The Gear UI Design Guidelines

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<DRAFT Ver.>

Samsung Electronics

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1. The Gear UI Overview

1.1 Introduction

This document aims to explain the overall concept of the Gear's user experience and provide design guidelines for the Gear's customizable UI components. Although mobile and wearable devices share some common characteristics, there are many wearable-specific design topics due to different form factors and uses. This is a good starting point to see the guides and caveats.

The Gear's key components can be planned individually, or they can also be designed in combination with other components. For instance, the Gear apps may be developed, packaged, and distributed together with widgets to provide a holistic user experience.

With the introduction of the Next Gear, its innovative round screen and bezel rotary actions became important part of the Gear's UI design. These new topics that are specific to the Next Gear are covered in detail in the corresponding sections of this document.

After reading the overview section of this documentation and understanding the basic ideas of the Gear UI, you can go directly to the parts of the document that offer more specific information.

1.2 Design Principles

The following are the design principles for the Gear UI.

Glanceable

Glanceability is important when users want to quickly decide whether to dismiss a notification or find out more about it on the Gear or on their mobile devices.
Any information displayed on the Gear should be concise and informative, offering bite-sized updates that show users the most important details at a glance.

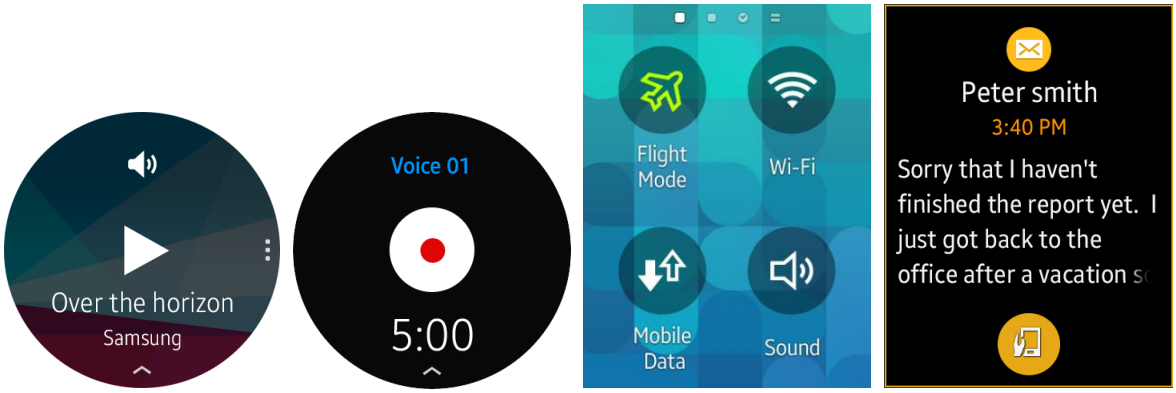
More images and less text allows for a glanceable experience



Actionable

Actionability is one of the most important goals of the Gear UI. With a simple tap or two, users can view options and quickly perform actions on the Gear. They can respond to messages, navigate to a destination, or even like a photo without using their mobile devices.

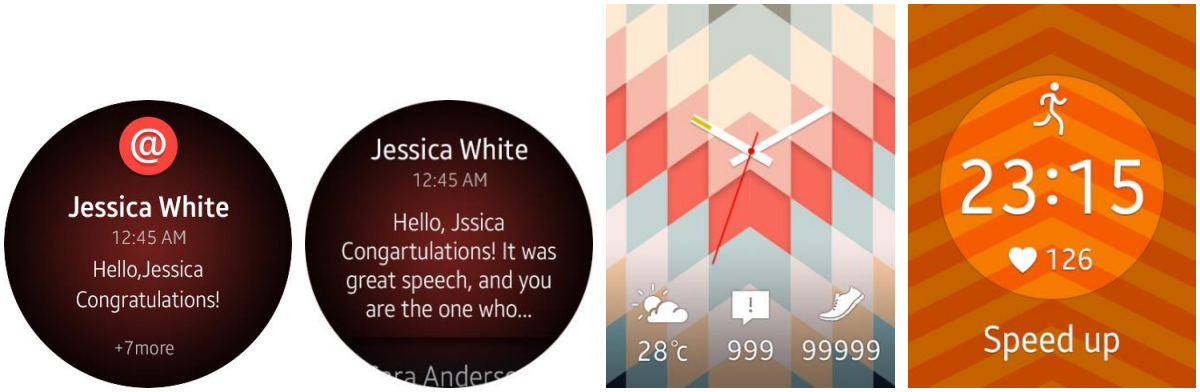
Conveniently placed action buttons allow for effortless interactions



Delightful

Providing a delightful user experience is crucial for success in the domain of wearable devices. You can design your app with vivid graphics, rich text, and flexible content layouts.

A delightful user experience



1.3 Introducing the Next Gear Design–Expand beyond the Boundary of Small Screen

The Next Gear provides maximized user control by introducing unique and intuitive actions which make the best use of its design. The newly added controls maximize navigation efficiency by maintaining and fortifying the concepts of previous user interface conventions.

1.3.1 Innovation in the Physical Design–Rotating Bezel as an Input Device

The Next Gear shares the design philosophy on which the previous generations of the Gear have been developed. However, it now comes in an innovative round design which resembles that of a traditional wristwatch. Its round design allows for the introduction of a rotating bezel, a highly efficient user interface for controlling the device.



The rotating bezel on the Next Gear makes an intuitive physical user interface for page navigation and device control. With this new input device, the Next Gear enables its users to control events on the screen more easily, confidently, and comfortably.

The rotary action is handy in that it does not require repeated inputs (swipes or taps) when users want to move to a certain screen or gradually increase or decrease certain setting values. Instead of repeatedly swiping on the screen to get to the pages they want, or tapping multiple times to adjust setting values, users can rotate the outer bezel until they get the desired result.



Note The following are the guidelines for designing rotary actions.

- Design the rotary action to be the main control for navigation.
- Match the directions. Clockwise rotation is equivalent to swipe-ups and swipes to the left, and counterclockwise rotation, to swipe-downs and swipes to the right.
- Use the rotary action for adjusting setting values, such as volume level, display brightness, date, and time.
- Where the rotary action is used for navigation, use touch inputs to run features or apps.

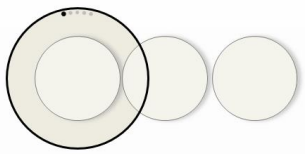
1.3.2 Understanding the Next Gear's Navigation Views

You can choose to use one of the four navigation views to design your app pages: Vertical, horizontal, anchored, and freeform views.

Vertical view



Horizontal view



Anchored view



Freeform view



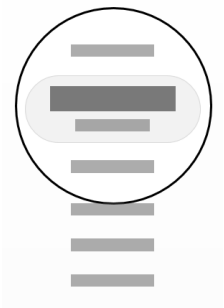
Vertical View

The following are examples of screen types that you can refer to when designing vertical navigation views.

Note When you design a page in the vertical view, design the contents on the screen to be navigated by both the touch inputs and the rotary actions.

List Type

The list type screen is well suited for a list of text-focused information. Each item in the list usually comes with subordinate screens. A list type screen can provide a good overview of the items on a page, and is suitable when a quick navigation is required on multiple items. This type of navigation design is presented with a circular scroll bar to indicate which part of the content is currently viewed.



The Next Gear's list design takes advantage of its round screen. With a round screen, the screen width is the widest in the middle. It presents the list item in focus in the middle of the screen in a bigger size than the others, so that users can easily recognize it.

Note For a more efficient list design, simplify the information or ideas before listing it. Note that a list screen must provide a list of items that are capable of conveying meaningful information.

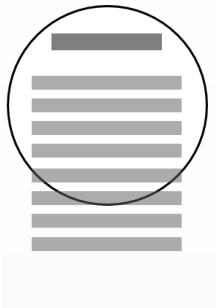
Card Type

The card type screen is ideal when you provide information that can be presented on a single card. The card type screen does not allow continuous scrolling of the contents, but users can tap on the card to view the detailed information on a subordinate screen. As you navigate up or down the screen, the next card or the previous card snaps into the screen.



Body Text Type

The body text type screen is ideal when you present information in a long text format. Users can scroll up or down the screen to read the text. This type of navigation design is presented with a circular scroll bar to indicate which part of the content is currently viewed.



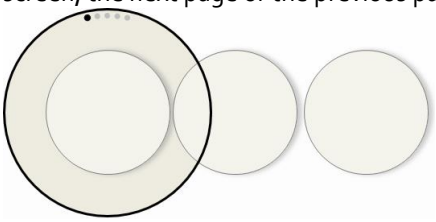
Horizontal View

The following are examples of screen types that you can refer to when designing horizontal navigation views.

Note When you design a page in the horizontal view, design the contents on the screen to be navigated by both the touch inputs and the rotary actions.

Pages Type

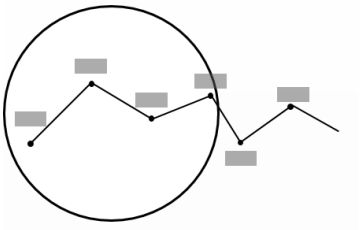
The pages type screen is ideal when you present multiple cards. As you navigate to the left or right on the screen, the next page or the previous page snaps into the screen.



This type of navigation design has a page indicator at the top of the screen to indicate how many pages are available, and which page is currently viewed.

Continuous Type

The continuous type screen is ideal when you present information that is closely related to time-oriented progress, such as a trend graph, or a progress report. Users can scroll to the right or left on the screen to follow or track back the flow of information. This type of navigation design is presented with a circular scroll bar to indicate which part of the content is currently viewed.



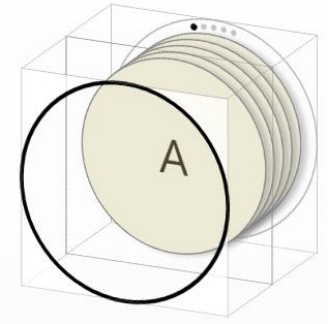
Anchored View

The following are examples of screen types that you can refer to when designing anchored navigation views.

Note When you design a page in the anchored view, design the contents on the screen to be navigated by only the rotary actions.

Stack type

The stack type screen is useful when you design your app pages to display multiple cards with shallow depth of information. This type of navigation design has a page indicator at the top of the screen to indicate how many pages are available, and which page is currently viewed.



Note The stack type screen does not allow page scrolling. However, you can provide action buttons on the page for subsequent actions, or allow users to access the subordinate pages with a tap.

Dial type

By displaying an index-type indicator around the screen, the dial type screen provides a simple and easy way to select and display specific information. When users rotate the bezel of the Next Gear, the indicator moves around the screen changing the selections, and the information corresponding to the selection is automatically displayed.



Freeform view

The freeform view screen is ideal when you need to display a large piece of content, such as a map, through the round screen.

Note When you design a page in the freeform view, design the contents to be zoomed in or out by the rotary action, and panned by the touch inputs.

Freeform view



1.3.3 Temporary Views

Temporary views are used for the context screen design to allow users to carry out simple tasks, or to take subsequent actions to the currently viewed content or notification.

Note Temporary views are overlaid over the main content.

Examples of temporary view screen designs include **More Menu**, pop-ups, pickers, and user control menus where value change or adjustment is allowed for users.

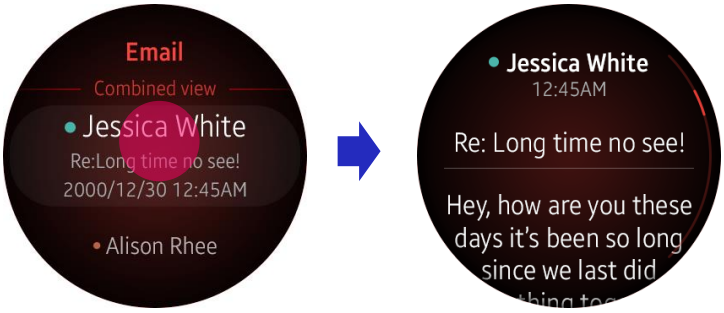
1.4 Basic Interactions

The following are the basic actions used for navigating the Gear's UI. When designing the apps, note that these basic system actions are reserved for the system and cannot be used for any other interactions.

