

# PalmTool User Manual

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# Chapter 1 Synopsis of PalmTool

PalmTool is a tool developed by Centrality Inc. mainly used to update, upgrade, and transfer files, etc.

## 1.1 Set and Run

### 1.1.1 Download

Please download Palmtool from our web site..

Please extract thirteen files from PalmTool.zip. They have PalmTool.exe and some correlative libraries.

### 1.1.2 Running

PalmTool have three language interfaces. It includes simple Chinese, traditional Chinese and English. According to computer system, it selects corresponding language interfaces:

Simple Chinese operating system – Simple Chinese interface;

Traditional Chinese operating system – Traditional Chinese interface;

English operating system – English interface;

If operating systems run other language, PalmTool run English interface.

## 1.2 Main interface

Please run PalmTool.exe, display main interface that is as follows figure 1-1-1. It consists of two parts: function buttons and parameters selection.

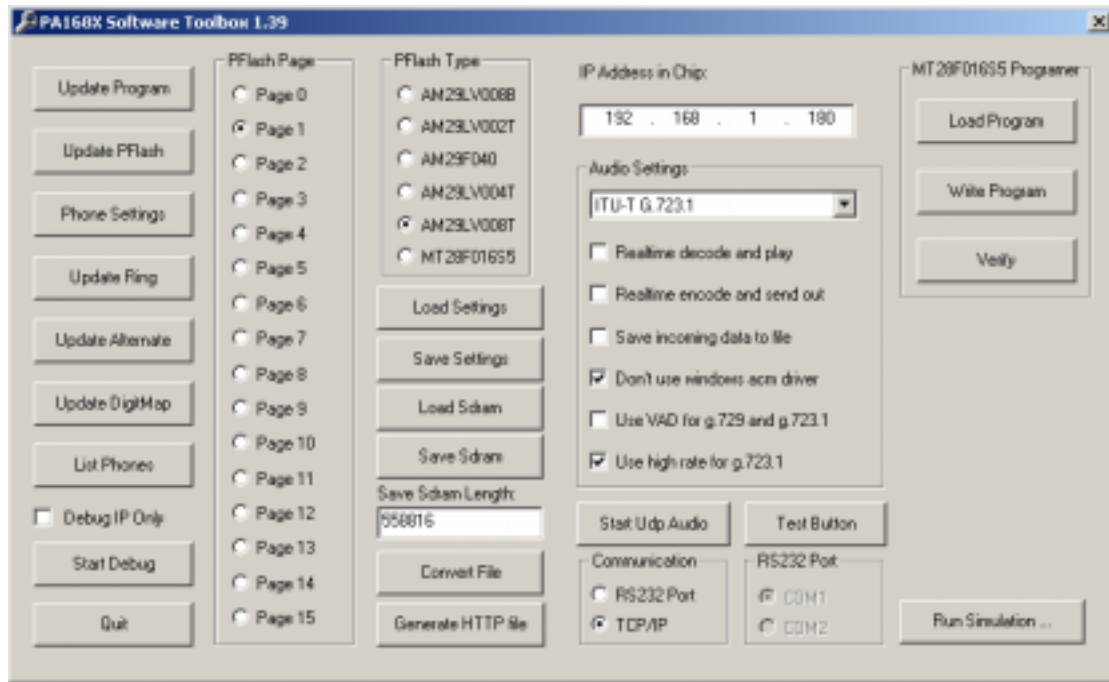


Figure 1-1-1

- **Update Program**  
Update program of PA1688 series phone by clicking this button.
- **Update PFlash**  
We adopt mode of relative page, and update phone Flash by clicking this button.
- **Phone Settings**  
According to IP address filled into **IP Address in Chip**, connect and open setting page of that IP phone by clicking this button.
- **Update Ring**  
Update music ring of that IP phone by clicking this button.
- **Update Alternate**  
Update backup settings of that IP phone by clicking this button.
- **Update DigitMap**  
Update file of call rules by clicking this button.
- **List Phones**  
Click this button to open phone list displaying online IP phone with part of information. For example phone number, MAC address, IP address, etc.
- **Debug IP Only**  
Output debug info of designated IP phone by checking this box.
- **Start Debug**  
Click this button to open **Udp Debug Output** window.
- **PFlash Page**  
This field shows all page items that are available for choosing when

updating pages.

- **PFlash Type**

This field shows all Flash types of IP phone. Please refer to following table to check corresponding relation of IP phone and Flash type.

PFlash type	Phone
AM29LV008B	PA168FB, iPH-E00, H2001
AM29LV002T	PA168B, PA168C, PA168E
AM29F040	SM168D, YUNXIN, UNISEN_D
AM29LV004T	PA168F, PA168FS, PINGHE
AM29LV008T	PA168S, PA168Q, 5111PHONE, iPH-E00-8B_F/NF
MT28F016S5	PA168T/H/R/U/V/W

- **Load SDRAM**

Load data information in SDRAM.

- **Save SDRAM**

Save data information from SDRAM.

- **Convert File**

The function of this controller is opening the window of transforming files.

- **Generate HTTP File**

Click this button to convert Http page into corresponding .h file in following dialog.

- **Load Settings**

Load data of phone settings from SDRAM.

- **Save Settings**

Save data of phone settings from SDRAM.

- **IP Address in Chip**

This field provides a space to enter IP address of IP telephone.

- **Audio Setting**

This Drop down list includes all kinds of audio encoding algorithms.

- **Run Simulation...**

Run SimIPPhone.exe by clicking button.

## Chapter 2 PalmTool Function

## 2.1 Update Program

This function corresponds **Update Program** button, which is used to update program of IP phone. Let us take PA168F IP phone as example to learn the detailed operation:

Step one: Set IP address

Input IP address of phone you want to update in **IP Address in Chip** field.

Step two: Select file of program to update

The file of updating telephone program is a binary file. Please refer to 2.8.1 to learn how to create a bin file. Click **Update Program** button, and then select a binary file in popup window, then click "Open". Please refer to figure 2-1-1.

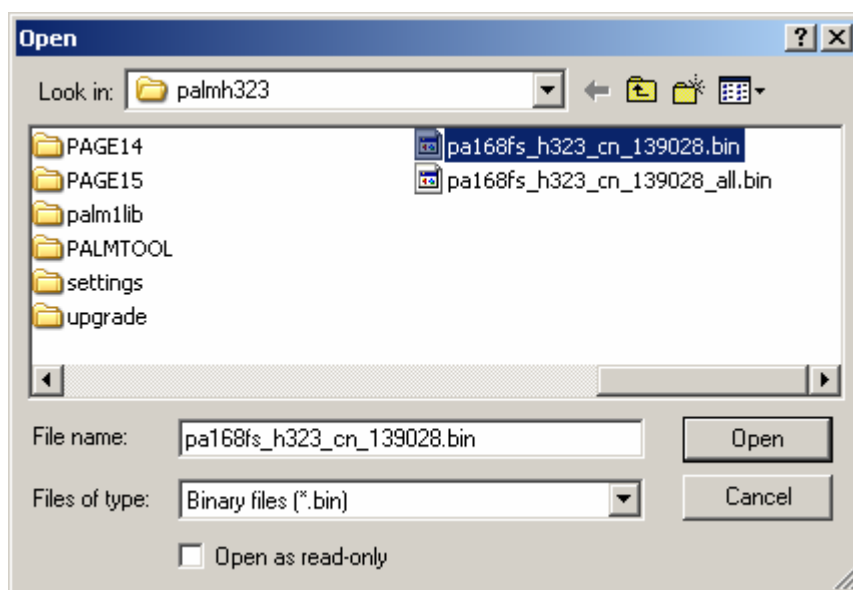


Figure 2-1-1

Step three: Update finish

After end of delivering, it will show prompt information on screen, which is "Updating...please wait until the update led stop on and off". It needs some time to update telephone program, it will show "Ready for Call" on screen if there is a LCD in telephone when succeed updating and the updating is OK.

## 2.2 Update PFlash

This function corresponds **Update PFlash** button, which is used to update Flash program. The updating is mode of page part, after compiling program, each page corresponds a .hex file. The operation of updating PFlash is as follows:

Step one: Parameters setting

Input IP address of IP phone you want to update in **IP Address in Chip** field, and then choose the page need be renewed in **PFlash Page** field; then

select the type of Flash. Please note that while updating following pages of following IP phone, please read the setting of the phone at first:

PFLASH	Upgrade Page
AM29LV008B	Page0
AM29LV002T	Page3
AM29LV004T/F040	Page7
AM29LV008T	Page15

Step two: Update Flash

Click **Update PFlash** button, and then select the file that will be updated. As page0.hex, page7.hex, etc. Then click **Open** button. Please refer to figure 2-2-1. The method to determine whether succeed the updating is the same with the method of “Update Program” after “Loading data...” and “Write program...”.

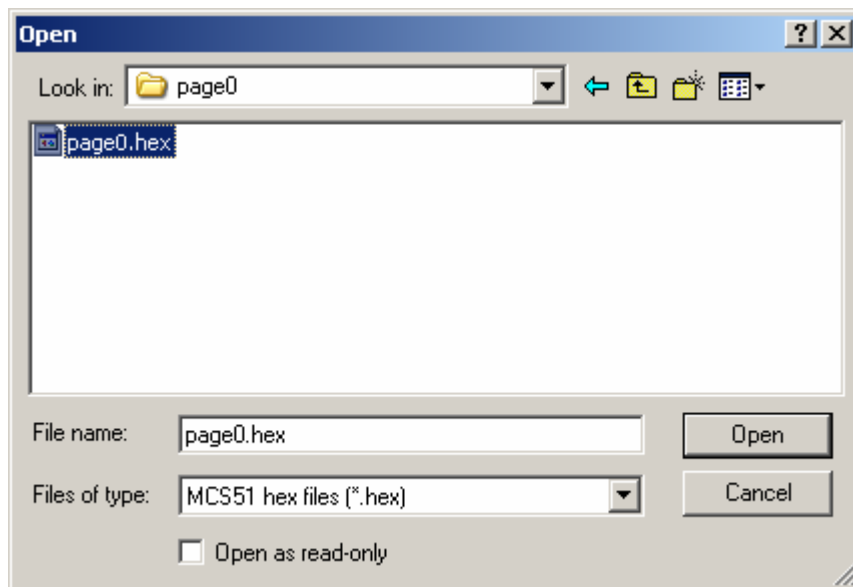


Figure 2-2-1

## 2.3 Phone Settings

Input the new IP address in the field of **IP Address in Chip**, then click the button of “Phone Settings”, the parameter setting will be shown in a pop window on the screen. Please refer figure 2-3-1.

