

User's Guide for Patrol System

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一、 **Operational Principle**

Each information button (or card) has a code number saved in it, which is unique and different from any others. The patrolwand is an information collector with a built-in clock and a storage. Each patrol point is installed with an information button (or card), from which the patroller may read data with a patrolwand. The patrolwand then will generate records, with each containing the code number and time of the information button (or card).

Use a computer to connect the communication unit via a serial port. Transmit the information collected by the patrolwand into the computer, which then will be able to display the patrol points and times contained in each information button (or card), analyze the patrol records and obtain relevant patrol results.

The storage level of a patrolwand is about 2000 or 8000 records. Reading an information button, the patrolwand normally will send out a long “beep” (about one second long) and the indicator will send a flash quickly, which indicates a successful reading. When making a continuous reading from the same information button (or card) within 2 minutes, the patrolwand will send out a short “beep” (shorter than a half second) and the indicator will also send a quick flash , which is a prompt only and won’t produce any patrol record. If the records saved in the patrolwand exceed 1700 or 7700 entries, the wand will send out four “beeps” and the indicators will also send four flashes, which prompts that the storage is getting full soon. When the records saved reach 2000 or 8000 entries, the patrolwand won’t be able to read any information button (or card). Only when the saved records are cleared away by collecting and saving them elsewhere can the patrolwand be used to read data again.

二、 Technical Indicators

2、 1、 Patrolwand

Volume: 27.5×155mm

Weight: 250g

Storage Level: 2000/8000 records

Operating Temperature: -20℃——55℃

Power Supply: built-in 3.6V rechargeable lithium battery

2、 2、 Communication Unit

Volume: 158×121×58mm

Weight: 600g

Power Supply: DC9V

Operating Temperature: -20℃——55℃

Communication Interface: Standard RS-232 Interface

2、 3、 Information Button

Volume: Ø16.3×3.2mm

Weight: 1.6g

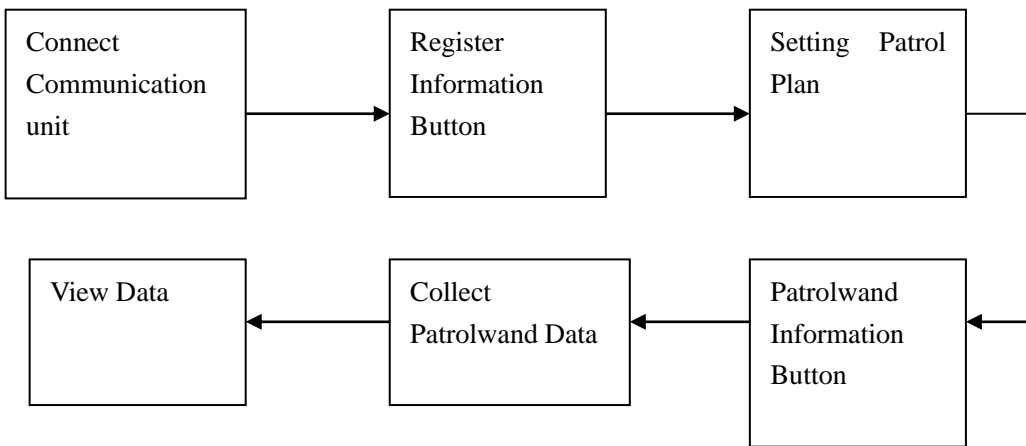
Operating Temperature: -40℃——85℃

Operating Environment: keep away from water and sunshine

三、 Software Installation

- 1、 Patrol Management System is applicable for WINDOWS9X or higher level WINDOWS operating system.
- 2、 If Windows9X operating system is applied, it is necessary to run the file mdac_typ.exe under the root directory of this CD.
- 3、 Run the SETUP.EXE file in the installation CD and install the software according to the installation instructions. Generate a shortcut on the desktop for the Patrol System

四、Operating Flow



五、System Operation

(1) How to Connect A Communication unit

USB Communication

Shown as the diagram below, connect the USB line of the communication unit into the USB port on the computer and then power up the communication unit.

The communication unit must be installed with USB driver program.

Start the computer. The new hardware is found by the computer.

Select the the file “USB DRIVE/DRIVER/CH341SER” in the installation disk.

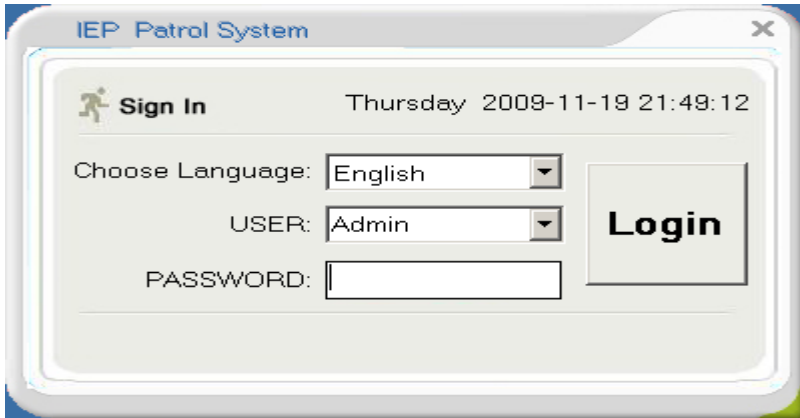
Now the communication unit is installed with USB driver program successfully and thus can be put into use.

Note: as shown in the diagram below, a user must close the USB equipment before he pulls out the connection line of the communication unit.

