

GcSdk Android Programmer Guide (GCPRN)



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Version No.	Date	Description
1.0.1	2017/2/28	First draft
1.1.7	2018/5/3	Fix some bug
2.0.1	2018/9/20	<ol style="list-style-type: none"> 1. Add some new function for string print 2. Add some new function for bitmap print 3. change all the function name from GCxxx to Gcxxx
2.0.2	2018/9/29	<ol style="list-style-type: none"> 1. Add function : GcSetMaxStrChar 2. Add print queue,the max queue number is the total of MaxStrChar and MaxBitmap,came from GcSetMaxStrChar and GcSetMaxBitmap,the default is 10,it mean the app can call GcPrintText 5 times and call GcPrintBitmap 5 times before printer finish;
2.0.3	2018/10/8	<ol style="list-style-type: none"> 1. Add function: GcSetBarcodeType 2. Add function: GcDrawBarcode
2.0.4	2018/10/11	<ol style="list-style-type: none"> 1.Fix the bug: hybrid printing (simultaneous printing of strings and pictures) may occur individual tickets are not printed when printing thousands of tickets. 2. Add GC_BMP_COLOR_BITMAP_II for GcPrintBitmap; use GC_BMP_COLOR_BITMAP for text bitmap by default,and use GC_BMP_COLOR_BITMAP_II for logo bitmap
2.0.5	2018/10/17	<ol style="list-style-type: none"> 1. Fix the bug: in some cases, the distance to walk paper is shortened. 2. Add Greek font Print.
2.0.6	2018/10/26	<ol style="list-style-type: none"> 1. Optimized bitmap processing algorithm 2. GcPrintBitmap do not occupy bitmap object,app can release bitmap after call GcPrintBitmap; 3. Change the default size of the max list buffer to save bitmap to 10, and also change the default size of the max list buffer to save string to 10;
2.0.7	2018/11/1	<ol style="list-style-type: none"> 1. Canceling the GC_BMP_MONO_DEFAULT parameter, When using the GC_BMP_MONO_DEFAULT parameter, the equivalent of using GC_BMP_COLOR_TEXT. 2. Change GcWalkPaper Function.The app don't need to wait for the print to finish when using GcWalkPaper.
2.0.8	2018/12/7	<ol style="list-style-type: none"> 1. Fix the bug: When two bitmap are printed continuously using GcPrintBitmap, and if the parameter bAutoWalkingPaper is false, and the height of the two bitmap is not a multiple of 8,

		there will be a gap between the two bitmap when printed out 2. Optimize Arabic Typesetting when GcDrawText
2.0.9	2019/1/8	Add function GCSetArabMode for print string when the string have arabic char
2.0.10	2019/3/28	Add function GcSetDefaultFonts for set default font,the default font is small font.
2.0.11	2019/6/28	Add a check for the string length of GcDrawText
2.0.12	2019/7/15	1. For GcDrawText,when the string has “\r\n”, which is printed with only one line, and the previous version is two lines. 2.For GcDrawText,support font which can be double height or double width,add parameter:GC_FONT_DoubleHeigh , GC_FONT_DoubleWidth 3. Updated libprn2_jni.so
2.0.13	2019/11/1	Add fault tolerance to string printing to avoid errors caused by calling GcPrintText directly without calling GcDrawText, The call order view “ Calling API function Flow ”
2.0.14	2020/1/16	Add font for small bold:GC_FONT_SmallBold
2.0.15	2020/2/17	1.Modify bug for Thai language (need to update libprn2_jni.so) 2.Support build for 64bit system 3.Modify the returned content of GcGetPrinterVer and GcGetJniVer when the printer is busy. it does not return empty and returns "BUSY" string for busy;
2.0.16	2020/3/12	Add GcDrawFormatText to format and draw text;
2.0.17	2020/5/9	Add GcPrintPicture to support printing large bitmap (unlimited size, as long as the system memory supports),for subsequent bitmap printing, it is recommended to use GcPrintPicture instead of GcPrintBitmap. Please check the instructions of gcprintpicture to see their differences. Disable GcSetMaxBitmap and GcSetMaxStrChar, use GcSetMaxSize instead, and no longer distinguish bitmap and string sizes
2.0.18	2020/7/17	Fix the bug caused by 2.0.17: When GcPrintPicture is used, but the parameter bRecycleAfterPrint is false, the paper will not be automatically fed after printing(bAutoWalkingPaper is true)
2.0.19	2021/5/11	1. add Inverse char: Unicode_Inverse 2. add font type for double height and double width 3. add interface: isDeviceSupportPrint 4. add interface: GcSetThreadListener(GCThreadListener threadListener) 5. add interface: GcSetRealTimeMonitoringStatus

2.0.20	2021/7/7	<p>Add New API: GcSetLog(boolean isOn) it can open the log when set isOn to true. Example: GcSetLog(true) Call this API after GcPRNInit();</p>
2.0.21	2021/12/7	<p>1.Support GT81P printing 2.Add new API: GcSetInsideCmd(int isSave, int value) for set some command to printer; GcSetInsideDensity(int isSave, int value) for set special density to printer; Call these API after GcPRNInit() when using.</p>
2.0.22	2022/1/25	<p>1.add api: GcSetFontType set different font type: GC_FONT_TYPE_GC_FONT_I GC_FONT_TYPE_GC_FONT_II --- new font GC_FONT_TYPE_SYS_FONT --- system font 2. add api: GcSetFontTypeface for system font 3.update libprn2_jni.so for new font</p>
2.0.23	2022/2/16	<p>1.Added function: support printing QR code: GcSetBarcodeType(GCAndroidPrint,GC_BARCODE_QRCODE) Usage reference: GcDrawBarcode 2. Fix a bug in version 22: Individual content will be placed on a separate line when right aligned when font type is GC_FONT_TYPE_GC_FONT_II</p>
2.0.24	2022/2/21	<p>1. The system print mode is added. In this mode, the app does not need to deal with the printing status, such as paper shortage and overheating, and the system printing will automatically prompt. How to enable this mode: during initialization, pass in the context parameter, such as GcPRNInit (context), and set GcSetMsgHandler (null). If no context is passed, it defaults to the previous local printing mode(refer to GcPRNInit). 2. Add new api for system print mode: GcSetPrintMusic --- play music when printing GcSetPrintStatusTips --- play tone and tips when paper shortage or overheating GcSetReprint --- Reprint after paper shortage</p>

1. Introduction

This document describes the important notes for customers to design their applications.

