

# Jet Launcher 1.0

## User Manual

### 1. Introduction

This document describes how to use Jet Launcher. Jet Launcher is an Android application that enables easy and efficient launching of applications in Android devices. Jet Launcher is a property of JetKeys LTD and ideas implemented in the software are protected by US patent 6,597,345.

### 2. General Concept

Jet Launcher is Android application that acts as a resident service in an Android device. The service is registered to receive touch screen user interface events from the corners of the touch screen in all time. The user can launch a new application in any instance of time and within any running application and any screen view. The launching of a new application is gesture based. The gesture should be initiated in one of the four corners of the screen and consists of a swipe of the finger towards the center of screen. Each corner initial touch area is "L" shaped to reduce the interference to other application from one hand and to capture the finger movement over the corner edge from the other hand. The default corner leg length and width are optimized to balance between those contradicting demands. You may change the default corner legs width and length in Jet Launcher setup screen.

To activate an application, the user must perform long swipe. The length of the swipe should be long enough so the finger up event is outside an imaginary quarter of cycle referred as "no activation zone". Each corner allows launching of three different applications. Totally 12 applications, referred also as shortcuts, can be launched by Jet Launcher. The different applications are selected based on the direction of the swipe relative to the corner location. Three directions are detected vertical, horizontal and diagonal. The boundaries between detections of different direction are the angles 30 and 60 degrees respectively. A diagram of the different zones on the screen as well as the 12 activation zones is illustrated below.

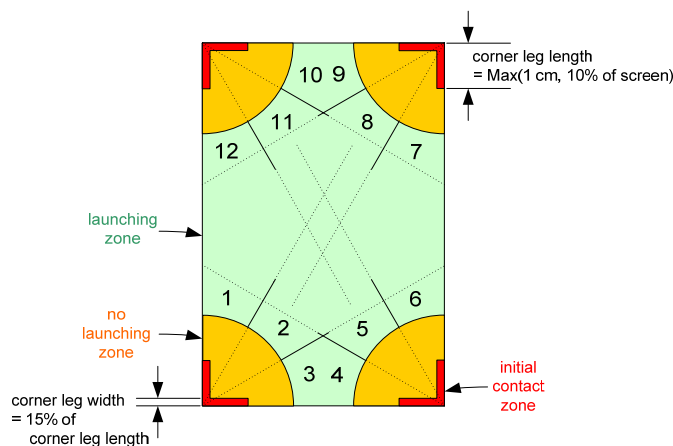
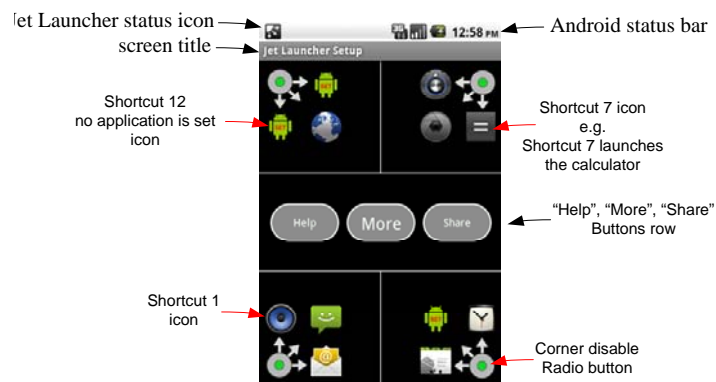


Figure 1 - Jet launcher shortcuts zones geometry

To initiate application launching operation a "finger down" event in the "L" shape corner area, the initial contact zone, must occurred. If the "finger up" event location is **inside** the quarter of a cycle area that referred as the no launching zone, no operation will be taken. If the "finger up" event location is **outside** the no launching zone, Jet Launcher will launch an application according to the angle between the finger up location and the corner location.

### 3. Setup

Several parameters of Jet Launcher may be changed from its default setup. Setup main screen (illustrated below) is to customize the applications that are associated with each of the 12 shortcuts. In order to get into setup screen just after installation press the open button. To get into setup screen later, press the Jet Launcher icon in the Android applications home page. Note that all screen snapshot have been taken from 320 x 480 Android 2.2 emulator screen and the actual screen image might be slightly different between different Android devices.



The setup screen contains the top title bar, "Jet Launcher setup", and another five regions. Four regions are located in adjacent to each corner and the last region located in the middle of the screen contains three buttons. Clicking on "Help" opens a help screen. Clicking on "Share" button enables the user to share Jet Launcher with his friends. The "More" button opens an additional setup window (described later in this chapter).