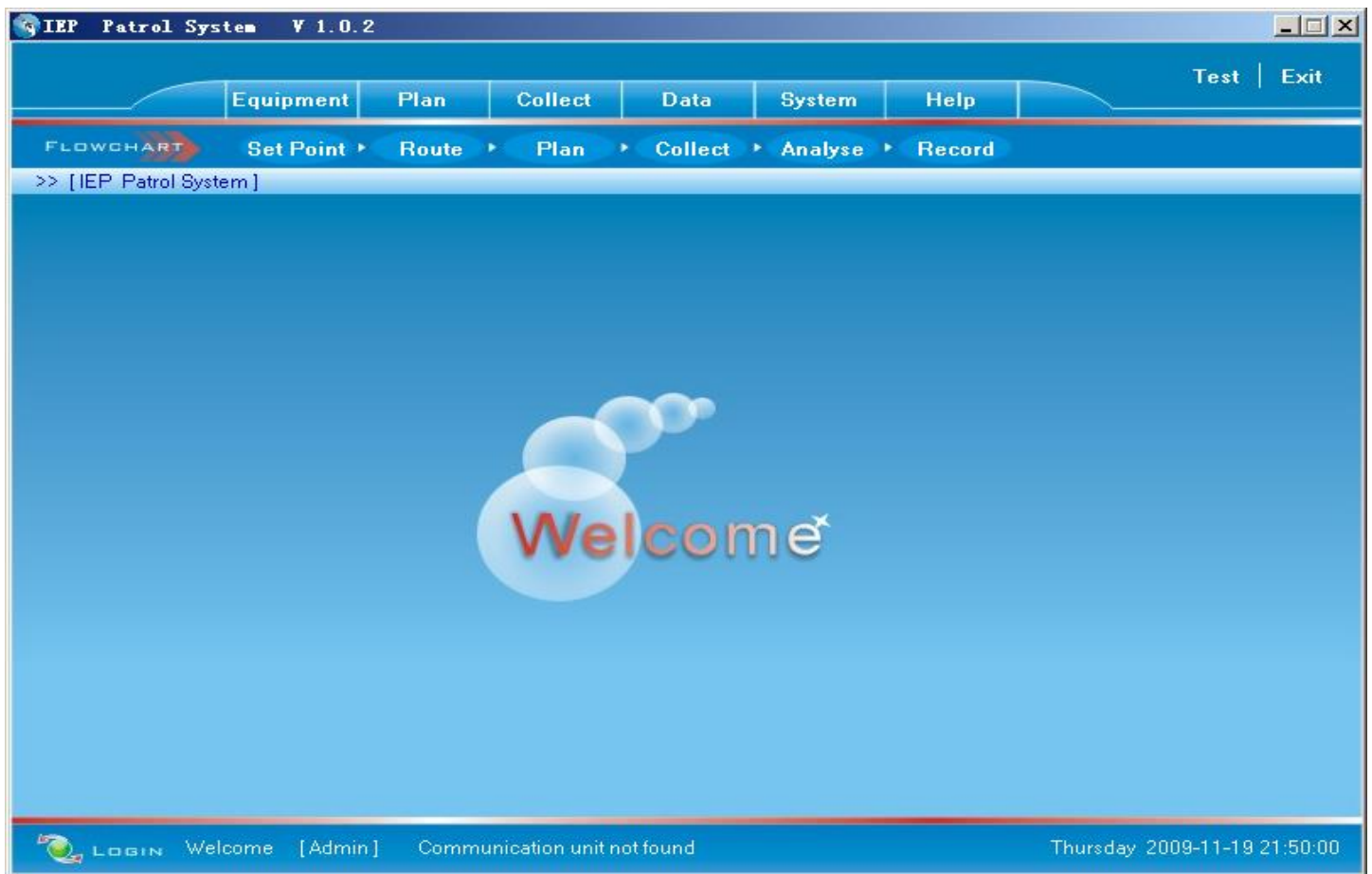
Now he may pull out the communication line.

(2) How to Use the Software

Double-click the shortcut icon PatrolSystem on the computer desktop and the patrol system will run as follows:



Input a password (ex-factory password is blank) and then click “Login” to enter the system interface.

