

Sprint PCS[™]

Sprint Personal Communication Services[™]

User Guide

SANYO SCP-4000

Sprint_®

Sprint PCS[®]

Sprint PCS Phone[™] SCP-4000

Manufactured by SANYO

User Guide

Please read this manual before operating the phone, and keep it for future reference.



This phone will work only with service from Sprint PCS, which must be purchased separately. See Sprint PCS Terms and Conditions of Service.

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Printed in Japan

Welcome to Sprint PCS

Only Sprint PCS built an all-digital, nationwide network from the ground up, for a new level of clarity. We've built our network to give you what we believe you really want from a wireless phone: clear sound, private conversation and time saving features. But Sprint Personal Communication Service^{*} also has the potential to do something even more far-reaching–simplify your life. Our advanced technology is designed to grow with your communications needs so that one day, you will be able to rely almost entirely on your phone to stay connected.

Thank you for choosing Sprint PCS.

First things first.

Read this before you do anything else.

Determine if your phone is pre-activated.

If you received your Sprint PCS Phone[™] in the mail or purchased it at a Sprint PCS Center, your phone is already activated and simply needs to be unlocked. See "How to unlock your phone" on the following page.

How to activate your phone.

There are two ways to activate your phone.

- 1. The fastest way is to call from your new Sprint PCS phone.
 - Fully charge your battery.
 - ► Turn on your Sprint PCS Phone.
 - Press (+*), (2), (TALK) while in a Sprint PCS Service Area. You will be connected to a Sprint PCS Customer Care Advocate who will guide you through the activation process. (In southern California, call 1-888-PCS-6699 from any phone other than your Sprint PCS Phone.)
- Another option is to call Sprint PCS Customer Care from any phone other than your new Sprint PCS Phone. Call us toll-free at 1-888-715-4588.(In southern California, call 1-888-PCS-6699.)

What you should know before you call.

The call typically takes about 30 minutes, but may take longer at peak times. Your Sprint PCS Phone will be ready for use approximately one to three hours after this call is complete.

What you should have handy.

- Your new Sprint PCS Phone
- ► The original packaging for your new phone
- Your billing address
- ▶ Your Social Security number or Tax ID number
- ▶ Your driver's license number
- Pen and paper to write down your new Sprint PCS Phone number

During this call, a Sprint PCS Customer Care Advocate will collect your information and help you select your Sprint PCS Service Plan. Once you've made all your selections, they'll guide you through the activation process.

How to unlock your phone.

If you received your phone in the mail, you need to unlock it before you can begin making calls. Just follow these simple steps:

- 1. Press **POWER** to turn on the phone.
- 2. Highlight **Unlock** and press **OK**.
- Enter the four-digit lock code (This code typically is the last four digits of your Sprint PCS Phone Number, or Social Security number or Tax ID number. If none of these works, call Sprint PCS Customer Care at 1-888-211-4PCS (4727). In southern California, call 1-800-455-4551).

How to get help.

If you need help with this or anything else, we hope you'll call Sprint PCS Customer Care at 1-888-211-4PCS (4727). In southern California, call 1-800-455-4551. You can also press (+*) 2 (TALK) from your activated Sprint PCS Phone (in southern California, press (+*) 6 1 1 (TALK)). A Sprint PCS Customer Care Advocate will answer (24 hours a day) and will be happy to assist you.

Our services are provided to you under certain terms and conditions, all of which are contained in the literature included in your customer package.

Getting to know your phone

Easy Menu Navigation Control

The rocker key allows you to easily scroll through the menu. As you navigate throughout the menu, the menu options will be highlighted (**Call History**, for example). Once you've highlighted your desired feature, simply press \bigcirc^{K} . The rocker key and \bigcirc^{K} key are also used to change your phone's settings. The upper half of your phone's display screen is dedicated to providing you with various notifications and prompts. The lower half of the screen is dedicated to the phone's menu items. A scroll arrow has conveniently been placed to the right of the menu items. This allows you to keep track of your position in the menu at all times. Intuitive prompts are displayed to guide you through each step. For example:

If you want to view your last incoming call, use your rocker key to highlight **Call History** and press **OK**.



Then highlight Incoming Calls and press OK

Alpha Entry Using Keypad

Press a number several times until the desired letter appears. Letters scroll in the following order:



After two seconds, the cursor will automatically advance to the next space once a character has been entered. To expedite the process, use your rocker key (right) to move the cursor forward or enter any character not in the same key. If you make a mistake, press \bigcirc or use the rocker key (left) to correct the last letter you entered. To clear the whole name, hold down \bigcirc for about two seconds. For example, to enter the letter "K", press \bigcirc key four times (Note: The first character of each word entered defaults to uppercase,

the following characters default to lowercase.)

Front View of Phone

- **1. Red Light:** Illuminates when FOWER is pressed and when you've got incoming calls and messages.
- **2. Headset Jack:** Insert the plug of the headset (not supplied).
- **3. OK:** Lets you place a call, receive a call, and select menu options.
- **4. TALK:** Lets you place a call, answer Call Waiting and use Three-Way Calling.
- **5.** Rocker Key: Lets you navigate through the menu.
- **6. POWER:** Turns the phone on and off.
- 7. VOL (volume): Lets you adjust the sound level during a call.
- **8.** END: Lets you disconnect a call and return to standby mode.
- **9. CLR:** Allows you to clear characters from the screen or back up menu levels.
- **10. Antenna:** Makes the voice on the other end sound clearest when the antenna is all the way up.



Display icons: What they tell you.

Display icons are all the graphic symbols that show up on your-— display screen. In short, they tell you what's happening. Just look below.

Tull	Signal	Measures your current signal strength. The more lines there are, the stronger the signal.
X	No Service	This means the phone is outside a service area. When this is displayed, you cannot use your phone.
<u>(</u>	In Use	Tells you a call is in progress.
R	Roaming	If the icon is not displayed, you are in the Sprint PCS Network. If it is displayed (it may or may not be flashing), you are on another service provider's network.
\mathbf{M}	Messages	Indicates when you have messages waiting.
	Vibrate	Indicates when the vibrate feature is set to ON.
Ŵ	Analog	Indicates when using the phone in analog roaming.
{ ZZ;	Battery	Shows the level of your battery charge. The more black you see, the more power you have left. When the charge is low, this icon blinks and an alert tone is sounded.