Each corner region consist a radio button that enable/disable the usage of that corner. Adjacent to the radio button there are 3 arrows that hint the Jet launcher swipe operation. For each swipe direction there is an application icon that displays the current application assigned to the corner / swipe direction pair. 12 such icons are displayed. The above figure illustrates the default Jet Launcher setup. During installation Jet Launcher is trying to set an application for each shortcut. However, due to the wide variety of difference between Android devices different application may be selected in different devices and in some cases no application is selected at all for a shortcut. If no application is assigned to a shortcut, the icon displayed to the right of this paragraph is displayed instead.



In the figure above shortcut 5, 10 and 12 are not assigned and the no application icon is displayed in the proper locations. In the other places the application icons are displayed, for example, in shortcut 1 the music player application is assigned and in shortcut 7 the calculator application is assigned.

To change the assignment of application to the shortcut the user should select the appropriate icon. Selecting (by touching) the icon will open a screen with a list of all possible installed applications in the device as illustrated below.



Depending on the selected shortcut a shortcut indicator will be displayed in the proper location of the screen. For shortcuts 1-3 the indicator will be located in the bottom left of the screen. For shortcuts 4-6 and 7-9 the indicator will be located in the bottom right and top right of the screen respectively. For shortcut 10-12 the shortcut indicator will be located in the top left of the screen as indicated in the above figure. The shortcut indicator contains an half circle orange corner indicator, as well as three arrows indicating the actual shortcut. Only one of the arrows is highlighted in orange to indicate the specific shortcut that is currently assigned. In the Figure above the diagonal direction is highlight, hence shortcut 11 is being assigned.

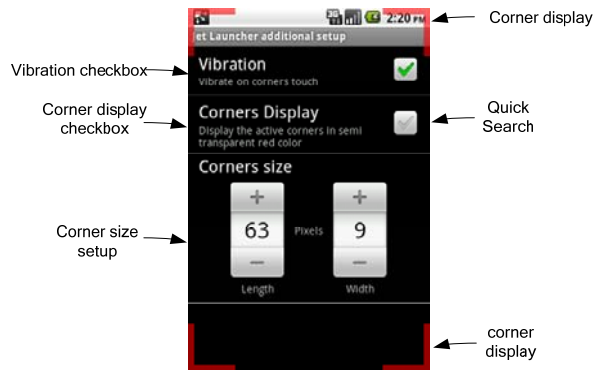
Aside to the shortcut indicator a quick search field is provided. While the application list can be scrolled to get any one of the entire list of applications that installed in your device, if the application list is long you can select the quick search field and narrow down the application list according to the application name prefix entered in the search field.

Selecting, i.e., pressing an application in the list will assign that application to the shortcut and will exit back to the main setup screen. The current assigned application icon will be updated on the main setup screen.

The quick search field is located next to the corner / swipe pair indicator. When entering corner / swipe pair setup screen a list of all applications installed in the device is shown. If the list is bigger then the screen the user can scroll the list. To help the user find the desired application quickly a quick search option is provided to the side of the corner / swipe pair indicator. The user enters the search field and then presses the search icon. An updated list is provided by the application containing only the application that there name contains the search string.

### 3.1. *Additional (more) setup*

Selecting the "More" button in the main setup screen will open the additional setup screen illustrated below.



Additional setup contains three items: Vibration, Corners Display and Corners size.

#### Vibration

Vibration is a check box to enable/disable vibration when a finger down event occurs on the initial contact zones, i.e., the corners. The purpose of the vibration is to give the user a feedback that the launching gesture has been accepted by Jet Launcher.

Checkbox on – Jet Launcher generate vibration feedback

Checkbox off – No vibration feedback provided

#### Corners display

The corner display checkbox determines if a visual indication is given to the user. The corner display indicates where currently an initial contact zone is available. The indication is a semi-transparent red color on each pixel in the screen where a finger down event will trigger Jet Launcher operation. When corners display is checked on the corners display will be visible on all time on the screen. If Jet Launcher is disabled (see notification bar operation) corner will not be displayed. If specific corner is disabled that specific corner will not be displayed. When the checkbox is off no indication on the active initial contact zone will be given in any screen **but** the additional setup screen.

Checkbox on – Display the active corners in semi transparent red color

Checkbox off – Do not display the corners

#### Corners size

The actual corner size is displayed, in semi transparent red color as demonstrated for all corners in the above figure. If there is no corner display in the additional setup size make sure that Jet Launcher is enable and at list one corner is enabled in the main setup screen.

Two up/down controls for both the length and width of corners legs is provided.

The controller displays the current setting. Changing the size of the corners leg will change immediately the corner display. For more info on when and why to change the corner size, see computability issues section.