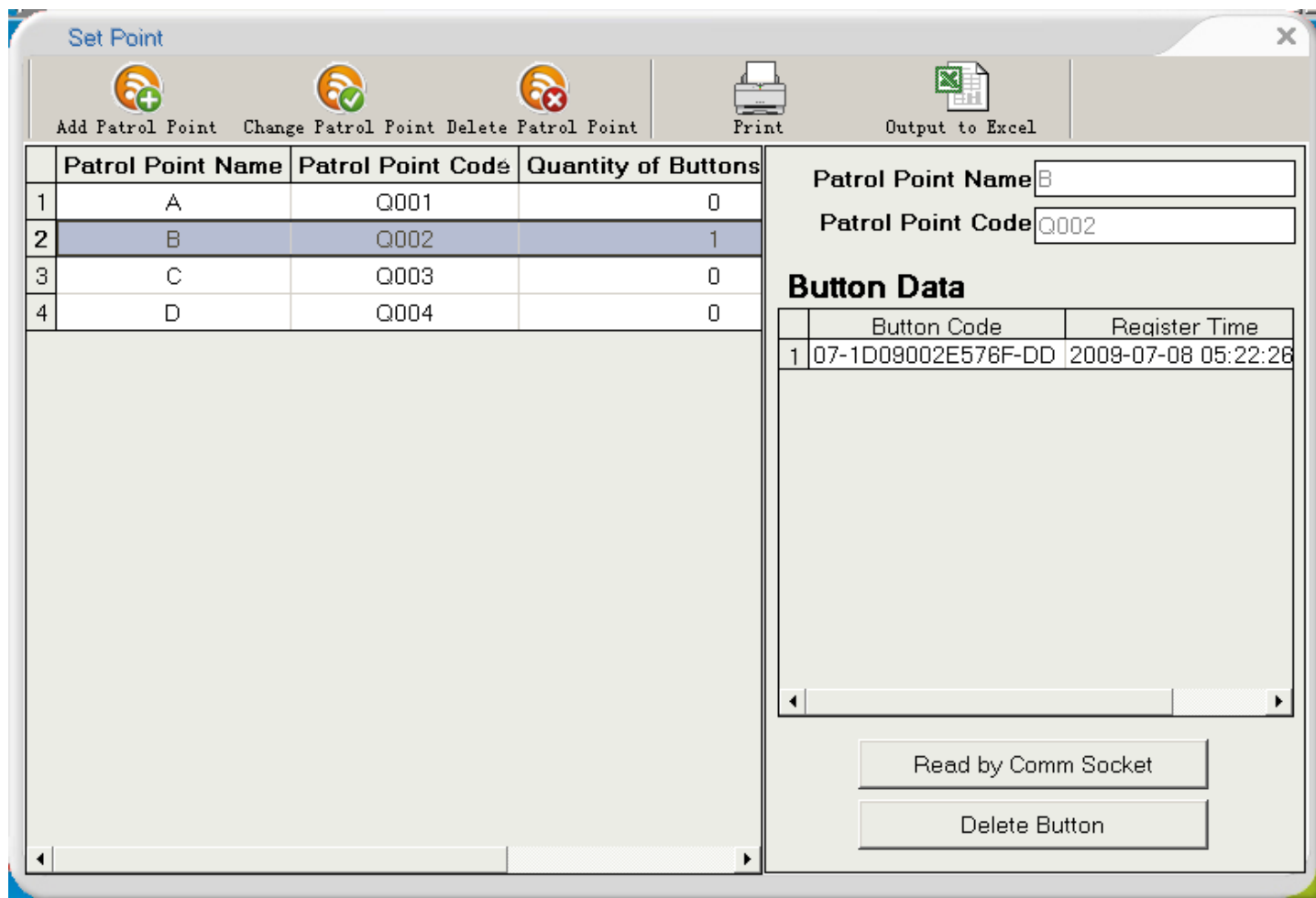


The system interface provides the following menu functions:

- Equipment
- Plan
- Collect
- Data
- System
- Exit

5、 1、 Patrol point Registry

It is advisable to register an information button before install it. (If an information button is installed without registry or loses any data, please re-register the button using the function of “Re-register Information Button”; for detail operation, please refer to the latter section “Re-register Information Button”) Open the pulldown menu “Equipment” and then click “Set point” to enter the appropriate interface.



How to input a new patrol point: click “Add Patrol point” to enter the name and number of the patrol point to be added and then press “OK”

How to register an information button at each patrol point: as shown in the diagram below, select a patrol point from the patrol point list on the left and then put the information button on the reading seat (or reading zone).

Now click “Read by Comm Socket” to have the number of the information button registered to the patrol point.

5、 2、 Patroller Registry

Open the pulldown menu “Equipment” and then click “Set Patroller” to enter the appropriate interface.

The screenshot shows the 'Set Patroller' interface. The toolbar includes 'Add Patroller', 'Change Patroller', 'Delete Patroller', 'Print', and 'Output to Excel'. The table below shows the following data:

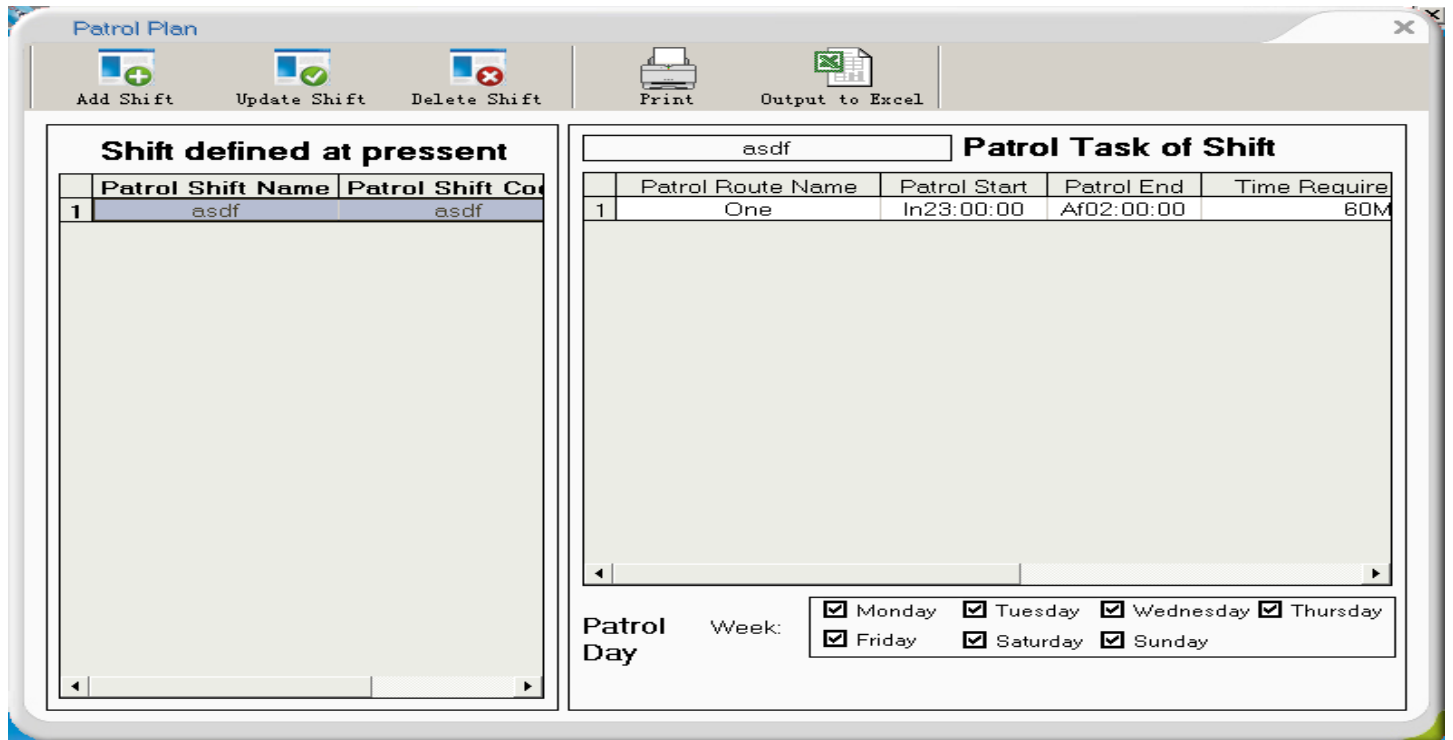
	Patroller Name	Patroller Code	Quantity of Buttons Regis
1	baby	R001	0
2	lover	R002	0