This document can help user to quickly understand Android GcSdk interface. With the help of this document and other GcSdk application notes, users can use GoodCom Android Printer to design and set-up mobile applications quickly.

Support terminal:

GcSdk can be used for GoodCom terminal:

GT90/GT91/GT81/GT81P --- Portable type with display

Environment

Program language: Java language

Editor of emulator platform: Eclipse Or Android studio

GcSDK contains content

libs\GCPRN.jar
libs\armeabi-v7a\libprn2_jni.so
ibs\arm64-v8a\libprn2_jni.so

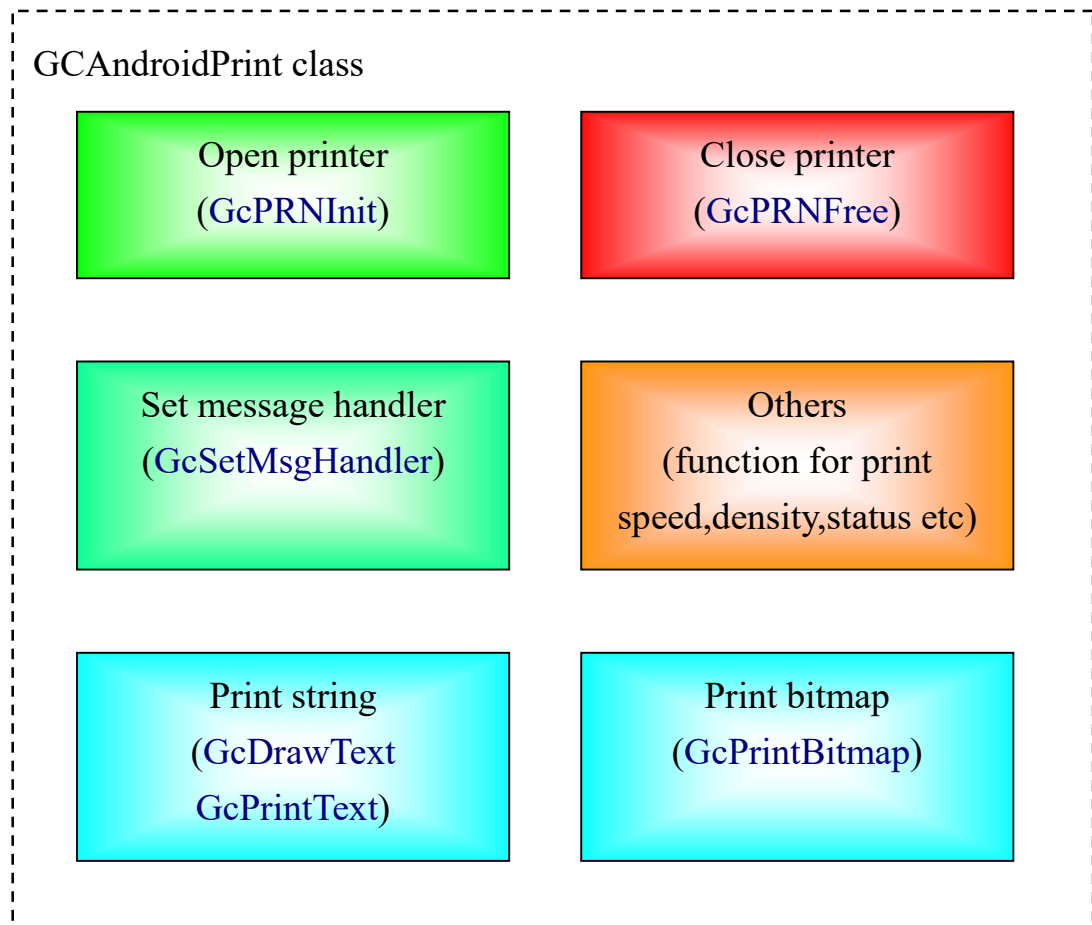
Path for Eclipse:

1.ProjectName\libs\GCPRN.jar
2.ProjectName\libs\armeabi\libprn2_jni.so
or ProjectName\libs\armeabi-v7a\libprn2_jni.so

Path for Android Studio:

1.ProjectName\app\libs\GCPRN.jar
2.ProjectName\app\src\main\JniLibs\armeabi-v7a\libprn2_jni.so
3.ProjectName\app\src\main\JniLibs\arm64-v8a\libprn2_jni.so
4.Add string to build.gradle file:
dependencies{
.....
api files('libs/GCPRN.jar')
}

2. GcPRN function module diagram



GcPRN sdk is a android class, written by java language.