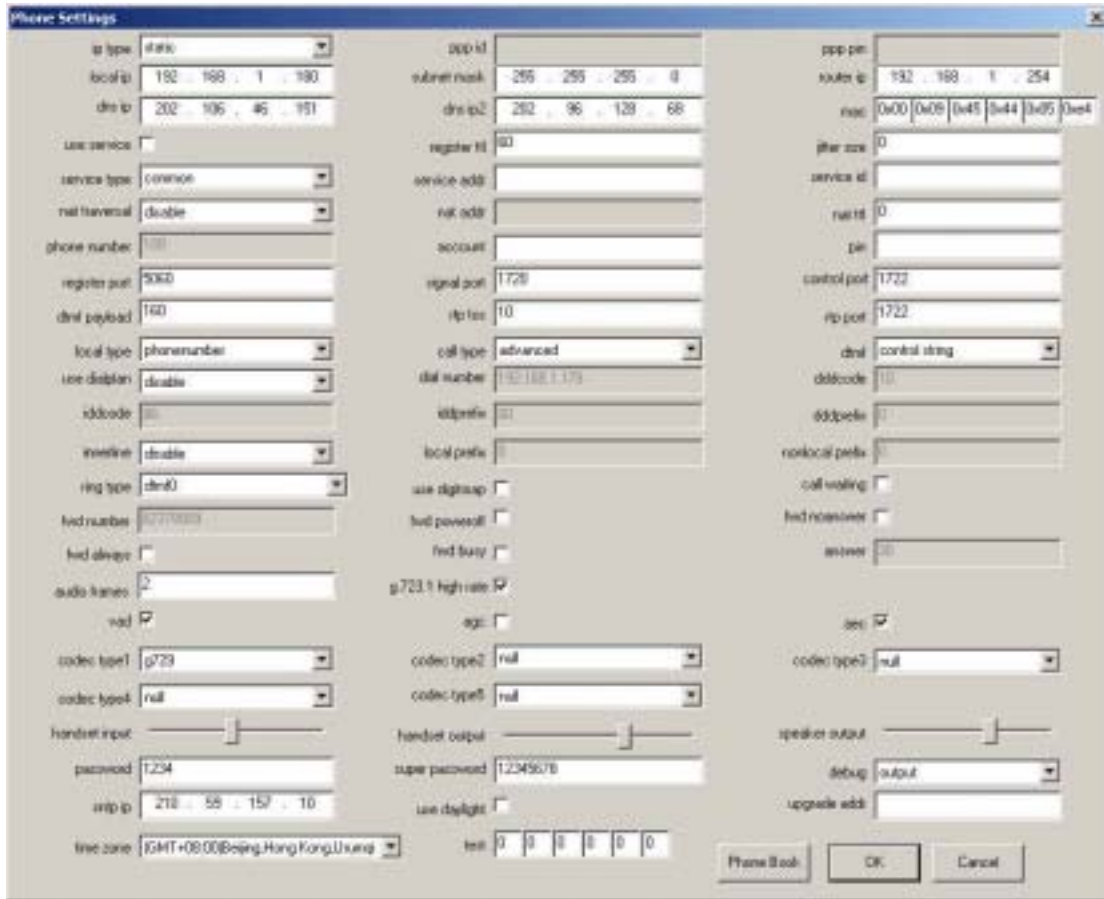


Figure 2-3-1

We can see or change parameters information of telephone, and read or change phone address in the setting interface.

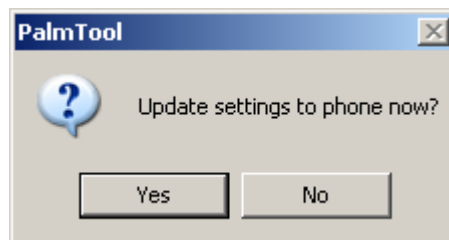
1. See phone setting

We can see all settings information of phone in the figure 2-3-1. Click **Cancel** button, and leave the window.

Note: Please refer to < User Guide> about information of phone parameters.

2. Change phone setting

Click **OK** button after we change parameter information, then display window of prompt information. If confirm that select **Yes** button, or else select **NO** button.



3. Phone Book

Phone Book can save 100-piece phone number. We pass mode of phone



book linking with function of speed dial to predigest process of calling.

Click **Phone Book** button in below right corner, and display window of phone book. Refer to figure 2-3-2. Click double time **Name** or **Phone Number**, then display editor frame. We can change information in the field. Click everywhere outside editor frame, then editor frame comes back mode of display. Explanation of operating button is as follows:

**Save/Back:** Save information of phone book, then go back window of phone setting;

**Clean All:** Click the button, and clean all information of phone book;

**Cancel:** Go back window of phone setting;

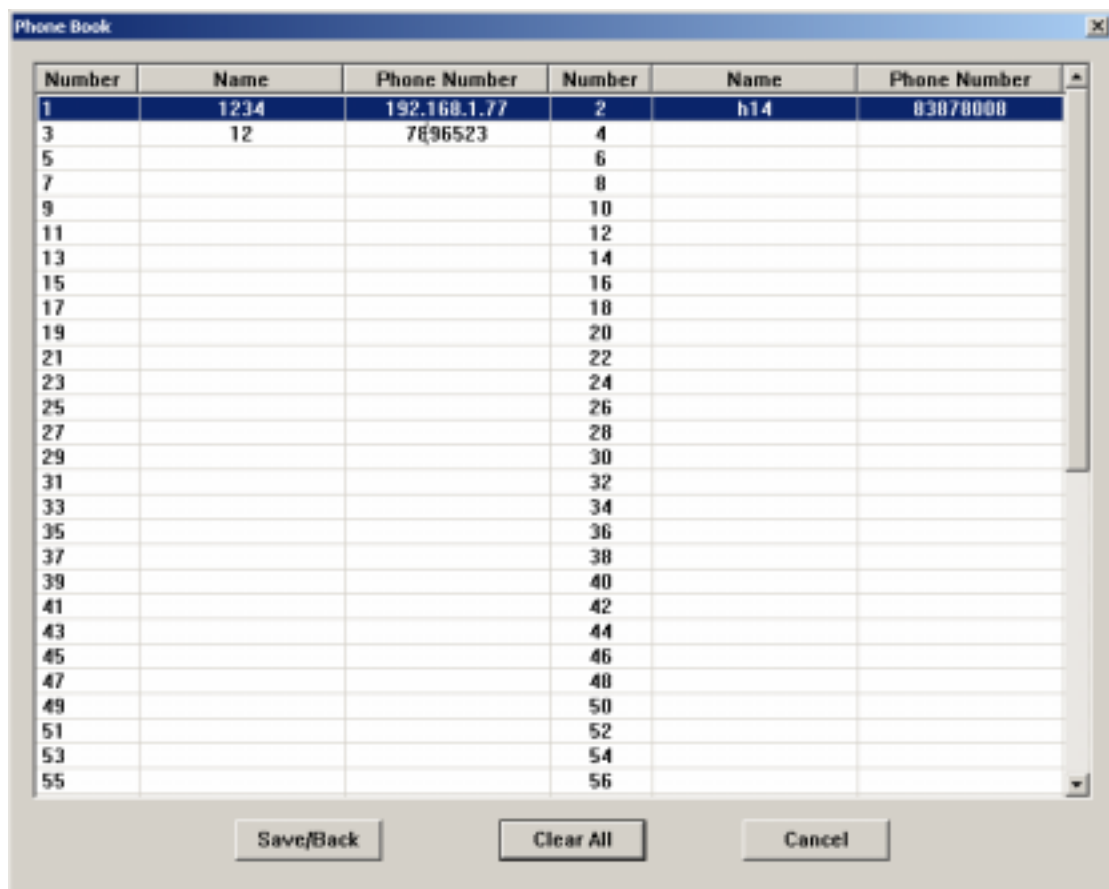


Figure 2-3-2

## 2.4 Update Ring

This function is used to update music ring bell. Only the phones with AM29LV004T, AM29LV008T, AM29LV800T and MT28F016 Flash can update the music rings. The ring includes two audio coding, viz. g7231 and g729.

### 2.4.1 Create music ring

There are two ways to get ring file. The one is downloading it from our website [www.aredfox.com](http://www.aredfox.com), the other way is create it by DIY. Detailed operation

of creating music ring by DIY is as follows.

Step one: Record ring

We recommend you use Cool Edit.

1) Run Cool Edit , Click **File>New...**, then in popup dialog, set as follows:

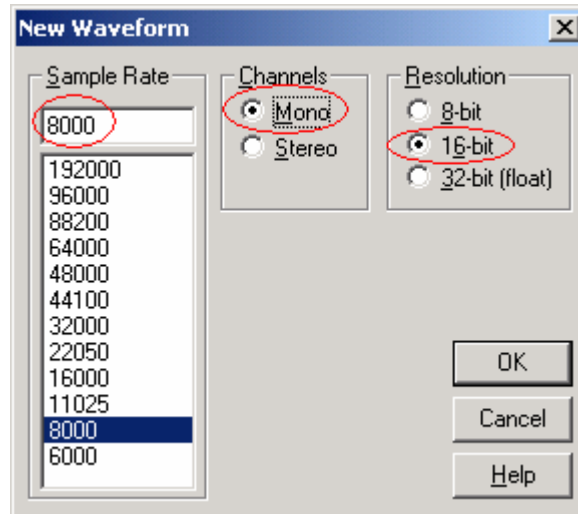



Figure 2-4-1

2) Play music on PC, and then click  button to record. Currently, the length of the music should be between **7.680~7.689** seconds. After the music is recorded, please save the file as .pcm file, such as bells.pcm. If want to audition that Click **File>Open...** on menu, and select ring file bells.pcm. Then set as follows in popup dialog. Refer to figure 2-4-1 and 2-4-2.

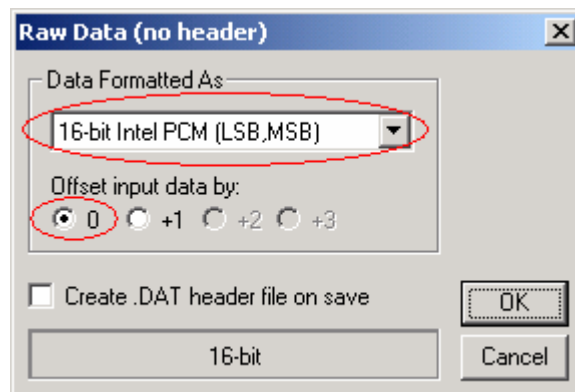


Figure 2-4-2

Step two: Code

The music ring includes two codec: G723 and G729. So after recording, please code G723 and G729 respectively.

1) G723 code :

- Run PalmTool.exe ,select **ITU-T G.723.1** from **Audio Settings** field. But it doesn't select **Use VAD for g.729 and g.7231**. See following fig please.