On the right side, the 'Patroller Name' field contains 'baby' and the 'Patroller Code' field contains 'R001'. The 'Button Data' section has a table with headers 'Button Code' and 'Register Time'. At the bottom right, there are two buttons: 'Read by Comm Socket' and 'Delete Button'.

Data registry here is similar as the operation of “Read by Comm Socker”.

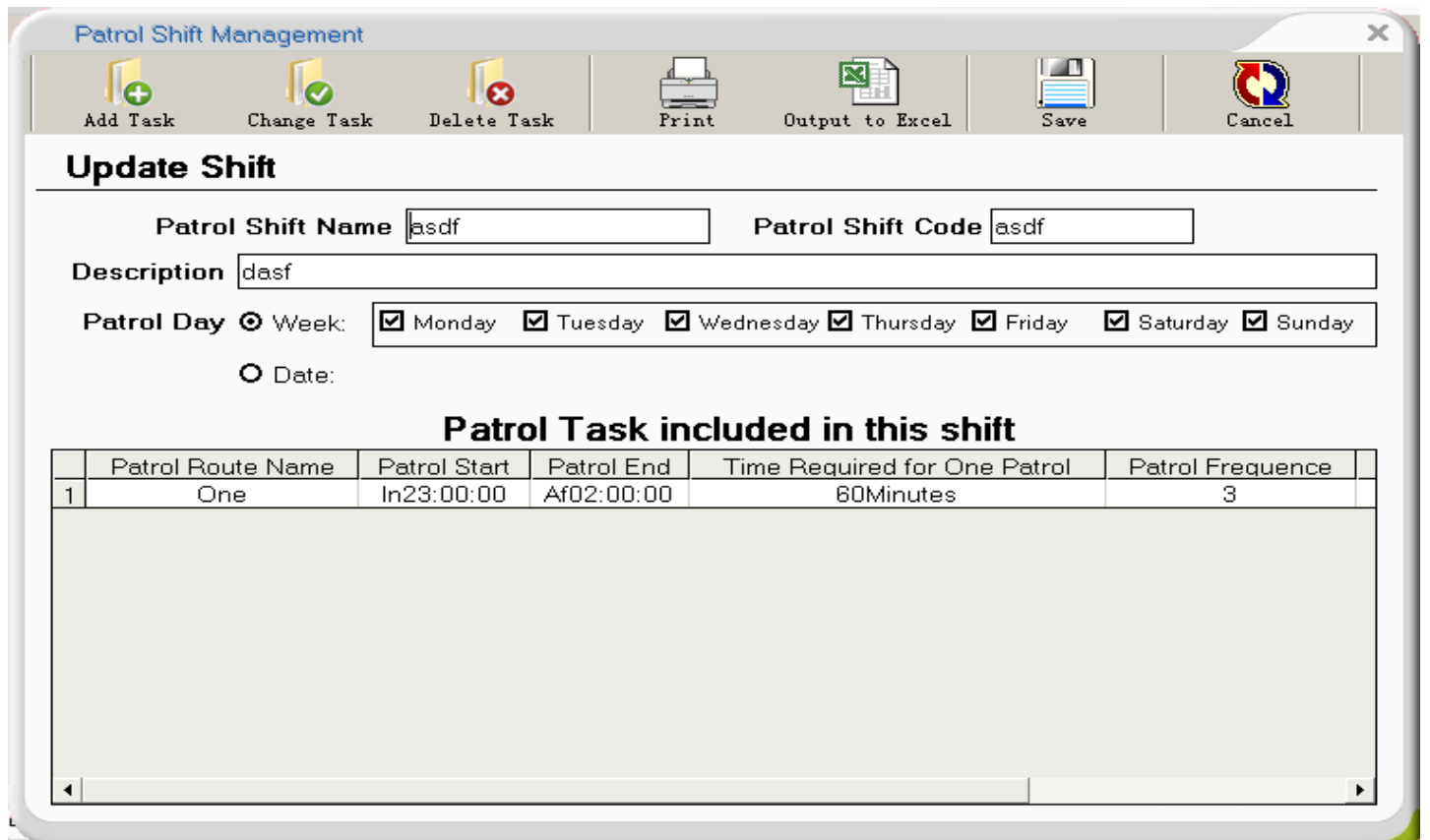
5. 3. Patrol Plan

Open the pulldown menu “Plan” and then click “Patrol Plan” to enter the appropriate interface.



A patrol plan includes three indispensable components: patrol shift, patrol route and patrol task. The software will automatically instructs you to make relevant settings.

To set a patrol shift, click “Add Patrol Shift” to display the appropriate interface.