Using the battery.

Your Sprint PCS Phone comes with a rechargeable battery. Remember to fully charge your battery as soon as the charge becomes low in order to maximize your talk and standby times.

Installing and removing the battery.

The battery snaps easily onto the back of the phone (bottom end first) for quick installation and removal. Make sure to turn the power off before removing the battery. Otherwise, you could lose stored numbers and messages.

Charging the battery.

You can tell whether or not your battery needs to be recharged by checking the upper-right corner of your Sprint PCS Phone's display. When the battery charge level gets low, the battery icon is will blink and the phone will sound a tone. If the battery level gets too low, the phone will turn off automatically. A series of alert tones will sound just before the phone turns itself off. If this happens, unfortunately, you'll lose whatever you were just doing. So watch that indicator and make sure your battery charge level is okay.

To charge your battery, you should use the standard AC adapter, or the optional dual slot desktop charger or cigarette lighter adapter. Using unauthorized accessories could cause damage.

Charging with the AC adapter.

Use only **SANYO**-approved adapter, model number SCP-01ADT, with your Sprint PCS Phone. Using unauthorized accessories could cause damage.

- 1. Plug the adapter into a wall outlet.
- 2. Plug the other end into the bottom of your Sprint PCS Phone, with the battery attached.

Charging a completely discharged standard Lithium Ion battery takes up to four hours.

If your phone is turned on, the red light will go on while charging. The **track** icon on the phone display will stop blinking when charging is complete.

If your phone is turned off, the red light will go on and "BATTERY CHARGING —Power Off" will show on display while charging. The **T** icon on the phone display will stop blinking when charging is complete.

When the battery is completely discharged, you may wait for several minutes until the red light will go on and "battery is charging" will show on display.

Using Your Phone: Basic operations to place and receive calls

Turning your phone on and off.

When you're ready to turn your Sprint PCS Phone on, check to see that the charged battery has been installed on the back of the phone or that you have external power (meaning the cigarette lighter adapter, hands-free car kit or AC adapter) with the battery installed. Then, simply press **POWER**. The red light flashes briefly and the banner is displayed, which means you're ready to make a call.

To turn your phone off, press **POWER** for <u>one second</u> until "Powering Off" is displayed. Then release **POWER**. When your phone is turned off, nothing is displayed on the screen.

Note: If *cover* is pressed for <u>less than one second</u>, the phone will not turn off. This keeps your phone from being turned off accidentally.

Standby mode.

Standby is the most basic state of the phone. The phone goes into standby mode soon after you turn it on or whenever you press

END. When your Sprint PCS Phone is on but no call is in progress, the phone is in standby mode.

When your phone has acquired service, the greeting banner will be displayed along with the date and time. The menu options will be displayed on the lower half of the screen. This is known as the standby display or standby mode. While in the standby mode, use the rocker key to highlight the menu option you wish to select, or enter a phone number using the keypad.

Power Save mode.

Your Sprint PCS Phone comes with a Power Save feature that will be activated automatically if your phone hasn't been able to find a signal after 15 minutes of searching. While this feature is active, the phone's battery charge is conserved. The phone will automatically check for a signal periodically. To manually prompt the phone to check for a signal, press any key. A "Power Save" message on the display will let you know when the phone is operating in Power Save mode.

Making a call.

Whenever you make a call, follow these simple steps:

- 1. First, check to see that your phone is on. If you see the display indicators on the screen, that means the power is on.
- 2. Enter the phone number you're calling.

4. When you're finished with your call, press \overbrace{END} to disconnect.

You can also make calls from your Internal Phone Book (see page 42) or from your recent calls list (see page 38).

Correcting dialing mistakes.

If you make a mistake while dialing a phone number, press \bigcirc to erase one digit at a time. You can delete the entire number at once by pressing \bigcirc and holding it down for at least one second.

Answering calls.

Your Sprint PCS Phone must be turned on before you can receive calls. When your phone rings ("Incoming Call" displays and the Red Light flashes), press Talk to answer. You can also answer by pressing any key (other than FOWER or END). Before you do this, you have to set Any Key Answer function on (See page 55). To disconnect the call when you're through, press (END).

Where you can use your phone.

Your Sprint PCS Phone is dual-band, which means you can use it to make and receive calls in many places:

- ▶ In any city where Sprint PCS provides service
- On other PCS CDMA networks and conventional analog cellular networks where automatic roaming is available.

When you use your phone outside the

Sprint PCS Nationwide Network, it's called **roaming**. If you're in an area where Sprint PCS has implemented roaming with PCS CDMA or conventional analog providers, you will pay the roaming rate plus long-distance charges, where they apply.

Note: In areas where Sprint PCS does not have a roaming agreement, you will still be able to make (but not receive) calls using a credit card.

What you'll see.

You should always check your phone's display because it will let you know when you're outside the Sprint PCS Network and whether your phone is operating in analog. The chart below indicates what you will see, depending on where you're using your phone. (Roaming Indicator) Sprint PCS Network

Other PCS CDMA Networks		R
		("Digital Roam" displays.)
Analog Cellular	₩ Y	R
		("Analog Roam" displays.)

Regardless of whether you're using your phone on or off the Sprint PCS Nationwide Network, you should always dial numbers using 10 digits (area code + number) when you make calls outside your Sprint PCS Service Area. (This does not necessarily mean you'll be charged a long-distance rate.)

Calling experience.

When you use your phone on other PCS CDMA networks, your calling experience and call quality will be similar to what you experience when making calls from within the Sprint PCS Network. Although certain calling features may not be available, your phone calls are still private and secure.

When you use your phone on analog networks, your experience will be different. Analog roaming will be similar to the quality provided by conventional cellular carriers today. Although you will still have the convenience of being able to make and receive calls, here are some differences you can expect:

- You are more likely to experience static, cross-talk, fade-out and dropped calls.
- Some calling features such as caller ID and the message waiting indicator that are standard within the Sprint PCS Network may be unavailable.
- You will experience the same security and privacy risks (eavesdropping and phone number cloning) that exist with conventional cellular services today.
- Battery life will be shorter when you use your phone for analog roaming than when you use it on a CDMA network.

