit, the system will read the number of IC card on the exit control machine, record the cars images automatically. The images at the entry will show on the left of computer screen, and that at the exit will show on the right, then the manager can judge if the entry and exit car is the same one according to the comparison of the two images.

If the operator wants to confirm the opening of the barrier gate, he'll click the "Confirm" button before the driver's swipe their cards to open the barrier gate.

If the card is lost before exit, the operator can click the button "Passing without card" on the interface, then there pops up a dialog box as bellow:



Input the license number or card number, click "Query", the system will search the corresponding records, including IC card number, card type, entry time and operator's name. If it is the temporary card, import the charge fees and choose the exit lane, click the "Confirm", the system will open the barrier gate and release the car. Meanwhile, the card will be reported loss automatically. If it is the month card, the driver should report the loss and get a new card at management center.

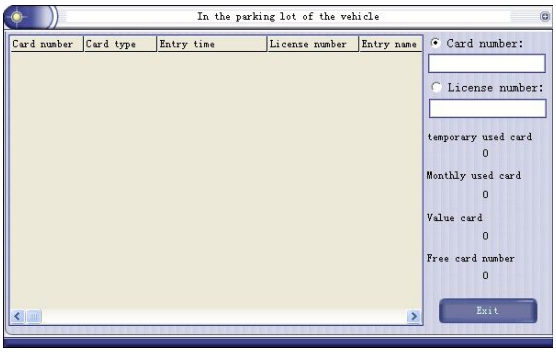
If operator has the authority to release the car freely, click the button "Free car entry in", the window of free car entrance appears. Input the license number of the car to be release free, choose the entry name, click "Confirm", and open the barrier gate, the car can enter the parking lot for free.

Click the button "Free car exiting", the window of free car exit will appear. Input the license number of the car to be release free, choose the exit, click "Confirm", then the barrier gate

opens.

If you need the computer to open the barrier gates, click the "Open" button, then the window of “computer open” pops up as shown bellow. Input the card number or breaking causes, click “Confirm”, then the barrier gate opens.

Click the button “Vehicle in the parking lot”, a window “In the parking lot of the vehicle” appears as follows. It will show the entry name, entrance operator, card number, card type, entry time, license number, and the total numbers of temporary used card, value card and the free card.



4.2. **On-line Operation**

Online operation is the setting of read and write of the control board in the entrance control machine or the exit through workstation. Such as uploading or reading the time and charging standard of the control board, reading or clearing the records on the control board.

【Extract records】

This function apply to the records of the entrance/exit control machines which works on line.

Click the “Extract records” icon on the toolbar or in the menu of “Online operation, then it can read the stored card-reading records in the online controller and upload the records to the server database.

For the monitored running entrance/exit control machines, it will read the stored card-reading records in the control board before entering the on-line monitoring interface.

To ensure that the records will not be lost, this operation can be conducted at any time.

Notice: 1. Operate the “reading records” before being off duty to ensure all data are stored in

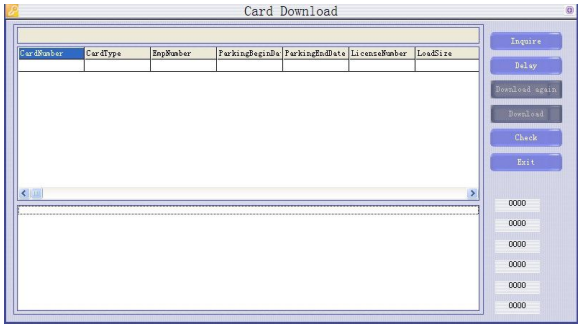
the database.

2. Don't clean the card-reading records in the IC card reader before running the "reading records", or the data stored in the card reader will be lost.