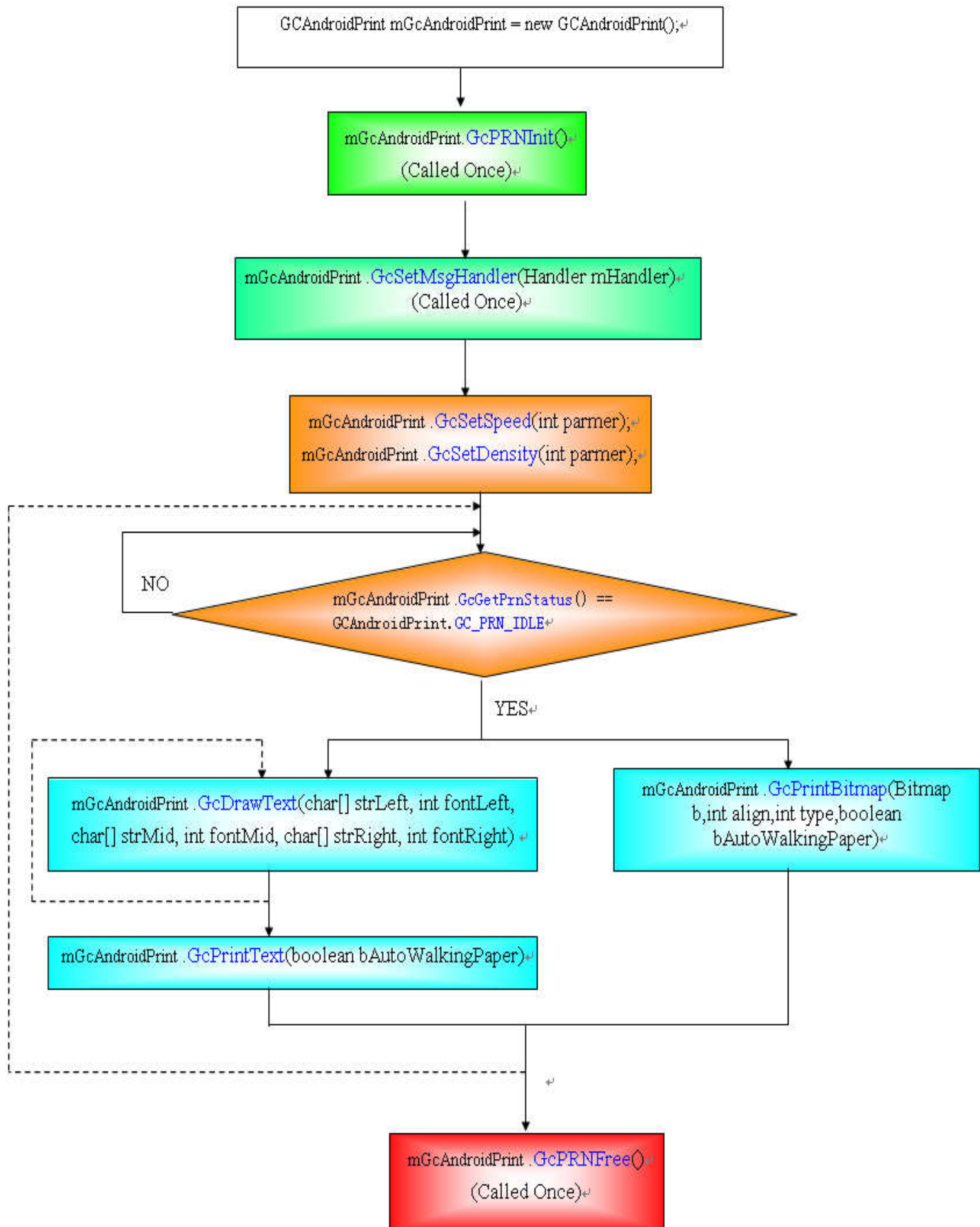
The class name is GCAndroidPrint.

It has many module function,

The main function is:

1. Start up the printer, the function is **GcPRNInit**. It is used by the app at the first time when it starts up printer.
2. Set message handler: **GcSetMsgHandler**. The second function needs to be called by the App. It is used to set message handler. When the printer lacks in the paper or the temperature is too high, or the printing is completed, it will send message to the App by the message handler. App should deal with the message. e.g. prompt the note or make a warning tone.
3. Set parameter function. e.g. **GcSetSpeed** to set printer speed, **GcSetDensity** to set printer density;
4. Print strings & print bitmap. The functions are **GcDrawText**, **GcPrintText** and **GcPrintBitmap**
5. Release printer, the function is **GcPRNFree**;

Calling API function Flow:



3. INIT/Release Functions

Functions
<code>void GcPRNInit()</code>
<code>void GcPRNFree()</code>
<code>boolean isDeviceSupportPrint()</code>
<code>void GcSetRealTimeMonitoringStatus(boolean isOn)</code>
<code>void GcSetThreadListener(GCThreadListener threadListener)</code>

3.1 GcPRNInit

void GcPRNInit () --- Local print mode		
void GcPRNInit (Context context) --- System print mode		
Description	Initialize the printer. This function shall be called before all other api function and called for one time.	
Parameters	NULL or Context	<p>When the parameter is empty, it means local printing mode</p> <p>When the parameter is context, it means the system printing mode. In this mode, the app does not need to process the printing status, and there is no need to judge whether the paper is missing, overheated or printing is completed.</p> <p><code>GcSetMsgHandler</code> (null) needs to be set.</p>
Returns	NULL	

Example 1: Local print mode

```

GCAndroidPrint mGcAndroidPrint = new GCAndroidPrint();
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_gc_printer);

```

```
GcMsgHandler mGcMsgHandler = new GcMsgHandler(this.getMainLooper());
mGcAndroidPrint.GcPRNInit();
mGcAndroidPrint.GcSetMsgHandler(mGcMsgHandler);
.....
}
```

Example 2: System print mode

```
GCAndroidPrint mGcAndroidPrint = new GCAndroidPrint();
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_gc_printer);

    mGcAndroidPrint.GcPRNInit(this);
    mGcAndroidPrint.GcSetMsgHandler(null);
    .....
}
```

3.2 GcPRNFree

void GcPRNFree()		
Description	Release printer. The function shall be called when the printer is not in use. Except GcPRNInit(), all other functions cannot be called after this function is called.	
Parameters	NULL	
Returns	NULL	

Example:

```
protected void onDestroy() {
    mGcAndroidPrint.GcPRNFree();
    super.onDestroy();
};
```

3.3 isDeviceSupportPrint

boolean isDeviceSupportPrint ()		
Description	Check pos device to find does it support print,when app run on different device,this function can be used to check which device support print.	
Parameters	NULL	
Returns	true or false	

Example:
<pre> mGcAndroidPrint.GcPRNInit(); boolean isSupportPrint = mGcAndroidPrint.isDeviceSupportPrint() if (!isSupportPrint){ mGcAndroidPrint.GcPRNFree (); } else{ } </pre>

3.4 GcSetRealTimeMonitoringStatus

void GcSetRealTimeMonitoringStatus (boolean isOn)		
Description	Real time to monitor Temperature and parper status It can not read the temperature during printing data, if want to read temperature during printing data,it need to set realtime monitoring status.	
Parameters	boolean isOn	true to start realtime monitoring status false to stop realtime monitoring status default is false.
Returns	NULL	

Example:
<pre> mGcAndroidPrint.GcSetRealTimeMonitoringStatus(true); </pre>

3.5 GcSetThreadListener

void GcSetThreadListener(GCThreadListener threadListener)		
Description	Set thread listener and return the Runnable of print thread at callback; When printer print data,it will run a thread to do that.If app have thread pool,this function can let app use thread pool to run the print thread.	
Parameters	GCThreadListener threadListener	Thread listener
Returns		

Example:
<pre> mGcAndroidPrint = new GCAndroidPrint(); mGcAndroidPrint.GcSetThreadListener(new GCThreadListener() { @Override public void onStartThread(Runnable runnable) { if (runnable!=null){ // ...run the runnable use thread pool } } }); </pre>
<pre> //the defined of GCAndroidPrint public interface GCThreadListener { void onStartThread(Runnable var1); } </pre>