If you are on the phone when you leave a Sprint PCS Service Area and enter an area where roaming is available (whether PCS CDMA or analog cellular), your call will be dropped. If your call is dropped in an area where you think Sprint PCS provides service, turn your phone off and then on again to acquire Sprint PCS Service.

If you need customer service for any reason while using your phone outside the Sprint PCS Network, just dial (+) (2) (+) from your Sprint PCS Phone (in southern California, press (+) (6) (1) (1) (-)

Sprint PCS periodically implements new roaming agreements. To ensure your phone is able to roam everywhere Sprint PCS has roaming agreements, stop by Sprint PCS Center periodically for a free roaming software upgrade.

User Options During a Call (In-call state/status)

During a call your phone provides you with access to all the menu items you have in the standby state. You will also notice three additional menu items or in-call options. The three in-call options 'End Call, Mute, and 3-Way Call) appear on your screen immediately after your call is connected. To select one of the three options simply highlight the option you wish to select and press (or).

(See page 35 for detailed instructions on using 3-Way calling.)

Mute

The mute function on your Sprint PCS Phone works just like your phone at home. While your call is muted the party on the other end of your call will not be able to hear you.

While in a call:



To unmute the call:

1. Highlight **Intel** and press **(K)**.

Redialing Last Outgoing Number

Highlight Call History, press and hold () for about 2 seconds.

Dialing Sprint PCS Directory Assistance

To obtain residential, business and governmental listings; to get help completing local or long-distance calls; or to obtain movie55 listings, hotel shopping and major local event information, contact Sprint PCS Directory Assistance by dialing

4 1 1 TALK. Or...

- 1. From the menu, highlight Phone Book and press ().
- 2. Highlight and press ().
- 3. Highlight Din Assistand press ()
- 4. Highlight and press OK.

Your can obtain more than one number at a time from Sprint PCS Directory Assistance. Sprint PCS will connect your call for no additional charge.

Dialing Sprint PCS Operator Services

Press **()** for assistance with placing collect calls or calls billed to a calling card or to a third party.

Note: You cannot charge calls made through operator services to your Sprint PCS account.

Dialing Sprint PCS Customer Care

1. From the menu, highlight **Phone Book** and press **()**.

2. Highlight Find Name and press OK.

3. Highlight **Distance Core** and press **OK**.

4. Highlight and press ()

A Sprint PCS Customer Care Advocate will answer 24 hours a day and will be happy to assist you.

Prepaid Calls

Prepaid Customers can access the Prepaid Options Menu* to receive account balance notification, replenish their account or speak with Sprint PCS Customer Care. There are two ways to access the Prepaid Options Menu, free of charge;

1. Dial (+*) 7 2 9 Talk, or

If you can't recall the phone number, you can access the Prepaid Options Menu through your Phone Book menu, by:

- 1. From the menu, highlight **From** Book and press (OK)
- 2. Highlight Find have and press OK
- 3. Highlight $\mathbf{Prepaid}$ and press (\mathbf{OK})
- 4. Highlight and press OK
- *Note: Only available to Sprint PCS Customers that have a Prepaid Account.

Making Emergency Calls

You can place calls to 911, Customer Care (+) $(\textcircled{+$

Handy tips for easier everyday usage:

Adjusting the Volume

The volume keys (vol-) (vol+) of your Sprint PCS Phone can perform two different functions. They let you:

- Adjust the earpiece volume during a call.
- Adjust the ringer volume in the standby state.

Displaying Your Phone Number

- 1. From the menu, highlight **From** Book and press **()**.
- 2. Highlight the thone that and press (••).

Greeting

This feature allows you to put whatever you want on your phone's display screen - just as long as it's no more than 12 characters. Your greeting will be displayed on the top line whenever your phone is on. To change your greeting:

- 2. Highlight and press ().
- 3. Highlight \bigcirc and \bigtriangledown of the rocker key.
- 4. Highlight **Change** and press **OK**.
- 5. Using your (R) key, delete the existing greeting and enter your custom greeting.
- 6. Highlight and press \bigcirc .

Backlight/Contrast Setting

Your Sprint PCS Phone allows you to customize the backlight and contrast setting.

To change the backlight setting:

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight **Booklight** and press **OK**.
- Depending on your preference, highlight Boconds,
 Suscends, Diff or Blueus On by using the rocker key, and press or.
- Note: For maximum battery life the backlight setting should be set to "Off".

To change the contrast setting:

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight Contrast and press **OK**.
- Depending on your preference, highlight High rest, High, or or ourself by using the rocker key, and press
 OK.

Using Caller ID

This feature tells you who is calling by displaying the caller's number when the phone rings. If the caller's name and number are stored in your phone's internal phone book, the name you've stored will be displayed along with the number.

If you call someone who also has Caller ID, your Sprint PCS

Phone Number will be displayed on their phone. To block your Sprint PCS Phone Number from being displayed for a particular outgoing call, follow these steps:

- 1. Press (+*) 6 7.
- 2. Dial the outgoing phone number and press (TALK)

Saving and Storing a Phone Number in your Phone Book

Your Sprint PCS Phone provides you with multiple ways of adding numbers to your phone book. An easy way to get started with your phone book is to follow these simple instructions:

- 1. From the menu, highlight **Call History** and enter phone number. We suggest that you save numbers using 10 digits (area code + number) so you can easily dial them from your phone book while traveling outside your Sprint PCS Home Service Area.
- 2. Highlight and press OK
- Highlight desired label (Flore, Moria, Mobile, Flager, Flager, or to Label) by using the rocker key and press (*).
- Enter name associated with phone number and press or. To enter the name, press the key that corresponds to the letter you want to display. For lower case letters, continue to press the key until the lower case letter appears (see "Alpha Entry using keypad on Page 8.)
- 5. Press OK

 To store your entry in the next available memory location simply press

(For more advanced phone book features and alternative ways to enter phone book entries, see pages 42-44)

Finding a Name in the Phone Book

- 1. From the menu, highlight **From Book** and press \bigcirc .
- 2. Highlight Find Name and press OK.
- 3. Enter name of the number you want to find. Once a letter is entered, the phone book will automatically display all the entries that start with that particular letter. The search will continue to narrow as you enter more letters.
- Once the name you wish to call is displayed, use your rocker key to highlight the name and press
- 5. Press OK.