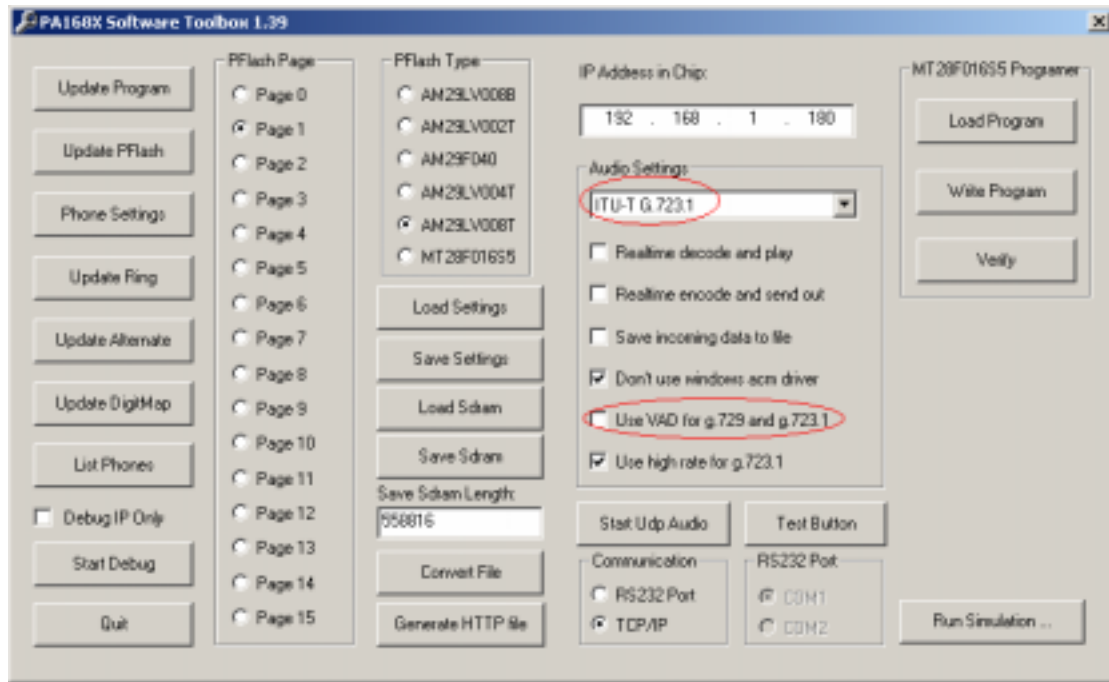
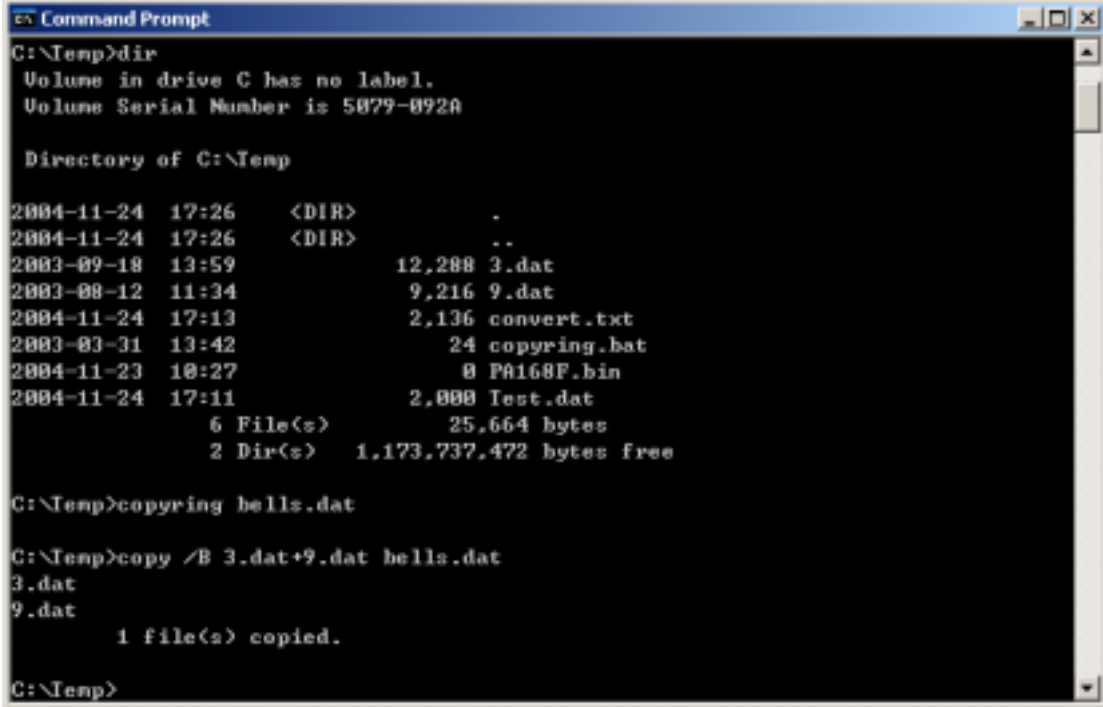


Figure 2-4-3

- Click **Transfer file** and select **Audio encode file...** In popup window, select saved bells.pcm file and open it, and then save it into .dat format, such as bells\_3.dat.
- 2) G729 codec:
- Run PalmTool.exe , select **ITU-T G.729.1 with Annex A&B** from **Audio Codec** field.
    - Click **Transfer file** and select **Audio encode file...** In popup window, select saved bells.pcm file and open it; and then save it into .dat format, such as bells\_9.dat.

Step three: Generate music ring file

We combine music ring by a simple batch command. The command of realization is copy /B 3.dat+9.dat %1. We named it **copyring.dat**. Use **copyring.dat** to combine bells\_3.dat and bells\_9.dat files. Ring files and command must exist same catalogue. Command format is as follows : **copyring [ ring file ]**. As **copyring bells.dat**, “bells.dat” is ring file of creating. Refer to figure 4-4-4.



```

C:\Temp>dir
Volume in drive C has no label.
Volume Serial Number is 5079-B92A

Directory of C:\Temp

2004-11-24  17:26    <DIR>          .
2004-11-24  17:26    <DIR>          ..
2003-09-18  13:59             12,288 3.dat
2003-08-12  11:34             9,216 9.dat
2004-11-24  17:13             2,136 convert.txt
2003-03-31  13:42              24 copyring.bat
2004-11-23  10:27              8 PA168F.bin
2004-11-24  17:11             2,000 Test.dat
           6 File(s)                25,664 bytes
           2 Dir(s)  1,173,737,472 bytes free

C:\Temp>copyring bells.dat

C:\Temp>copy /B 3.dat+9.dat bells.dat
3.dat
9.dat
        1 file(s) copied.

C:\Temp>

```

Figure 4-4-4

## 2.4.2 Update ring

Step One: Update ring

Input the new IP address you want to in the blank of **IP Address in Chip**. Then click the button of **Update Ring**, choose and open a bell file, as bells.dat.

Step Two: Set parameters

Please set **Ring type** as item of **User define**.

## 2.5 Load SDRAM and Save SDRAM

**Load SDRAM** is used to write data information into SDRAM. **Save SDRAM** is used to read data information from SDRAM, and then save data. There are two ways to use. The one is remote debug, the other way is testing of DSP.

### 2.5.1 Test DSP

Test the design of PCB wiring rationality by decoding and encoding of D.723 and G.729 at different circulation rates. The detailed description of testing is:

#### 1. Test Data

- G.723 standard testing vector input file : g723in.dat
- G.723 standard testing vector output file : g723out.dat
- G.723 standard testing vector input file : g729in.dat
- G.723 standard testing vector output file : g729out.dat

2. Test means
  - G.723 encoding and decoding testing

Step one: Run PalmTool.exe, input the IP address the testing want to in the blank of **IP Address in Chip**, choose the item of **ITU-T G.723.1** in **Audio Settings**. There must be a number of **558816** in **Save SDRAM Length** now. Please refer to figure 2-5-1.

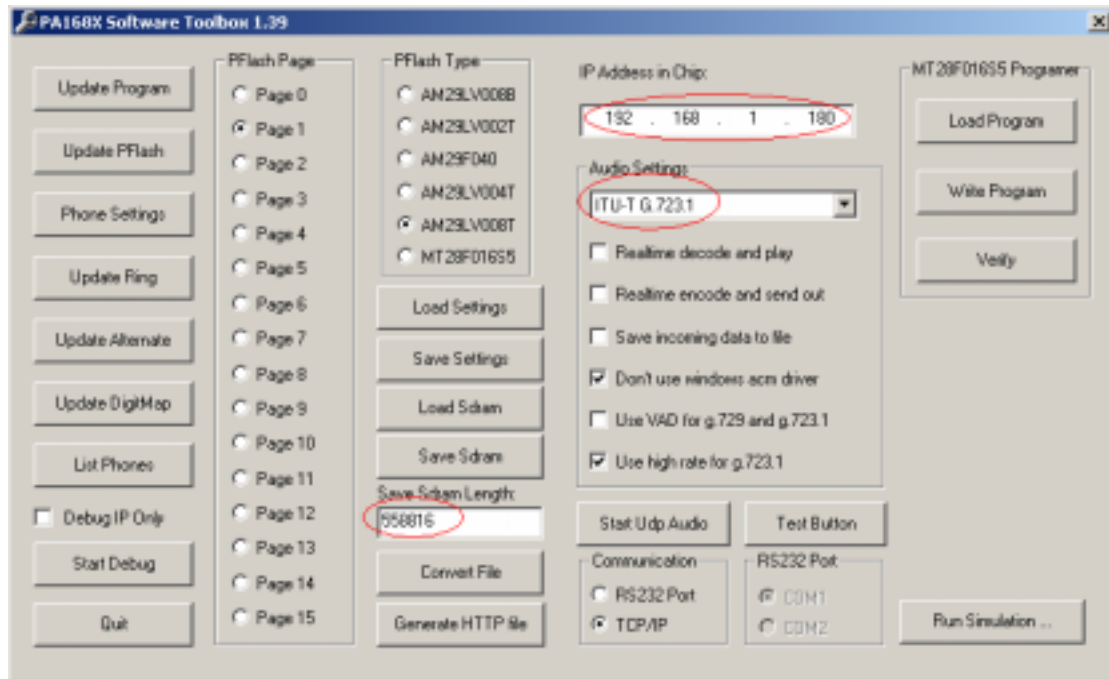


Figure 2-5-1

Step two: Click **Start Debug**, and popup a window of **UDP Debug Window**. Please enter “1234” by keyboard at a time, then do not press the key of “\*” until a prompt information **Page0 running** showed in the window. Now, the telephone machine is in the station of testing. Please refer to figure 2-5-2.