### 3.2. Enable/Disable and Notification Bar

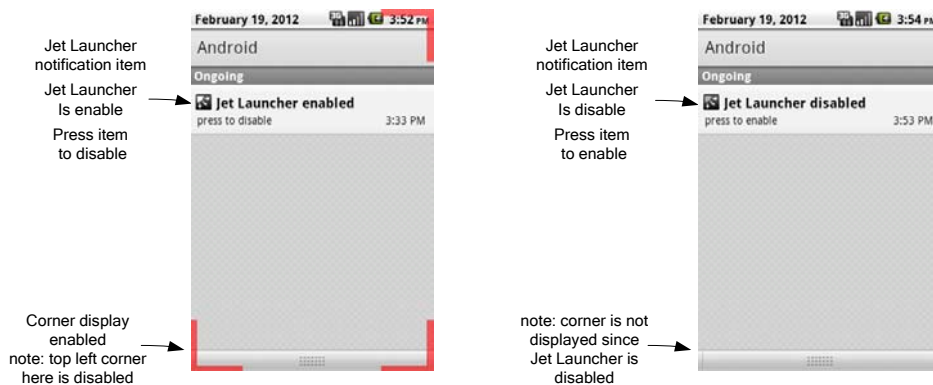
Jet Launcher has a status icon in Android notification bar. When Jet Launcher is disabled part of the icon is shaded as illustrated on the following Figure.



As shown in the above figure the running application is the Android home page and Jet Launcher icon is presented. Launching Jet Launcher setup can be performed by pressing Jet Launcher icon regardless if Jet Launcher is disabled or enabled.

The corner display on the other hand is shown only when Jet Launcher is enabled and only for the enabled corners.

To enable or disable Jet Launcher the user need to open the notification window by swiping down on the notification bar. Touching Jet Launcher item the notification window toggles Jet Launcher between enable and disable states as illustrated in the Figure below.



## 4. Lunching operation

Jet Launcher is accessible anytime regardless of which application is currently running. Jet Launcher is fully independent launching alternative and is not a replacement of the default launcher or any another 3<sup>rd</sup> party alternative to home-screen application which should still functioning the same. Jet Launcher shortcuts do not interfere with any GUI of the running application.

To ensure that Jet Launcher will capture your gesture you should slowly slide your finger from the edge of one of the corners of the screen. If the swipe is not long enough and does not cross the "no launching zone", Jet launcher does nothing.

Whenever a swipe is crossing to the launching zone Jet launcher will wait for the finger up event to decide its action. Depending on the finger up location, one of the three applications is launched.

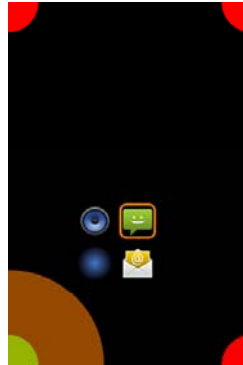
Jet Launcher shortcuts numbering are absolute with respect to the screen orientation which mean that shortcut number 1 will always be from the bottom left corner vertically upwards. Note for the following scenarios: Some application locks the screen for specific orientation, portrait or landscape. In this case the bottom left corner of the application will be the corner assigned to shortcuts 1-3; whenever the application enable to rotate its screen relative to the device holding state, the shortcuts are also tracking the rotation of the screen. Trying to launch application during the transient may launch the wrong application, wait until the rotation finished and always keep orientation base on text orientation in the running application.

Jet Launcher is focused on quick and easy launching of your most frequent application and it assumes that eventually you will remember the corner/swipe direction pair that launches your favorite applications. A directional swipe provides a quick launching operation and no visual feedback is given to the user other then launching the desired application.

If the user does not raise his finger from screen for more then three seconds a visual feedback will be presented. The purpose of the visual feedback is to give the user a reminder of Jet Launcher setting so the user can finish the launching operation even when the user forgot the current setting. Jet Launcher is intended to use for launching operations such as writing message, memo, update your status, etc. In most cases no visual feedback is provided and when the user lifts his finger the location of the finger up event will determine which application will be launched. If the user swipe the finger back into the no launching zone (regret operation) no application will be launch.

#### 4.1. *Primary Visual Feedback*

Remember the difference between Jet Launcher and other launchers is that selecting the application visually is not suppose to be the usual operation and the visual feedback is just a way to help you to remember your setting. To ensure that the visual feedback is not opened immediately and a delay of three second is deliberately added. When the user finger touch on the screen is more then three seconds a visual feedback as illustrated in the figure below will be displayed.