Setting the Vibrating Ringer

The vibrating ringer feature allows you to receive incoming calls without disturbing others. You can select this feature by either of the methods below:

- While in the standby state, press either the + or volume key and the Ringer Volume Setting will appear on the screen. Five ringer settings are available: **199, Jecture**, **100**, **199**, and **Uibrate**. Using the volume keys select **Uibrate** and your phone will use the vibrating ringer to notify you of incoming calls.
- From the menu, highlight and press ^(K).
 Highlight ^(K) and press ^(K). Highlight ^(K) and press ^(K).
 Highlight ^(K) and press ^(K).

When the vibrating feature is set to "on", you will see "

Getting the most from Sprint PCS service

Voicemail and Text Messages Setting Up Your Sprint PCS Voicemail

Voicemail allows callers to leave a message when you don't answer your Sprint PCS Phone. We suggest you set up your voicemail box soon after your phone is activated. To activate your voicemail:

- In the standby state either press and hold 1 for about 2 seconds, or highlight 1 and press and press and hold (r) for about 2 seconds.
- 2. Follow the system prompts.

The first time you access the voicemail system from your Sprint PCS Phone, if will prompt you to:

- Create your own personal pass code. Make sure that you pick a number that is easy to remember.
- ▶ Create the greeting that people will hear when they call you.
- ▶ Initialize your name announcement.
- Choose whether to activate One-Touch Access.

After you have set up your voicemail box, it will automatically record messages whenever someone calls and you don't answer. Whenever you need to call your voicemail from your home or business phone, you should dial your Sprint PCS Phone Number, press $(+ \times)$ and enter your pass code.

Finding Out You Have A Message

Your Sprint PCS Phone alerts you when you have new messages: If you have new messages, your phone will ring and you will be notified with a red flashing LED light.

Retrieving Voice Messages

You can listen to your messages by following any of the three methods.

- 2. From the menu, highlight **remained** and press and hold **()** for about 2 seconds, or
- From the menu, highlight Tensalles and press OK.
 Highlight Call Voicemail and press OK.
- 4. Follow the system prompts.

Message Clear Count

To clear the voice message count:

- 1. From the menu, highlight 6 and press (κ) .
- 2. Highlight locemail ion and press OK.
- 3. Highlight Clean Count and press ().
- 4. Highlight and press ().

Page/Text Messages

Text Messages can be retrieved by following these simple steps:

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight Padez Text. and press OK.
 - Use your rocker key (up/down) to scroll through messages.
 - Press or to read your messages.
 When reading a message:
 - Use your rocker key (up/down) to navigate to the previous or next message.
 - Pressing or when reading a message (or the down arrow key at the end of the message will bring up the options for the message.

Page/Text Number Extraction

When you receive a page/text message on your Sprint PCS Phone that contains phone numbers you can extract those numbers, making it easy to place a call or save the numbers. To extract a phone number:

- 1. While reading a message, press () to view the message option menu.
- 2. Highlight **Extract 1** and press **()**.
- 3. The phone will display all the numbers extrcted from the message.
- 4. Highlight the appropriate nember and press \bigcirc .
- Depending on what you want to do, hgighlight 11, Saue Phone #, Novi, Previous and press (%).

Message Storage

Your Sprint PCS Phone is capable of storing up to 20 text messages and numeric pages. When the message memory is 75% full, a warning message will be displayed, prompting you to erase messages in order to obtain more memory space.

Call Waiting

When there is a call waiting, you will hear a beep and a text message, including the caller s name (if the caller is programmed into your phone book) and phone number, will appear on yur screen. To answer the call:

1. Highlight and press $\bigcirc \mathsf{K}$ or $\bigcirc \mathsf{K}$.

To toggle between the two callers, simply highlight again

and press 🤇	ок or	TALK .
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If you do not want to be interrupted during a particular call, you can temporarily disable Call Waiting by dialing 7 0 before dialing the phone number. When the call is finished, Call Waiting will be reactivated automatically.

To permanently disable Call Waiting for all calls, contact Sprint PCS Customer Care.

Three-Way Calling

Three-Way Calling lets you talk with two people at the same time.

- 1. Dial the first number, and press (TALK).
- 2. When connected, highlight 5-030 Call and press (κ) .
- 3. Dial the second number, highlight \square and press \bigcirc .
- When the second party answers, highlight and press
 again to begin your Three-Way call.

When you use this feature, you will be charged normal airtime rates for each call. Each call will appear as a separate item on your bill.

Note: When making a Three-Way call, the speed dialing function is disabled.

Call Forwarding.

With Call Forwarding, you can have all of your incoming calls forwarded to another phone number – even if your Sprint PCS Phone is turned off. (With Call Forwarding, a per minutes charge applies.) When Call Forwarding is activated, you can still make calls from your Sprint PCS Phone. To activate Call Forwarding, follow these steps:



- 2. Enter the area code and seven-digit phone number to which your calls should be forwarded.
- 3. Then press A. You will hear a tone that confirms you've activated Call Forwarding.

To deactivate Call Forwarding, press (+) 7 2 0 Take Once again, you'll hear a tone to confirm the deactivation.

Getting The Most From Your Phone

Menu Map



Menu Map (cont'd)



Call History

Your Sprint PCS Phone captures the last 20 incoming calls, 20 outgoing calls, and 20 missed calls in the Call History menu. You can place calls through the Call History menu, providing a quick and easy way to call frequently used numbers.

Additional information, such as the time and date a particular call was made, received, or missed may also be viewed once a number is selected. To review this list, follow these steps:

- 1. From the menu, highlight Call History and press ()
- Highlight either <u>Outgoing Calls</u>, <u>Incoming Calls</u>, or Missed Calls and press ○^K.
- 3. Use your rocker key to scroll through the last twenty dialed received, or missed calls.

To view time and date information:

- Highlgfht the call you wish to receive information about and press OK.
- Once you've selected a number in the Call History menu, highlight inexplate and press or to display the date and time that particular call was made, received or missed.