1.4.1 Tap

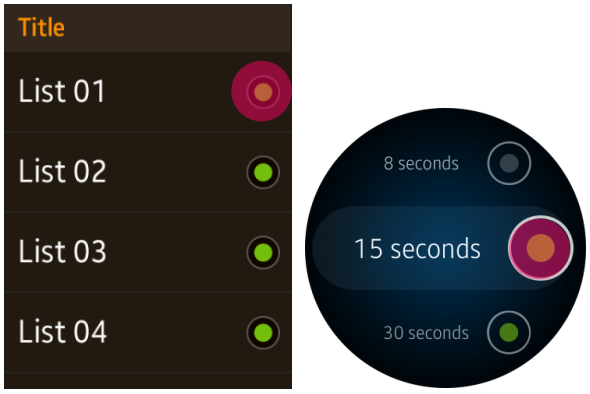
Users can tap the elements on the current screen (for example, lists and pop-ups) to move from one screen to another, open a new screen for more details, and proceed with tasks.

Tapping on the screen

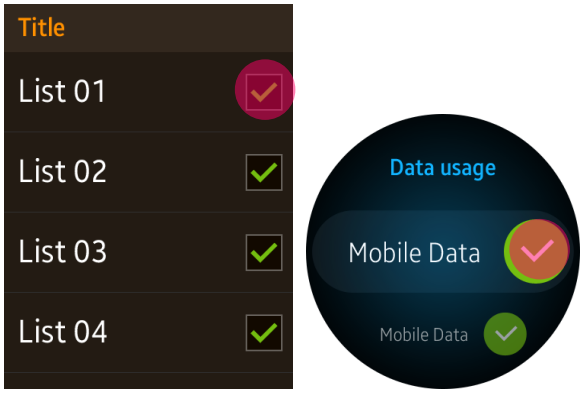


Tapping is also used to make selections on lists containing radio buttons or checkboxes.

Tapping a radio button



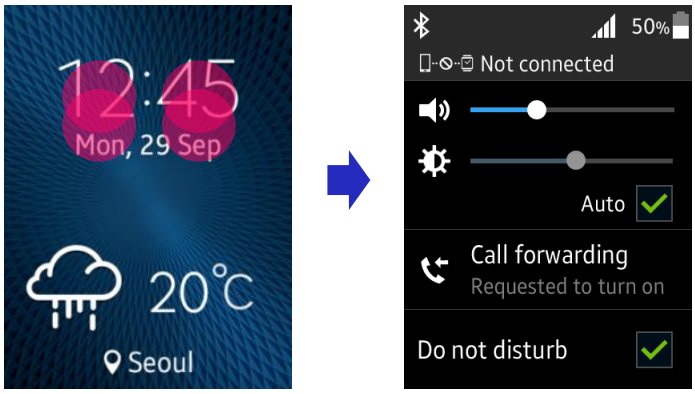
Tapping a checkbox



1.4.2 Two-finger Double Tap

On the Gear 1, Gear 2, and Gear S, a two-finger double tap displays the control panel. On the Next Gear, however, this interaction is not supported.

Two-finger double tap on screen

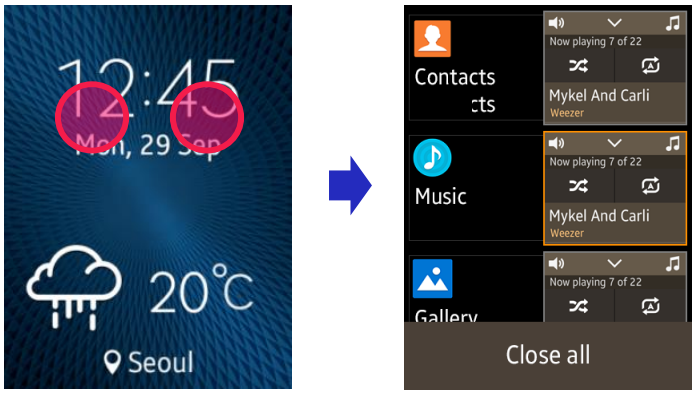


Note On the Next Gear, users can swipe downwards on the Watch Face to access the control panel. Because the Next Gear does not support direct access to the control panel using two-finger double taps, it is recommended that you design appropriate action buttons to allow direct access to the settings menu, if an instant access to settings is required in your app. Also, provide a "volume setting" button on a control screen in your app if it records or plays sound, voice or music.

1.4.3 Two-finger Double Tap and Hold

In the Gear 1, Gear 2, and Gear S, a two-finger double tap and hold displays the recent apps screen. On the Next Gear, however, this interaction is not supported.

Two-finger double tap and hold



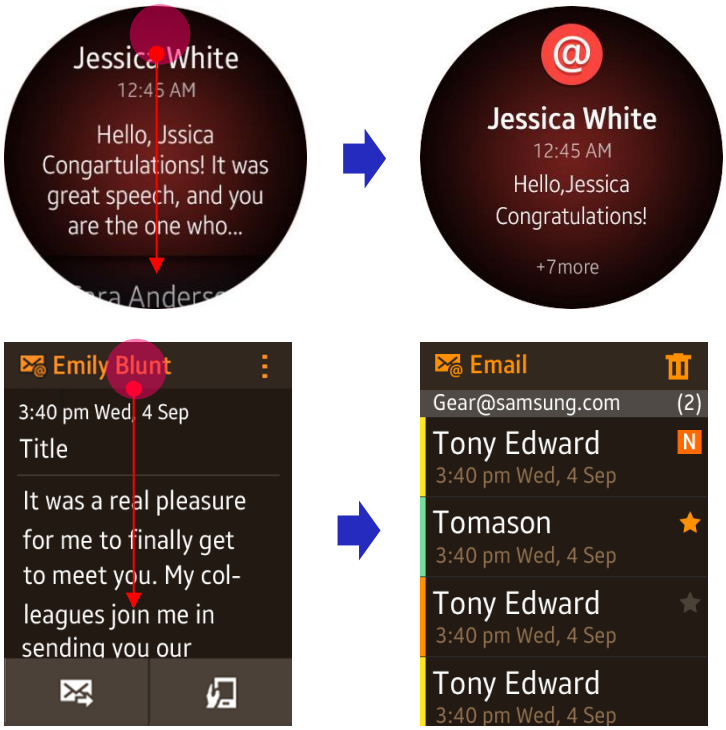
Note On the Next Gear, users can access the list of recent apps from the Apps screen.

1.4.4 Bezel Swipe Down (Back)

Users can swipe downwards from the top edge of the screen to return to the previous step or screen.

Note When designing any additional interactions for your app, be careful not to include interactions that conflict with this basic interaction (for example, interactions for swiping downwards from the header).

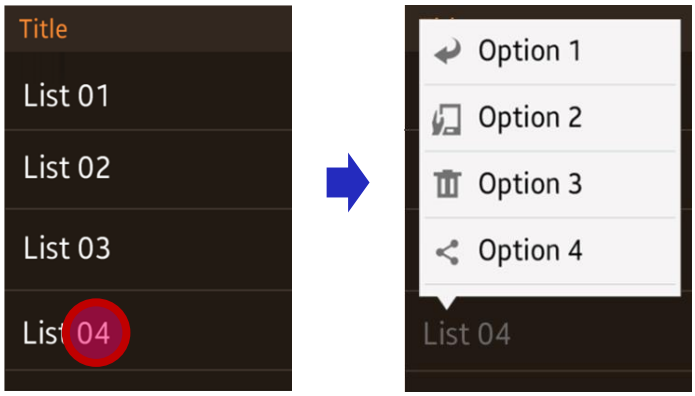
Bezel swipe down



1.4.5 Touch and Hold (Contextual menu / Select menu)

In the Gear 1, Gear 2, and Gear S users can touch and hold an item to view additional options or contextual menu. Once the option menu is displayed, users can tap each option to perform a task.

Touch and hold



On the Next Gear, users can touch and hold an item to enter Select menu. Select menu enables users to select or deselect multiple items at once. When users select one or more items in the list, the number of items selected appears in a button at the top, and a visual cue is displayed on the right edge of the screen.
Users can tap the button at the top to view the **Select all/Deselect all** menu.

Once users are done selecting items, they can drag the visual cue to the left to access the action button(s) for the selected items.

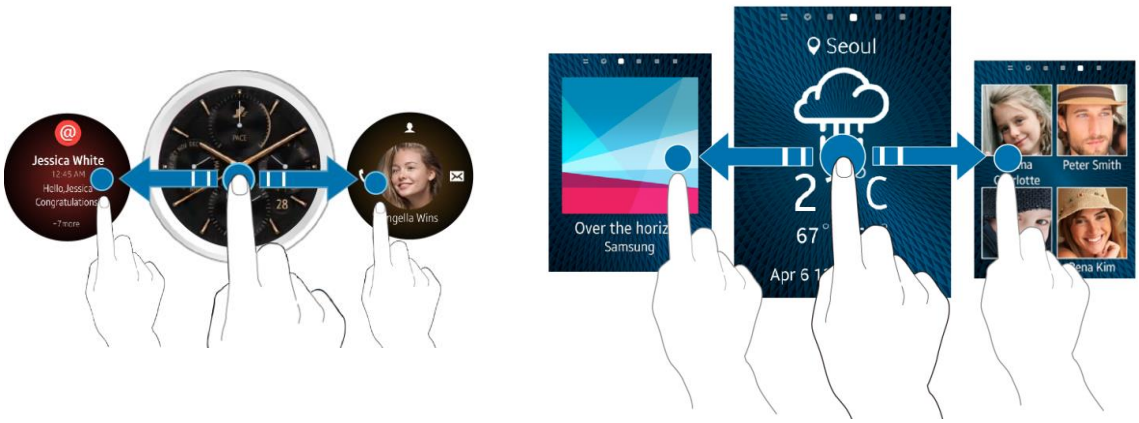
Accessing Select menu on the Next Gear



1.4.6 Swipe (Page navigation)

Users can swipe to the left, right, or upwards from the Watch Face to move to other Home components, such as the Widget Board, Rich Notification Board, and the Apps. Swiping is also one of the major interactions inside apps composed of full-screen sized sections and pages.

Navigation via swiping



1.4.7 Rotary Action *Next Gear Only*

The outer bezel of the Next Gear works as a physical input device. Depending on the design of the apps, it may be used to navigate across pages horizontally, scroll up and down on a page, or to increase or decrease setting values.



Note On the Next Gear, both the touch and rotary actions can be used for navigation. Refer to ***1.3.2 Understanding the Next Gear's*** Navigation Views to decide which type of input option is available for your app design.

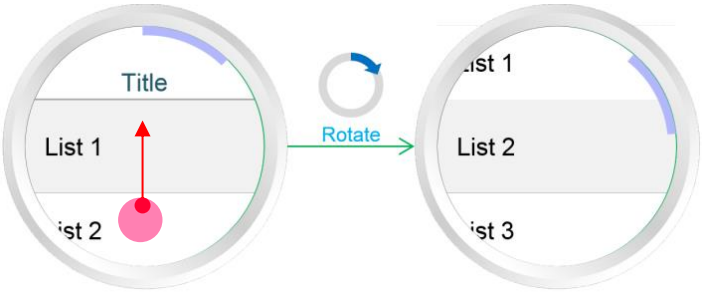
The following are general rules and guidelines to avoid conflicting interactions when you design your Apps.

- Allow the rotary action to control navigation on all pages.
- Design the app's navigation to be either horizontal or vertical, and avoid navigations in both directions.
- If your app requires navigations in both directions, use the rotary action for the primary navigation, and touch action for the secondary navigation.
- Avoid user interface flows that require frequent switching between rotary actions and touch actions.
- Rotary actions may be used for primary navigations in horizontal, vertical, or circular directions depending on the design of your app.
- On each screen, do not place more than one element that is controlled by the rotary action. If an additional element must be provided, allow users to tap the element to enter a separate screen to control it with the rotary action.

Vertical Scrolling of List Items (Vertical view)

If your app page needs multiple items on it, list up the items and design your app to take both the touch and rotary actions to vertically scroll the list items.

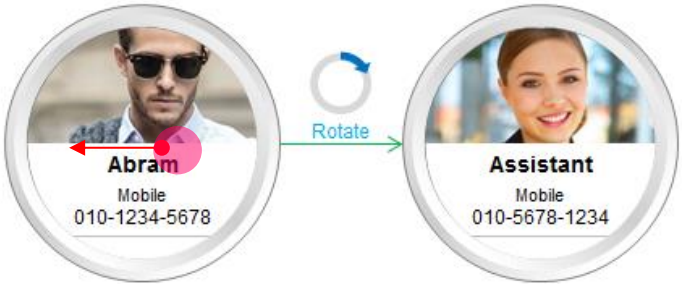
Vertically scrolling list items with touch and rotary action



Navigating Across Cards (Horizontal view)

If your app has multiple cards or pages, you can design your app to take both the touch and rotary actions to navigate through cards in your app.