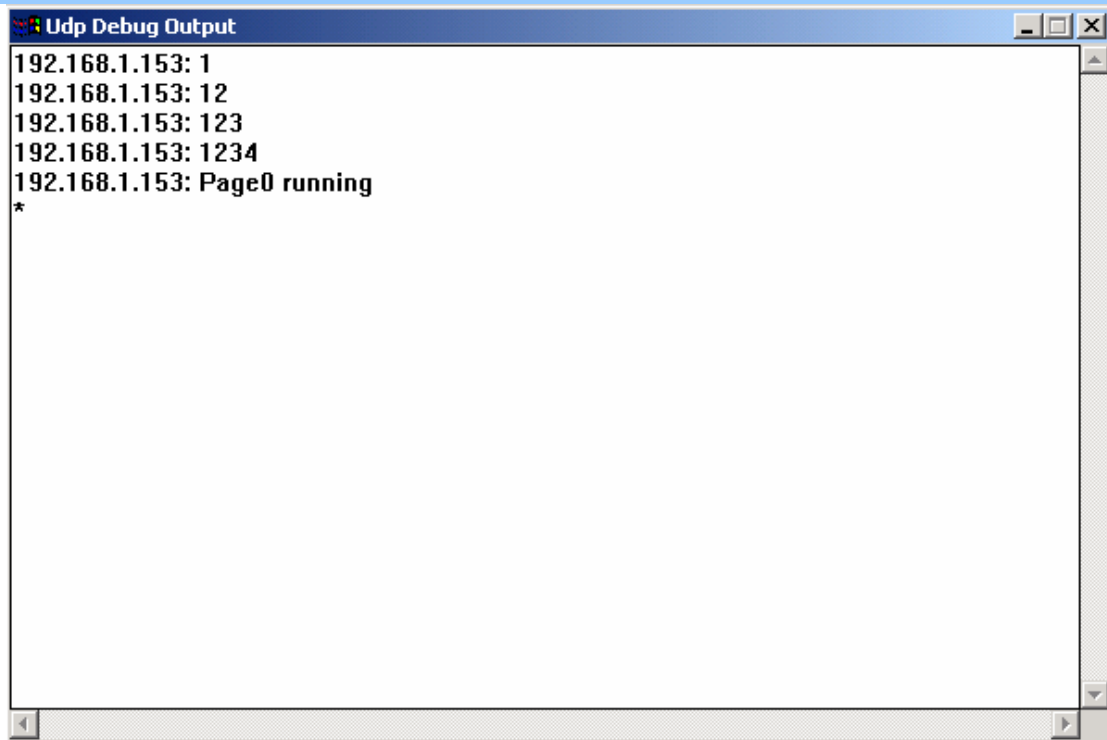
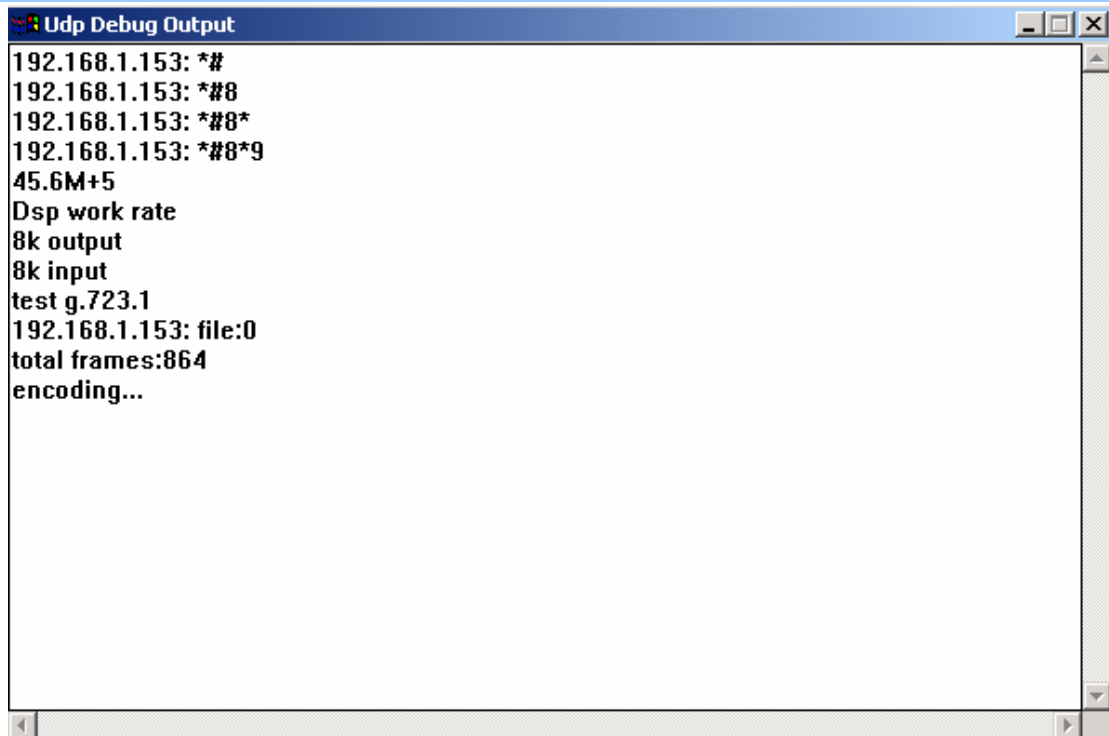


Figure 2-5-2

Step three: Click **Stop Debug** button, then close the window of **UDP Debug window**.

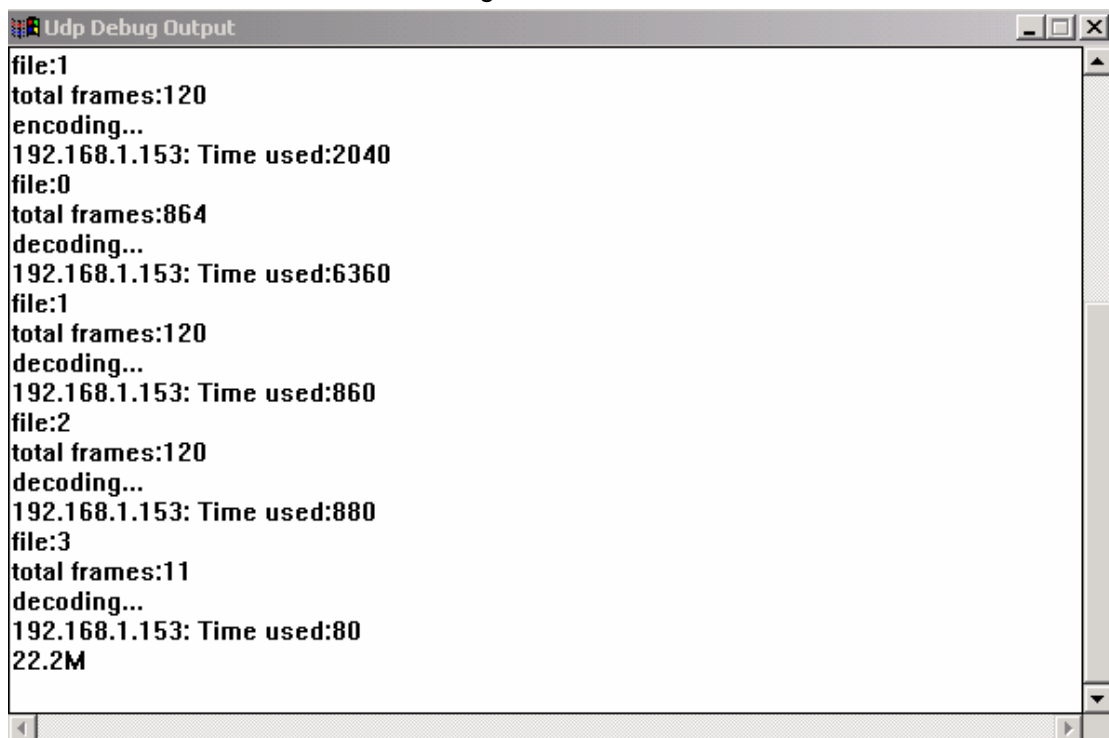
Step four: Click **Load SDRAM**, and select g273in.dat in popup window that import file into the SDRAM of telephone, and the number of byte is 558816.

Step five: After load data, click **Start Debug**, then it will open a window of **UDP Debug Output**. Pressing the key of "#8\*9" in turn will make the machine's DSP which is the most important part run under the different rates in encoding testing of G.723.1. The encoding will be succeeding if the prompt information of 22MHZ is showed in the window of **UDP Debug Window**. Please refer to figure 2-5-3, 2-5-4.



```
Udp Debug Output
192.168.1.153: *#
192.168.1.153: *#8
192.168.1.153: *#8*
192.168.1.153: *#8*9
45.6M+5
Dsp work rate
8k output
8k input
test g.723.1
192.168.1.153: file:0
total frames:864
encoding...
```

Figure 2-5-3



```
Udp Debug Output
file:1
total frames:120
encoding...
192.168.1.153: Time used:2040
file:0
total frames:864
decoding...
192.168.1.153: Time used:6360
file:1
total frames:120
decoding...
192.168.1.153: Time used:860
file:2
total frames:120
decoding...
192.168.1.153: Time used:880
file:3
total frames:11
decoding...
192.168.1.153: Time used:80
22.2M
```

Figure 2-5-4

Step six: Click **Stop Debug**, close the window of **UDP Debug Window**.

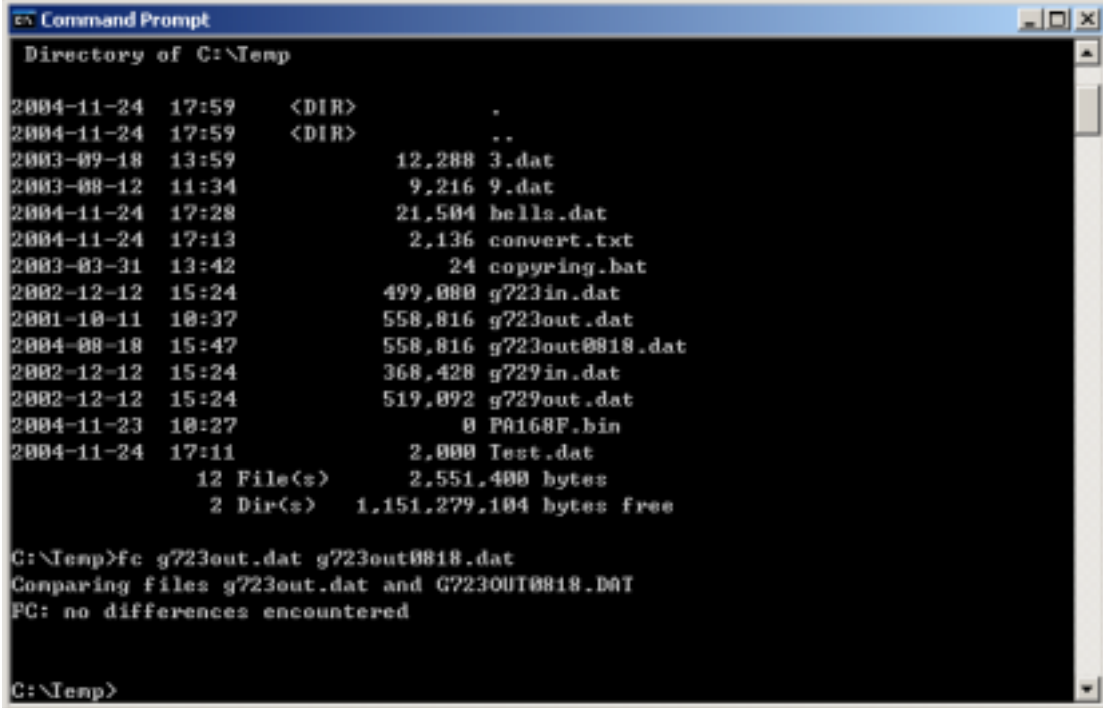
Step seven: Click **Save SDRAM**, the data of encoding/decoding will be exported from SDRAM of telephone. Save them as a file named a definite meaning, such as g723testout.dat.