To place a call from this list simply following these steps:

- 1. Highlight the number you want to call and press \bigcirc .
- 2. Highlight \square and press $\bigcirc \mathbb{N}$.
- **Note:** Once you've selected a call from the Outgoing, Incoming or Missed History, you can scroll through all the calls in that history using your rocker key (up/down).

Missed Call Notification

When an incoming call is not answered, the missed call will be logged into the "Missed Calls". The missed call information shall continue to be updated and displayed until canceled explicitly by pressing (CLR) when in the missed call information display.

Erasing Individual or All Call History

To erase an individual call log ...

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight and press ().
- 4. Highlight and press ().

To erase all call logs (Outgoing Log, Incoming Log, and Missed Log)...

- 1. From the menu, highlight Call History and press ().
- 2. Highlight \bigcirc and press \bigcirc .
- 3. Highlight **All Calls** and press **OK**.
- 4. Highlight and press \bigcirc .

Air Time

Your Sprint PCS Phone allows you to check the air time of your calls as follows:

To check the last call;

- 1. From the menu, highlight Call History and press ().
- 2. Highlight **in the** and press **or**.
- 3. Highlight and press ().

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To check the home calls;

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight either 110 and press $\circ\kappa$.
- Highlight fone Calls and press or.
 Then the total number of calls and times of all calls made while in the home system.
- 4. To reset the display, highlight $\boxed{\text{deno}}$ and press $\bigcirc \kappa$.

To check the roaming calls;

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight either 110 and press 0^{κ} .
- Highlight Calls and press or.
 Then the total number of calls and times of all calls made while roaming.
- 4. To reset the display, highlight $\boxed{1}$ and press $\bigcirc \kappa$.

To check the all calls;

- 1. From the menu, highlight Call History and press ().
- 2. Highlight either fine and press ().
- Highlight III Calls and press or.
 Then the total number of calls and times of all calls in the Sprint service area and roaming area.

Phone Book

Your Sprint PCS Phone has 98 Phone Book memory locations capable of storing up to 300 phone numbers. This allows you to organize your phone book, storing up to 6 phone numbers under one person's name. You will no longer have to look for a person's home number one place and their work number in another. (Each memory location will accept up to 12 characters per entry name and 44 digits for the phone number.)

Once you have entered a name and number, you are given the option of attaching a label (Home, Work, Mobile, Pager, Fax, or No Label) to the entry. When you search the phone book, either by name or entry, the selected phone number will appear in the upper half of the display. If a label has been attached to the phone number, a small icon/label will appear before the phone number. This feature provides you with a convenient method of identifying the phone number as the person's home, work, mobile, pager or fax number.

For example, see "Add New Entry" on page 43.

Find Name

- 1. From the menu, highlight hone Book and press ().
- 2. Highlight 1 and press \circ K.
- 3. From here you have two options, you can either use your rocker key to scroll through your phone book entries or enter the letter(s) of the entry you want to find (more information on alpha-entry can be found on page 8.)

- 4. If you entered the letters manually your Sprint PCS Phone will automatically search for entries with those letters and display a list of matches.
- 5. To place a call, highlight the name you wish to call and press $\bigcirc \kappa$.
- 6. Highlight \bigcirc and press \bigcirc .
- **Note:** Once you've selected a phone book entry you can scroll through all your existing entries using your rocker key (left/right.)

Add New Entry

- 1. a. From the menu, highlight 2000 and press (\sim) .
 - b. Highlight **Control** and press **(K)**.
 - c. Enter a name to correspond with the number (use the alpha-entry method described on page 8.)
 - d. Once the name is entered correctly, press \bigcirc K.
 - e. Enter the phone number you want to save. We suggest that you save numbers using ten digits (area code + number) so you can dial them from you phone book while traveling outside you Sprint PCS Home Service Area.
 - f. Highlight ext Stee and press ().
 - g. Highlight the appropriate label (**1000**, **1000**, **100**,
 - h. The entry # will automatically default to the next available number. Press or to confirm or use the rocker key to

highlight another entry # and press \bigcirc

 a. From the standby state, enter a phone number using your phone's keypad.

- b. Highlight and press or
- c. Follow the phone's prompts.
- 3. At the conclusion of a phone call, both incoming and outgoing, you have the option of saving that particular number.
 - a. Once you have ended your call, highlight and press or
 - b. Follow the phone's prompts.
- 4. a. From the menu, highlight **Call History** and press **(or)**.
 - b. Highlight Dutgoing Calls, Incoming Calls, or Missed Calls.
 - c. Highlight the number you want to save and press (κ) .
 - d. Highlight and press $\bigcirc \kappa$.
 - e. Follow the phone s prompts.

Adding Multiple Phone Numbers to an Existing Entry

Once an entry has been added to your phone book you can enter multiple phone numbers (up to 6) to that entry.

- Select the entry you width to add to your phone book you wish to add phone numbers to. (See "Find Name" for detailed instructions on selecting a phone book entry.)
- 2. Highlight de Phone and press ().
- 3. Enter phone number, highlight ext. Ster and press ().
- Highlight the appropriate label (Home, Work, Mobile, Pager, Fax or No Label) and press (.

Editing an Existing Phone Book Entry

To edit an existing phone book entry:

- 1. Select the entry you wish to edit (See "Find Name" for detailed instructions on selecting a phone book entry.)
- 2. Highlight , and press .
- 3. Highlight the feature (Phone # or want to edit and press .
- 4. Follow the phons's intuitive prompts.

Secret Phone Book Entries

Your Sprint PCS Phone allows you to make certain phone book entries "secret". Once "secret", the entry will still be displayed in your phone book, however, the entry's phone number will not be displayed. Your 4-digit lock code will need to be entered in order to call your "secret" entry.

To make a phone book entry secret:

- 1. Select an existing phone book entry (See "Find Name" for detailed instructions on selecting a phone book entry.)
- 2. Highlight $\boxed{}$, and press \bigcirc .
- 3. Highlight Secret, and press **OK**.
- 4. Highlight **1**, and press **()**.

To make a secret phone book entry not secret:

- Select the secret phone book entry you wish to change (See "Find Name" for detailed instructions on selecting a phone book entry.)
- 2. Highlight and press (••).
- 3. Enter your 4-digit lock code.
- 4. Highlight Secret and press ().
- 5. Highlight and press ().