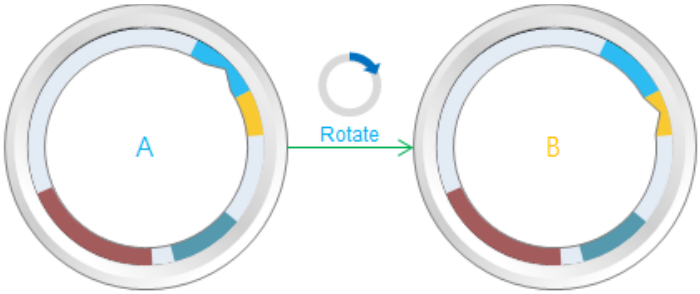
Navigating through cards with touch and rotary action



Control for App-specific Features (Anchored view)

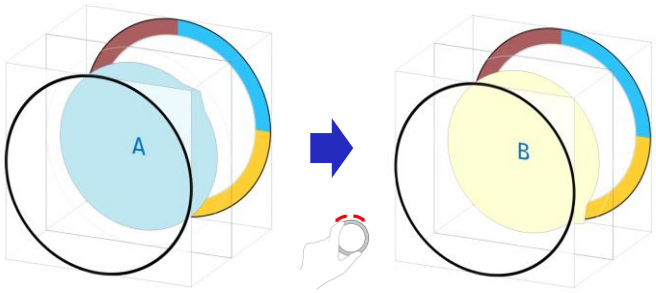
The Next Gear's round design provides circular menus on the screen that can transform long lists into a simple index to increase the ease of use. Index screens designed in the anchored view can take only the rotary action for navigation.

Accessing an index with the rotary action



Note When users access the indexed items, the rotary action moves the indicator on top of the index, shifting the focus onto another indexed item, instead of rotating the panel under a small hole.

A rotary action changes the indicator position and shifts the focus onto another indexed item.



Zoom In and Zoom Out (Freeform view)

You can develop an app that uses the rotary action to zoom in or zoom out from images on the screen. Rotation has always been an action required to zoom in or zoom out the images or views in cameras or binoculars, so users will feel comfortable using this feature.

Zoom in and zoom out using the rotary action



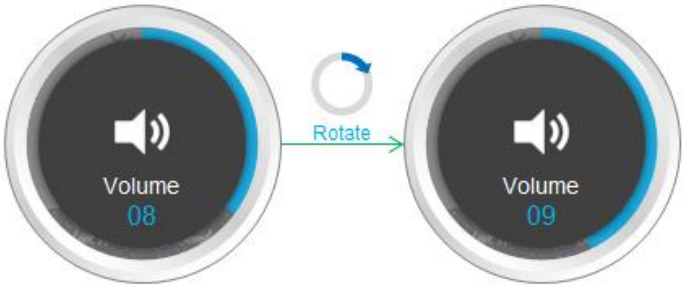
Note The freeform view allows you to present large sized images, such as maps or high resolution pictures through the Next Gear's round screen. Users can use touch actions to move to the part they want to see and rotate the bezel to zoom in out the view.

Other Controls by the Rotary Action

Changing Setting Values

If your app has setting pages or menus, you can design your app take rotary actions to increase or decrease setting values.

Adjusting volume with the rotary action

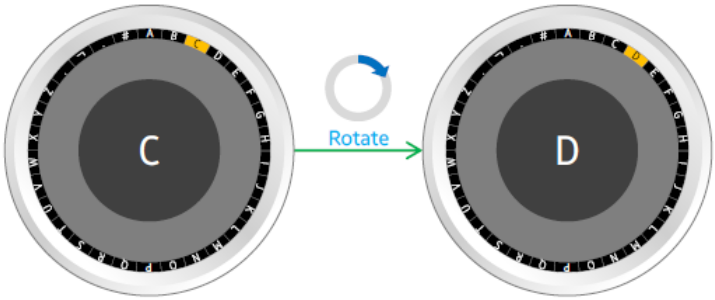


Note When the rotary action is used for adjusting a value, it can increase or decrease the value by up to 24 increments (in 15 degree angle increment or decrement).

Powerful Indexing

Combined with the rotary action, use of index can keep item selection on the Next Gear simple and easy.

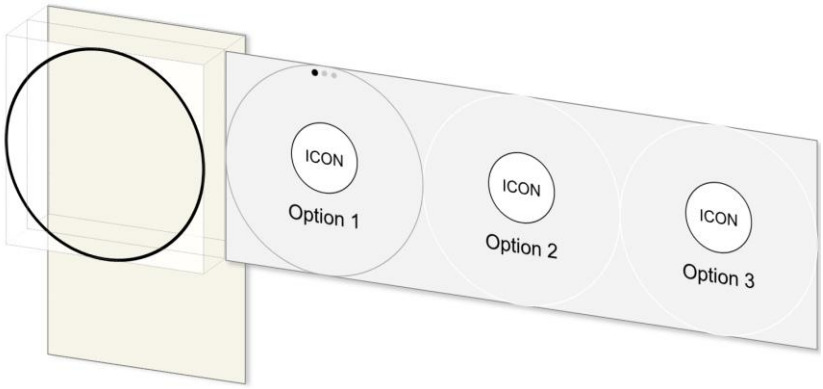
Navigating through multiple indexed items with the rotary action



Navigating through Multiple "More Menu" Screens

If a page in your app has multiple **More Menu** screens, you can allow users to navigate through the **More Menu** screens with the rotary action.

*Navigating through multiple **More Menu** screens with the rotary action.*



1.5 Styles

This section provides essential information about the Gear's app design in terms of the basic actions, color schemes, icons, typographic factors, and the design elements that can be incorporated into the Gear apps.

1.5.1 Iconography

The Gear's iconography consists of a few requirements to achieve a simple but elegant design. These rules cover all the icons used in the Gear and Gear Manager. Refer to the following for information about icon sizes and other style properties.

Icon Size

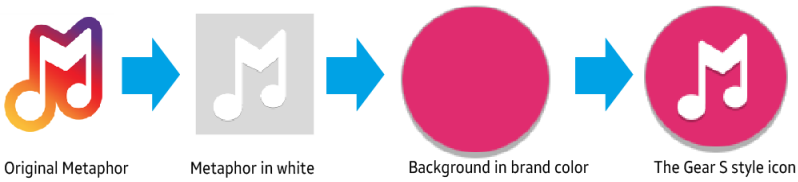
Icons in the same style are used for different design elements. Although icons in many different sizes are used in the Gear based on the situation, you don't have to worry about all the different icon sizes. Simply design your icons in 170 x 170 pixels. The icons will be automatically resized for the Gear and the Gear Manager.

Gear S Style Icons

The Gear icon style has evolved throughout the generations. The following icon style is newly introduced with the Gear S. We recommend that you design the Gear icons to conform to this style for future Gear apps. Since white icons will be placed against the background, solid colored backgrounds are recommended to maximize visibility and glanceability.

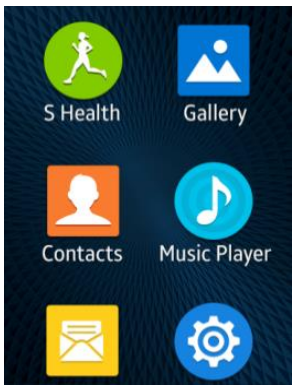
Below is an example of how to convert an ordinary app icon into the Gear S style.

App icon conversion into the Gear S icon style

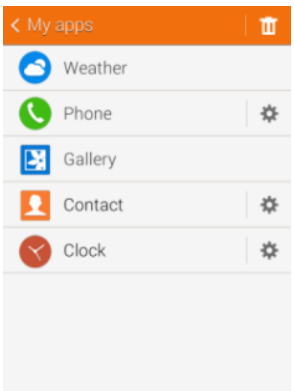


You can use either circular or rectangular designs for the icon background.

App icon layout for the Gear S



App icons for the Gear Manager

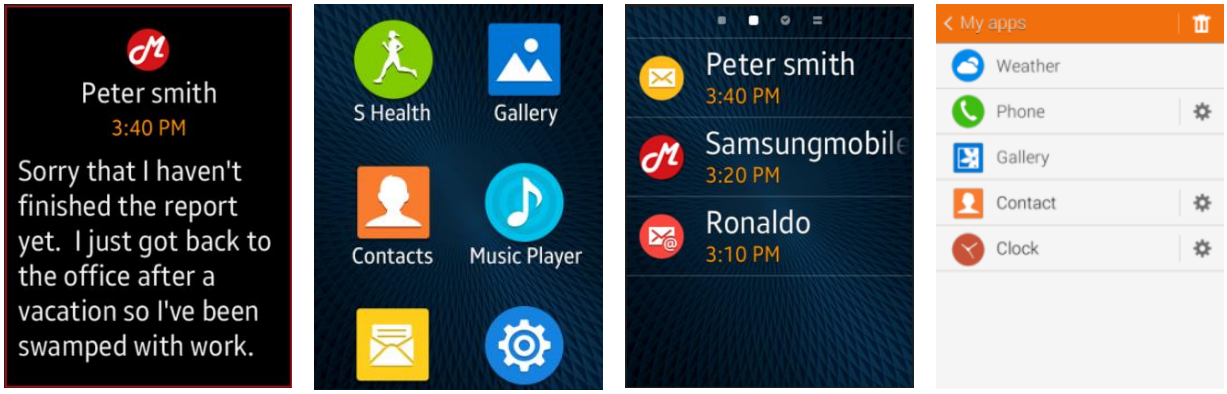


Note Circular App icons are recommended for the Next Gear, because they are the best fit for the Next Gear's round screen design.

Icon Background Colors

An icon consists of a white design on a round or rectangular background. While the icons are recommended to be designed in white, line-type drawings, you can still choose a background color for your icons to make them consistent with your app.
Carefully choose the icon background color when designing an icon for your app, since the background color greatly affects the visibility of your icon. Since the icon will be used to distinguish your app, icons should be designed for easy recognition. An icon with a carefully selected background color makes your icon design easy to notice no matter where you place it in your app.

Examples of Icon background colors



Note An icon is also an element that delivers information to users. For example, use the font design itself as the icon when designing an icon for a font app. The typeface on the icon allows users to see what your fonts look like before they run the application and apply the font to the system.

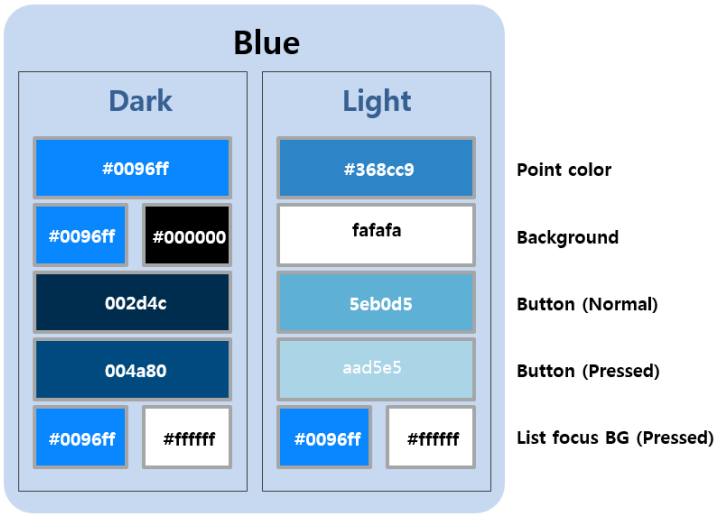
1.5.2 Colors

Gear devices have used elegant black and orange tones as the main theme. Starting with the Gear S, blue themes have been added to the main color palette.

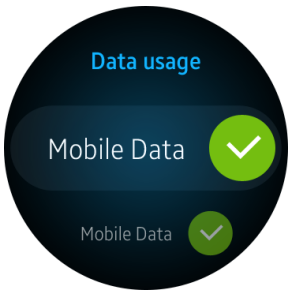
System Theme Colors

You may design your apps based on the default themes to make them consistent with the Gear's system.

The following are examples of the Next Gear's default color themes.