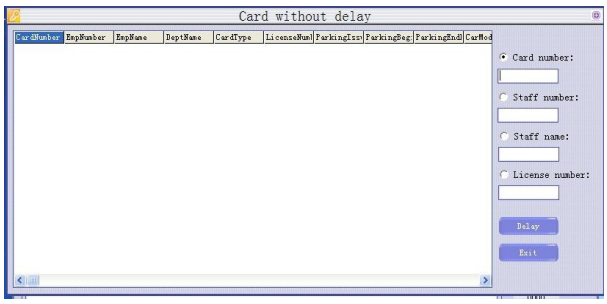
4.3 **IC card management**

4.3.1 Card download

This function mainly works on the ID month cards, ID free cards or IC month cards which requires no card release. The month cards and free cards issued or extended all need to be re-downloaded for for the use of this function., and it requires that the control board is set to validate the card number downloaded. Card download is shown as below:



There are two ways for the extension of month cards or free cards, onw is to swipe the cards at the management center, and the other is to input the card number directly, the interface of "Card without delay" is as below. Input the card number needed to be extended or staff number, then the detailed information of the card will display on the interface. Click "delay" and the "delay" window pops up, then modify the date, click "delay", the card is extended successfully.



4.3.2 Card loss report

If the card is lost or the owner can't find it temporarily, they need to apply for the card loss report in order to avoid any further loss.

Click "Card loss report" on the menu, a window below pops up. Then choose the card which needs to be reported loss, click "report the loss" button to finish the loss report.

Notice: 1. The owner needs to apply for the loss report at the management center. The IC cards and ID cards have the separate operating interface. Put the card in the loss reporting base, and then the workstation will deal with it.

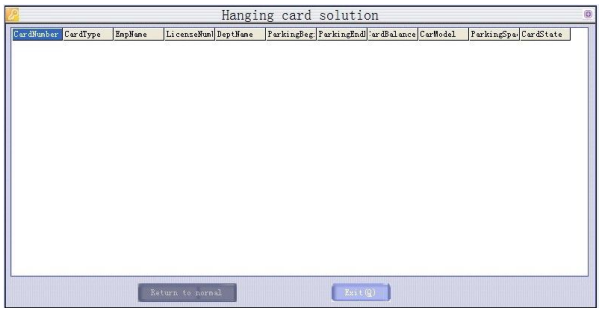
2. The card loss report should be dealt with on all the control machines managed by the system, and then the card loss report is done successfully.

4.3.3 Hanging card solution

Click "Hanging card solution" on the menu, a window pops up as below.

Choose the IC card needed to be restored, click "return to normal" button to get the IC card returned.

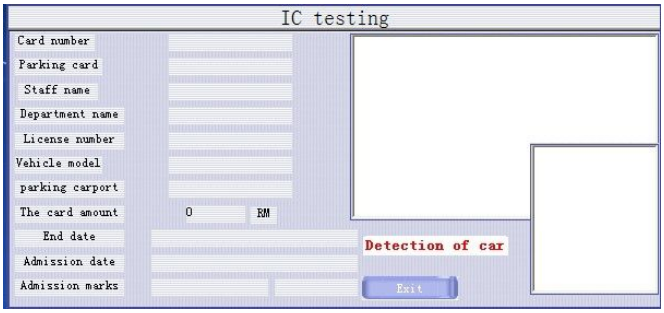
Notice: The IC card can only be totally returned when it's handled on all computers.



4.3.4 IC card testing

Click the "IC testing" icon on the toolbar or in the menu of "Online operation", then there pops up a window as below.

This function mainly works for the test of the information in the IC cards. Just put the IC card to be tested on the issuing card device which connected with the computer. After reading the card, the related information will be displayed on the interface, such as card number, card type, license number, card valid date, admission marks, admission date, the card amount.

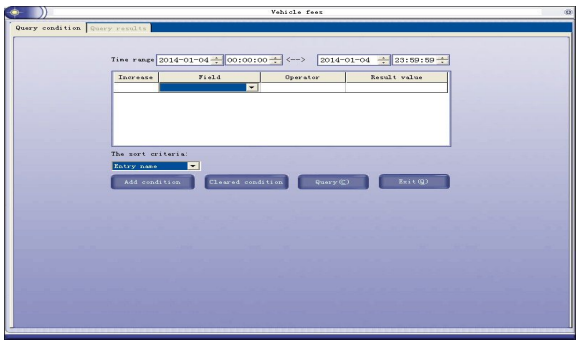


5.0 Records Report

It can check the condition of the parked cars, charging sstatus, loss reporting conditions of the IC cards and print the reports through the inquiry management system.