Speed Dialing

Every phone book entry is assigned to an entry number or speed dialing number. To dial a phone book entry using the entry's speed dialing number, simply.

- 1. Dial the one digit speed dialing number (2 through 9) assigned to the phone book entry you wish to call.
- 2. Press (TALK) , or press and hold (OK) .

4-Digit Dialing

4-Digit dialing is another form of speed dialing. If you cannot remember your phone book entry's speed dialing number, but remember the last four digits of the entry's phone number, all you have to do is:

- 1. Dial the last four digits of a phone book entry's phone number.
- 2. Highlight 4-Digit Dial and press OK.

Find Phone Number

Your Sprint PCS Phone is so user-friendly it will even search for phone numbers containing certain numbers. For example, let's say you can only remember the first three numbers of the phone number you wish to call; your phone can pull up all the phone numbers that begin with those numbers in your phone book.

- 1. Dial the numbers.
- 2. Highlight **1**, and press **()**.
- 3. Using your rocker key (up/down.) scroll through the list of phone numbers containing the numbers you entered.
- 4. Highlight the number you wish to call and press \bigcirc .
- 5. Press (TALK), or press and hold (K).

Prepend Dialing

Prepend dialing allows you to prepend a phone number in your phone book with additional numbers that you, yourself can enter. For example, if your phone book entry was entered without an area code and you are out of town, you can prepend that entry with the appropriate area code. Another example would be if you wanted to make a phone call using a calling card. You would prepend the calling card number before the phone number of the person you want to call.

- 1. Select the phone book entry or call history using one of the previously described methods.
- 2. Highlight **Depend**, and press **OK**.
- 3. Enter the digits you wish to prepend.
- 4. Highlight \square , and press $\frown \kappa$.

Pause Feature

When you call automated systems (such as voicemail or credit card billing numbers,) you often have to enter a series of numbers. Instead of entering the numbers by hand, you can store the numbers in your phone book separated by special characters called pauses:

- Hard pauses-Once your call is connected, highlight
 Generation and press the ork key to send the next string of numbers.
- 2 Second Pauses Your phone will send the next set of numbers after two seconds. Each additional timed pause will add two more seconds to the pause length.

Storing a Number Writh Pauses

- 1. Enter the number you wish to call.
- 2. Highlight land Pauce or 2 Second Pauce, and press ().
- 3. Enter additional numbers (e.g. pin number, credit card number.)
- 4. To dial the number, highlight and press (K). To save the number in your phone book, highlight (K), press (K), and follow the phone's prompts.

My Phone Number

Sprint PCS has provided an easy way to display your phone number in case you forget it.

- 1. From the menu, highlight \bigcirc 800k, and press \bigcirc
- Highlight Phone A, and press .
 (Note: An easy way to remember your number and keep it displayed at all times is to set your phone number as your Greeting/Banner. For information on how to change your greeting, see page 26.)

Sounds and Display: Volume (Ringer and Key Beep)

- 1. From the menu, highlight \bigcirc , and press \bigcirc .
- 2. Highlight **Column**, and press **OK**).
- 3. Highlight linger or Key Boer, and press (K).
- Highlight III, Medium, Col, Off or Vibrate (Not applicable to Key Bee,) and press OK.

Ringer Types

Your Sprint PCS Phone provides you with multiple ringer types. Besides being fun to play with, this allows you to assign different ring types for Voice Calls (With Caller ID, No Caller ID, or Roaming.) Messages (Voicemail or Page/Text,) and Alarms. You can also customize different rings for individual phone book entries, making it easy to distinguish who is calling without having to look a your phone. Select a ring type by following these simple directions:

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight Line Line, and press (K).

or \mathbb{C} and press \mathbb{C}^{K} .

- Depending on which option you want to change, highlight
 Unice Calls or Messages, and press OK.
- 3a. If you selected Voice Calls:
 Highlight With Caller ID, Rostricted ID, No Caller ID
- 3b. If you selected Messages:Highlight Loicneil, Paterlext, and press (K).
- Using your rocker key scroll through the list of ring types.
 Once you've highlighted the ring you want, press OK.

Tone Length

Your phone provides you with two customization options for the tone length. To customize the tone length of DTMF tones sent after a call is connected:

- 1. From the menu, highlight **founds** and press \bigcirc .
- 2. Highlight **and press (K)**.
- 3. Depending on your preference, highlight either there and press or .

Security: Lock Phone

You must enter your lock code to view the security menu. Typical default values are either the last 4 digits of your phone number or 0000. When your phone is locked, you can only make emergency calls (9-1-1 and your user-specified Special Numbers) or receive incoming calls. All other functions of the phone are disabled. If you forget your lock code, take your phone to the nearest Sprint PCS Center.

- 1. Highlight \bigcirc and press \bigcirc .
- 2. Enter lock code.
- 3. Highlight Lock Phone and press **OK**.
- 4. Depending on your preference, highlight either **Cold How** or **On Power UP** and press **OK**.

Unlock Phone

- 1. Highlight and press (K).
- 2. Enter lock code.

Change Lock

To change your Lock Code:

- 1. From the security menu, highlight \bigcirc and press \bigcirc .
- 2. Enter lock code.

Re-enter your code and your new code will be saved.

Restrict Calls

- 1. Highlight Security and press ().
- 2. Enter lock code.
- 3. Highlight Dut going or Incoming and press ()
- 4. Highlight Allow All, PhoneBook Only or Special # Only and press (.

By selecting "PhoneBook Only", your phone will restrict you from making or receiving calls to any number other than your phone book entries. By selecting "Special# Only", you will not be able to make or receive calls to any number other than special numbers.

Note: Emergency call can still be made in this state.

To deactivate Restrict Calls:

- 1. Highlight Security and press ().
- 2. Enter lock code.
- 3. Highlight and press **(K)**.
- 4. Highlight and press or

Special Numbers

This feature allows you to store 3 important phone numbers that you would like access to even if your phone is locked. To add a phone number to your Special Numbers:

- From the security menu, highlight Special #s and press
 OK.
- 2. Highlight the entry number where you would like to store the number and press \bigcirc .
- 3. Enter the phone number.
- 4. Highlight and press or

Erase Phone Book

To erase the entire phone book:

- 1. Highlight Security and press ().
- 2. Enter lock code.
- 3. Highlight **Chase PhoneBook** and press **(K)**.
- 4. If you're sure you want to erase your phone book, highlight

Reset Phone

Resetting your phone will restore all the factory defaults, including ringer types, display settings, etc. However, your Call History, Phone Book and Messages will not be affected.