Please note that a shift has two attributes: shift set by week and shift set by date. In the actual application, there're two situations:

Patrol task is the same in each day, that is, there' s no difference on day-offs and holidays. Thus it' s enough to set one patrol task for each shift and it' s ok to tick from Monday till Saturday and Sunday.

There might be different patrol tasks on different dates and weekdays. The system can set patrol shifts of different tasks by date and week and analyze patrol results by calling out appropriate shifts according to dates and weekdays. When calling out a patrol shift, priority will be given to the "By Date" shift, that is, if a "By Date" shift is set on a certain date, the "By Week" shift appropriate to that date won't be considered. For example, 1th May 2006 is a Monday; if the shift/task of 1th May 2006 is set, the shift/task on that Monday won't be considered when summerizing the patrol task that day.

Example: The security guards of a company are arranged to implement such morning patrols: 5 patrols per day from Mondays to Fridays, 10 patrols on Saturdays and Sundays and 20 patrols on holidays. In such case., we may set 3 kinds of morning shifts: common morning shift, day-off morning shift and holiday morning shift.

Tick Monday to Frinday on the interface of "Common Morning Shift".

Tick Saturday and Sunday on the interface of "Day-off Morning Shift".

Choose the attribute "By Date" from the interface "Holiday Morning Shift" and then input the dates of holidays.

Do the same setting for swing shift and night shift. Thus, when you view the patrol status of a certain day, the system will call out the appropriate shift statistics according to the chosen date. For example, 29th December 2005 is a Thursday and so it is summarized as a common shift. Though 1th May 2006 is a Monday, it is also included in the holiday shifts and therefore is summerized as a holiday shift.

After setting the shifts, you may set patrol route and task for each shift.

5. 4. Collect Patrolwand Data

Insert a patrolwand into the communication unit and then click “Collect Data” menu. The system will start collecting patrolwand data.

Seq	Patrol Time	Patroller	Patrol Point	Button Code
1	2007-01-04 09:54:17	Ren 1	Patrol Button	0F-1D05005E7330-DD
2	2007-01-04 09:54:18	Ren 1	Dian 4	2C-1D05005E4EB8-DD
3	2007-01-04 09:54:19	Ren 1	Dian 3	A9-1D0100EF6292-DD
4	2007-01-04 09:54:20	Ren 1	Dian 2	ED-1D05005E50DC-DD
5	2007-01-04 09:54:21	Ren 1	Dian 1	45-1D08000F2C32-DD
6	2007-01-04 09:54:22	Ren 1	Dian 5	8D-1D05005D8A06-DD
7	2007-01-04 09:54:23	Ren 2	Patrol Button	45-1D0500F0E91D-DD
8	2007-01-04 09:54:24	Ren 2	Dian 5	8D-1D05005D8A06-DD
9	2007-01-04 09:54:25	Ren 2	Dian 1	45-1D08000F2C32-DD
10	2007-01-04 09:54:26	Ren 2	Dian 2	ED-1D05005E50DC-DD
11	2007-01-04 09:54:27	Ren 2	Dian 3	A9-1D0100EF6292-DD
12	2007-01-04 09:54:28	Ren 2	Dian 4	2C-1D05005E4EB8-DD

After collecting all data, click “Save & Return” button. The system will save the data and carry out clock setting and storage clearance for the patrolwand. As clock setting is applied to the patrolwand, please **ensure that the computer’s clock and date are correct.**

5. 5. View Data

Click “View Data” to pull down the three menus: “Analyze Data”, “Original Records” and “Original Records (Display by Patrol point)”. “Analyze Data” provides results acquired by analyzing the patrolwand data according to the patrol plan. “Original Records” displays patrolwand records only, without making any analysis.

Results are displayed as below:

Analyze Data

The screenshot shows the 'Analyze Data' window with the following components:

- Toolbar:** Analyze Data, Lookup Patrol Record, Print, Output to Excel.
- Viewing Condition:**
 - Date: 2009-11-19 to 2009-11-19
 - Patrol Shift: All
 - Patrol Route: All
- View Patrol Result:**
 - Detail Patrol Result
 - Patrol Tasks
 - Patrol Shifts
- Print Selection:**
 - All
 - Unpatrolled
 - Behind-Schedule
- Table:**

Seq	Shift Date	Week	Patrol Shift	Patrol Task	Patrol Point	Patroller	Patrol Time A
1	2009-11-19	Thursday	asdf	One	Patrol Beqin		2009-11-19 23:00:00--20
2					A		Unpatroll
3	2009-11-19	Thursday	asdf	One	C		Unpatroll
4					D		Unpatroll
5	2009-11-19	Thursday	asdf	One	Patrol Beqin		2009-11-20 00:00:00--20
6					A		Unpatroll
7	2009-11-19	Thursday	asdf	One	C		Unpatroll
8					D		Unpatroll
9	2009-11-19	Thursday	asdf	One	Patrol Beqin		2009-11-20 01:00:00--20
10					A		Unpatroll
11	2009-11-19	Thursday	asdf	One	C		Unpatroll
12					D		Unpatroll