5.1 Vehicle fees

Click "Vehicle fees" in the menu "Record report(S)", then there pops up a dialog box as below:



You can query according to the "time" "field" "operator" "result value" in the query condition. Field names include card type, card number, license number, entry name, exit name, entry operator, export operator, staff name, staff number. The query by time is based on the exit time.

When querying about the records of car entering or exiting, it needs the date range, field condition and sort criteria. You can add or clear the field condition, if there's a blank field condition, the data you query will be all the data within the data range.

After setting the query conditions, please click the "Query" button, it will turn to "Query results" window which will show the card number, card type, entrance time, exit time, license number, amount, entry name, exit name, operator and so on.

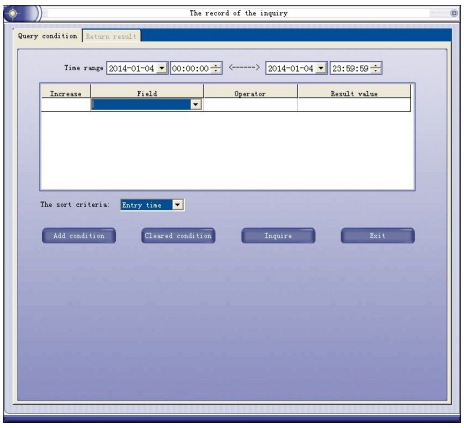
At last, print the report of the query. Apart from the statistics of car entering or exiting, it also reports the number of month cards, free cards, temporary cards, value cards, and total vehicle quantity, total charging amount, total amount receivable (Charging amount means the actual amount received; receivable charges means the charges without discounts).

5.2 Admission reports

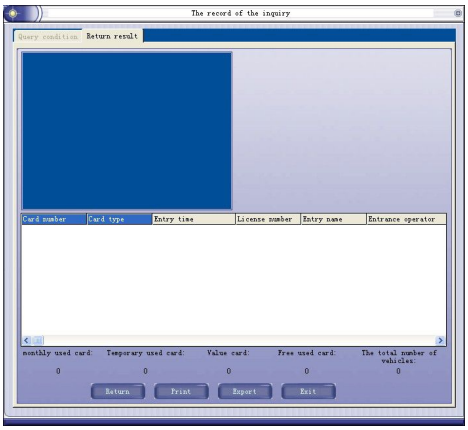
Click “Admission reports” in the menu “Record report(S)”, therepops up an interface as follows:

You can query according to the “time” “field” “operator” “result value” in the query condition. Field names include card type, card number, license number, entry name, and entrance operator.

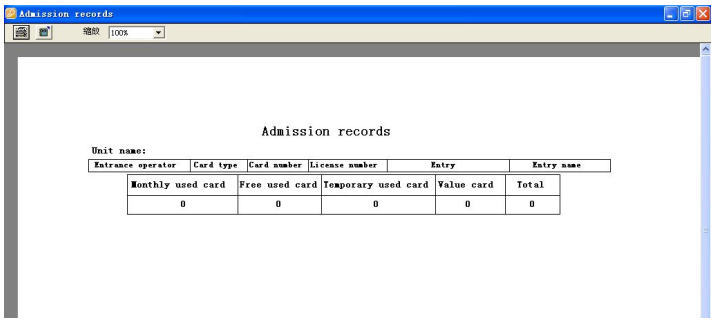
When querying about the records of car entering or exiting, it needs the date range, field condition and sort criteria. You can add or clear the field condition, if there’s a blank field condition, the data you query will be all the data within the data range.



After setting the query conditions, please click the “Inquire” button, it will turn to “Return results” interface as below:



Press the “Print” button, to print the report of the query.