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Enter your 4-digit lock code and the security menu will appear.

- From the security menu, highlight Reset. Phone and press
 OK.
- 4. If you're sure you want to reset your phone, highlight and press .

KeyGuard

KeyGuard allows you to keep the phone in your pocket or purse without the worry of accidentally dialing a number. While in this mode, incoming calls can be answered by opening the flip. To activate KeyGuard from the menu, highlight **KeyGuard** and press **OK**. To disable KeyGuard, press and hold **CLR** for about two seconds.

Auto Answer For The Hands-Free Car Kit

While your phone is connected to your Sprint PCS Hands-Free Car Kit you can set your phone to auto answer. This feature will enable your phone to answer incoming calls automatically after 1 ring or 3 rings; you don not have to press anything. (WARNING: While your phone is in the Auto Answer mode your phone will answer incoming calls regardless of whether you are present or not.) To activate this feature:



- 2. Highlight **Dutter and press OK**.
- 3. Highlight **King** or **S** Rings and press **()**.

To disable Auto Answer, simply follow steps 1-2 and select Off.

Any Key Answer

Your phone can be set to answer incoming calls by pressing any key (Not including the \bigcirc key, rocker key, or volume keys.) To customize your phone to function this way, follow these simple instructions:

- 1. From the menu, highlight \bigcirc and press \bigcirc .
- 2. Highlight Angles Angles and press ().
- 3. Highlight \bigcirc and press \bigcirc .

Accessories.



Lilon Batteries

Two types of LiIon batteries are available for use with your Sprint PCS Phone[™].

- Standard LiIon Battery SCP-02LBPS
- Extended LiIon Battery SCP-02LBPL

Figure 1: Standard and Extended Batteries



AC Adapter

The AC adapter plugs into a wall outlet and enables you to charge your Sprint PCS Phone at your home or office, or when traveling. Figure 2: AC Adapter: SCP-01ADT



Cigarette Lighter Adapter

The cigarette lighter adapter charges your Sprint PCS Phone in a vehicle from a vehicle cigarette lighter socket while driving. Figure 3: Cigarette Lighter Adapter: SCP-02CLA



Dual-Slot Desktop Charger

The dual-slot desktop charger charges the battery at your home or office. Figure 4: Dual-Slot Desktop Charger: SCP-02DTC



Leather Case

The leather case provides durability and convenience. Figure 5: Leather Case: SCP-02LC



Hand Strap

The hand strap provides convenience and safety while carrying or using your Sprint PCS Phone. Figure 6: Hand Strap: SCP-01HS

Charging Times with Accessories.

	Standard Battery	Extended Battery
AC Adapte	r 4.0 hrs.	6.0 hrs.
Cigarette Lighter Adapte	r 4.0 hrs.	6.0 hrs.
Dual-Slot Desktop Charge	r 4.0 hrs.	6.0 hrs.

The accessories listed above are available for purchase at any Sprint PCS Center, or call the Sprint PCS Accessory Hotline[™] at 1-800-974-ACC1(2221).

Usage guidelines: All about performance and safety.

Keeping tabs on signal strength.

The voice quality of your Sprint PCS Phone will always be at its best when the antenna is fully raised. If you're inside a building, reception may be better near a window.

The quality of each call you make or receive depends on the signal strength in your area. Your phone will inform you of the current strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal. (See page 12 for an illustration of the signal strength indicators.)

Understanding Power Save mode.

If you're trying to use your phone in an area where the signal is too weak, the Power Save feature will automatically activate to conserve battery power when you've been unable to pick up a signal for 15 minutes. If your phone is on, it will periodically recheck service availability, or you can do so yourself manually by pressing any key. A message will be displayed on the screen any time Power Save has been activated.

Understanding how your phone operates.

Your Sprint PCS Phone is basically a radio transmitter and receiver. When it's turned on, it receives and transmits radio frequency (RF) signals. Your phone operates in the frequency range of 1.9 GHz and 800 MHz. When your phone is in use, the system handling your call controls the power level.

Radio frequency safety.

In 1991–1992, the Institute of Electrical and Electronics Engineers (IEEE) and the American National Standards Institute (ANSI) joined in updating ANSI's 1982 standard for safety levels with respect to human exposure to RF signals. More than 120 scientists, engineers and physicians from universities, government health agencies and industries developed this updated standard after reviewing the available body of research. In 1993, the Federal Communications Commission (FCC) adopted this updated standard in a regulation. In August 1996, the FCC adopted a hybrid standard consisting of the existing ANSI/IEEE standard and the guidelines published by the National Council of Radiation Protection and Measurements (NCRP).

The design of this Sprint PCS Phone complies with these updated standards. Of course, if you want to limit RF exposure even further than the updated standard, you can choose to control the duration of your calls and operate your phone in the most power-efficient manner.

Maintaining your phone's peak performance.

To operate your phone properly – that is, to maintain safe and satisfactory service – you should follow these rules:

- ▶ For best reception, fully extend the antenna.
- ▶ Hold the phone with the antenna up and over your shoulder.
- ▶ Do not hold the phone antenna at any time.
- ▶ Do not use the phone with a damaged antenna.
- Speak directly into the mouthpiece.

Avoid exposing your phone and accessories to rain or liquid spills. If your phone does get wet, turn the power off immediately and remove the battery. If it is inoperable, you should return it to a Sprint PCS Center or call Sprint PCS Customer Care for service.

Only authorized personnel should service your phone and its accessories. Faulty service may invalidate the warranty.

Protecting your battery.

For best battery performance, you should follow these guidelines:

- Use only SANYO-approved batteries (model numbers SCP-02LBPS and SCP-02LBPL) and AC adapter, cigarette lighter adapter, and desktop charger (model number SCP-01ADT for AC adapter; model number SCP-02CLA for cigarette lighter adapter; model number SCP-02DTC for desktop charger). These chargers are designed to maximize battery life. Using other batteries or chargers will invalidate your warranty and may cause damage as well.
- ► To avoid damage, charge the battery only in temperatures that range from 32°F to 104°F (0°C to 40°C).
- Do not use the battery charger in direct sunlight or in high humidity areas, such as the bathroom.
- ▶ Never dispose of the battery by incineration.
- Keep the metal contacts at the bottom of the battery clean.
- ▶ Do not attempt to disassemble or short-circuit the battery.
- You may need to recharge the battery if it has not been used for a long period of time.