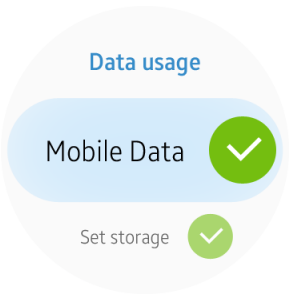


Dark blue



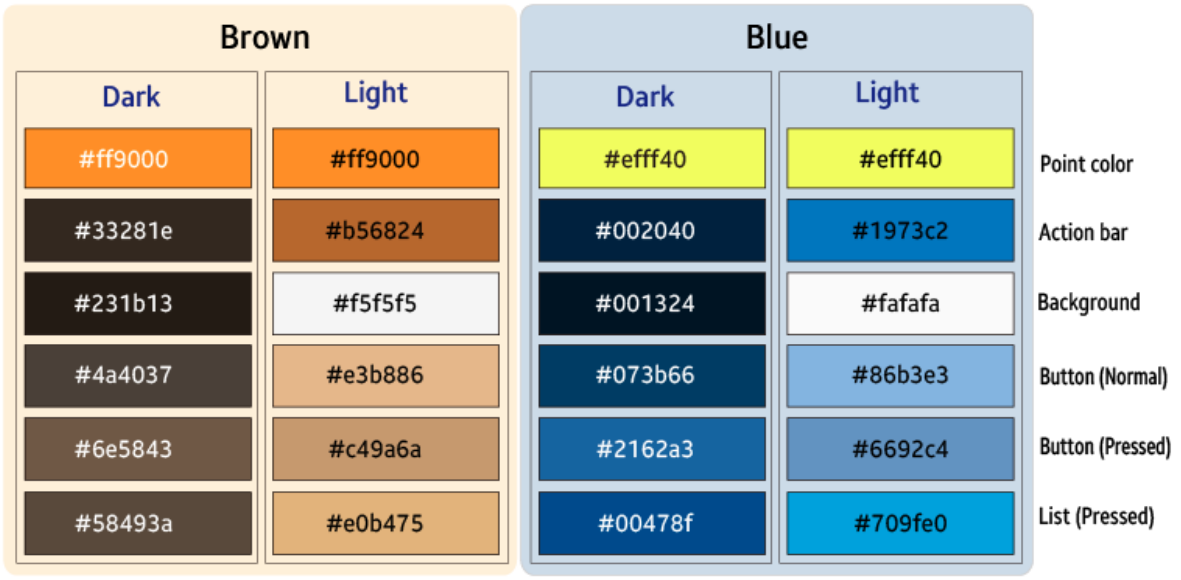


Light blue



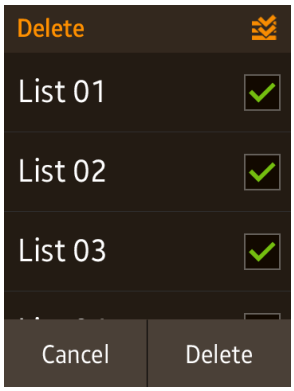


The Gear S comes with four different themes built into the system.

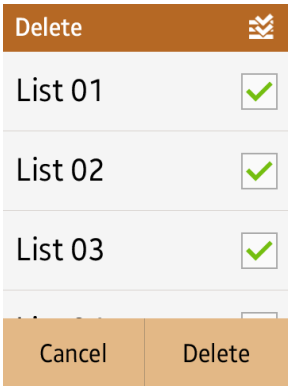


The following are the four color themes for the Gear S.

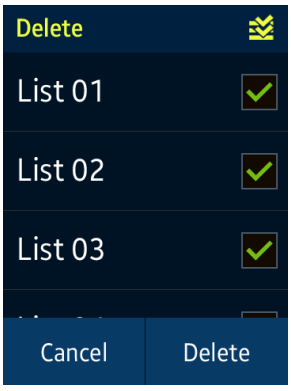
Dark brown



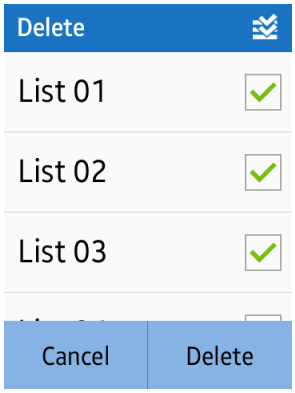
Light brown



Dark blue



Light blue



Color Selection for Gear App Design

The themes applied to the system do not affect 3rd party apps installed by the user. Your app may not look consistent with the system theme if users apply custom themes to the system. Therefore, we recommend that you identify your apps using the major colors that fit best while sticking to the dimensions provided in the UI framework.

Note When the background has a muted color, you can choose a different font color to increase readability. Brown tones are also applied to the color elements of the buttons.
Using your own brand identity color is a good idea as well. Use color sets that not only reflect your brand image but also colors that match the color tone and characteristics of the device as a whole.

1.5.3 Typography

By default, the Gear provides four different system fonts for text and numbers, and two number-only fonts.

System body fonts:

Samsung Condensed

Rosemary

CoolJazz

Choco Cooky

Number only fonts:

SamsungNeoNum3L

012345678:

SamsungNeoNum3T

012345678:

We provide size and color recommendations for the alphanumeric character fonts. As long as it does not adversely affect usability, the text should be displayed as large as possible on a wearable device. For example, users will not like it if they have to scroll or swipe to read one sentence. Therefore, your goal here is to fine-tune the balance between the amount of information on the screen and the effort required to obtain it.

To support overarching design principles and a unique visual style, the Gear uses a dedicated font family named Samsung Condensed (regular/medium/bold). The Samsung Sans family supports regular and medium weights by default.

You can always include the fonts of your choice in your apps. You can also develop a font app to apply your fonts to the Gear system.

Font size

To maintain optimal readability and accessibility across different screen sizes, we recommend that you design your apps based on the basic system font sizes. Also, refer to the Tizen Wearable Web UI framework font properties suggested in the tables below for various font sizes in different contexts. The font sizes change based on the Gear system settings, but your app's font sizes will not be affected by it.

The following are the basic system font sizes and font properties by context for the Next Gear.

<Basic system font sizes for the Next Gear>

Font Size	Size in Pixels	Actual Size on Display (Height)
Tiny	24pt	1.6 mm
Small	28pt	1.8 mm
Medium	32pt	2.0 mm
Large	36pt	2.2 mm

<Font properties by context for the Next Gear (Default: Samsung Condensed)>

Context(detail)	Font	Style	Size / Align (Default : left)	RGB		Effect
				Default / Dim	Focus/Press	
Default font	Default	Light	36	255:255:255		
Action bar_title	Default	Medium	30	255:255:255		
Basic list_group index	Default	Light	24	255:144:0		
Basic list_1line	Default	Light	36	255:255:255		
Basic list_Sub_2line	Default	Light	24	0:150:255		
Button_general	Default	Light	32	255:255:255		
Body_normal_1line	Default	Light	32	255:255:255		
Pop-up_title	Default	Medium	32	0:150:255		
Pop-up_body	Default	Light	32	255:255:255		
Pop-up_button	Default	Light	32	255:255:255		
Pop-up_toast	Default	Regular	32	255:255:255		
No_item	Default	Light	24 / Center	255:255:255 (Opacity 60%)		

The following are the basic system font sizes and font properties by context for other Gears.

<Basic system font sizes for other Gears>

Font Size	Size in Pixels	Actual Size on Display (Height)
Tiny	28pt	1.8 mm
Small	32pt	2.0 mm
Medium	36pt	2.2 mm
Large	40pt	2.5 mm

Refer to the Tizen Wearable Web UI framework font properties suggested in the table below for various font sizes in different contexts. The font sizes change based on the Gear system settings, but your app's font sizes will not be affected by it.

<Font properties by context for other Gears (Default: Samsung Condensed)>

Context(detail)	Font	Style	Size / Align (Default : left)	RGB		Effect
				Default / Dim	Focus/Press	
Default font	Default	Regular	36	255:255:255		
Action bar_title	Default	Medium	32	255:255:255		
Basic list_group index	Default	Regular	28	255:144:0		
Basic list_1line	Default	Regular	40	255:255:255 / 51:51:51	Highlight (Search) 255:144:0	
Basic list_Sub_2line	Default	Regular	228	189:167:146 / 51:51:51	Press 189:167:146	
Button_general	Default	Regular	32 / Center	255:255:255 /255:255:255 (Opacity 20%)		
Body_normal_1line	Default	Medium	36 / Center	255:255:255		
Body_normal_2line	Default	Regular	28/ Center	255:144:0		
Pop-up_title	Default	Medium	32	255:144:0		
Pop-up_body	Default	Regular	336	245:245:245		
Pop-up_button	Default	Regular	32 / Center	255:255:255 /255:255:255(opacity 20%)		
Pop-up_list	Default	Regular	36	255:255:255		
Pop-up_toast	Default	Regular	28	255:255:255		
Progress_left	Default	Regular	28	255:255:255		
Progress_right	Default	Regular	28 / Right	255:255:255		
Activity	Default	Regular	36 / Center	255:255:255		
No_item	Default	Regular	36 / Center	255:255:255		

1.5.4 Wearable Writing Style Guidelines

The compact nature of wearable device requires clear and concise writing.

Users should be able to glance at on-screen text and immediately understand the meaning without scrolling.

Find the Main Idea of Your Message

Determine the key message and remove unnecessary information.

The clarity of your message is determined by its place in the UI flow. Make sure you understand:

- what sort of text it is (Pop-up? Description? Warning? Confirmation?)
- what appears around it on the same screen
- what action a user has taken to display this text
- what will happen in the UI flow on the screens that follow

MOBILE VERSION
Your device is now looking for your Gear. This may take several minutes. It may be difficult to locate your Gear if it is indoors.

WEARABLE VERSION
Finding Gear...

Remove Nonessential Information

Decide the essential part of your message and remove the rest.

Unnecessary information can include:

- advice and guidance for the user
- further details about why a problem is occurring
- extra details about a particular item

Try to create the shortest text possible while retaining the text's original meaning.

Nonessential: Alarm set for %d hours and %d minutes from now.

Essential: Alarm set.

Nonessential: Switching from wireless charging to cable charging...

Essential: Switching to cable charging...

Reduce Grammar

Use reduced grammar whenever possible in the wearable UI. Articles and other grammar can be removed if it does not lead to a loss of meaning.

The types of words that can be removed include articles (a, an, the), determiners (this, that, their), and forms of the verb "to be."

FULL: A subscription may be required to allow your mobile device to use this feature. This may result in additional charges.

REDUCED: Subscription may be required. Extra charges may apply.

Understand the Context

Check the context and ensure you have all the necessary information. For example:

- Stating "Swipe left" or "Swipe right" becomes unimportant if an obvious visual cue appears alongside it.
- Can the text appear in more than one place? If so keep it generic or create a slightly different text for each situation.
- Does the text appear on the Gear or on a mobile device? In some instances, it may be important to clarify which device a notification or pop-up is referring to.

Stay Positive

Avoid using negative words. Gear devices should be fun to use. They should not blame or accuse the user of making a mistake.

Do not emphasize negative aspects of interaction with the device. Instead, use language that lets users know that they are dealing with a capable, reliable, and powerful device that is good to own.

NEGATIVE: Don't disconnect your charger before the installation is finished. This might result in the installation failing.

POSITIVE: Before unplugging your charger, wait for the installation to finish.

Be Active

Use the active voice whenever possible. It saves space and is easier to understand.

Please, Sorry and Thanks

Only include "Please" if omitting the word from the text makes it sound rude or demanding.

"Sorry" should not be used on a wearable device. It may only appear as part of the S Voice app or in message templates that the user can send to their contacts.

"Thanks" should be avoided.

Contractions

Contractions are recommended.

BAD: Unable to show email for security reasons. You can view the email on your phone.

GOOD: Can't show email for security reasons. View it on your phone.

Device Naming

Always refer to the wearable itself as "Gear."

Always use "phone" to refer to the smartphone that your Gear syncs with and connects to.

Enable/Disable

"Enable" and "Disable" should only be used as verbs. If you need to describe the state of a particular function once it has been enabled or disabled, use "On" and "Off" instead.

BAD: Turn on call forwarding?

GOOD: Enable call forwarding?

BAD: Call forwarding is enabled.

GOOD: Call forwarding on.