Original Records

Lookup Patrol Record

View Reregister Button Print Output to Excel

Viewing Condition

Date/Time 2008-11-19 0:00:00 — 2009-11-19 23:59:59

Patrol Point All Patroller All WandNo: All

Seq	Patrol Time	Patroller	Patrol Point	Button Code	WandNo:
1711	2009-07-24 10:53:25	Unregistered		FF-1D0C0006EC83-DD	30000003
1712	2009-07-24 10:53:26	Unregistered		DA-1D390052CF0F-DD	30000003
1713	2009-07-24 10:53:27	Unregistered		FF-1D0C0006EC83-DD	30000003
1714	2009-07-24 10:53:28	Unregistered		DA-1D390052CF0F-DD	30000003
1715	2009-07-24 10:53:29	Unregistered		FF-1D0C0006EC83-DD	30000003
1716	2009-07-24 10:53:30	Unregistered		DA-1D390052CF0F-DD	30000003
1717	2009-07-24 10:53:31	Unregistered		FF-1D0C0006EC83-DD	30000003
1718	2009-07-24 10:53:32	Unregistered		DA-1D390052CF0F-DD	30000003
1719	2009-07-24 10:53:33	Unregistered		FF-1D0C0006EC83-DD	30000003
1720	2009-07-24 10:53:34	Unregistered		DA-1D390052CF0F-DD	30000003
1721	2009-07-24 10:53:35	Unregistered		FF-1D0C0006EC83-DD	30000003
1722	2009-07-24 10:53:36	Unregistered		DA-1D390052CF0F-DD	30000003
1723	2009-07-24 10:53:37	Unregistered		FF-1D0C0006EC83-DD	30000003
1724	2009-07-24 10:53:38	Unregistered		DA-1D390052CF0F-DD	30000003
1725	2009-07-24 10:53:39	Unregistered		FF-1D0C0006EC83-DD	30000003
1726	2009-07-24 10:53:40	Unregistered		DA-1D390052CF0F-DD	30000003
1727	2009-07-24 10:53:41	Unregistered		FF-1D0C0006EC83-DD	30000003
1728	2009-07-24 10:53:42	Unregistered		DA-1D390052CF0F-DD	30000003
1729	2009-07-24 10:53:43	Unregistered		FF-1D0C0006EC83-DD	30000003

Original Records (Display by Patrol point)

Lookup Patrol Record (Display by Patrol Point)

View Print Output to Excel

Viewing Condition

Date/Time 2008-11-19 0:00:00 — 2009-11-19 23:59:59

Patrol Point All Patroller All WandNo: All

	A	B	C	D
248		2009-07-24 10:40:28 Patroller:		
248		2009-07-24 10:40:30 Patroller:		
250		2009-07-24 10:40:32 Patroller:		
251		2009-07-24 10:40:34 Patroller:		
252		2009-07-24 10:40:36 Patroller:		
253		2009-07-24 10:40:38 Patroller:		
254		2009-07-24 10:40:40 Patroller:		
255		2009-07-24 10:40:42 Patroller:		
256		2009-07-24 10:40:51		

5、 6、 Summarize Results

You can summarize all kinds of patrol results through the patrol-result inquiry interface

5、 7、 Re-register Information Button

During the use of the system, there might be such a situation that although you have read information from a patrol point with a patrolwand and save the data into the computer, yet you can't see the patrol point on the computer. This suggests the information button hasn't been registered. You can re-register the unregistered information button and patrol point through the "Reregister Button" function.

The re-registry can be done during the collectiing of patrolwand data or the viewing of records.

During the collection of patrolwand data:

Information Button Type To Be Re-registered

Patrol Point Patroller

	Point Name	Point Code	Quantity of Buttons Registered
1	A	Q001	0
2	B	Q002	1
3	C	Q003	0
4	D	Q004	0

Point Name

Point Code

Information Button Data Sent

Button Code	Register Time
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Button Number To Be Re-registered

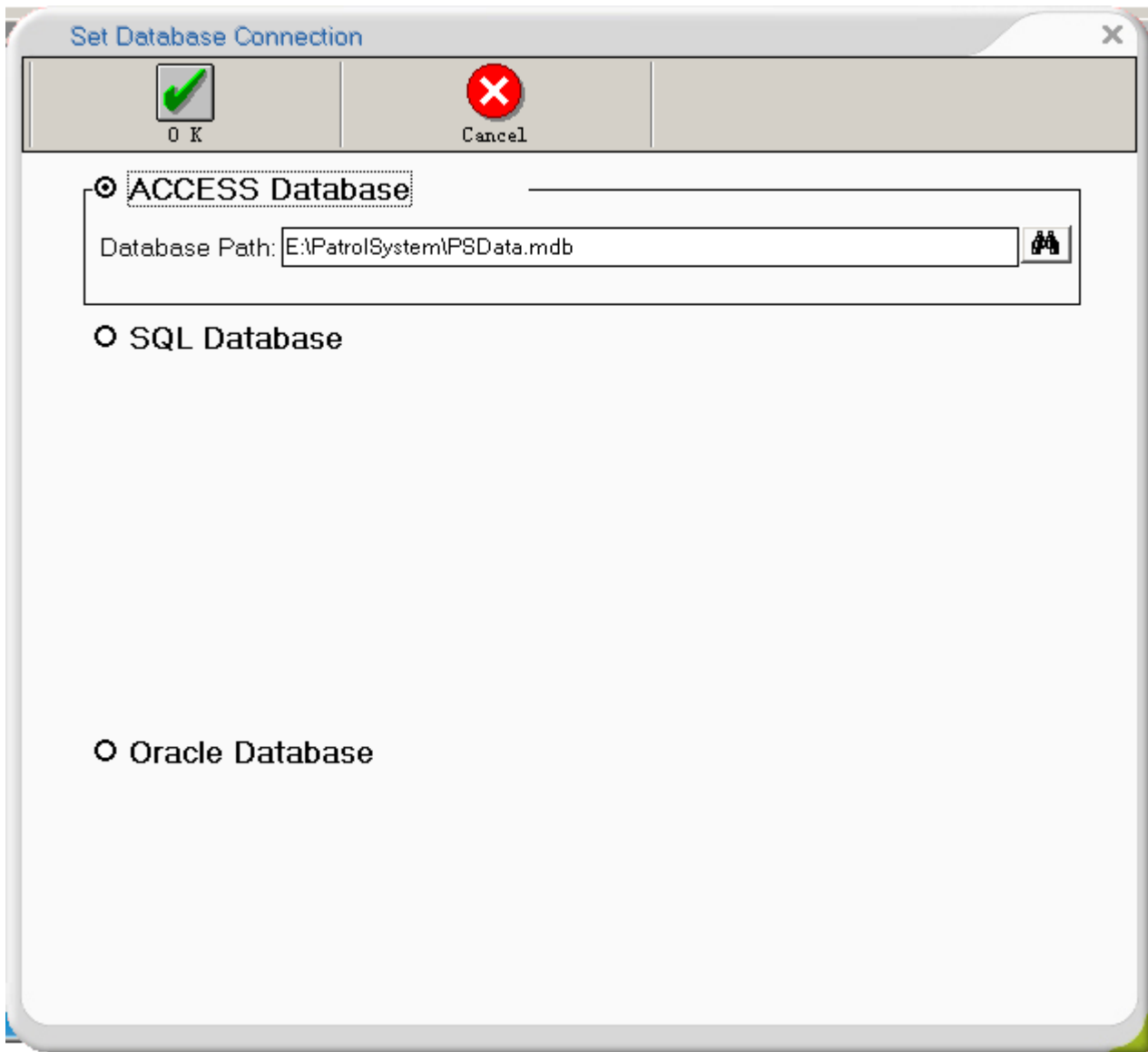
During the viewing of records:

