

## 1-1. Introduction

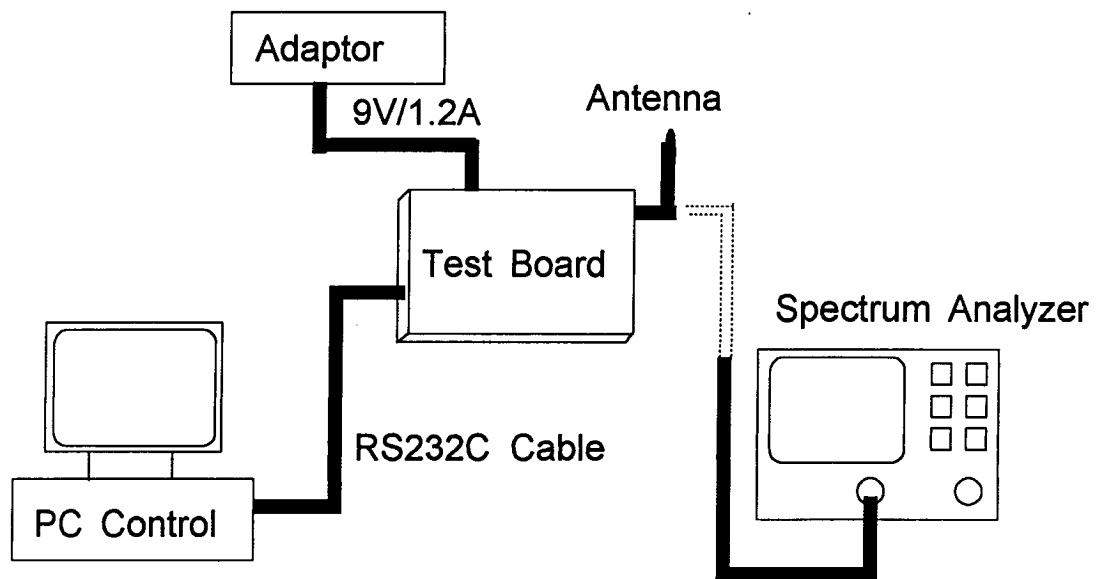
The 'Autotest Program' is the test program for SCW-R5000 in 'test mode'. You should run the 'Autotest Program' in your PC or notebook to control SCW-R5000 in test mode.

## 1-2. List of Equipment

- DUT(Device Under Test) ; SCW-R5000
- RF Cable
- RS232C Cable
- Adaptor(9VDC/1.2A)
- PC(IBM or compatible computer) ; at least 80386-SX
- Spectrum Analyzer ; HP8596E

## 1-3. Configuration of Test

When you check DUT works rightly, you may connect Spectrum Analyzer.



## 1-4. Test Procedure

### 1-4-1. Start in Normal Mode

1. When you connect a DUT(SCW-R5000) with the adaptor, you can see the 'power' LED is ON(red) on the DUT. In a few minutes later, the DUT enters into 'Normal Mode' in the state of which you can make a call with CDMA Mobile Station Test Set(HP8924C, CMD-80 etc.).

### 1-4-2. Change to Test Mode

1. Connect DUT to PC with RS232C serial interface cable.
2. Run the 'Autotest Program' in your PC. "F1 : Manual Test" is chosen with start.  
There are two ways of selecting the test command you want; one is a pull-down type in which you can select the test command by moving "↑" and "↓" keys and hitting the enter key, the other is writing the test command number in "input command" section directly and hitting the enter key.
3. You can change DUT from Normal Mode into Test Mode when you enter the command "00" (Enter to Test Mode). If rightly initialized, "ACKed" message and some numbers at Terminal Info.(S/W, ESN, NAM) section will display.
4. The command "01"(Suspend) is entered to start the test.
5. To finish or restart the Test Mode, you should enter the command "02". And if you want to exit the Autotest Program, hit the "escape key" in the keyboard.

### 1-4-3. Carrier ON/OFF and Spreading Signal

1. The command "07"(Turn on Carrier) turns the carrier on.  
You will find the signal is in 600 channel. The DUT is set in 600 channel.
2. If you want to turn off the carrier, enter the command "08"(Trun off Carrier).
3. The command "34"(CDATA) spreads the signal into CDMA spectrum.
4. **If you turn on the carrier in a first time, you MUST follow the next step without omission.**
  - ① **Once you turn on the carrier first, you must spread the signal by entering "34".**
  - ② **Next, turn off the carrier by entering "08".**
  - ③ **Turn on the carrier again by entering "07".**

④ The step is finished.

You need not repeat the above process again unless you exit the Test Mode. If you do not omit the above process, the power level of the signal may be 4~5dB less than expected. In fact this is a little program bug only in Test Mode.

#### 1-4-4. Tx Power Output level Control

1. The DUT is set to 「099」 AGC code with start.

If you enter the command "71"(Set CDMA Tx AGC), you can control the Tx power output level by writing an AGC code. The AGC code range is 000 ~ 511 code.

Note the AGC code must be written in 3-digit. For example, if you want 5, 43, 300 AGC code, you must write 「005」, 「043」 and 「300」 respectively.

2. You can confirm the AGC code you set in DUT by entering the command "71" and just hitting "enter key" once more without writing an AGC code.

3. **The AGC codes for Tx. max power(23dBm) and radiated spurious test power(-13dBm) are presented in 1-5.**

#### 1-4-5. Channel Selection

1. The DUT is set to 600 channel at first. If you enter the command "09"(Set channel), you can select the channel. Similarly to entering an AGC code, the channel number must be written in 4-digit. For example, if you want 25, 600 and 1175 channel, you must write 「0025」, 「0600」 and 「1175」 respectively.

2. You can confirm the channel you set in DUT by entering the command "09" and just hitting "enter key" once more without writing a channel number.

3. **Note when you change the channel, the AGC code at the changed channel goes back to 「099」 code unless you enter the command "07"(Trun on Carrier) again. So you MUST enter the command "07" again after you change the channel to recover the AGC code.**

#### 1-4-6. RS232C Port Test

1. The command "32"(RS232C Port Test) makes the DUT communicate with the connected PC.
2. Write an arbitrary 6-digit numerical value and hit the "enter key". You will find the 6-digit numerical value you wrote shifts to the left by 1-digit in every 500msec if rightly performed.

### 1-5. AGC code for specific Tx output powers

Channel Output Pwr	CH25	CH300	CH600	CH900	CH1175
-13dBm	280	270	270	270	280
23dBm	430	410	415	420	455