Shortened Terms

Gear devices use a number of shortened terms:

Full version	Gear version
Application	App
SIM card	SIM
With	w/
And	&

Full version	Gear version
Kilometer, centimeter, mile	km, cm, mi
Minutes, hours, seconds	min, hr, sec
Currencies	ISO currency code
Days of the week	Mon, Tue, Wed, Thu, Fri, Sat, Sun

Other Tips

If you are still struggling for space, some of these quick fixes can save space:

- Use a dash without spaces when indicating ranges (17-20cm)
- Always use digits to represent a number (6s ago)
- Remove the space between digits and units of measurement (2MB)
- Remove commas from all text

1.6 Device Compatibility

Different generations of the Gear share similarities, but they also feature different specifications such as the screen size, display resolution, and the sensor specifications.

Note You can always design your app to be compatible only with certain Gear devices. At the Samsung App Store, users can sort apps by compatibility before they download and install the apps.

Gear Device Form Factor Comparison Tables

The following comparison table shows the display specifications for different Gear devices.

Model	Display size and type	Ratio	Resolution (PPI)
The Next Gear 	360x360 px Round screen	1:1	305
Gear S 	2.0 inches (360x480 px) Rectangular screen (curved)	3:4	300
Gear / Gear 2 	1.63 inches (320x320 px) Square screen	1:1	278

The following table shows the different sensor specifications for the Gear devices.

Features	The Next Gear	Gear S	Gear 2	Gear2 Neo
2/3G Connection	✓ / X	✓	X	X
Camera	X	X	✓	X
Infrared LED	X	X	✓	✓
GPS	✓	✓	X	X
Acceleration sensor	✓	✓	✓	✓
Gyro sensor	✓	✓	✓	✓
Heartbeat sensor	✓	✓	✓	✓
UV sensor	X	✓	X	X
Pressure sensor	✓	✓	X	X
Magnetic sensor	✓	✓	X	X
Ambient light sensor	X	✓	X	X

2. Watch Face

The Watch Face is the first screen displayed when you turn on the Gear. Pressing the Home button closes the running application and brings the user to the Watch Face. Pressing the Home button while the Watch Face is displayed will dim the screen.

You can design the Watch Face for the Gear and distribute the design via the Samsung Apps so that users can download it on their Gear devices.

2.1 Watch Face States

The Gear's Watch Face has two different display states: "active" and "always-on." The name "active state" is very self-explanatory. In the active state, the Watch Face displays in full color. On the other hand, the always-on state uses limited colors and brightness. The active state Watch Face is customizable. Users can download and install custom Watch Face designs on their Gear. On the other hand, the always-on state Watch Face designs are provided by the Gear system.

2.1.1 Active State Watch Face

You can make the active Watch Face designs as creatively as you want, since a detailed full-color Watch Face is available in the active state. The graphical elements on the Watch Face are actively updated on the screen every second for decorative purpose. The Watch Face must provide quick responses to user interactions. When designing an active state Watch Face, colorful and easily noticeable designs are recommended. Icons may be added to the Watch Face allowing users to launch apps directly or receive necessary information on the Watch Face.

Active state Watch Face



The Watch Face is turned on when the user presses the Home button. Another press on the Home button during the active state dims the Watch Face and forces it to enter the always-on state. Also, the Watch Face automatically enters the always-on state if a user interaction is not detected for 10 seconds (factory default).

2.1.2 Always-on State Watch Face

Unlike the active state Watch Face designs, the always-on state Watch Face designs are provided by the Gear system. They are designed to show only the main Watch Face components. Designed to display the time information with ultra-low power consumption, the always-on Watch Face lowers the screen brightness. Therefore, simple and bold designs are used to maximize the visibility of the Watch Face.

Always-on state Watch Face



Tapping on the always-on state Watch Face or pressing the Home button turns on the active state Watch Face. Users may turn off the always-on option and keep the screen blank (turned off). Tapping on the blank screen or pressing on the Home button resumes the Watch Face that was last displayed on the screen.

2.2 Watch Face with System Icons

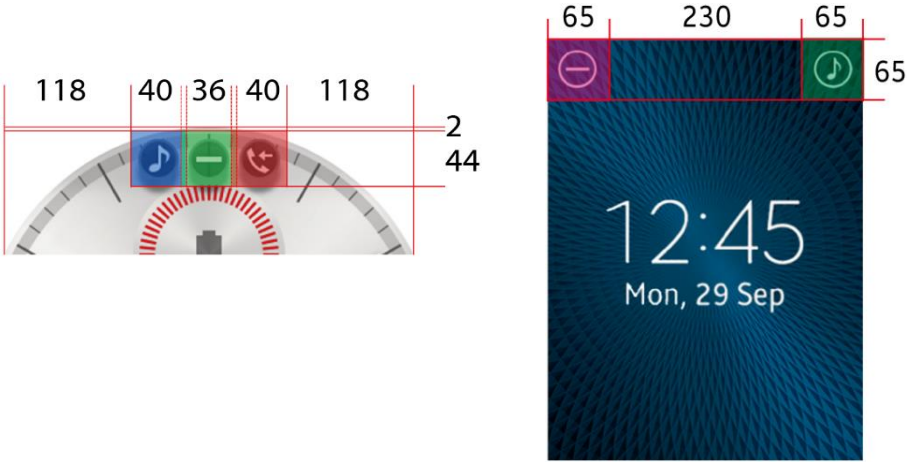
Depending on the system settings, the Watch Face may have small system icons that display the device status and provide shortcuts to other features. When you work on a Watch Face design, you should avoid placing your action buttons in locations reserved for the system icons to prevent any possible conflicts.

Watch Face with system icons



Refer to the following screenshots for the dimensions reserved for the system icons.

System icon locations and dimensions



2.3 Design Guidelines for the Watch Face

Basic Watch Face Visibility

When you design a basic Watch Face, keep in mind that the Watch Face's background changes when the user changes the wallpaper. Since the background colors or patterns may impair the visibility of the Watch Face, drawing bold outlines or applying shadow effects on the Watch Face UI elements is a good idea. This way, you can ensure that your Watch Face UI stands out from the background at all times.

Design Your Watch Face to be Stylish

The Watch Face is the single feature that the users and their friends see the most on the Gear. A stylish Watch Face design can turn the Gear into a fashion accessory that expresses the person wearing it. Therefore, it is very important that you design the Watch Face carefully and make it stylish and attractive.

Add Features to Your Watch Face

Users like stylish Watch Face designs with extra features. Watch Face designs with information or shortcuts to other features on the screen can make it stylish and functional at the same time. For this, you can designate a special area on the Watch Face and place user interfaces, such as action buttons, to allow users to access the corresponding information on separate pages.

Note When you add interactive features on the Watch Face, design them to take only tap and vertical swiping as user inputs. The Gear's home structure does not allow any other types of user inputs on the Watch Face.

Since the Watch Face is the first thing the users see when they do anything with the Gear, additional features on the Watch Face can maximize user accessibility.

Note You can place an icon showing the number of new notifications on the Watch Face. A tap on the icon opens up the Rich Notification Board so that users can view the newly received messages.

3. UI Elements

This section provides sample images and information about the Gear UI components included in the Tizen Wearable Web UI framework.
Since a Gear app is basically a type of web application, the process and techniques required to develop a Gear app are very similar to those used for developing a web application. In the ***Tizen Wearable SDK [link]***, we have prepared a set of styles for the common HTML elements, such as buttons, lists, and checkboxes. Refer to the following sub-sections to figure out what the default style elements look like and how they work. At the end of each sub-section, short summaries are provided to give you ideas on how to improve the user experience in your app.

3.1 A Page

An app is composed of one or more pages. At any moment, the Gear shows a part of a page or a whole page. You can decorate a page with full screen-sized images or HTML elements. The common elements of a page are a header, footer, and content. A header can hold the title of the page and **More Menu** button when necessary. A footer is the overlaid element that is docked to the bottom. A footer usually has a set of buttons. Main contents, images or texts, are placed inside the content area.

Generic Page structure for the Gear



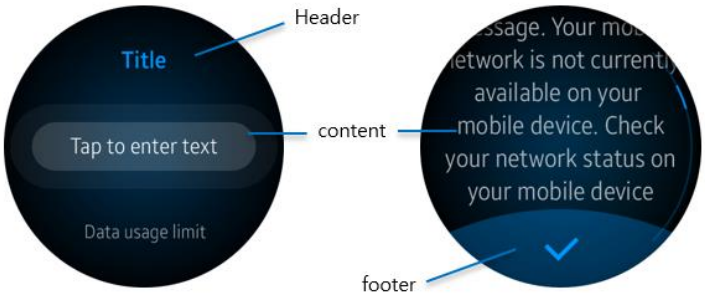
Note The main page of an app will not remember a user's previous position in the app after it closes.

Page Structure for the Next Gear

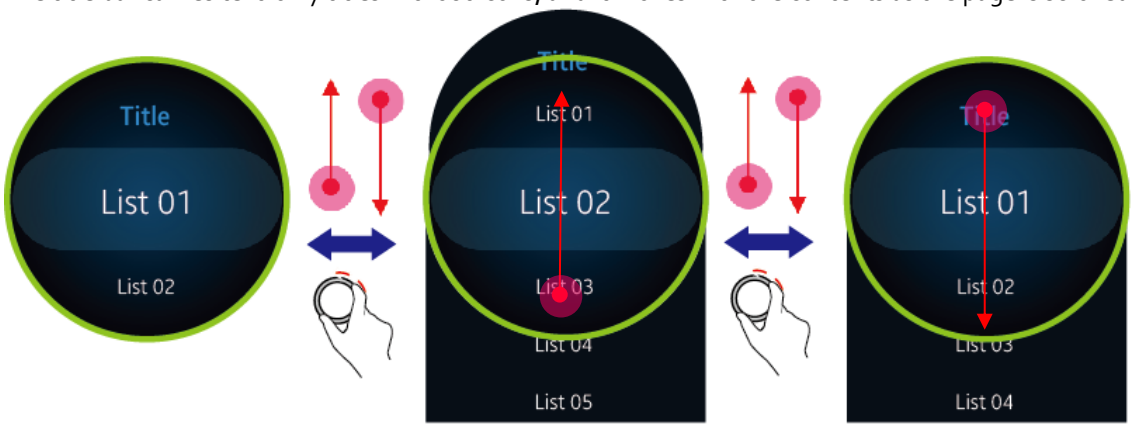
Design the main page of a Next Gear with a header (title), content, and a footer. On the Next Gear, every page must have a title bar unless the page is used in an app to display full-screen information, such as an image or a map screen, or unless it carries action buttons only.

Note **More Menu** and other action buttons may be provided using the visual cue.

Page structure for the Next Gear

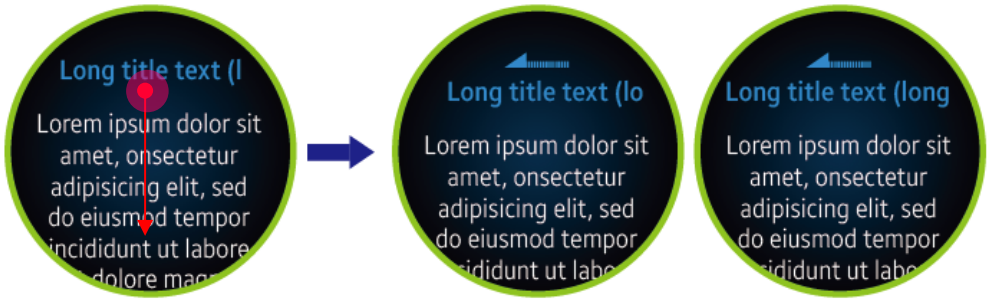


The title bar carries text-only titles without icons, and it moves with the contents as the page is scrolled.