Choose one unregistered button and then click "Re-register Button". It displays:

Choose one of the patrol points and click "Re-register and Return", the button thus is re-registered successfully:

5. 8. Single-machine Mode

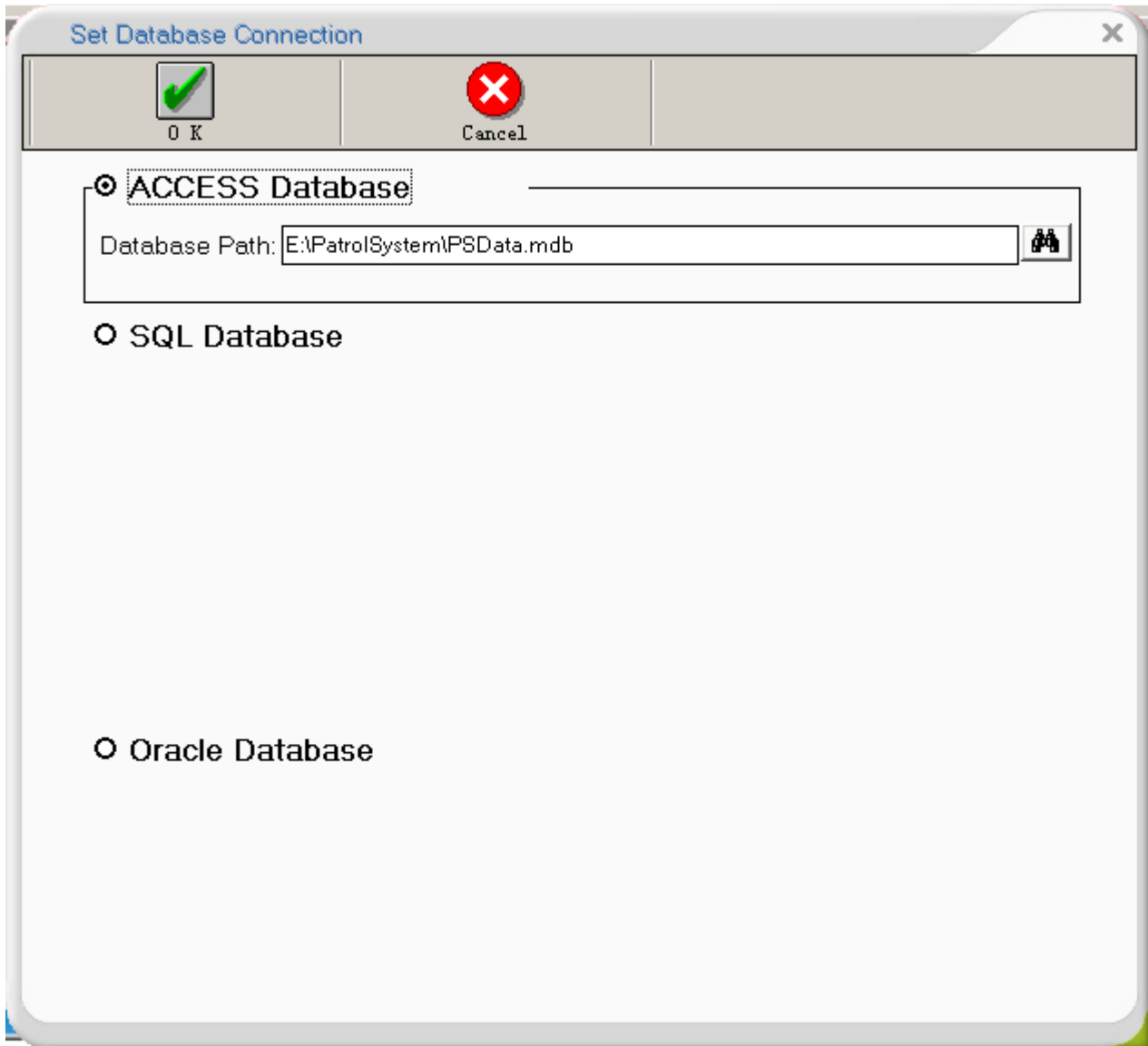
This is a basic mode which uses the database of this machine. After the program is installed, this mode is accepted as default mode and there's no need to make any setting. If there's a need to choose database of different route, please enter the "Database Setting" interface and change the database route. Open the "System" menu and click "Set Database Connection" to show the following interface:



Click the Browse Button on the right of the route list. Choose the route to the required database and then click "OK".