4. MSG Handler Functions

Functions
void GcSetMsgHandler(Handler mHandler);

4.1 MSG Handler Type

Macros

```
public static final int GC_MSG_FINISH = 0; //print finish
```

```
public static final int GC_MSG_PAPER = 1; //miss paper
```

```
public static final int GC_MSG_HOT = 2; //printer is too hot
```

```
public static final int GC_MSG_NORMAL = 3; //printer is from miss paper/too hot status go to normal
```

4.2 GcSetMsgHandler

```
void GcSetMsgHandler(Handler mHandler)
```

Description	set message handler,it shall be called after GcPRNInit(); it will send message to mHandler;	
Parameters	Handler mHandler	The message handler
Returns	NULL	

Example:

```
GcMsgHandler mGcMsgHandler = new GcMsgHandler(this.getMainLooper());
```

```
mGcAndroidPrint.GcSetMsgHandler(mGcMsgHandler);
```

```
public class GcMsgHandler extends Handler{

    public GcMsgHandler(Looper L)
    {
        super(L);
    }

    @Override
    public void handleMessage(Message msg)
    {
        switch(msg.what)
        {
            case GCAndroidPrint.GC_MSG_PAPER:
                Toast.makeText(TestGcPrinter.this, "No paper!", 2000).show();
                break;
        }
    }
}
```

```

        case GCAndroidPrint.GC_MSG_HOT:
            Toast.makeText(TestGcPrinter.this, "Too hot!", 2000).show();
            break;
        case GCAndroidPrint.GC_MSG_FINISH:
            break;
        default:
            break;
    }
}
}

```

5. PARAMETER Functions

Functions
<code>void GcSetSpeed(int parmer)</code>
<code>int GcGetSpeed ()</code>
<code>void GcSetDensity (int parmer)</code>
<code>int GcGetDensity ()</code>
<code>void GcSetLog (boolean isOn)</code>
<code>void GcSetFontType (int type)</code>
<code>void GcSetFontTypeface (Typeface typeface)</code>
<code>void GcSetPrintMusic(int musicType)</code>
<code>void GcSetPrintStatusTips(boolean isDisplay,boolean isPlayTone)</code>
<code>void GcSetReprint(int type)</code>

5.1 GcSetSpeed

<code>void GcSetSpeed(int parmer)</code>		
Description	Set print speed	
Parameters	<code>int parmer</code>	Print speed,the range is 0 - 9
Returns	NULL	



Example:

```
mGcAndroidPrint.GcSetSpeed(9);
```

5.2 GcGetSpeed

int GcGetSpeed ()

Description	Get print speed	
Parameters	NULL	
Returns	The print speed	

Example:

```
int speed = mGcAndroidPrint.GcGetSpeed();
```

5.3 GcSetDensity

void GcSetDensity (int parmer)

Description	Set print density	
Parameters	int parmer	Print density,the range is 0 - 9
Returns	NULL	

Example:

```
mGcAndroidPrint. GcSetDensity (5);
```

5.4 GcGetDensity

int GcGetDensity ()

Description	Get print density
--------------------	-------------------



Parameters	NULL	
Returns	The print density	

Example:

```
int density = mGcAndroidPrint.GcGetDensity ();
```

5.5 GcSetLog

void GcSetLog(boolean isOn)

Description	Start or stop log	
Parameters	boolean isOn	true: open log false: close log
Returns	NULL	

Example:

```
mGcAndroidPrint.GcSetLog(true);
```

5.6 GcSetFontType

void GcSetFontType(int type)

Description	Set font type	
Parameters	int type	GC_FONT_TYPE_GC_FONT_I GC_FONT_TYPE_GC_FONT_II GC_FONT_TYPE_SYS_FONT
Returns	NULL	

Example:

```
mGcAndroidPrint.GcPRNInit();  
mGcAndroidPrint.GcSetFontType(GCAndroidPrint.GC_FONT_TYPE_GC_FONT_II);
```


5.7 GcSetFontTypeface

void GcSetFontTypeface(Typeface typeface)		
Description	Use the built-in resource TTF file to set the font, Valid when GC_FONT_TYPE_SYS_FONT is selected using GcSetFontType	
Parameters	Typeface typeface	get Type face from resource
Returns	NULL	

Example:
<pre> mGcAndroidPrint.GcPRNInit(); mGcAndroidPrint.GcSetFontType(GCAndroidPrint.GC_FONT_TYPE_SYS_FONT); try { Typeface typeface=Typeface.createFromAsset(getAssets(),"gcfont.ttf"); mGcAndroidPrint.GcSetFontTypeface(typeface); } catch (Exception e){ e.printStackTrace(); } </pre>

5.8 GcSetPrintMusic

void GcSetPrintMusic(int musicType)		
Description	Set to play music. Only system print mode is valid(refer to GcPRNInit).	
Parameters	int musicType	<p>0 means no music is played when printing</p> <p>1-10 indicates that the corresponding music is played during printing</p> <p>default is 0</p>
Returns	NULL	

Example:

```
mGcAndroidPrint._GcSetPrintMusic(1);
```

5.9 GcSetPrintStatusTips

void GcSetPrintStatusTips(boolean isDisplay,boolean isPlayTone)		
Description	Set prompt mode for paper shortage or overheating. Only system print mode is valid(refer to GcPRNInit).	
Parameters	boolean isDisplay	Indicates whether there is a window prompt in case of paper shortage or overheating , true indicates display and false indicates no display default is true
	boolean isPlayTone	Indicates whether to play tone when the paper is out of paper or overheated. true indicates to play tone. false indicates not to play tone default is true
Returns	NULL	

Example:

```
mGcAndroidPrint.GcSetPrintStatusTips(true,true);
```

5.10 GcSetRePrint

void GcSetReprint(int type)	
Description	Set reprint type after Paper shortage. Only system print mode is valid(refer to GcPRNInit).



Parameters	<code>int</code> type	0 means don't reprint 1 means reprinting after paper shortage default is 1
Returns	NULL	

Example:

```
mGcAndroidPrint. GcSetReprint (1);
```

6. Status Functions

Functions

```
int GcGetPrnStatus()
```

```
String GetPRNLIBVer()
```

6.1 Status Type

Macros

```
public static final int GC_PRN_IDLE = 0; //mean the printer is idle,it can print now
```

```
public static final int GC_PRN_BUSY = 1; //printer is busy,it can't print new data now
```

```
public static final int GC_PRN_PAPER = 2; //printer miss paper
```

```
public static final int GC_PRN_HOT = 3; //printer is too hot
```

6.2 GcGetPrnStatus



int GcGetPrnStatus()		
Description	Get the print status	
Parameters	NULL	
Returns	The status of printer. Please refer to the defined status type .	