Step eight: Open a DOS window, go to the catalog in that there are files

imported and exported. Using command FC to compare the standard output file with testing output file. The detailed command information is:

```
C:\Dsptest>fc g723out.dat g723testout.dat
```

The DSP will be well in work under this rate if no differences. Please refer to figure 2-5-5.



```

C:\Temp>dir
Directory of C:\Temp

2004-11-24 17:59 <DIR>          .
2004-11-24 17:59 <DIR>          ..
2003-09-18 13:59             12,288 3.dat
2003-08-12 11:34             9,216 9.dat
2004-11-24 17:28            21,504 bells.dat
2004-11-24 17:13             2,136 convert.txt
2003-03-31 13:42              24 copyring.bat
2002-12-12 15:24           499,000 g723in.dat
2001-10-11 10:37           558,816 g723out.dat
2004-08-18 15:47           558,816 g723out0818.dat
2002-12-12 15:24           368,428 g729in.dat
2002-12-12 15:24           519,092 g729out.dat
2004-11-23 10:27              0 PA168F.bin
2004-11-24 17:11             2,000 Test.dat
                12 File(s)      2,551,400 bytes
                2 Dir(s)      1,151,279,104 bytes free

C:\Temp>fc g723out.dat g723out0818.dat
Comparing files g723out.dat and G723OUT0818.DAT
FC: no differences encountered

C:\Temp>

```

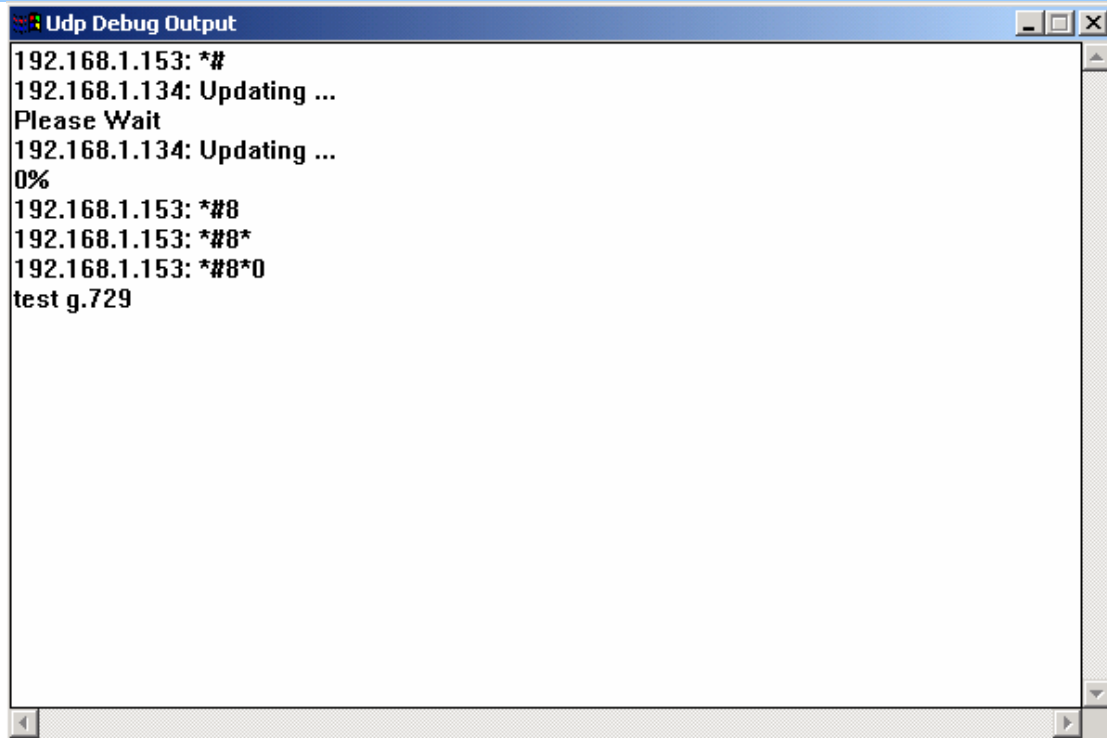
Figure 2-5-5

- G.729 encoding and decoding testing

The operations of G.729 are same with G.723. But there must be two notices:

1. It will be **ITU-T G.729 with Annex A&B** when choose in **Audio Setting**, and the proper number of **Save SDRAM Length** will be **519092**.
2. After load data into the SDRAM of telephone, must input “#8\*0” to make the machine to G.729 testing of encoding/decoding. The information **Test g729** will be shown in the window of **UDP Debug Window** at this time. Please refer to figure 2-5-6. Then press key “#8\*9” in turn. The other operations are as same as G.723.





```
Udp Debug Output
192.168.1.153: *#
192.168.1.134: Updating ...
Please Wait
192.168.1.134: Updating ...
0%
192.168.1.153: *#8
192.168.1.153: *#8*
192.168.1.153: *#8*0
test g.729
```

Figure 2-5-6

## 2.5.2 Remote Debug

Save the debug data in SDRAM of phone by PALMTOOL, when parameter **Debug Level** selects **remote debug**. For example, course of calling phone include 4 step, namely, holding headphones – calling – talking – hangup. Please press key **Local IP** in phone keypad after finish the above operations. The operation is the symbol of end. The operation of getting data is as follows:

Step one: Run PalmTool.ext, input telephone IP address in the blank of **IP Address in Chip**, and input the verified data in the blank of **Save Sdram**, such as “20000”. This value is based on the quantity of testing operation.

Step two: Click **Save Sdram**, then export all texts and debugging data from Sdram of telephone machine, and save as a file named a definite meaning, such as test.dat.

Step three: Click **Convert File**, and select **Convert Debug...** in the popup window, then open the file that exported from SDRAM just now, and save as a file named a definite meaning. For example, save test.dat as convert.txt. Please refer to Figure 2-5-7 and 2-5-8.

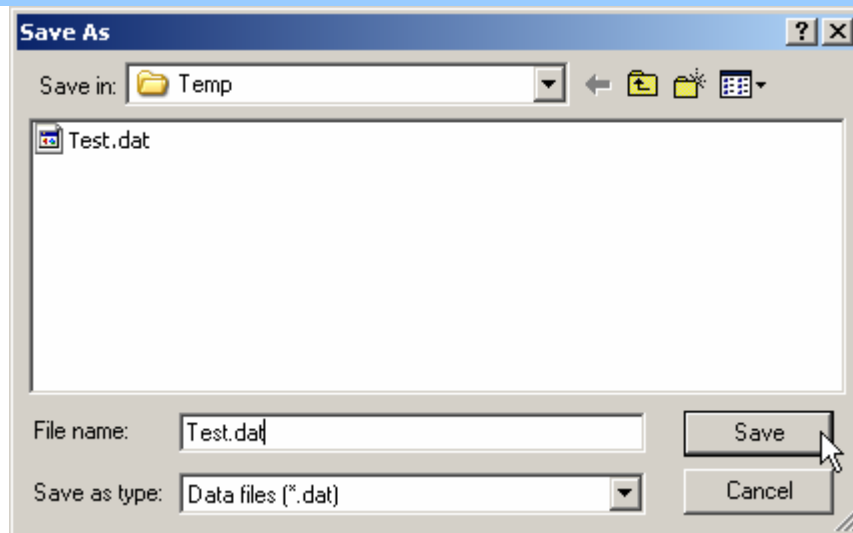


Figure 2-5-7

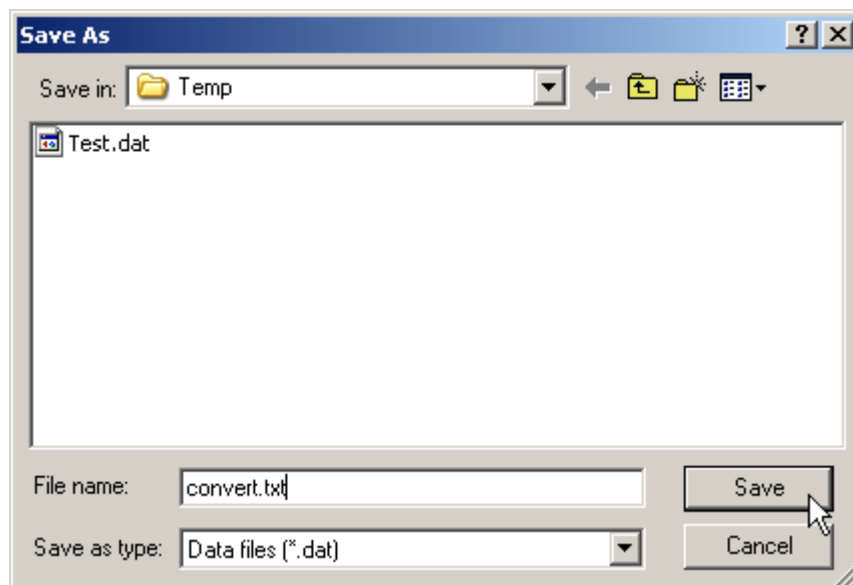


Figure 2-5-8

After above operations, all the test information and data are saved in the file of convert.txt . Then you can find out the problem by checking this document. When there is something wrong with the phone, please mail this file to us so that we can analysis the detail data.

## 2.6 Debug IP Only

Select the item, then only one IP phone's debug information will be displayed in **UDP Debug Output**. Please enter IP address of the phone you want to debug in **IP Address in Chip** field, and check box **Debug IP Only**. Then click **Start Debug**, and show information of the phone in **UDP Debug Output**.

## 2.7 Start Debug

Click **Start Debug**, and open debug window **UDP Debug Window**. We can see text information of debug and data message by the window. The text of button is changed into **Stop Debug** after it is clicked **Start Debug**. Click **Stop Debug**, close debug window, and restore text on button.

The output information in **UDP Debug Window** will be different because the different choices of parameter of **Debug Level**. Parameter **Debug Level** includes five items.

- Disable

Select the item, the debug window **UDP Debug Window** showed nothing. According to management of security level, we don't connect phone by PalmTool when select **Disable**.

- Output

Output the text information of phone to the window **UDP Debug Window**, such as state of phone, operation of keypad by selecting this item. Refer to figure 2-7-1.

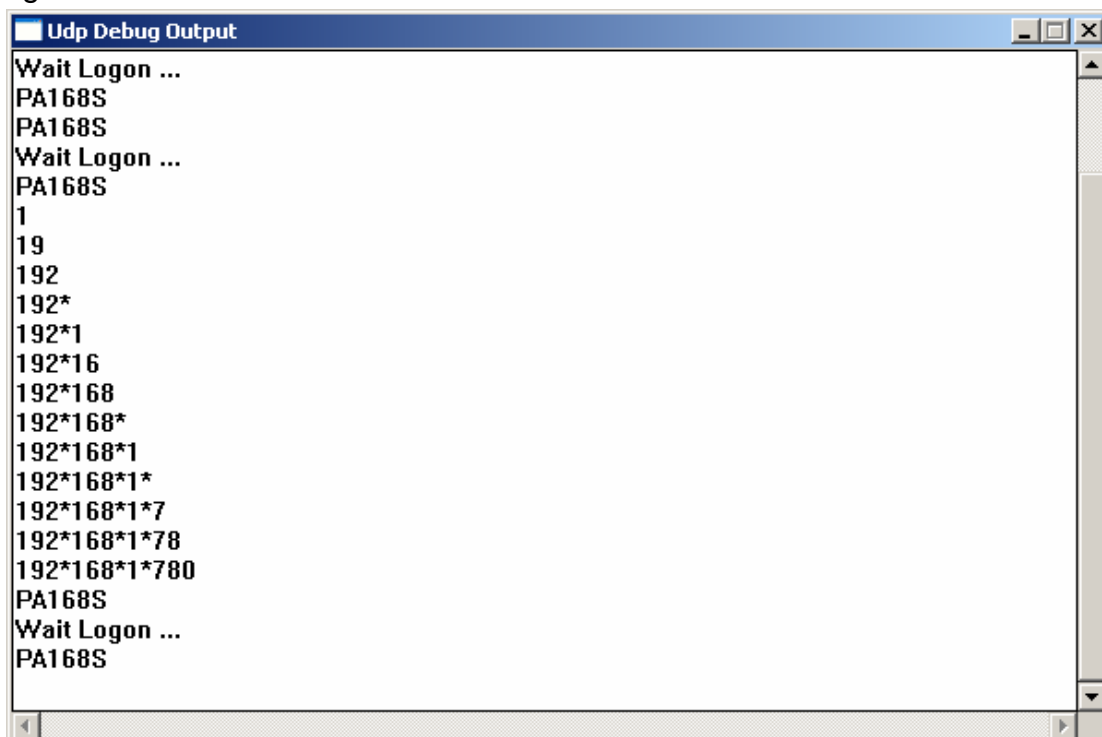


Figure 2-7-1

- Output All

Output text information of debug and data message in debug window **UDP Debug Window** by selecting this item. Refer to figure 2-7-2. It is circling information that is data message in red line. Users can copy all debug data of phone and send Email to us when phone find misty error.

```

Udp Debug Output
192.168.1.204: iPH-D00-BF V1.39.030 P3
192.168.1.202: ras req alive
0e 00 44 70 06 00 08 91 4a 00 04 00 01 00 c0 a8
01 ca 12 70 01 00 c0 a8 01 ca 12 70 02 00 02 04
00 4b 56 ab 33 b4 08 00 31 00 38 00 32 00 33 00
37 00 38 00 30 00 30 00 38 00 26 00 55 55 10 0f
03 40 01 2b 01 80 13 10 00 38 00 34 00 31 00 34
00 5f 00 65 00 6e 00 64 00 70 01 00 01 00

192.168.1.68: PA168S
192.168.1.202: ras req cfm
12 c0 44 70 06 00 08 91 4a 00 04 01 00 cb 5d 09
39 06 b9 02 04 00 4b 56 ab 33 b4 08 00 31 00 38
00 32 00 33 00 37 00 38 00 30 00 30 00 38 1e 00
50 00 41 00 31 00 36 00 38 00 38 00 52 00 6f 00
75 00 74 00 65 00 64 00 44 00 65 00 6d 00 6f 10
00 38 00 34 00 31 00 34 00 5f 00 65 00 6e 00 64
00 70 0e 8a 02 00 3b 01 00 01 00

192.168.1.211: PA168F
192.168.1.203: iPH-D00-NF V1.39.030 P3

```

Figure 2-7-2

- Remote Debug

Please refer to section [2-5-2](#) of text about the item.

