5. Product Support Tools

5-1 General

These tools enable you to edit or transfer all the EEPROM data of SCH-210 Cellular Phone. For examples, there are three tools; PST (including 'Phone Book Transfer', 'Download', and 'Edit common UI parameters'), Data Transfer.

Equipment Required

- PST program, Data transfer program.
- IBM compatible PC (above 386, 33MHz, 8MB RAM, DOS 5.0, 500K of memory free to execute program, and 1MB of disk space free for software upgrade.)
- SCH-210 Test Jig
- 7.2V Power Supply

Connection

Connect the test jig to COM1 serial port on the PC and connect the interface cable of the test jig to the phone.

Caution: When you use the PST program with a notebook PC, you might encounter some problems. Check your serial port setup in your notebook PC (see your notebook PC manual).

Don't worry about the serial port setup when you use a desktop PC.

Software Installation

1. Insert the PST floppy disk into drive (A:).
2. Create an appropriate directory to the drive (C:) for PST software.
3. Copy all files of the drive (A:) to the directory you made.
4. Execute PSTxx.EXE to run the PST program.

Note: There are three executable files in the new directory you made:

- PSTxx.EXE : PST program where xx is the PST version number.
- DTRANxx.EXE : Data transfer program.

5-2 Product Support Tool (PST)

The Product Support Tool(PST) offers you the ability to interface with the SCH-210 cellular phone using a personal computer. You can program the phone, swap phone data, and download software upgrades.

Notes:

- This software is made to be executed on the MS-DOS, not on the DOS mode within Windows95. **If this software is executed in Windows by mistake, it may work abnormally and damage the phone especially while downloading. Please check the mode you are using.**
- You can transfer EEPROM data one unit at a time.
- It is illegal to copy to several units.

5-2-1 Getting Started

MAIN MENU SCREEN

1. At the DOS prompt, type "PSTxx" where xx is the release version.
2. The Main Menu screen is displayed.

Notes:

- The Main Menu screen shows the basic tasks that are available.
- Move the cursor through the menu choices and press <Enter> key to select a task.

EXITING THE PROGRAM

1. Press <Esc> key until you find the Main Menu screen.
2. Select the "QUIT" option on the Main Menu or press <Alt-X> key, and the PST program is over.

EDITING FIELDS

Once you are in a particular screen, you may want to change a value of any field. A highlighted cursor can be moved to each editable field by using the arrow keys. A field can only be edited if the cursor is on that field (that is, if the field is highlighted.)

1. Begin the editing process by pressing <Enter> key.
2. To accept the new value, press <Enter> key. To abort edit mode and return to the old value, press <Esc> key.
3. The value of some field that is fixed types will be changed by just pressing <Enter> key.

See table 5-1 for the list of editing keys.

5-2-2 Operation Procedure

SERVICE PROGRAMMING

The Service Programming screens enable you to set and change the service parameters of the phones, read and write to internal phone book, and transfer phone book data to other phone. There are six options listed on the Service Programming Main Menu.

The parameter modification is done on the "Edit Parameters NAM" and "Edit Parameters UI" screens. The variables found on those screens can be preset from a phone or a previously saved file. Select "Read Data from File" or "Read Data from Phone" to preset the values.

READ DATA FROM FILE

Use this command to enter the name of a file whose extension is "mmc". The values read from the named file will initialize the parameter values seen on the "Edit Parameters NAM" and "Edit Parameters UI" screens.

READ DATA FROM PHONE

Use this command to replace the current programmable parameter values with the values that are currently programmed into the phone. The values are read from the phone that must be properly connected to the PST with power on.

EDIT PARAMETERS NAM

Use this command to edit Number Assignment Module(NAM) items.

Function Keys

F1	Displays help message about a selected field
F6	Takes you to the General settings screen
F7~10	Takes you to the NAM(1~4) parameters screen
Esc	Takes you back to the Menu screen after saving.

There are two types of screens :

1. General settings : some writable, some read-only
2. Parameters associated with Number Assignment Module 1~4 (NAM1~4)

EDIT PARAMETERS UI

Use this command to edit User Preference (UI) items.

There are two types of UI items :

1. Common UI items: Edits User Preference items.

Function Keys

F1	Displays help message about a selected field
F6	Takes you to the next (or previous) UI Parameters screen
Esc	Takes you back to the Menu screen after saving.

Screens

First Screen: Setting 'Auto Setup', 'Alert Select', 'Volume', 'System', and 'Restrict'
Second Screen: Setting 'Time', 'Setup', 'Outgoing Call Log', and 'Incoming Call Log'

2. Phone Book: Edits Phone Book's Data

Function Keys

F4	Searches by the Name
F5	Searches by the Number
F6	Displays the next Name / Number
F9	Clears all memory
Esc	Takes you back to the Menu screen after saving.

※ Valid vs. Invalid Data

Upon startup, all items are initialized "invalid". All fields display the question marks instead of data. After reading from a phone or a file, if the question marks still show in a field, then that item has never been written to the phone or saved to the file.

