

# Android 2.3 r5 for BM-170 Release Notes

This software is built on Linux kernel 2.6.35 and Android 2.3.7. Please note that this release is a full Android 2.3 release for the BM-170. Please see the Change Log at the end of this document for further detail.

## Android Installation via ISO image

- You must already have Android installed on your BM-170 in order to be able to install this Android release. Please contact SDG Systems if you have a Windows Mobile BM-170.
- Burn the r5 .iso file to a CD and boot a computer from the CD.
- Reboot your BM-170 into reflashing mode by pressing up arrow key three times during device boot, before the red bar has reached the edge of the screen.
- Plug the USB cable into the BM-170 and connect it to the computer via USB. Be sure the AC adapter is plugged into the cable.
- The device will automatically reflash itself, and when complete it will reboot into Android.

## Over-The-Air (OTA) Update

Android can be upgraded from r1-r4 by selecting Settings -> About phone -> Check for updates.

## Android Software

**At this time, we do not have the Android Market application.** Many applications found in the market, however, may also be found at <http://www.androidfreeware.org/> or <http://www.aproov.com/>. These sites are provided for informational purposes only. We have not investigated their licensing arrangements with the application providers, and do not provide any warranty the use of any of these applications.

You can install these applications using 'adb install <application.apk>'. Or, use the Android Central Side Load Wonder application on Windows for installing applications: <http://www.androidcentral.com/sideload-android-apps-all-you-want-sideload-wonder-machine>.

## General

- To use the GPS, you must turn on Location Services: Settings -> Security & Location -> Enable GPS satellites. It is enabled by default.
- To use 802.11 wireless networking and/or Bluetooth, you must configure and enable it: Settings -> Wireless & networks.
- GSM data services should automatically connect to your cellular network. If not, you must configure an APN for your provider: Settings -> Wireless & networks -> Mobile networks -> Access Point Names (Menu -> Add).
- Busybox is installed in the root. Links are in /bin and /sbin.
- The /system partition is mounted in read-only mode by default.

## ADB

The USB vendor ID in Android 2.3 has changed, so some extra steps are required to allow "adb" to see the device.

## Windows

Install the SDG Bluebird USB driver using the Android SDK Manager:

1. Start the Android SDK manager (simply run "android" if it's in your path).
2. Click the Tools menu and choose "Manage Add-on Sites...".
3. Click the "New..." button then enter "https://sdgsystems.com/android/repository/addon.xml", then click "OK" then "Close".
4. Click the Packages menu and choose "Reload". You should see the "SDG Bluebird USB driver package". Check the box next to the package and then click "Install Packages...".
5. Run the following from a command prompt:

```
echo 0x1aca >> "%USERPROFILE%\android\adb_usb.ini"
```

### Linux / Mac OS X

No driver is necessary for Linux and Mac OS X, but it is necessary to run the following command from a terminal:

```
echo 0x1aca >> ~/.android/adb_usb.ini
```

Linux may require additional steps as described here: <http://developer.android.com/guide/developing/device.html#setting-up>

### Known Problems, Fixes in Progress

- We are not supporting video capture at this time.
- Video playback may fail for some types of video.
- SMS messages sent to the device while the device is sleeping may not be received. If this occurs, subsequent SMS messages may also fail to be received or be delayed.
- First ring for incoming phone call is lost if device is sleeping
- After booting or resuming from sleep, the adb connection may be lost. Unplug and replug the USB connection to restore the connection.
- VPN will fail to connect.
- Bluetooth connection is lost when device suspends.

# Changelog

## New since r4:

- Add support for high-brightness flash.
- Fixed a bug where if the device was reset while doing touchscreen calibration, the touchscreen would be unusable. Now the calibration utility is restarted when it detects this situation.

## New since r3:

- Fixed an issue that would cause the device to periodically wake from suspend

## New since r2:

- Improved WiFi stability
- Added support for QVGA BM-170s

## New since r1:

- Improved wifi hidden ssid support.
- Fixed low in-call audio volume.
- Fixed occasional camera hangs.
- Fixed a bug that sometimes prevented BM-170 from sleeping, or caused it to wake after 30 seconds, draining the battery.

## New since rc3:

- New boot animation.

## New since rc2:

- Camera now works reliably after suspend/resume.
- Bluetooth now works after suspend/resume.
- The Data Collections menu has been removed from Settings, since it is irrelevant.

## New since rc1:

- Reflashing from SD in sdgboot
- Added GSM carrier PPP authentication
- Modified default homescreen widget layout
- New WiFi driver

## New since beta2:

- Boot screen now displays properly
- Default ringtone no longer set to "Silent"
- MMS messages should now send and receive properly
- System Info (serial, etc) is now stored in NAND flash

## New since beta1:

- WiFi to GSM failover now works properly
- Improved reliability of DNS resolution

## New since alpha2:

- Touchscreen calibration runs on first boot.
- USB-Ethernet support.
- Recovery mode is now enabled (allows factory reset, OTA updates).
- Screen elements are slightly smaller to better fit home screen widgets.

# Android Key Assignments