- No Check

Not to check the model matching relationship when update the program. According to different Pflash type and hardware design, phone has its own model. The model includes phone type and logo. Fore-16 byte is phone type. Aft-16 byte is logo. This function is mainly used in updating program after modify the type of phone. The operations is as follows:

Step one: Open C:/Palmh323/inc/flags.h.

Step two: Look station up in the file according to phone definition. Take example for PA168FS. Primary phone type is changed PA168FS into CENTRALITY (“Centrality”). Refer to figure 2-7-3.

```

// link flag data to 0xbf00

CCHAR Sys_cFlags[MAX_TAG_LENGTH*2] = (
#ifdef UER_PA168C
    'P', 'A', '1', '6', '8', 'C', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    'P', 'A', '1', '6', '8', 'C', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
#endif
#ifdef UER_PA168F
    'P', 'A', '1', '6', '8', 'F', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    'P', 'A', '1', '6', '8', 'F', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
#endif
#ifdef UER_PA168FB
    'P', 'A', '1', '6', '8', 'F', 'B', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    'P', 'A', '1', '6', '8', 'F', 'B', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
#endif
#ifdef UER_PA168FS
    'C', 'E', 'N', 'T', 'R', 'A', 'L', 'I', 'T', 'Y', 0, 0, 0, 0, 0, 0,
    'P', 'A', '1', '6', '8', 'F', 'S', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
#endif
#ifdef UER_PA168G
    'P', 'A', '1', '6', '8', 'G', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    'P', 'A', '1', '6', '8', 'G', 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
#endif
);

```

Fore-16 byte is phone type

Aft-16 byte is logo

Figure 2-7-3

Step three: Save file flags.h, and compile afresh program.

Step four: Update phone program.

## 2.8 Update Digitmap

This function is corresponding with **Update Digitmap**, its task is updating calling rules. Using digital mapped dial rules to keep up the consistence of VOIP dial operation with common telephones. For example, If you want to dial a number of Beijing, press key “01082866902”, not to press key “#” or “Call”. The concrete operations is:

Step one: Compile calling rules file

The dial rules will be compiled and saved by test mode according to the demands of users. For example mobile numbers, it's length is 11, start with 13 inland, the prefix of inland number is 0, so it's rule is written with 013xxxxxxxxx. A compiled Digitmap file is shown in figure 2-8-1. And this file's max size is 2K.

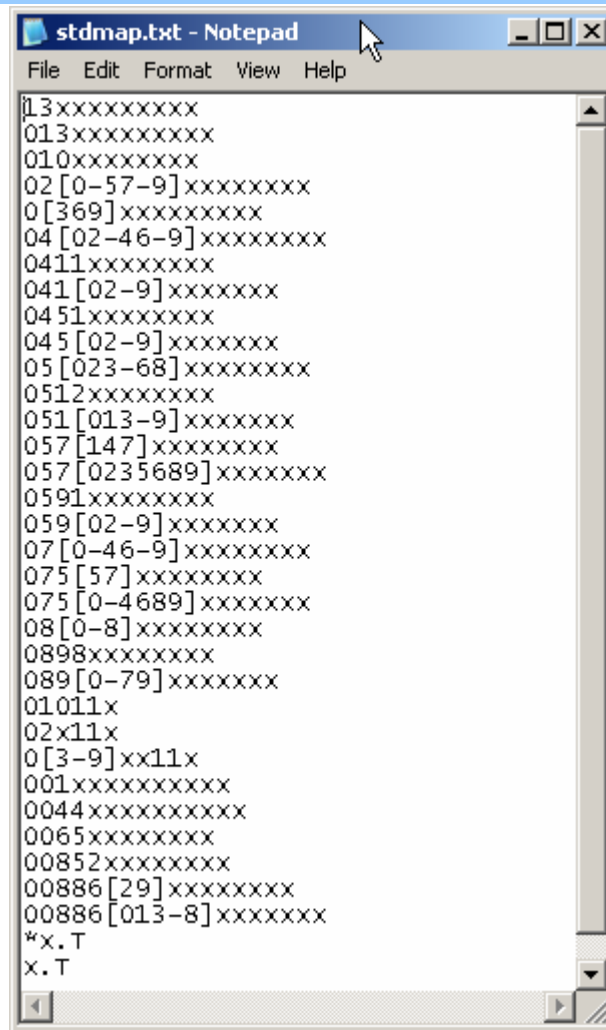


Figure 2-8-1

Step two: Update Files

Click **Update Digitmap**, then choose and open the file of calling rule file (.txt) in the pop-up window

Step three: Set parameters

Run PalmTool.exe, and check **Use Digitmap**.

## 2.9 Convert File

Click **Convert File**, open function of converting and building file interface. Refer to figure 2-9-1. There are some ways to convert and build files.

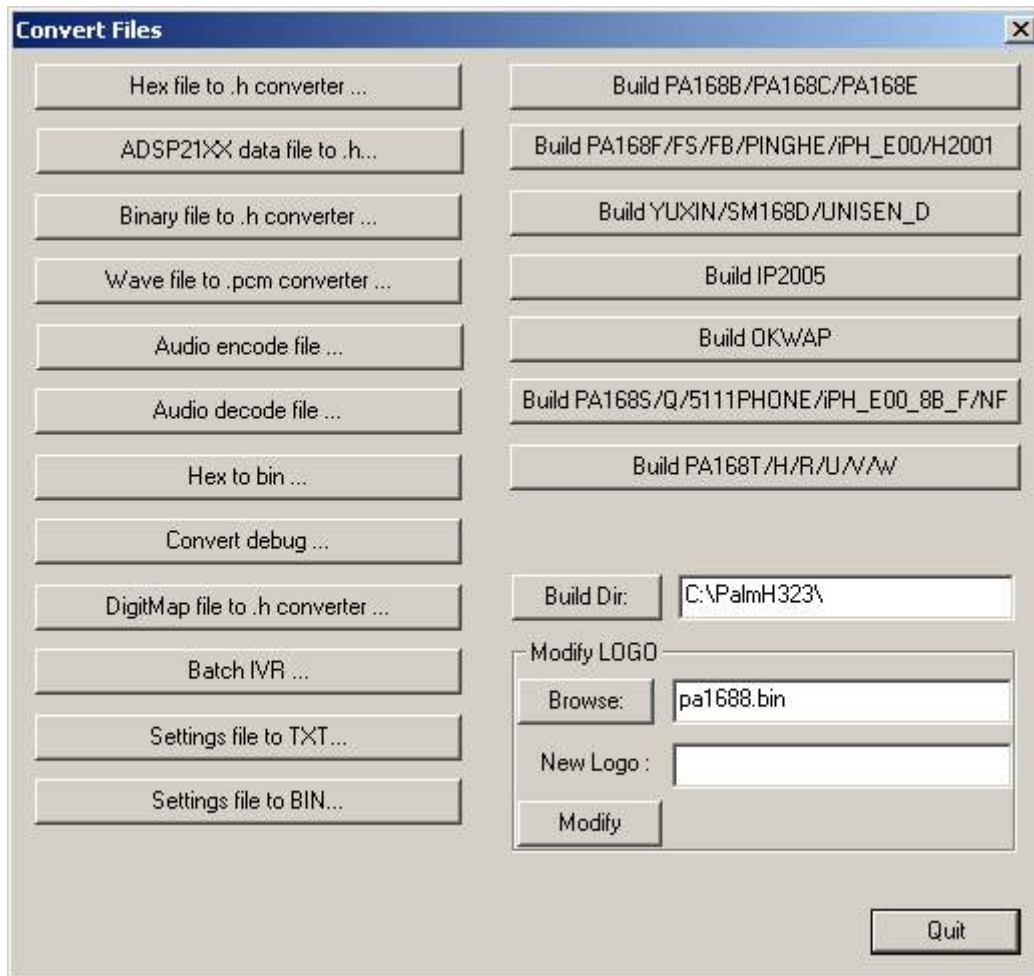


Figure 2-9-1

## 2.9.1 Build program file

There are two ways to build program file according to the different program edition. The one is used to directly compile and build. The other is used to combine compiling with button. If phone program use V1.39 edition and upwards of V1.39 edition, that adopt two ways. If phone program use downwards V1.39 edition that only adopt to combine compiling with button. Please refer to < PA1688 IPPhone Develop guide > about information of the way of direct compiling and building. The other way includes two ways. The one is fast building, the other is selecting files by DIY.

### 1. Fast Build

In Fig 2-9-1, the buttons on right interface, that is used to build binary program file. The text on it is the type of phone. These phone use the same of PFlash. The detailed explanation is as follows:

**Build PA168B / PA168C / PA168E** : To use AM29LV002T PFlash;

**Build PA168F / FS / FB / PINGHE / IPH\_E00 / H2001** : To use AM29LV004T of PFlash, and adopt the order of compiling;

**Build YUXIN / SM168D / UNISEN-D** : To use AM29F040 of PFlash;

**Build IP2005** : To provide specially the IP2005 phone;

**Build OKWAP** : To provide specially the OKWAP phone;

**Build PA168S / 5111PHONE / iPH\_E00\_8B\_F / NF** : To use AM29LV008T of PFlash, and adopt the order of compiling;

**Build PA168T / H / R / U / V / W** : To use MT28F016S5 of PFlash, and adopt the order of compiling;

We click the above button directly after compile program, and then create binary program files in the catalog C:\palmh323. For example: Click **Build PA168S / 5111PHONE / iPH\_E00\_8B\_F / NF**, then create files 1Mflash.bin and 1Mflash\_all.bin. 1Mflash.bin is used to update phone program. 1Mflash\_all.bin is used to copy FLASH by compiling equipment.

## 2. Build by DIY

It is the agile way that build program file by DIY. If you change order of composing program, that can adopt the way. Take example for PA168FS, the detailed operation is as follows:

Step one: To compile program, and build .Hex files. Please refer to section 4 of < PA1688 IPPhone Develop guide > about compiling program.