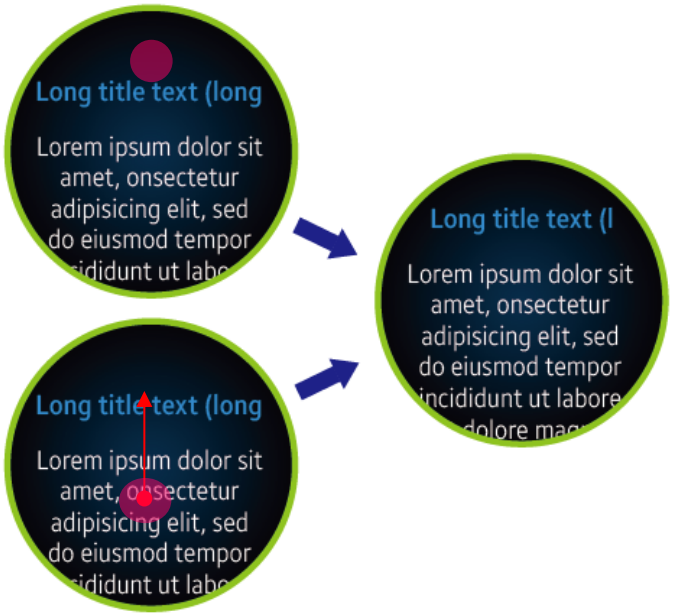


If the title is too long to be displayed in the title bar, only the first part of it will be displayed. To see the entire title, users can scroll further down the page to expand the title bar. This enables the title text to slide left to display the entire title. Then, users can tap the expanded title bar, or scroll up the page to collapse it to the original size.

From the top of a page (title bar is collapsed), users can scroll further down the page to expand the title bar.



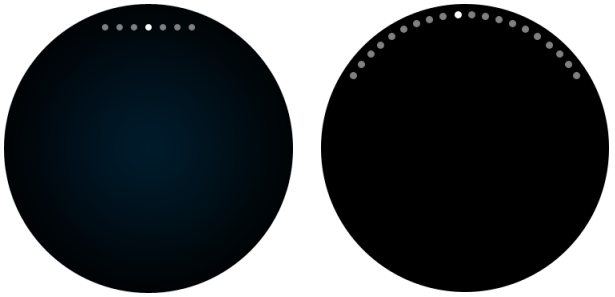
When users tap on the expanded title bar, or scroll up the page, the title bar collapses.

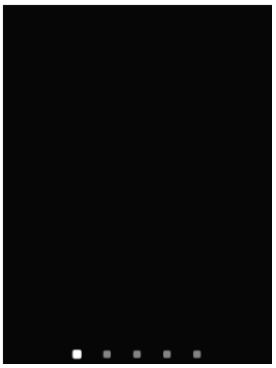


3.2 Page Indicators

Provide page indicators at the top or bottom of the screen to inform users that more pages are available. Users can use swipe or rotary actions to access other pages.

Page indicator *Circular page indicator* *Page indicator on the Gear S*





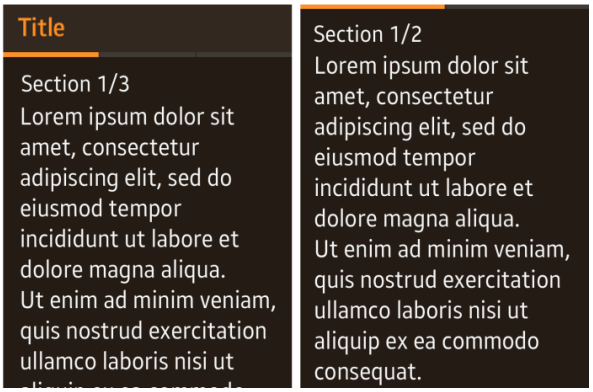
On the Next Gear, page indicators are used for screens designed for only horizontal swiping actions, while circular page indicators are for screens that take both the touch and rotary inputs for horizontal navigation.

Note You can choose to place the page indicator either at the top or bottom of the screen. Choose a position that goes best with your screen design.

3.3 Tabs

A tab is used to create a paginated layout when the content in a topic is too large to be displayed in one page. If the first page has a header with a title, the same title is displayed on all the following screens. Remember that a bezel swipe down ("back" action) does not bring you to the previous tab screen- it simply closes the tab screen that is currently open.

Tabs



Note On the Next Gear, use page indicators instead of tabs.

3.4 Circular Indicators

To go with the Next Gear's round screen design and rotary action, arc-shaped bars or dots are used to indicate the current position on a page.

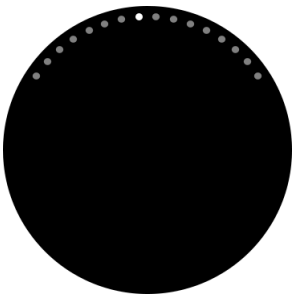
Circular scroll bar



Circular slider



Circular page indicator



3.5 Scroll Bar

A scroll bar may be used to indicate the current position on a long page, such as a long vertical list. When the user scrolls up or down on a screen, a scroll bar appears for few seconds and then it disappears.

Scroll bar for vertical scrolling



3.6 Pop-ups

You can design and provide various types of pop-ups for different events or occasions based on their context. On the Next Gear, a pop-up message does not require a header, but headers can be added if necessary.

Pop-ups on the Next Gear



When designing a pop-up for the Next Gear, you can place the action icons on both sides of the screen to maximize the screen usage. This enhances usability as well because users can take instant actions as soon as they read the pop-up message.

If you need to provide additional (secondary) action buttons or a small checkbox, add them at the bottom of the body text. These additional elements will only be accessible when the user has scrolled down to the end of the page.

Pop-up with additional action buttons



Pop-up with small checkbox at the bottom



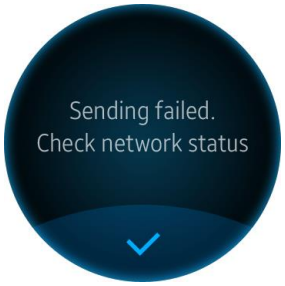
For information pop-ups that require only one button, place the action button at the bottom of the screen and allow users to select it using the rotary action.

Pop-up Types available on the Next Gear

Confirmation pop-up



Information pop-up



Progress pop-up



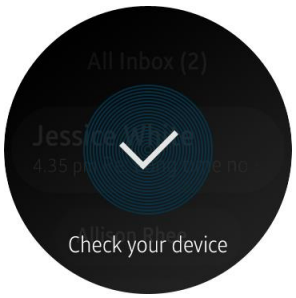
Progress pop-up (small)



Toast pop-up



Graphical toast pop-up



Note

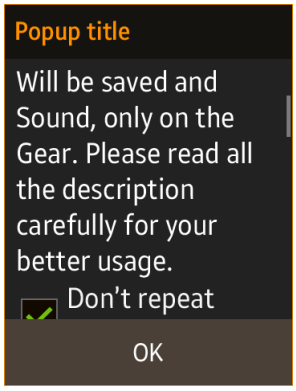
- When you design pop-ups for the Next Gear, try to minimize the use of toast pop-ups. If your pop-up requires user interaction, or if the text is longer than the 3-line limit, provide a confirmation pop-up (dialog pop-up) instead.
- Plain toast pop-ups may only carry a maximum of 3 lines of text. Graphical toast pop-ups may carry a graphical icon only, with optional text up to a maximum of two lines. A toast pop-up is displayed for 2 seconds, and then it automatically disappears.

Pop-up types available on the previous Gears

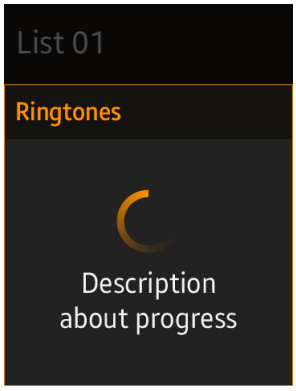
Confirmation pop-up



Information pop-up



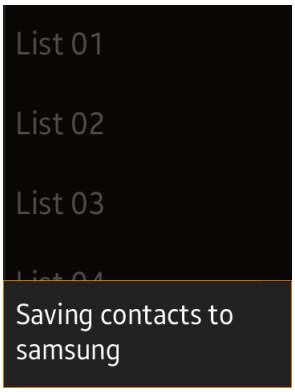
Progress pop-up



Process pop-up



Toast pop-up



Note When you design your pop-ups for the previous Gears, align the bottom buttons using the button styles to ensure that your pop-up is compatible with all the Gear devices.

3.7 Buttons

The default buttons, without any styles applied to them, will look like generic web buttons on a Web page. You can apply pre-defined styles to customize the buttons.

The following are the most common examples of the button designs.

Button Types for the Next Gear

Note When designing a list page for the Next Gear, a Select menu button may be placed at the top of the screen. Using this button, users can select or deselect all the items in a list.

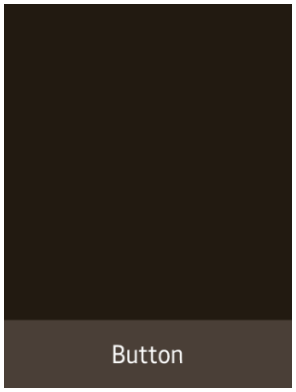
If your app requires more than two buttons on a page, add the main action button at the bottom of the page. Provide the remaining action buttons on the **More Menu** page, which can be accessed by dragging the visual cue.

Single button at the bottom



Button Types for the Gear S

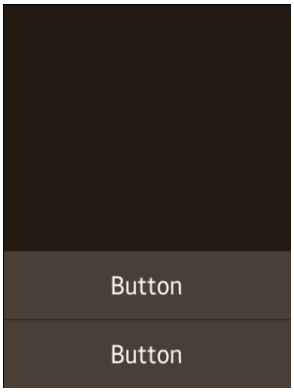
Single button at the bottom



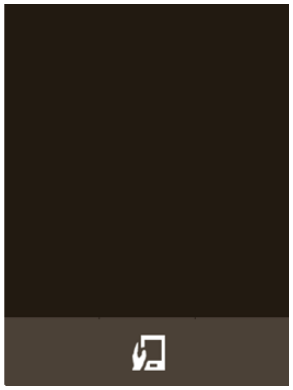
Two buttons at the bottom



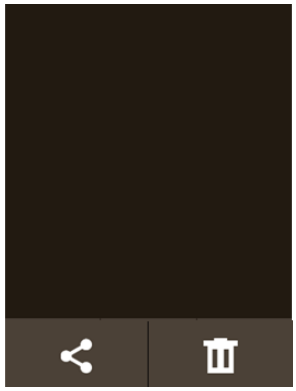
Two buttons stacked at the bottom



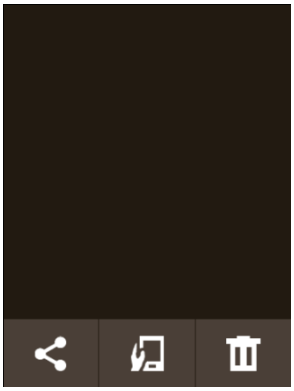
Single icon button



Two icon buttons



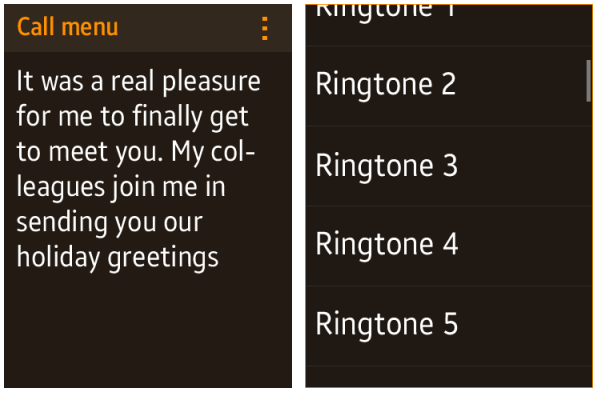
Three icon buttons



3.8 More Menu

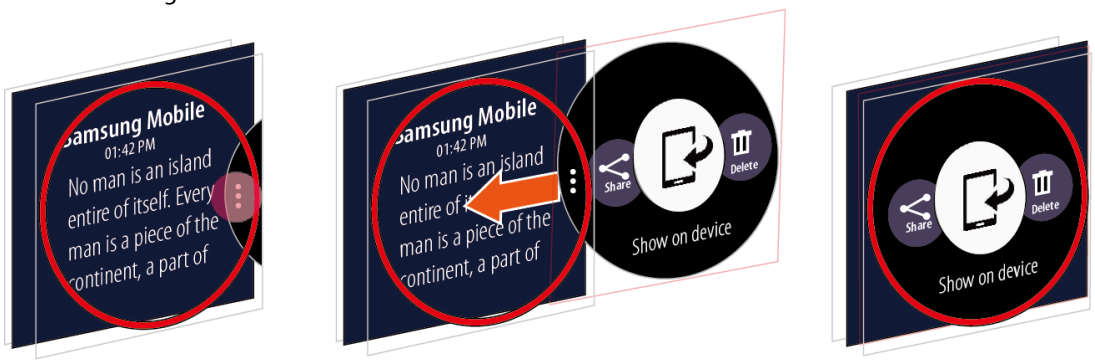
The **More Menu** is used to place multiple options on a separate page. Users can tap the **More Menu** to see available options related to the information displayed on the current page.