5、 9、 Network Mode

It's possible to view patrol data on several computers through the network. Share the patrol software database OPB4 on the data-collected computer and install the patrol system software onto the other computers. Run the patrol software and open the "System Management" menu. Click "Set Database Connection" to display the interface below.



Click the Browse Button "...” on the right of the route list to eject the file-route dialogue box :

Choose "Network Neighborhood" and find out the database OPB4. Click "Open" and then click "Save".

5、 10、 Database Type

This system can use two kinds of database types: ACCESS and SQL. On the “System Management” menu, open the “Database Setting” interface and choose either ACCESS or SQL. For the ACCESS database, simply choose the database route.

For SQL database (SQL Server must be installed into the computer), you should build up a database before accessing to it.

Build up a database as the diagram shown below:

Set Database Connection

OK Cancel

ACCESS Database

SQL Database

SQL Server Name: (local)

SQL Database Name: PatrolSystem

Use Windows NT Integration Security Set

Use user name and password for login

SQL Database Login Name: sa

SQL Database Login Password: *

Establish SQL database in the PC

Oracle Database

Choose SQL on the interface and then click “Establish SQL database in the PC” button to create a database named PatrolSystem There will be a prompt that the database has been created successfully.

Access to the database: input the server name (the equipment on which the database is built) and the database name PatrolSystem Choose the way to access to the required database and then click “OK”

5、 11、 Data Backup

As soon as the system is put into formal use, please backup data and save the data into the other computers to prevent the patrol points data from any loss due to system paralysis.

5、 12、 Data Recovery

After the system is reinstalled, it's possible to recover the system data utilizing this function.

5、 13、 Software Management Authorities

The authorities of this system are classified into two kinds: Administrator Authority and Operator Authority. The administrator possesses the ownership authority while the operator owns the authority to collect and view data only, but no authority to change any parameters. The setting of the administrator and operator can be made through "System Management | Operator Management".

6、 Common Phenomena

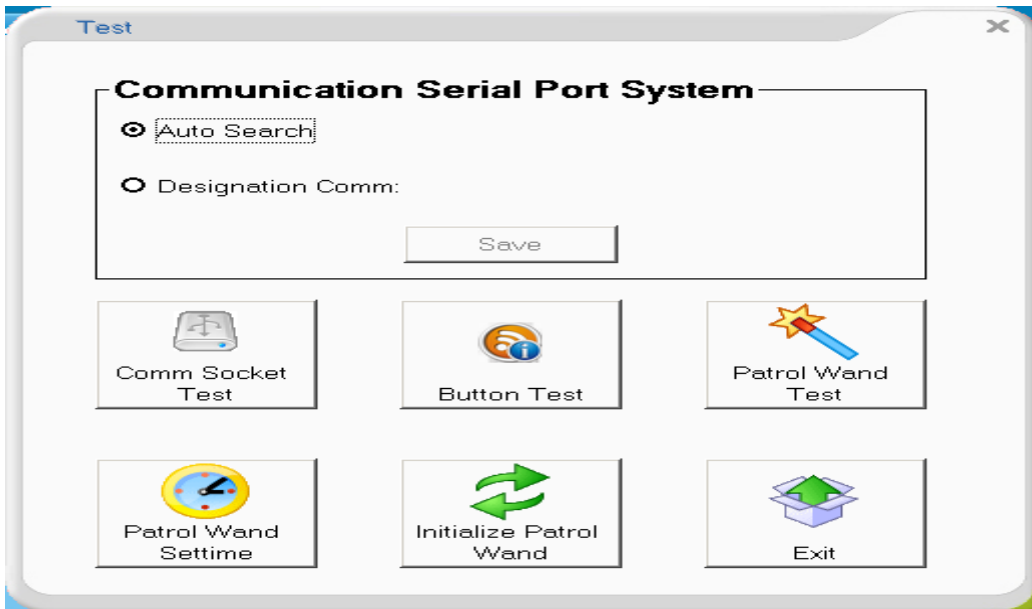
When reading a card (button), the patrolwand sends out 4 beeps and the indicator sends 4 flashes. This is a normal phenomenon indicating that the patrolwand is going to be full of data (exceeding 1700 or 7700 records; full load is 2000 or 8000 records). Please collect data as soon as possible.

The patrolwand fails in reading a card (button). The main reason might be: 1. full of data 2. clock reset 3. dead battery

Check if the patrolwand data can be collected through the communication unit. If yes, collect the data and click “Save” to save the data. During the data collection, the patrolwand’s storage will be cleared and the clock will be resetted. Note: Do click the “Save” button. It’s necessary to carry out this operation even though there’s no data. Do empty the patrolwand’s storage and reset the clock. The computer clock must be correct. After the data in the patrolwand is cleared out and the clock is resetted, the patrolwand can read cards (buttons) again.

If the above operation cannot restore reading patrolwand data, please try the following treatment:

If the patrolwand still cannot read data, please enter the “Equipment\Test” menu to test if the communication unit can be successfully connected to the machine.



Click “Comm Socket Test”. If the unit is well connected, a prompt will appear:

If not successful, please power up the communication unit once again or change the port (COM port)

If the communication unit can be successfully connected to the machine yet the patrolwand still cannot read data, please power up the communication unit once again.

If the patrolwand still cannot read data, the wand probably has a dead battery. Please replace the battery.

After installed with Windows9X, the system cannot operate normally.

The reason is the system is lack of Microsoft Data Access Components 2.7. users are suggested to run the “mdac_typ.exe” file under the root directory of the installation disk and then install the Microsoft Data Access Components 2.7. Now restart the computer to run the patrol system.