Example:
<pre> if(mGcAndroidPrint.GcGetPrnStatus () != GCAndroidPrint.GC_PRN_IDLE) { Toast.makeText(TestGcPrinter.this, "Busy ,please wait.", 2000).show(); } else { } </pre>

6.3 GetPRNLIBVer

String GetPRNLIBVer()		
Description	Get the printer lib version	
Parameters	NULL	
Returns	The sdk lib version string of printer	

Example:
<pre> String str = mGcAndroidPrint.GetPRNLIBVer(); if((str != null)&&(str != "")){ } </pre>

7.PRINT

Modules

PRINT Type
PRINT String Functions
PRINT Bitmap Functions
OTHERS

7.1 PRINT Type

Macros
public static final int GC_FONT_Defaultt = 0;
public static final int GC_FONT_Small = 1;
public static final int GC_FONT_Medium = 2;
public static final int GC_FONT_Big = 3;
public static final int GC_FONT_DoubleHeight = 4;
public static final int GC_FONT_DoubleWidth = 5;
public static final int GC_FONT_SmallBold = 6;
public static final int GC_ALIGN_Left = 1;
public static final int GC_ALIGN_Center = 2;
public static final int GC_ALIGN_Right = 3;
public static final int GC_BMP_COLOR_TEXT = 0;
public static final int GC_BMP_COLOR_BITMAP = 1;
public static final int GC_BMP_COLOR_BITMAP_II = 3;
public static final int GC_LANG_DEFAULT=0;
public static final int GC_LANG_ARAB=1;
public static final int GC_LANG_THAI=2;
public static final int GC_LANG_FLAG_PERSIAN = 0x80;
public static final int GC_BARCODE_UPCA=0;
public static final int GC_BARCODE_UPCE=1;
public static final int GC_BARCODE_EAN8=2;

public static final int <i>GC_BARCODE_EAN13</i> =3;
public static final int <i>GC_BARCODE_CODE128</i> =4;
public static final int <i>GC_BARCODE_CODE39</i> =5;
public static final int <i>GC_BARCODE_CODEBAR</i> =6;
public static final int <i>GC_BARCODE_ITF</i> =7;
public static final int <i>GC_BARCODE_CODE93</i> =8;
public static final int <i>GC_BARCODE_QRCODE</i> =0x80;
public static final int <i>GC_FONT_TYPE_GC_FONT_I</i> =0;
public static final int <i>GC_FONT_TYPE_GC_FONT_II</i> =1;
public static final int <i>GC_FONT_TYPE_SYS_FONT</i> =2;

7.2 Print String Functions

Functions
int <i>GcDrawText</i> (char[] strLeft, int fontLeft, char[] strMid, int fontMid, char[] strRight, int fontRight)
boolean <i>GcPrintText</i> (boolean bAutoWalkingPaper)
void <i>GcSeLanguageType</i> (int type,int flag)
void <i>GcSetMaxStrChar</i> (int maxNum)
void <i>GcSetBarcodeType</i> (int type)
int <i>GcDrawBarcode</i> (char[]strBarcode,int align)

7.2.1 GcDrawText

int GcDrawText(char[] strLeft, int fontLeft, char[] strMid, int fontMid, char[] strRight, int fontRight)		
Description	Draw one line of texts to the buffer. The text types can be either left-aligned texts, right-aligned texts or centralized texts, or a mixed with all of them. And the font size for each can be different.	
	Example:	
	name	number price
	chicken	1 3.00

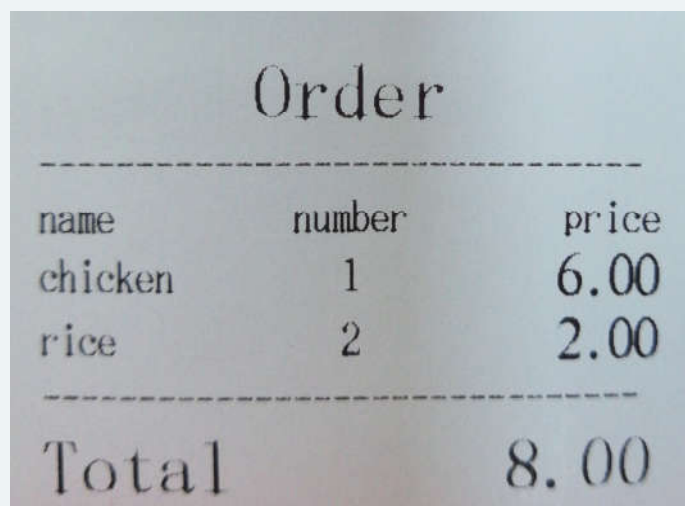
	This function is just for drawing the text to the cache, no for printing. Call this function GcPrintText will print out the cache.	
Parameters	<code>char[] strLeft</code>	String left Justified
	<code>int fontLeft</code>	The font size for string left Justified
	<code>char[] strMid</code>	Center string
	<code>int fontMid</code>	The font size for center string
	<code>char[] strRight</code>	String right-justified
	<code>int fontRight</code>	The font size for string right-justified
Returns	The length of the string	

Example:

```

mGcAndroidPrint.GcDrawText(null, 0, "Order".toCharArray(), GCAndroidPrint.GC_FONT_Big, null, 0);
mGcAndroidPrint.GcDrawText("-----".toCharArray(), 0, null, 0, null, 0);
mGcAndroidPrint.GcDrawText("name".toCharArray(), 0, "number".toCharArray(), 0,
"price".toCharArray(), 0);
mGcAndroidPrint.GcDrawText("chicken".toCharArray(), 0, "1".toCharArray(), 0, "6.00".toCharArray(),
GCAndroidPrint.GC_FONT_Medium);
mGcAndroidPrint.GcDrawText("rice".toCharArray(), 0, "2".toCharArray(), 0, "2.00".toCharArray(),
GCAndroidPrint.GC_FONT_Medium);
mGcAndroidPrint.GcDrawText("-----".toCharArray(), 0, null, 0, null, 0);
mGcAndroidPrint.GcDrawText("Total".toCharArray(), GCAndroidPrint.GC_FONT_Big, null, 0,
"8.00".toCharArray(), GCAndroidPrint.GC_FONT_Big);
mGcAndroidPrint.GcPrintText(true);