More Menu button



On the Next Gear, an element called the "visual cue" has been added to provide direct access to the **Circular More Menu** page. The visual cue on the right side of the screen allows users to directly access the **Circular More Menu** page, regardless of where they are on the page.

The following is an example to illustrate how the visual cue works. The **Circular More Menu** page is pulled out when users drag the visual cue.



Then the **Circular More Menu** page disappears when a "back" interaction (bezel swipe down) is performed, returning the visual cue to the right edge of the screen.



Note

- A visual cue for the Apps screen is provided at the bottom of the Home screens (the Watch Face, Rich Notification Board, and Widget screens). Users can drag the visual cue upwards to access the Apps screen.
- The visual cue cannot be used on a page design that requires horizontal navigation.

3.9 ListViews

You can design a list using the ListView styles.
With the Next Gear, you can allow users to use the rotary action to scroll across the list.

Basic ListViews

Use the ListView style to create a page with a basic list. You can add sub-text strings to the main item description to provide more information. The default height for a list item is fixed to 130 px for the Next Gear, and 100 px for the Gear S, but you can customize it with CSS styles when you design a list of multi-lined text items.

Basic ListView



ListView with sub-text



ListView with multi-line sub-text



ListView with action buttons

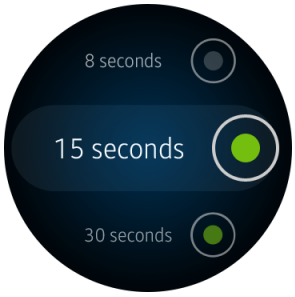




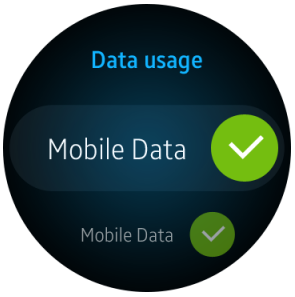
ListView with a divider and an icon



ListView with radio buttons



ListView with checkboxes

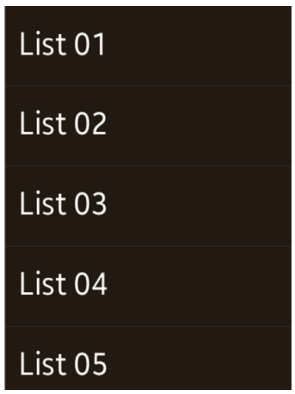


ListView with group index

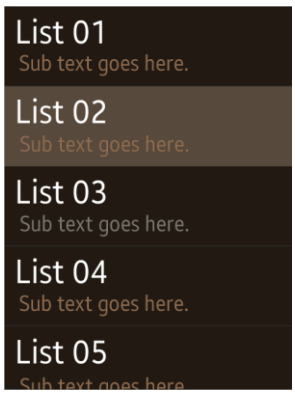


Other than the sub-text strings, you can also place action buttons, checkboxes, or radio buttons to add features to your basic ListView layout. The following are examples of lists designed with ListView style.

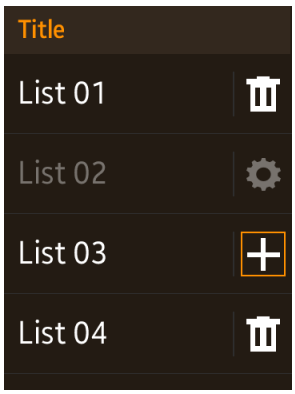
Basic ListView



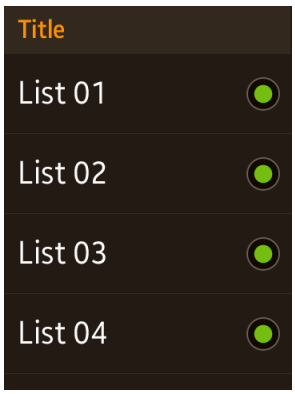
ListView with sub-text



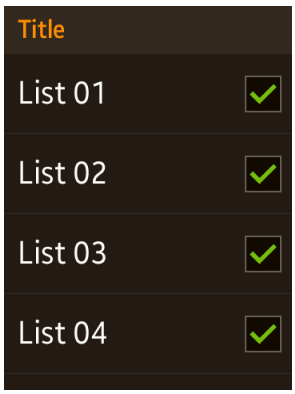
ListView with action buttons



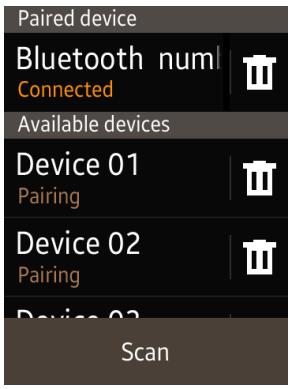
ListView with radio buttons



ListView with checkboxes



ListView with group index



3.10 GridView

The Next Gear provides GridViews for displaying images. Allow users to swipe horizontally to scroll through the list. The size of the thumbnail displayed in the center is 202x202 while the thumbnails at the edge are 164x164. The users can tap the center image to get a full-screen view of the image.

Single GridView



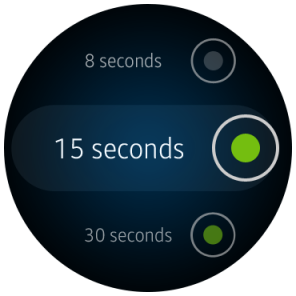
Quad GridView



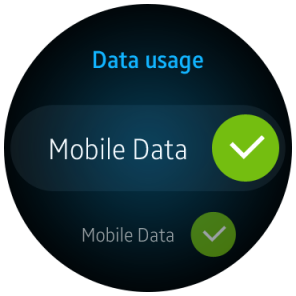
3.11Checkbox and Radio Button

By default, the Gear's key color schemes are applied to the checkboxes and radio buttons.

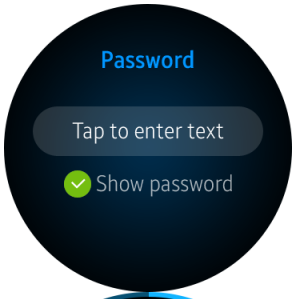
Radio buttons



Checkboxes



Checkbox (small)

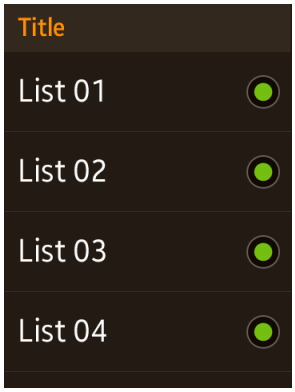




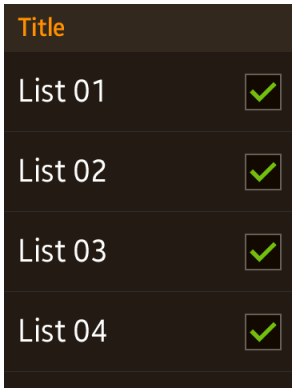


Provide a small checkbox at the bottom of the screen to allow users to change setting options without accessing the **More Menu** page.

Radio buttons



Checkboxes

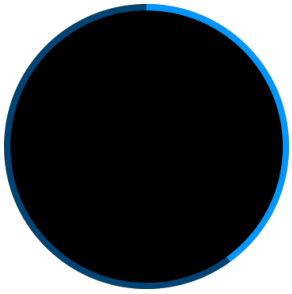


When you design a list of checkboxes or radio buttons, make the whole area of each entry tappable, rather than designing only the checkboxes or the radio buttons to be tappable. This will provide an improved user experience by making list selections easier for users.

3.12 Progress

Three different styles can be used to inform the users that a task is in progress: progress indicator (indeterminate), progress indicator and process indicator." The progress indicator (indeterminate) shows an indefinite process where the progress rate is unknown, with a rotating circle icon. You can design your app to stop the rotation when a job is done. On the other hand, the progress indicator can be presented with either a percentage bar or a fraction indicator to show the detailed progress of a task.

Progress indicator (Indeterminate)



Process indicator



Process indicator for download



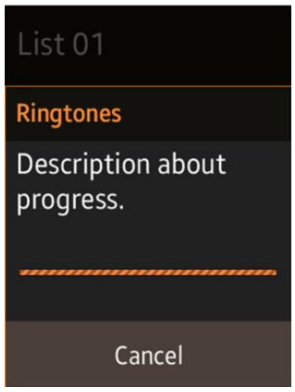
Process indicator (Small)



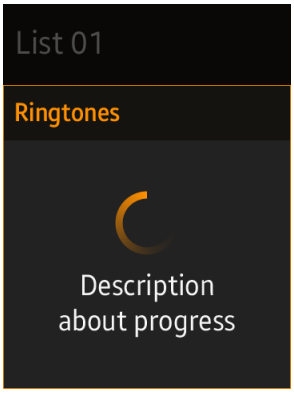
Process indicator (ListView)



Progress indicator (Indeterminate)



Process indicator



Process indicator for download



3.13 Sliders

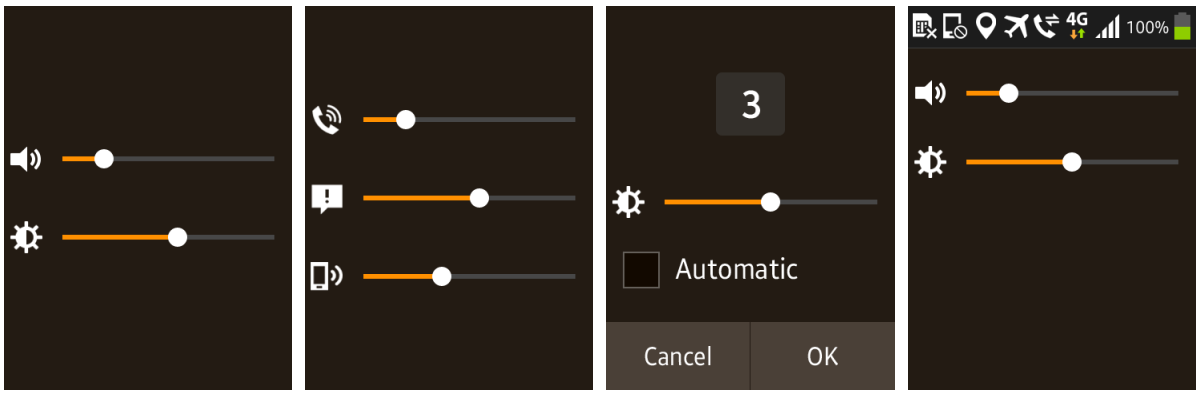
You can implement sliders in the Gear's style simply by adding the web standard components to your design. The Gear automatically applies the system style to the components to make your designs consistent with the Gear system.

Sliders are used to adjust a value within a certain range, and are provided with the descriptions and/or icons that explain the values. Users can tab the slider bar or circle to increase or decrease the value. You can choose to display numbers for the value to complement the sliders.

The following are examples of sliders presented in the Gear's system style.

Sliders





3.14 Switches

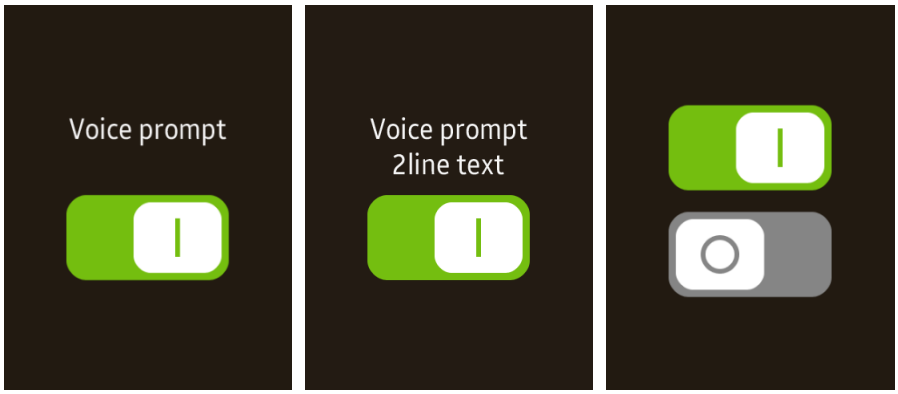
You can design toggle switches for your app to allow users to turn a feature on or off. Provide a switch beside a description for the option that can either be enabled or disabled by the user.

The following are examples of toggle switches presented in the Gear's system style.