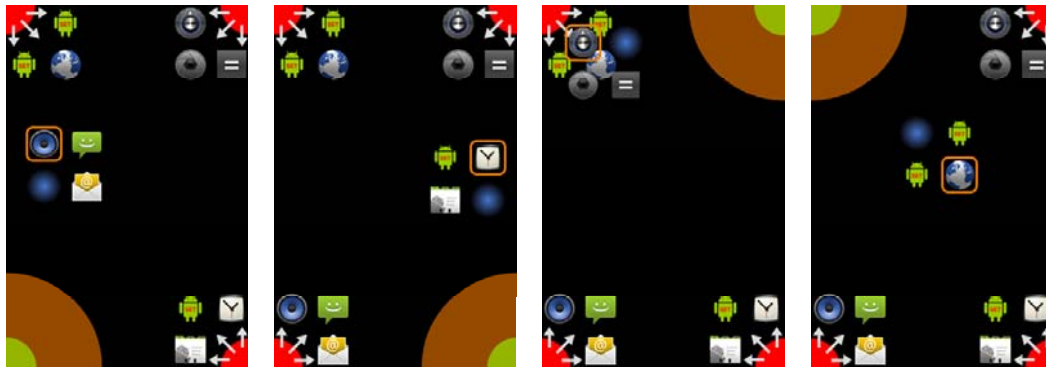


The visual feedback include a green quarter of a cycle on the corner of initial contact zone (in the figure the bottom left), a semi transparent orange quarter of a cycle to indicate the no launching zone and three red quarter of a cycles indicate the other corners that did not activated.

In addition, a semi transparent blue circle indicates the current location of the finger and around it a three application icons correspond to the vertical, diagonal and horizontal swipes are presented. If the finger located outside the no launching zone, the icon of the application that would be launched if the finger will be lifted in the current location is highlighted (in the figure the messaging application associated with shortcut 2). The application icons always track the finger position and when the finger cross a shortcut zone the highlighted icon is changed accordingly. When the user lifts its finger the highlighted application is launched.

## 4.2. Secondary Visual Feedback

If the finger stay on the screen another three seconds, i.e. for more the six seconds, an additional visual feedback is added (see illustration in the figure below). In this second visual feedback all other nine shortcuts application icons are shown with an arrows that indicate the swipe direction from each red corner. The purpose of this additional visual feedback is to remind the user of the entire available shortcuts. To encourage that user to memories the shortcuts, the user is not been able to activate applications associated with the red corners. To launch application that associated with the other corners, the user will have to go back to the no launching zone, lift the finger and start a new swipe from the desired corner. The figure below illustrate the visual feedback for activating from bottom left corner (a), bottom right corner (b), top right corner (c) and top left corner (d). In (a) the finger is located in the zone of shortcut 1, in (b) the finger is located in the zone of shortcut 6, in (c) the finger is located in the zone of shortcut 9 and in (d) the finger is located in the zone of shortcut 11. the icons of the active corner that are moving with the finger are displayed over the other icons as illustrated in subfigure (c).



a

b

c

d

## 5. Supported devices and screen sizes

Jet Launcher is developed for Android 2.x and 3.x devices. Jet Launcher based on standard JAVA API and may be used in other version as well.

Jet Launcher designed to support all screen sizes. Jet Launcher support both portrait and landscape orientation. The setup is done only in portrait orientation.

### 5.1. *Compatibility issues*

Jet Launcher is trying to locate the corners in the absolute edges of the touch screen. However since it use the standard JAVA API it is not always possible. For example in Android 3.X the bottom bar used by Android for buttons and status bar so Android allow the corners to be located above the buttons and status bar. In that case there is a difficulty to operate shortcuts 1 – 6 by starting the swipe from the bottom since the swipe are captured by Android buttons and status bar. Start swipes from the side or disable the bottom corners. More problematic situation is where the device as a customized Android version that allocated a bar for soft keys or other options in this case you may see that the corners legs are displayed in below the more priority layer of the buttons bar. In this case it will be difficult or even impossible to activate the corner as well since the touch events are also not directed to Jet Launcher. If this is the case disable some of the corners. Such a situation may also occur with other resident service if installed in your device.

## 6. Frequent Asked Questions

### 6.1. *Q: Can I get rid of Jet Launcher notification icon?*

Answer: No. Since Jet Launcher is a resident service by Android guidelines it must have an active icon in the notification bar. We used this option to give you indication as well as quick way to enable and disable Jet Launcher.

### 6.2. *Q: I have an application that has a button on the corner and Jet Launcher makes it hard to activate it. What can I do?*

Answer: You have two options: (a) If the application is not used much you can disable Jet Launcher when you using the application and enable it when you finish using that application; (b) get into additional setup screen and reduce the corner legs. Note that if you reduce corner legs width you must start the swipe slower to be detected reliably by Jet Launcher. If you reduce the length you should be more accurate to start the swipe on the corner of the screen.

### 6.3. *Q: Corners red indicators are annoying. What can I do?*

Answer: The displays on the corners are set by default to be enabled to help you get acquainted with Jet Launcher and to be aware of its existence at the beginning. As soon as you feel it is not needed any more got to additional setting screen and uncheck Corners Display checkbox.