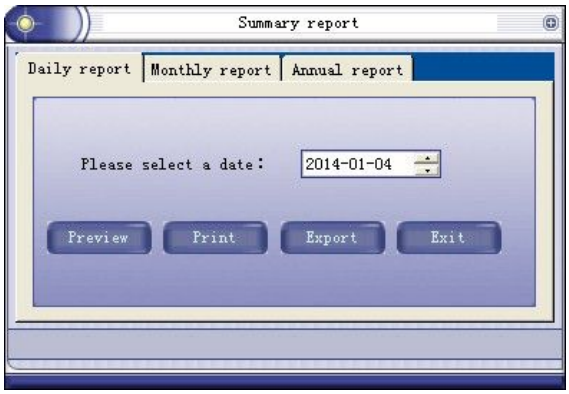


5.3 Summary report

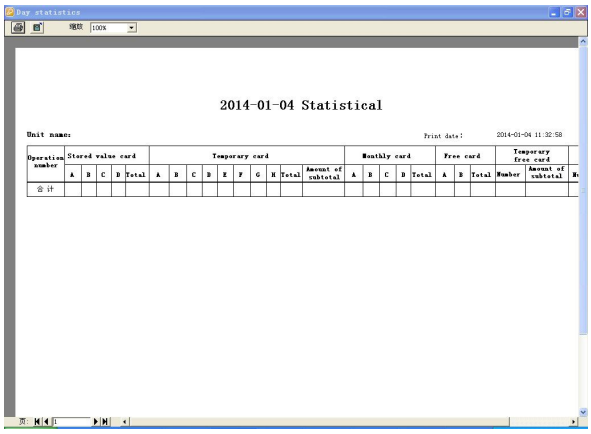
When using the parking management system , the users need to manage and get the statistic of the parking fees charged. Therefore, in the report management the system should analyses and prints the daily, monthly and annual reports regarding the charging situation.

In the menu , choose the "Record report(S)" and click "Summary report" in the pull-down menu, there pops up a dialog box of three pages, which are daily report, monthly report and annual report. The statistics in the report is based on the card types, and it can display the total car number and parking fees of the day, month and year.

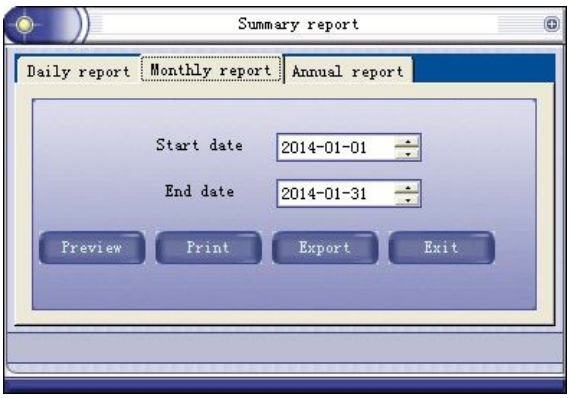
Choose the "Daily report", it shows as follows:



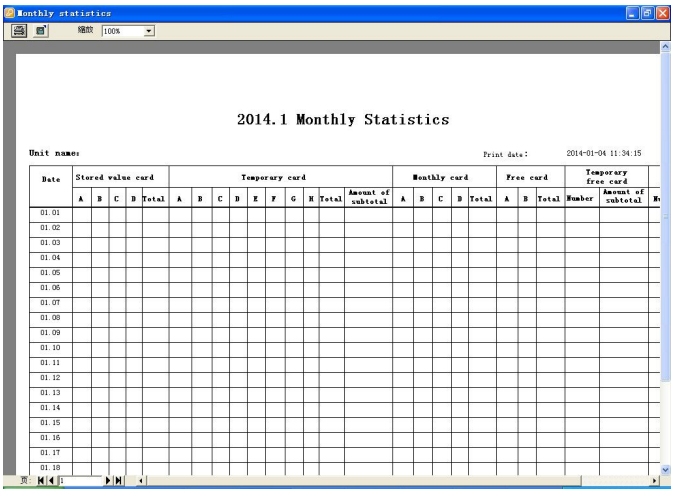
Choose the date, click "Preview" and the report will show as follows. The number of cars and the total parking fees of temporary card users are clear. The amount is the receivable parking fees.