Toggle switches



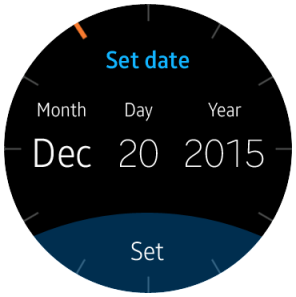
Toggle switches



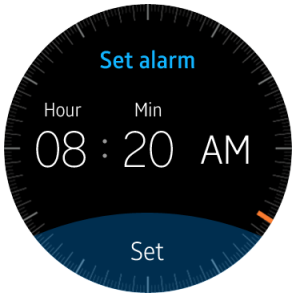
3.15 Pickers

Allow users to use the rotary action to set the date, time, and pick a color. Users can use rotary action to change the value of the centered item. Provide a confirmation button at the bottom of the screen to confirm changes.

Date picker



Time picker



Color picker



Number picker



Display all the shades of the color around the round screen. Allow users to rotate the bezel and select the required color.

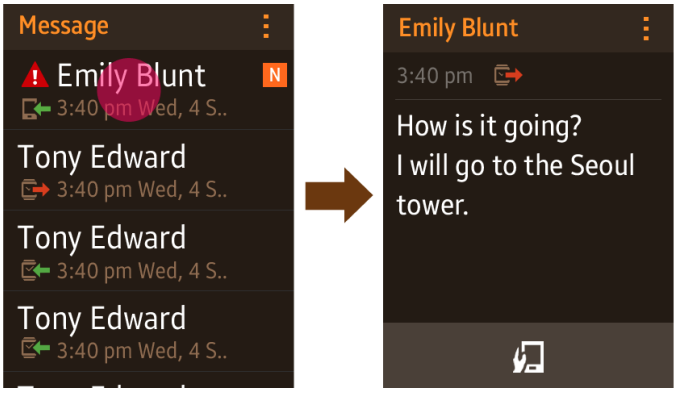
4. Best Practices

This section provides suggestions to make the most out of the UI elements that we have covered in the previous section.

4.1 What is a Header for?

A Header element on the Gear may take up 60 pixels (on Gear S) at the topmost part of the display.
It provides users with a context. Small and simple apps made up of only a few pages may work just fine without headers. However, you should consider adding headers to your page designs if you are designing apps with more pages and a complex structure. Using such apps, users will be required to move to different pages, and chances are high that they will get lost in your app without headers.

Example of headers: Headers help users understand the context.



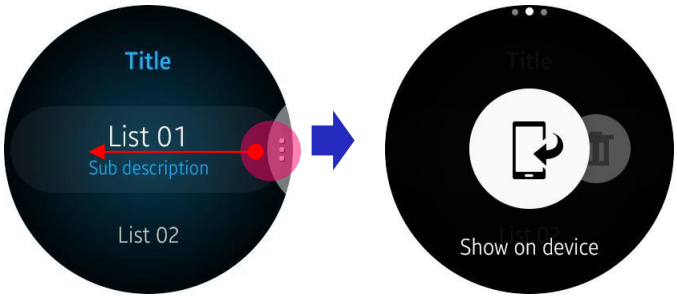
Example of a simple app



4.2 How Many Buttons are Good on a Page?

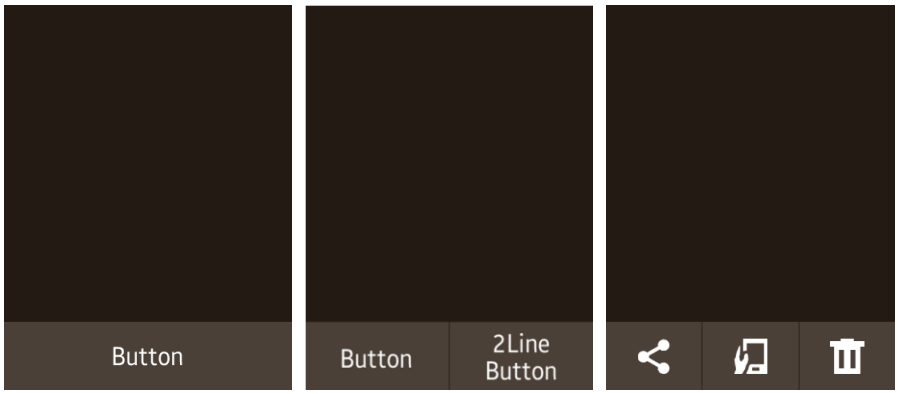
The display sizes vary among the Gear devices, and the display specifications will continue to change in future Gear devices. To stay on the safe side, the number of buttons we recommend at the bottom of any page is two. We would advise you against using three buttons at the bottom of a page. However, if you need a three button design for your app, use button icons instead of button texts.

For the Next Gear, we recommend that you add only one button at the bottom of a page if necessary. Allow users to access the remaining buttons by dragging the visual cue.



Notes

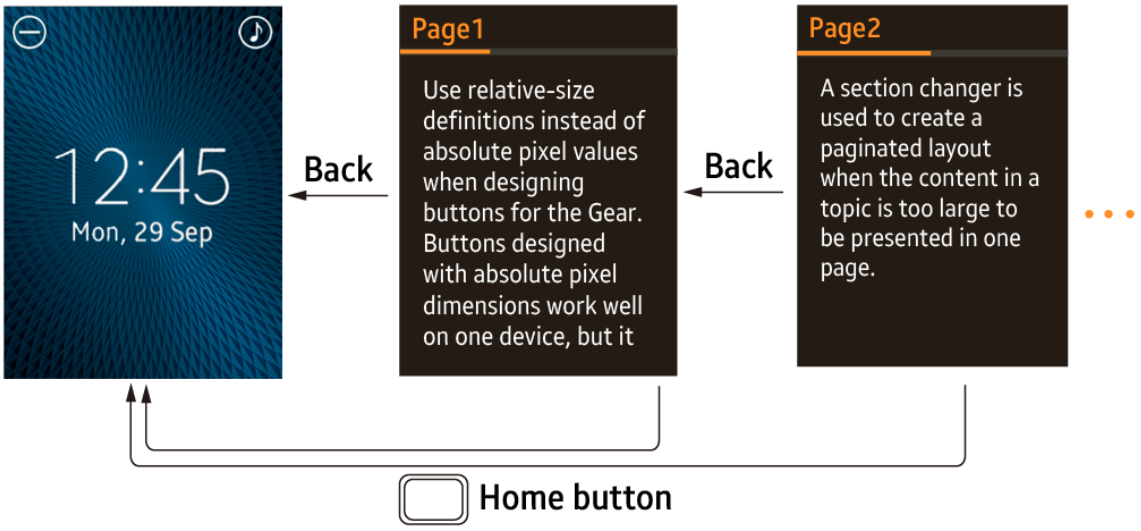
- In the Gear UI, up to two 10-character strings may be used for a button text, though it is always best to keep them as short as possible.
- Use the button group style to ensure that your button designs are compatible with various display sizes. These styles can automatically align a maximum of 3 buttons.



4.3 How do I Design My App to Close?

When users press the Home button or perform a bezel swipe down (the "back" gesture) from the main page (the first page) of your app, your app should close. If you have many pages inside your app, it will keep returning to the previous page each time the gesture is made. Then it will close the app when another "back" gesture is made on the main page.

On the Next Gear, users can swipe downwards from the bezel, or rotate the bezel counterclockwise on the current page to navigate to the previous page.



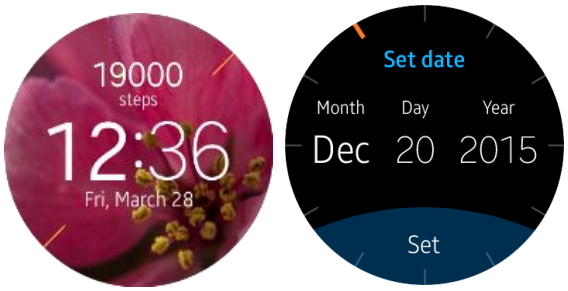
Note Your app pages may include multiple tabs. In this case, remember that the "back" gesture is used to display the previous page, and not the previous section. Therefore, performing back gestures on the main page will close the app regardless of the section that is currently being accessed.

We recommend that you design your Gear app to close without a confirmation pop-up, since asking for confirmation may annoy the users. Also, avoid designing your app to run in the background when an action is performed to close the app, since stable background operation is not guaranteed.

4.4 What Do I Need to Know to Create Compatible Designs?

In order to ensure that your app is compatible with other Gear devices, use responsive designs when developing an app. The Gear devices have been developed and marketed in different display sizes and resolutions so far, and such a trend may continue as the relevant technology advances.

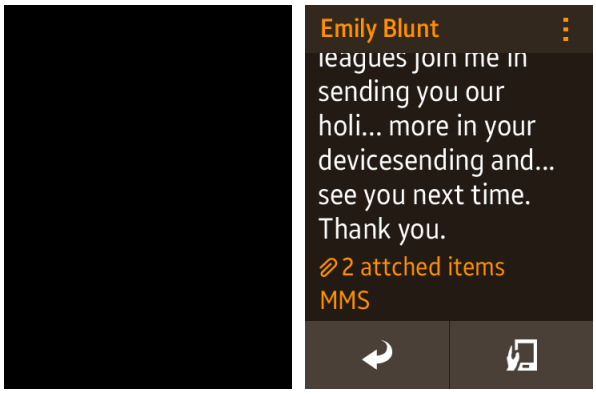
1:1 Round screen layout



1:1 Screen layout



3:4 Screen layout



If you use the assets in the **Tizen Wearable SDK [link]**, apps will be composed to match the screen ratio, but the layout may vary according to the screen ratio and size.

The Tizen Wearable Web UI framework elements are designed to shrink or expand according to the screen size. Also, note that the UI styles provided in the framework can be applied to display shapes other than the rectangular designs (circular display, for example).

Consider designing your screen based on a 1:1 ratio layout whenever it is practical. Then, find different ways to utilize the additional space provided by other screen ratios. While a design based on a 1:1 screen ratio screen layout will fit on any 3:4 ratio screen, one designed for a 3:4 screen ratio will not fit on a 1:1 ratio screen, nor can it be adjusted well enough to provide a natural look (if it is adjustable at all).

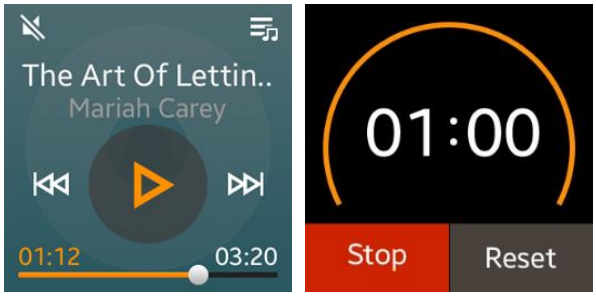
If you decide not to use the provided design elements and to design an independent UI, make sure to follow the basic design principles below.

Basic design principles

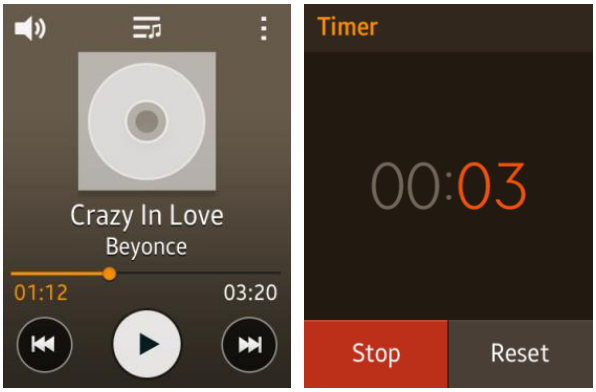


❶ Left-align the top left button. Right-align the top right button (for rectangular screens only).
❷ Bottom-align the bottom button and fix the width to 100%.
❸ Content in the body can be center-aligned, or it can use a different alignment depending on the design.
❹ If a background image is used, the width and the type of alignment should be set accordingly.

1:1 Screen layout



3:4 Screen layout



If you design an app where the layout cannot be modified (i.e. the Watch Face) and therefore cannot utilize the full screen, the app can be displayed as shown below. Set the horizontal width to 100% and leave blanks at the top and the bottom of the screen. The color for the blanks can be configured to match the main display, or separate images may be used to cover up the blanks.

1:1 Round screen layout



1:1 Screen layout



3:4 Screen layout