```



7.2.2 GcDrawFormatText

int GcDrawFormatText (char[] strText, char[] newLine)		
Description	Format the string and draw them to the buffer. When the string have special char,it will be format: Example: The string is:”\-\\r\\MThis is a test\\r\\-\\r” Then this string will be format to: ----- 	

Example:

```
mGcAndroidPrint.GcDrawFormatText (“\r\MThis is a test\r\r”, null);
```


7.2.3 GcPrintText

boolean GcPrintText(boolean bAutoWalkingPaper)		
Description	Print out the text cache, the function GcDrawText shall be used before use this function.	
Parameters	boolean bAutoWalkingPaper	<p>The parameter is for auto roll out the paper after printing the texts. If it is for a complete receipt (i.e. it does not require the user to interact when printing the receipt), the printer should roll out the paper after the contents are printed out. While if it requires the user to interact (e.g. press any key or button) during the printing, the printer does not require to roll out paper when it waits for user to interact. But it should roll out paper after the whole receipt is printed out.</p> <p>true: auto walk paper after print out text false: didn't auto walk paper after print out text</p>
Returns	false : fail, can't print true : start print	

Example:
mGcAndroidPrint.GcPrintText(true);

7.2.4 GcSetLanguageType

void GcSetLanguageType(int type, int flag)	
Description	It is to set language. Even though the language of Arabic, Persian and Thai are not supported by default, they can be supported by setting the appropriate language.

Parameters	int type	Language type. It can be: GC_LANG_DEFAULT : default language GC_LANG_ARAB: Arabic or Persian language GC_LANG_THAI : Thai language
	int flag	Language flag,it will be 0 or GC_LANG_FLAG_PERSIAN When the type is GC_LANG_ARAB and flag is 0,it mean it support Arabic; When the type is GC_LANG_ARAB and flag is GC_LANG_FLAG_PERSIAN ,it mean it support Persian.
Returns	NULL	

Example:

```
mGcAndroidPrint.GcSeLanguageType(GCAndroidPrint.GC_LANG_ARAB,0);
```

7.2.5 GcSetMaxStrChar

Void GcSetMaxStrChar(int maxNum)		
Description	The max list buffer to save string,it is print string queue. When the printer prints bitmap or string, the app can also call GcPrintText to save the new string to queue. After the print is completed, it will pritrn the string from the queue. The default is 5,it mean the app can call GcPrintText 5 times before printer finish print. Disabled after release 2.0.17	
Parameters	int maxNum	The number to set the max list buffer,print queue
Returns	NULL	

Example:

```
mGcAndroidPrint. GcPrintText(10);
```

7.2.6 GcSetBarcodeType

void GcSetBarcodeType(int type)	
Description	It is to set barcode ttype.

	It just need to be called one time after GcPRNInit ;	
Parameters	int type	barcode type. It can be: <i>GC_BARCODE_UPCA</i> : upca <i>GC_BARCODE_UPCE</i> : upce <i>GC_BARCODE_EAN8</i> : EAN8 <i>GC_BARCODE_EAN13</i> : EAN13 <i>GC_BARCODE_CODE128</i> : CODE 128 <i>GC_BARCODE_CODE39</i> : CODE 39 <i>GC_BARCODE_CODEBAR</i> : CODE BAR <i>GC_BARCODE_ITF</i> : ITF <i>GC_BARCODE_CODE93</i> : CODE 93
Returns	NULL	

Example:
<pre>mGcAndroidPrint.GcSetBarcodeType(GcAndroidPrint.<i>GC_BARCODE_CODE93</i>);</pre>

7.2.7 GcDrawBarcode

int GcDrawBarcode (char[]strBarcode,int align)		
Description	Draw barcode texts to the buffer. The barcode types can be set by GcSetBarcodeType This function is just for drawing the barcode text to the cache, no for printing. Call this function GcPrintText will print out the cache.	
Parameters	char[] strBarcode	String for barcode
	int align	barcode align. When the width of the barcode is less than 384 dots, this parameter will work. It can be: <i>GC_ALIGN_Left</i> <i>GC_ALIGN_Center</i> <i>GC_ALIGN_Right</i> Default is <i>GC_ALIGN_Left</i>
Returns	The length of the string	

Example:

```
GCAndroidPrint mGcAndroidPrint = new GCAndroidPrint();
mGcAndroidPrint.GcPRNInit();

mGcAndroidPrint.GcSetBarcodeType(GCAndroidPrint.GC_BARCODE_CODE93);
```

```
mGcAndroidPrint.GcDrawBarcode("863022030869323".toCharArray(),
GCAndroidPrint.GC_ALIGN_Center);
mGcAndroidPrint.GcDrawText(null, 0, "863022030869323".toCharArray(),0,null,0);

mGcAndroidPrint.GcPrintText(true);
```

7.2.8 GcSetArabMode

void GcSetArabMode(int mode)		
Description	It is used to set the mode for arabic language. when the print string have Arabic or Persian,printer will auto right align,and english string will also right align,but if the print string havn' t Arabic or Persian,the english will not right align;if you want to let the english string also right align,call this function and set the parameter to GC_ARAB_MODE_ON;	
Parameters	int mode	Language type. It can be: GC_ARAB_MODE_AUTO : auto detect language GC_ARAB_MODE_ON: arabic mode on,all string right align; GC_ARAB_MODE_OFF: arabic mode off,all string left align;
Returns	NULL	



Example:

```
mGcAndroidPrint. GcSetArabMode (GcAndroidPrint. GC_ARAB_MODE_ON);
```

7.2.9 GcSetDefaultFonts

void GcSetDefaultFonts(int font)		
Description	Set the default font size	
Parameters	int font	It will be as follow: 0: Small font 1: Small Bold font 2: Medium font 3: Big font
Returns	NULL	

Example:

```
mGcAndroidPrint. GcSetDefaultFonts(2);
```

7.3 Print Bitmap Functions

Functions

`boolean GcPrintBitmap(Bitmap b,int align,int type,boolean bAutoWalkingPaper)`

`boolean GcPrintBitmap(Bitmap b,int align,boolean bAutoWalkingPaper)`

`boolean GcPrintBitmap(Bitmap b,int align)`

`boolean GcPrintBitmap(Bitmap b)`

`void GcSetMaxSize(int maxNum)`

`boolean GcPrintPicture(Bitmap b,int align,int type,boolean bAutoWalkingPaper, boolean bRecycleAfterPrint)`