SAVE DATA TO FILE

Use this command to save the current parameters in a file. Once you enter a filename, press <Enter> key to write all current parameters to the file.

WRITE ALL TO PHONE

Use this command to write the changed parameter values to the phone.
Writing the changed values to the phone may take up to a minute.

Notes:

- Some items have dependencies on other items, and they will be written to the phone together.
- If you intend to use this "Write All to Phone" feature, it is recommended that you do a "Read Data from Phone" first, and then make the changes, so that nothing gets inadvertently overwritten.

SOFTWARE DOWNLOADER

Use this screen to download new software to the phone. The various windows are displayed to inform the user of the phone data and the progress of download.

The software downloader task of the PST is responsible for downloading a BIN file into the flash memory on the phone. It verifies that the given BIN file is compatible with the target phone, and performs all the protocol necessary to successfully download the file.

To begin a software downloader, use the following procedure.

1. Press <F4> key to choose a BIN file of the new software to be loaded into the phone. An Edit box will pop up asking for BIN file name. Enter full file name or press <Enter> key to see the lists of BIN files in the current directory. Using the arrow key, choose the appropriate BIN file, then press <Enter> key.

2. Press <F8> key to change the mode of the phone from hands-free mode to DM offline mode. This function is to view the software and hardware version of the phone. By setting the phone to DM offline mode, the upper left window should display the phone's data. If the phone fails to change mode, an error sound and message will occur. In that case, please check the power, link, and COM port configuration.

3. Press <ALT-D> key to begin download. Various messages and progress bar will inform the user of the progress of the download.

Caution: DO NOT REMOVE POWER WHILE THE PHONE IS BEING DOWNLOADED ! USE A FULLY CHARGED BATTERY TO OPERATE HANDSET.

4. Press <Esc> key to return to Main Menu.

SETUP

You can setup SCH-210 only. Use this screen to choose the phone type you want to setup.

Function keys

SPACE : Scrolls through menu.

ENTER : Accepts the phone type chosen.

ESC and ALT-x : Cancels operation and returns to Main Menu.

QUIT

You can exit the PST program.

5-3 Data Transfer program

When the main board of a customer's cellular phone is required to be replaced with a new one, or the customer is needed to use a phone lent from the service center while his phone is serviced, this feature is used to transfer(copy) all the EEPROM data of the customer's phone into the new board or the lent phone to keep the information the customer had stored into his phone personally.

5-3-1 Getting Started

1. Run the DTRANxx.EXE file. If you run the file for the first time, the message 'INITIAL FILE IS CREATED' appears. Do not delete the created file because the file creates DTRANxx.CFG to store environment setup data. The message does not appear once you have run the program.

2. Press any key to go to next procedure.

Function Keys

Fl	Reads EEPROM data from the customer's cellular phone.
F5	Writes the data of the customer's phone into the EEPROM on the new board.
ALT+X	Exits programming and returns to DOS mode.

5-3-2 Operation Procedure

1. On standby mode, 'Please check the communication link between your PC and the phone prior to beginning ...' messages appear on the screen. You are ready to transfer data.

2. Switch the phone power on after you have run the program.

3. Press <F1> key to read EEPROM data from the customer's cellular phone. On screen, 'Change the mode of the phone from HANDS-FREE mode to DM mode' message appears. On the LCD display of the phone, 'AUTO TEST' and 'WRITE EEPROM' messages appear. If the phone is already in DM(Diagnostic Monitor) mode, the message does not appear.

4. After the mode is changed to DM, EEPROM data on the cellular phone is read by PC. You can monitor the reading procedure on the screen.

5. When the data reading is completed, 'Replace the source phone with the target phone and press <F5> when ready' message appears on the screen.

6. Press any key to clear the message. The cellular phone displays 'DELETED' and '300-300-3000' instead of greeting and phone number respectively. All the features of the phone including ESN are reset to default status, and the phone can not be operated.

7. Remove the phone from the test jig and connect the new phone to the test jig.

Caution: If you try to perform reading again without writing after reading is already done once, the error message 'READING FROM THE PHONE WAS ALREADY BEEN CARRIED OUT, WRITING SHOULD BE CARRIED OUT' appears on the screen.

8. Press <F5> key to perform writing EEPROM data. You can monitor the writing procedure on the screen.

9. When the data writing is completed, the phone will reset. The program returns to standby mode and is ready to read data from another phone. 'WELL DONE, DATA TRANSFER IS COMPLETED' appears on the screen.

10. Check if the transferred EEPROM data is the same.

Table 5-1. Editing keys.

Key	Description
Arrow Keys	Move the field cursor to the next editable field in the direction of the arrow. If in edit mode, the left and right arrows move the cursor left and right within that field.
Enter	Enters edit mode. Some fields have a limited number of valid values, and pressing <Enter> key repeatedly cycles through the options. After editing, and press the <Enter> key again. Then exits edit mode, accepting a new value.
Esc	Aborts edit mode.
Delete	Deletes the selected charater in Edit mode.
Back Space	Backs towards the beginning of the line and deletes.
Home	Moves the edit cursor to the beginning of the string.