Step two: Create program file PA168F.bin

Please run PalmTool.exe. Click **Convert File**, and select **Hex to bin...** button in popup window. To build program file PA168F.bin in a special catalog, then click **Save**. Refer to Figure 2-9-2.

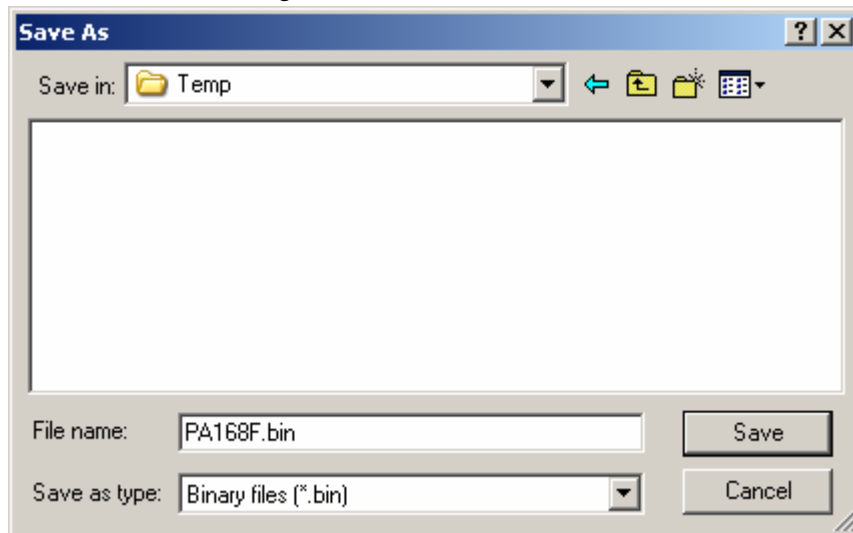


Figure 2-9-2

Step three: Build program file

Add file pageX.hex to program file PA168F.bin in turn. The order is g729misc.hex - g723.hex - g723misc.hex - page4.hex - page5.hex - g729.hex - page7.hex. Refer to figure 2-9-3, select .hex file in corresponding catalog, and



then click **Open**.

Note : Please refer to section 4 of < PA1688 IPPhone Develop guide > downwards V1.39 about order of adding page.

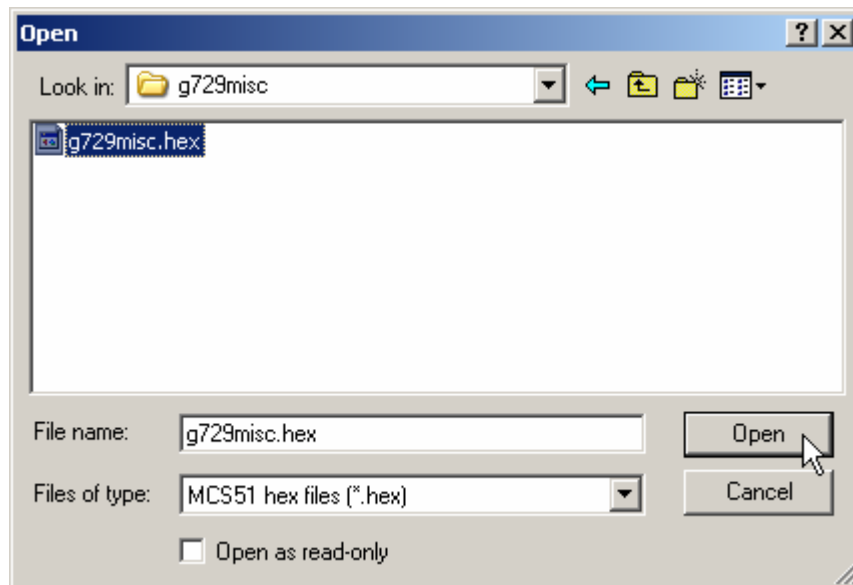


Figure 2-9-3

Click **Cancel** after add all files. We get PA168F.bin in corresponding catalog.

## 2.9.2 Covert files

### 1. Convert debug...

It is function is transmit the .dat file exported by debug to a .txt file. It is applied in choose debug level of “Remote Debug”, and it’s operations have mentioned before.

### 2. DigitMap file to .h convert...

It is function is transmitting the .txt dial file to a .h program file. The program of software can not distinguish digitmap.txt file when putting the digital mapped dial rules in use. So it is necessary to transmit rules to a file (.h) that can be distinguished. It is only suitable for developer, referring to the concrete operations of 《PA1688 IPPhone Develop guide》’s chapter 4.4.

### 3. Batch IVR...

This function is corresponding with “Batch IVR”.

It is function corresponding “Update Hint IVR” that update leaving message of telephone machine. To abundant leaving message functions of VOIP productions, we add updating of leaving message in it. Users will hear not only leaving messages of themselves but also the ring bell of leaving message saved in the telephone machine. The concrete operations are:

Step one: Record ring bell

It is same with methods of recording ring bell of telephone by Cool Edit software.

1) Run Cool Edit, click menu “File” to choose item of “New...”, and set in the popup window. It is shown in figure 2-9-7;

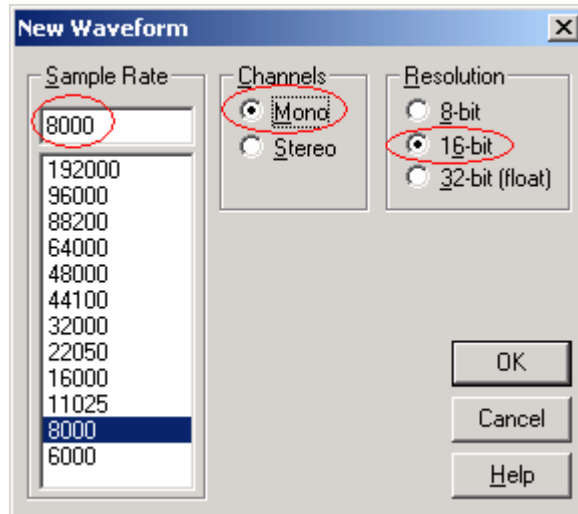



Figure 2-9-7

2) Broadcast a piece of music in PC by clicking the button of “”. After recording, it will be cut and saved as a file, such as allice.pcm. This sound of bell’s max size is 64K encoded, and it’s length must be the multiples of 7.680s~7.689s. If the method of audio encoding is G723, encode with G723, and the max multiple of bell sound is 10; If the method of audio encoding is G729, encode with G729, and the max multiple of bell sound is 7. Clicking item of “Open” in menu of “File” when it is needed will open file allice.pcm. Set it in the popup window. Please refer to figure 2-9-8.

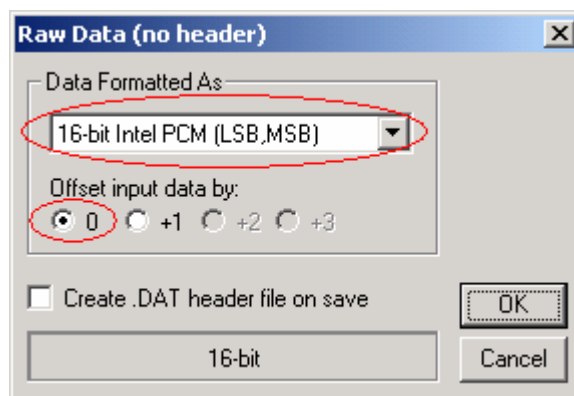


Figure 2-9-8

Step two: Create DAT sound file

Encode with G723 and G729 after recording sound of bell.

- 1) Run PalmTool, choose “ITU-T G.723.1” in the blank of “Audio Setting”.
- 2) Click “Convert File” to choose “Audio encode file...”. Open the sound file

in the popup window, and save it as a DAT file named with a definite meaning, then encode with G723. For example, save allice.pcm as allice3.dat.

3) Choose “ITU-T G.729.1 with Annex A&B” to encode with G729 in the blank of “Audio Setting”. For example, save allice.pcm as allice9.dat.

If the audio encoding is G723, the file will be allice3.dat. If the audio encoding is G729, the file will be allice9.dat.

Step three: Update Hint IVR

Run PalmTool, input IP address that will be updated in the blank of “IP Address in Chip”. Click the button of “Update Hint IVR” to open sound file of bell “allice3.dat/ allice9.dat”.

#### 4. Settings file to TXT...

It is function is transmitting the .dat settings file to a .txt text file.

#### 5. Settings file to BIN...

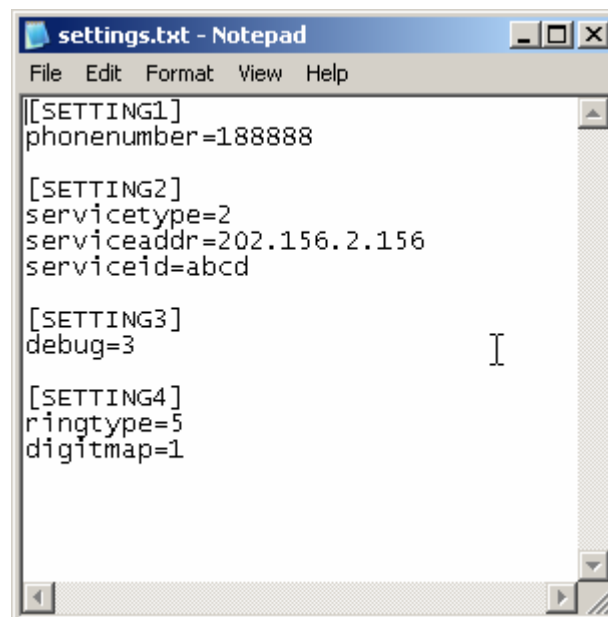
It is function is transmitting the .txt text file to a .dat settings file.

## 2.10 Update Alternate

This function is corresponding with “Update Alternate”. It needs to set and modify every backup sets when using multi-system. It concludes two methods. The one is setting files to update system. The other is operating by telnet mode, and the method will be introduced in the appendix.

Step one: Compile setting file

It will store no more than 5 set parameters in an IP telephone machine. One is default, others will be compiled and saved by text mode. It is shown in next figure.



```

settings.txt - Notepad
File Edit Format View Help
[[SETTING1]
phonenumber=188888

[SETTING2]
servicetype=2
serviceaddr=202.156.2.156
serviceid=abcd

[SETTING3]
debug=3

[SETTING4]
ringtype=5
digitmap=1

```

[SETTING2] is parameter of e-talk system. These parameter's names are keep up coincidence with connecting and getting parameters of telephone

machines in telnet mode. There is a notice that is de characters in “[ ]” must be capital letters.

Step two: Choose to update file

Click the button of “Update Alternate”, choose and open setting file in the popup window to update. Such as seeting.txt

After updating, it can not see whether parameter settings of every backup systems are succeed. So must telnet to see referring to the illustrates of appendix.

## 2.11 Generate HTTP File

Convert Http page into hex code and generate corresponding .h file. Source file of http page include three types in the catalog C:\PalmH323\PalmTool\HTTP\_DOC\. These types are part Chinese standard (catalog html\_CN ), part English standard (catalog html\_US ), part Chinese Huawei3com (catalog html\_huawei3com ). Take example for English standard. In catalog html\_CN , inclusive pages are as follows:

- Page0\_US.htm

The page is welcome page. Input IP address of the phone in address field of IE, and then enter welcome page, namely the page of password input.

- Page1\_US.thm

The page shows all parameters of IP phone.