`boolean GcPrintPicture(Bitmap b,int align,int type,boolean bAutoWalkingPaper)`

`boolean GcPrintPicture(Bitmap b,int align,int type)`

`boolean GcPrintPicture(Bitmap b,int align)`

`boolean GcPrintPicture(Bitmap b)`

7.3.1 GcPrintBitmap I

`boolean GcPrintBitmap(Bitmap b,int align,int type,boolean bAutoWalkingPaper)`

Description	The printer will print after calling this function. But if the print is already started before calling this function, the bitmap will be saved to the cache, and print out the bitmap after the whole printing is completed	
Parameters	Bitmap b	Bitmap
	int align	Bitmap align. When the width of the bitmap is less than 384 dots, this parameter will work. It can be: <i>GC_ALIGN_Left</i> <i>GC_ALIGN_Center</i> <i>GC_ALIGN_Right</i>
	int type	The bitmap can be color type or mono type. But for printed on receipt, it can only be mono. So the type decides the effect for the print. They type can be: <i>GC_BMP_COLOR_TEXT</i> <i>If the color bitmap is text bitmap,use this type</i> <i>GC_BMP_COLOR_BITMAP</i> <i>If the color bitmap is logo bitmap,use this type</i> <i>GC_BMP_MONO_DEFAULT</i> <i>If the bitmap is mono color bitmap,use this type</i>

	boolean bAutoWalkingPaper	This parameter is to auto roll out the paper after printing bitmap. true : it means auto roll out paper after printing out bitmap false : it means it cannot auto roll out paper after printing out bitmap
Returns	false : can't be printed true : can be printed	



Example:

Example One:

```
mGcAndroidPrint.GcPrintBitmap(bmp,
GCAndroidPrint.GC_ALIGN_Center,GCAndroidPrint.GC_BMP_COLOR_BITMAP, true);
```

source bitmap:

print out bitmap:

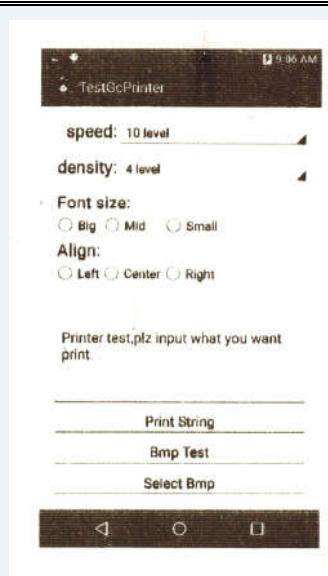
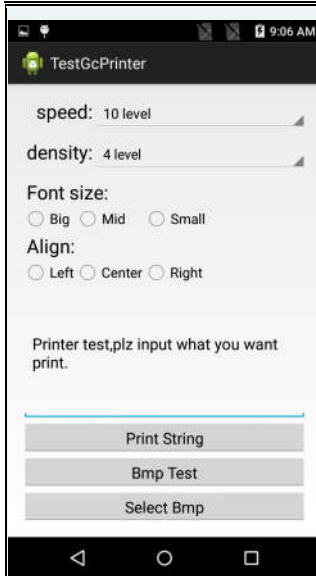



Example Two:

```
mGcAndroidPrint.GcPrintBitmap(bmp,
GCAndroidPrint.GC_ALIGN_Center,GCAndroidPrint.GC_BMP_COLOR_TEXT, true);
```

source bitmap:

print out bitmap:

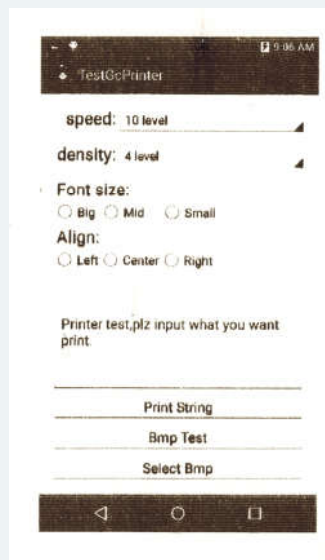
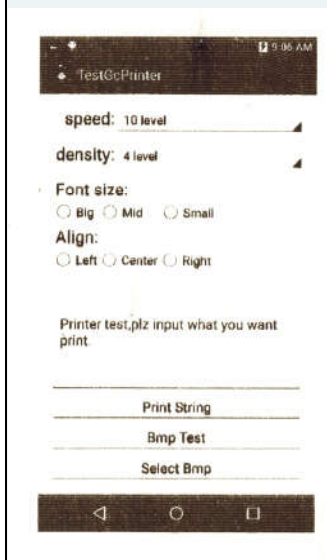


Example Three:

mGcAndroidPrint.**GcPrintBitmap**(bmp,
GCAndroidPrint.GC_ALIGN_Center,GCAndroidPrint.GC_BMP_MONO_DEFAULT, true);

Source bitmap:

print out bitmap:



7.3.2 GcPrintBitmap II

boolean GcPrintBitmap(Bitmap b,int align,boolean bAutoWalkingPaper)		
Description	The printer will print after calling this function. But if the print is already started before calling this function, the bitmap will be saved to the cache, and print out the bitmap after the whole printing is completed	
Parameters	Bitmap b	Bitmap
	int align	Bitmap align. When the width of the bitmap is less than 384 dots, this parameter will work. It can be: <i>GC_ALIGN_Left</i> <i>GC_ALIGN_Center</i> <i>GC_ALIGN_Right</i>
	boolean bAutoWalkingPaper	This parameter is to auto roll out the paper after printing bitmap. true: it means auto roll out paper after printing out bitmap false: it means it cannot auto roll out paper after printing out bitmap
Returns	false: print fail,can't print true: start print	

Example:
<pre>mGcAndroidPrint.GcPrintBitmap(bmp, GCAndroidPrint.GC_ALIGN_Center, true);</pre>
<p>it same as :</p> <pre>mGcAndroidPrint.GcPrintBitmap(bmp, GCAndroidPrint.GC_ALIGN_Center,GCAndroidPrint.GC_BMP_COLOR_TEXT, true);</pre>