Choose the "Monthly report', it shows as follows:



Choose the Start Date and End Date ,then click "Preview" and it will show the monthly statistics as follows :

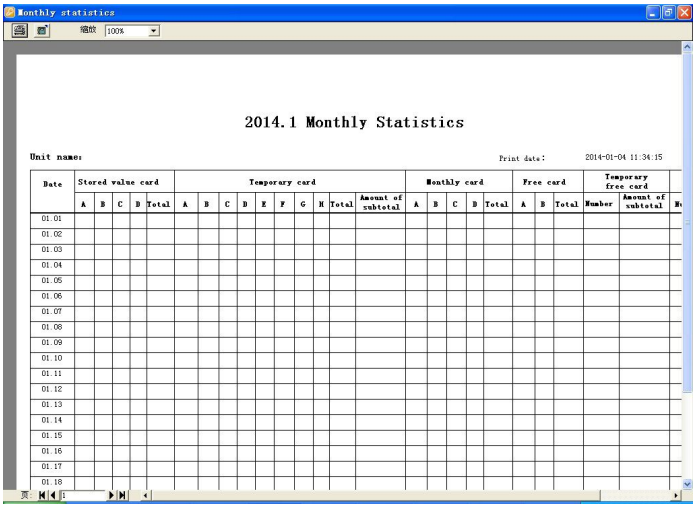


Choose the "Annual report', it shows as follows:

Choose the year, click "Preview" and it woll show the annual statistics as follows :

5.4 Charging setting

In the "Car set" of "Parking lot management", you can adopt different charging methods for different customers in the following dropdown box of "Charge setting". If not, it means the standard charge.



If tick "Charges can discount", the window of "Online monitoring" will show the discounts and the final due amount. "'"

If tick "Decimal point in charge", the window of "Online monitoring" will show the final due amount in decimal.

If tick "It can be chosen free when cars exiting with temporary used card", there is a button at the interface of "On-line monitoring" which means free exit admission.

If tick "Free cars can enter in", then click the button "Free car entering in" at the "Online monitoring" interface, and input the reason, the entry barrier will open to let the car in. If click "Free car exiting" adn input the reason, the exit barrier will open to let the car out. There are

records of the free car access.

If tick "Charges for monthly used card expiring", when the car with expired month card goes out, the owner will be charged by the temporary card standard. The corresponding setting needs to be done on the control board.

Auxiliary equipment setting in addition

If tick "Bill printing", once the computer is connected with the printer, the system can print the parking charging receipt. The printer can be ink-jet, laser, stylus or miniature thermal ones.

If tick "Remaining carport displayer serial port", the situation of remaining lots and parking occupation will show at the "Online monitoring" interface. It needs a screen to show the remaining lots.

Other setting

If tick "Display the status of barrier gate", it can monitor the status of barrier gate at the "Online monitoring" interface. This function can only be achieved when the state signal line of the barrier gate is connected to the control machine.

When the exit control machine is installed the card collector, and if tick "Display the quantity of cards in the box", the quantity of the cards in the card collector will show at the "Online monitoring" interface.

If tick "Controller display the remaining carport", it will show the real-time remaining parking spaces at the "Online monitoring" interface.

There are two methods of loading time, which is manual loading and automatic loading. When choose "Manual loading", the loading time is operated in the "Control settings" of "Parking lot system". When choose "Automatic loading", the system will load the time at the workstation to the control boards of the control machines, the interval can be set up.

"Work station ID" and "Parking lot number": When the System is large , and there are many computers or parking lots, set the number for the convenience.

5.5 Delete record

Click "Delete record" in the "Parking lot system", and there pos up the window of password input. Enter the password to get the authority, and the password can also be reset.

Enter the correct password and click the "Confirm" button, it will show the dialog box of "Clean record" as follows. At this interface, choose "Record source" to clear the corresponding records. There are three sources: all tables, entrance and exit table, and entry table.

Choosing "Entry table" means clearing the data inside the parking lots; choosing "Entrance and exit table" means clearing all the data that the server stores, including the data of the cars inside the parking lots at present and the ones that already exit. Choosing "All tables" means clearing the entire database established in the server, including that in the "Entrance and exit table" and the settings at the workstation, which means the initialization except the personnel and card issuing records.

When clearing the records in the "Entrance and exit table" or "entry table", you can choose the time range of the related records..

5.6 Record filing

The records in the server database will increase over time, part of the records need to be transferred to another archives in order to improve the running speed of query and process.

Click "Record Filing" in the "Parking Management", it will pops up a window. File the records in the parking lots database. When under the operation, the computer will check first if the records exceed 10000. If yes, it will continue the filing; if no, there will pops up a prompt dialog box which says it's not necessary to continue the process. Choose the start and end date (the default time is the very day of this operation), then click "Confirm" to do the filing. The system will exit filing automatically when it's done.