- Page2a\_US.htm, Page2b\_US.htm and Page2c\_US.htm

Three parts of address book page: head of page, input part and buttons. The head of page corresponds page2a\_US.htm. Input part pages correspond page2b\_US.htm. Button page corresponds page2c\_US.htm.

- Page3\_US.htm

The page is success information cue. Click button **Save Settings** in page1\_US, and popup this page.

- Page4\_US.htm

The page is password error cue. Popup this page when input error password.

- Page5\_US.htm

The page is a simple page in parameters setting. We select item **disable** in parameter **debug** dropdown list, and log on by ordinary user password, it will popup this page.

- Page6\_US.htm

The page is used some functions of updating. Click button **Upgrade Firmware** in page1\_US, and enter this page. Then we can select corresponding function.

In below content, we will explain operation of converting http page, for example, modify http interface of display.

Step one: Modify file html

Open file page1\_US.htm, and modify information of interface display, and then save. Open page1\_US.htm by IE browser, and see result.

Step two: Build file .h

Every type of http page includes three .h files in the catalog C:\PalmH323\inc\.

Chinese standard page: http\_cnc.h, http\_cni.h and http\_cnm.h;

English standard page: http\_usc.h, http\_usi.h and http\_usm.h;

Chinese huawei3com page: web\_cnc.h, web\_cni.h and web\_cnm.h;

Run PalmTool.exe, click button **Generate Http File**. Display window is as follows 2-11-1:

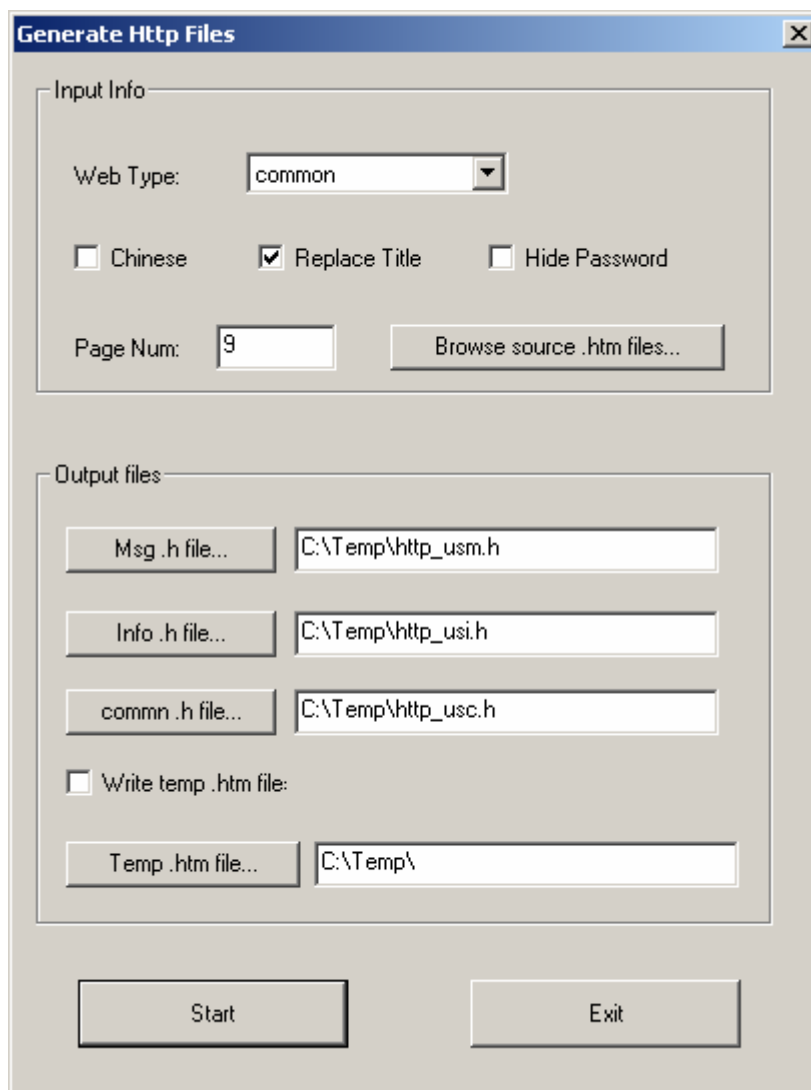


Figure 2-11-1

1) Fill in input information

- Web Type

Common: Select the item when generate files of Chinese standard and English standard.

Huawei3com: Select the item when generate files of huawei3com.

- Select attribute

Chinese: Generate Chinese page by checking the box.

Replace title: Generate title part of http page. We advise user to check the box.

Hide Password: If we check the box that password display “\*”, otherwise password display number.

- Page NUM

Input number of http page in the field. For example English standard, it has nine files, and fill in this field, giving number “9”.

## 2) Fill in output files

- Msg .h file...

Click button **Msg .h file...**, and select .h file in temporary object catalog C:\Temp\. File name is in common with the catalog C:\Palmh323\inc\, namely http\_usi.h. Refer to figure 2-11-1.

- Info .h file...

Click button **Info .h file...**, and select .h file in temporary object catalog C:\Temp\. File name is in common with the catalog C:\Palmh323\inc\, namely http\_usi.h. Refer to figure 2-11-1.

- Common .h file...

Click button **Common .h file...**, and select .h file in temporary object catalog C:\Temp\. File name is in common with the catalog C:\Palmh323\inc\, namely http\_usi.h. Refer to figure 2-11-1.

- Temp .htm file...

If check box Write temp .htm file, that input temporary object catalog in field

**Temp .htm file.**

## 3) Browse source files

Click button **Browse source .htm files...** after fill in-out information, and select the catalog C:\PalmH323\PalmToo\HTTP\_DOC\html\_US. Open the nine html files in turn, viz. page0\_us.htm - page1\_us.htm - page3\_us.htm - page4\_us.htm - page2a\_us.htm - page2b\_us.htm - page2c\_us.htm - page5\_us.htm - page6\_us.htm.

4) Click button **Start**, and generate corresponding .h files in the catalog C:\Temp\.

Step three: Replace Files

We cover files (http\_usc.h, http\_usi.h and http\_usm.h) in the catalog C:\Palmh323\inc with new files in the catalog C:\Temp\.

Step four: Newly compile and build program. Then update phone.

## 2.12 Phone List

In the same LAN, you can check state of all IP phones by clicking **List Phone** button. The information of list is as follows: **IP Address, Mac Address, Type & Version, IP Type, Protocol, Phone Number, Log on** and **Busy**. Please refer to figure 2-12-1.

At the bottom of the list, there are three buttons: OK, Refresh and Cancel. You can get the latest information by clicking **Refresh** button.

IP Address	Mac Address	Type & Version	IP Type	Protocol	Phone Number	Log on
192.168.1.114	08-03-c9-00-45-31	S2095IP1328008G	static	h323	2150	Yes
192.168.1.136	08-09-45-64-05-06	PA168FS V1.40.002	static	sip	17473861202	Yes
192.168.1.115	08-09-45-05-09-46	TINY TIGER V1.40.002	static	n2p	40845	Yes
192.168.1.156	08-09-45-08-23-a8	UNISEN-D V1.40.002	static	h323	76176902	Yes
192.168.1.165	08-09-45-22-3e-0f	YUDON V1.40.002	static	h323	18141010213	Yes
192.168.1.166	08-09-45-08-67-12	PA168S V1.40.002	static	h323	166	Yes
192.168.1.168	08-09-45-68-0f-a7	WaChuan V1.40.002	static	sip	8145099332	Yes
192.168.1.178	08-09-45-62-04-58	Wa Chuan V1.40.002	static	sip	178	Yes
192.168.1.180	08-09-45-44-05-e4	PA168S V1.40.002	static	h323	180	Yes
192.168.1.20	08-09-45-33-19-03	PA168FS V1.40.002	static	h323	20038105	Yes
192.168.1.200	08-09-45-02-03-0e	H2001 V1.40.002	dhcp	mgcp	03713326833	Yes
192.168.1.201	08-09-45-09-09-11	WaChuan V1.40.002	dhcp	h323	76176901	Yes
192.168.1.202	08-09-45-07-01-0e	PA168F V1.40.002	dhcp	h323	182378008	Yes
192.168.1.203	02-04-02-18-09-d8	IPH-D00-NF V1.40.002 P3	dhcp	h323	999002	Yes
192.168.1.205	08-09-45-63-34-c0	PA168S V1.40.002	dhcp	h323	18141021936	No
192.168.1.206	08-09-45-55-16-0b	PA168FS V1.40.002	dhcp	h323	182378009	Yes
192.168.1.207	08-09-45-68-6a-9b	PA168FS V1.40.002	dhcp	h323	82378009	Yes
192.168.1.208	08-09-45-08-08-a5	PA168S V1.40.002	dhcp	h323	5089981801	No
192.168.1.209	08-09-45-12-47-4e	PA168P V1.40.002	dhcp	sip	431895	Yes
192.168.1.211	08-09-45-64-08-44	PA168F V1.40.002	dhcp	h323	800566	Yes
192.168.1.217	08-09-45-64-14-c2	PA168V V1.40.002	dhcp	h323	82378008	Yes

Figure 2-12-1

## 2.13 Save and Load Settings

Save and load parameter data from SDRAM. Operation of phone setting is simplified by using these buttons.

### 1. Save Settings

Run PalmTool.exe, input IP address of phone you want to get settings in **IP Address in Chip** field. Then click button **Save Settings**, and save setting data from SDRAM, and save as a file named a definite meaning, for example, settings.txt. Refer to figure 2-13-1. The settings.txt file includes all phone settings except TCP\IP information.

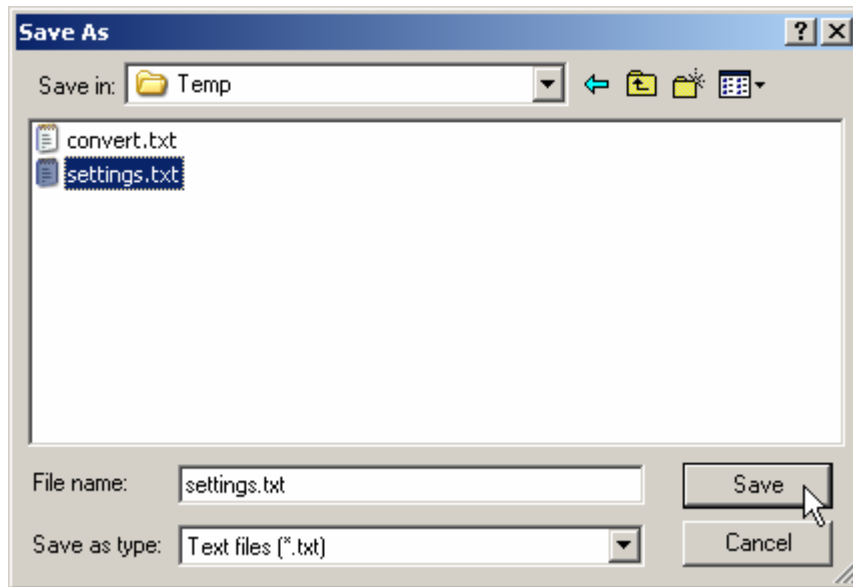


Figure 2-13-1

## 2. Load Settings

Load the settings.txt file given above into other phone that have the same setting. Operation of repetitive setting is simplified.

Run PalmTool.exe, input IP address of phone you want to update settings in **IP Address in Chip** field. Then click button **Load Settings**, and load the file settings.txt into phone SDRAM. Phone settings update succeed after restart phone.