7.3.3 GcPrintBitmap III

boolean GcPrintBitmap(Bitmap b,int align)		
Description	The printer will print after calling this function. But if the print is already started before calling this function, the bitmap will be saved to the cache, and print out the bitmap after the whole printing is completed	
Parameters	Bitmap b	Bitmap
	int align	Bitmap align. When the width of the bitmap is less than 384 dots, this parameter will work. It can be <i>GC_ALIGN_Left</i> <i>GC_ALIGN_Center</i> <i>GC_ALIGN_Right</i>
Returns	false: print fail,can't print true: start print	

Example:
mGcAndroidPrint.GcPrintBitmap bmp, GCAndroidPrint.GC_ALIGN_Center);
it same as : mGcAndroidPrint.GcPrintBitmap bmp, GCAndroidPrint.GC_ALIGN_Center,GCAndroidPrint.GC_BMP_COLOR_TEXT, true);

7.3.4 GcPrintBitmap IV

boolean GcPrintBitmap(Bitmap b)		
Description	The printer will print after calling this function. But if the print is already started before calling this function, the bitmap will be saved to the cache, and print out the bitmap after the whole printing is completed	
Parameters	Bitmap b	Bitmap
Returns	false: print fail,can't print true: start print	

Example:
mGcAndroidPrint.GcPrintBitmap bmp);
it same as :
mGcAndroidPrint.GcPrintBitmap bmp, GCAndroidPrint.GC_ALIGN_Left,GCAndroidPrint.GC_BMP_COLOR_TEXT, true);

7.3.5 GcSetMaxSize

void GcSetMaxSize(int maxNum)		
Description	The max list buffer to save string and bitmap,it is print string and bitmap queue. When the printer prints bitmap or string, the app can also call GcPrintText or GcPrintPicture to save the new task to queue. After the print is completed, it will pritrn the task from the queue. The default is 20,it mean the app can call GcPrintText and GcPrintPicture 20 times before printer finish print.	
Parameters	int maxNum	The number to set the max list buffer,print queue
Returns	NULL	

Example:

```
mGcAndroidPrint. GcSetMaxSize (30);
```

7.3.6 GcPrintPicture

<pre>boolean GcPrintPicture(Bitmap b) boolean GcPrintPicture(Bitmap b,int align) boolean GcPrintPicture(Bitmap b,int align, int type) boolean GcPrintPicture(Bitmap b,int align, int type ,boolean bAutoWalkingPaper) boolean GcPrintPicture(Bitmap b,int align, int type ,boolean bAutoWalkingPaper, boolean bRecycleAfterPrint)</pre>		
Description	<p>The printer will print after calling this function. But if the print is already started before calling this function, the bitmap will be saved to the cache, and print out the bitmap after the whole printing is completed</p> <p>The differences between GcPrintPicture and GcPrintBitmap are as follows:</p> <ol style="list-style-type: none"> 1. GcPrintPicture can print large bitmaps (unlimited size, as long as the system allows), GcPrintBitmap can only print bitmaps about 10MB memory 2. After GcPrintPicture is used, bitmap cannot be recycled immediately. The print thread will continue to use bitmap, but after GcPrintBitmap is used, bitmap can be recycled immediately 3. GcPrintPicture takes almost no time and can be used in UI threads. When GcPrintBitmap prints larger bitmaps, it takes up operation time; 	
Parameters	Bitmap b	Bitmap
	int align	<p>Bitmap align. When the width of the bitmap is less than 384 dots, this parameter will work. It can be:</p> <p><i>GC_ALIGN_Left</i> <i>GC_ALIGN_Center</i> <i>GC_ALIGN_Right</i></p> <p>When this parameter is not set, the default is <i>GC_ALIGN_Left</i></p>
	int type	<p>The bitmap can be color type or mono type. But for printed on receipt, it can only be mono. So the type decides the effect for the print. They type can be:</p> <p><u><i>GC_BMP_COLOR_TEXT</i></u> <i>If the color bitmap is text bitmap,use this type</i> <u><i>GC_BMP_COLOR_BITMAP</i></u></p>

		<p><i>If the color bitmap is logo bitmap, use this type</i> <u>GC_BMP_MONO_DEFAULT</u></p> <p><i>If the bitmap is mono color bitmap, use this type</i> When this parameter is not set, the default is <u>GC_BMP_COLOR_TEXT</u></p>
	boolean bAutoWalkingPaper	<p>This parameter is to auto roll out the paper after printing bitmap.</p> <p>true: it means auto roll out paper after printing out bitmap false: it means it cannot auto roll out paper after printing out bitmap When this parameter is not set, the default is true</p>
	boolean bRecycleAfterPrint	<p>This parameter is used to decide whether to recycle bitmap after printing true: recycle bitmap false: Do not recycle bitmap When this parameter is not set, the default is true</p>
Returns	false: print fail, can't print true: start print	

Example:
<p>Example1:</p> <pre>mGcAndroidPrint. GcPrintPicture (bmp);</pre>
<p>Example2:</p> <pre>mGcAndroidPrint. GcPrintPicture (bmp, GCAndroidPrint.GC_ALIGN_Center);</pre>
<p>Example3:</p> <pre>mGcAndroidPrint. GcPrintPicture (bmp, GCAndroidPrint.GC_ALIGN_Center, GCAndroidPrint.<u>GC_BMP_COLOR_TEXT</u>);</pre>
<p>Example4:</p> <pre>mGcAndroidPrint. GcPrintPicture (bmp, GCAndroidPrint.GC_ALIGN_Center, GCAndroidPrint.<u>GC_BMP_COLOR_TEXT</u>, true);</pre>

Example5

```
:
mGcAndroidPrint. GcPrintPicture (bmp, GCAndroidPrint.GC_ALIGN_Center,
GCAndroidPrint.GC_BMP_COLOR_TEXT, true,true);
```

7.4 Others Functions

Functions

`int GcWalkPaper(int lines)`

`int GcWalkPaper()`

7.4.1 GcWalkPaper

<code>int GcWalkPaper(int lines)</code>		
Description	Make printer roll out some lines on receipt.	
Parameters	<code>int lines</code>	The number that printer will walk;
Returns	<code>false</code> : fail,can't walk paper <code>true</code> : successful	

Example:

```
while (mGcAndroidPrint. GcWalkPaper(16)==false) {
    Thread.sleep(10);
}
```

7.4.2 GcWalkPaper

<code>int GcWalkPaper()</code>	
Description	Make printer roll out 8 lines on receipt



Parameters	NULL	
Returns	false : fail,can't walk paper true : successful	

Example:

```
while (mGcAndroidPrint. GcWalkPaper()==false) {  
    Thread.sleep(10);  
}
```