- Replace the battery when it no longer provides acceptable performance. It can be recharged hundreds of times before it will need to be replaced.
- Do not store the battery in high temperature areas for long periods of time. Follow these storage rules:

Less than one month: $-4^{\circ}F$ to $131^{\circ}F$ ($-20^{\circ}C$ to $55^{\circ}C$) More than one month: $-4^{\circ}F$ to $95^{\circ}F$ ($-20^{\circ}C$ to $35^{\circ}C$)

Driving.

Using a wireless phone while driving is illegal in some states and countries. For your safety, become familiar with the laws and regulations for your area, and pull off the road and park if you need to make a call.

If you must use the phone while driving, purchase and have installed the optional Hands-Free Car Kit or the headset.



Disposal of Lithium Ion batteries.

This product contains a Lithium Ion battery. Please ensure that disposal of this battery is in accordance with applicable laws and regulations.

- Do not dispose of the battery in a fire; the cell may explode.
- Do not open or puncture the battery; the released electrolyte is corrosive and may cause damage to the eyes and skin. This substance also can be toxic if swallowed.

Following safety guidelines.

To operate your phone safely and efficiently, you should always follow any special regulations in a given area, and turn your phone off in areas where use is forbidden or when it may cause interference or danger.

Using your phone near other electronic devices.

Most modern electronic equipment is shielded from radio frequency (RF) signals. However, RF signals from PCS telephones may affect inadequately shielded electronic equipment.

RF signals may affect improperly installed or inadequately shielded electronic operating and entertainment systems in motor vehicles. Check with the manufacturer to determine if these systems are adequately shielded from external RF signals. You should also check with the manufacturer regarding any equipment that has been added to your vehicle. Consult the manufacturer of any personal medical devices (such as pacemakers and hearing aids) to determine if they are adequately shielded from external RF signals.

Turn off the phone in healthcare facilities and request permission before using the phone near medical equipment.

Turn off your phone before flying.

You should turn off your Sprint PCS Phone before boarding any aircraft. To prevent possible interference with aircraft systems, U.S. Federal Aviation Administration (FAA) regulations require you to have permission from a crew member to use your phone while the plane is on the ground. To prevent any risk of interference, FCC regulations prohibit using your phone while the plane is in the air.

Restricting children's access to your phone.

Your phone is not a toy, and should not be played with by children. They could hurt themselves and others, damage the phone or make calls that increase your telephone bills.

Turn off your phone in dangerous areas.

To avoid interfering with blasting operations, you should turn off your phone when in a blasting area or in other areas with signs indicating that two-way radios should be turned off. Construction crews often use remote-control RF devices to set off explosives.

Turn off your phone when you are in any area with a potentially explosive atmosphere. It is rare, but your phone or its accessories could generate sparks. Sparks could cause an explosion or a fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked. They include fueling areas such as gas stations; below deck on boats; fuel or chemical transfer or storage facilities; areas where the air contains chemicals or particles such as grain, dust or metal powders; and any other area where you would normally be advised to turn off your vehicle engine.

Do not transport or store flammable gas, liquid or explosives in the compartment of any vehicle that contains your phone or accessories.

Cautions.

Any changes or modifications to your Sprint PCS Phone not expressly approved in this document could void your warranty for this equipment and void your authority to operate this equipment. Use only approved **SANYO** batteries, antennas and chargers. The use of any other type of accessory may invalidate the warranty.

FCC notice.

The phone may cause TV or radio interference if used in close proximity to receiving equipment. The FCC can require you to stop using the telephone if such interference cannot be eliminated. If you need assistance, contact Sprint PCS Customer Care.

And last, but certainly not least, vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

PATENT INFORMATION

The products/Equipment described in the attached documentation are manufactured under one or more of the following U.S. Patents:

4,901,307,	D356,560,	5,506,865,	5,566,357,	5,608,722,
5,056,109,	5,408,697,	5,509,015,	5,568,483,	5,614,806,
5,099,204,	5,414,728,	5,509,035,	5,574,773,	5,617,060,
5,101,501,	5,414,796,	5,511,067,	5,574,987,	5,621,752,
5,103,459,	5,416,797,	5,511,073,	D375,740,	5,621,784,
5,107,225,	5,426,392,	5,513,176,	5,576,662,	5,621,853,
5,109,390,	5,437,055,	5,515,177,	5,577,022,	5,625,876,
5,193,094,	D361,065,	5,517,323,	5,577,265,	5,627,857,
5,228,054,	5,442,322,	5,519,761,	D375,937,	5,629,955,
5,257,283,	5,442,627,	5,528,593,	5,588,043,	5,629,957,
5,265,119,	5,452,473,	5,530,928,	D376,804,	5,638,412,
5,267,261,	5,461,639,	5,533,011,	5,589,756,	5,640,414,
5,267,262,	5,469,115,	5,535,239,	5,590,069,	5,642,398,
5,280,472,	5,469,471,	5,539,531,	5,590,406,	5,644,591,
5,283,536,	5,471,497,	5,544,196,	5,590,408,	5,644,596,
5,289,527,	5,475,870,	5,544,223,	5,592,548,	5,646,991,
5,307,405,	5,479,475,	5,546,459,	5,594,718,	5,652,814,
5,309,474,	5,483,696,	5,548,812,	5,596,570,	5,654,979,
5,337,338,	5,485,486,	5,559,881,	5,600,754,	5,655,220,
5,339,046,	5,487,175,	5,559,865,	5,602,834,	5,657,420,
5,341,456,	5,490,165,	5,561,618,	5,602,833,	5,659,569,
5,383,219,	5,497,395,	5,564,083,	5,603,096,	5,663,807,
5,392,287,	5,499,280,	5,566,000,	5,604,459,	Other patents
5,396,516,	5,504,773,	5,566,206,	5,604,730,	pending