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A. Basic

A1. Appearance

A1.1. The size of Rivo is 94mm wide, 52mm high, 12mm thick, and weighs 55g.

A1.2. There are 20 buttons on the front arranged in 4 rows and 5 columns. Button 5 in the middle has a tiny bulge on

it.
A1.3. Microphone is on the front left behind three tiny holes arranged vertically.

A1.4. Speaker is on the front right behind a hollow vertical bar.

A1.5. There are three small buttons on the top side; the one on the left is the POWER button, and the two buttons on the right are the KEYBOARD button and the AUDIO button from left to right.

A1.6. On the bottom side, there are strap holes, a micro USB port, a reset button hole, and an earphone hole from left to right.

A2. Orientation and Button Names

A2.1. Rivo can be used in either horizontal or vertical orientation depending on the setting.

A2.2. Horizontal orientation is the default, and even if Rivo is set to the vertical orientation, it will reset to the horizontal orientation when turned on.

A2.3. The USB port is facing downwards in the horizontal orientation and facing right in the vertical orientation.

A2.4. Horizontal orientation is assumed throughout the manual except where vertical orientation is introduced.

A2.5. In horizontal orientation, buttons in Rivo are arranged in 4 rows and 5 columns.

A2.6. Buttons in the leftmost column are L1, L2, L3, and L4 from top to bottom.

A2.7. Buttons in the rightmost column are R1, R2, R3, and R4 from top to bottom.

A2.8. Buttons in the middle three columns are 1 through 9, *, 0, and # arranged just like a telephone keypad.

A2.9. The buttons on the top side are POWER, KEYBOARD, and AUDIO from left to right.

A2.10. On the front, the microphone is left to L2 and L3, and the speaker is right to R2 and R3.

A2.11. On the top side, POWER is above L1, KEYBOARD is above 3, and AUDIO is above R1.

A2.12. On the bottom side, the USB port is below 0, and the earphone hole is below # and R4.

A2.13. In vertical orientation, buttons in Rivo are arranged in 5 rows and 4 columns.

A2.14. Buttons in the top row are T1, T2, T3, and T4 from left to right.

A2.15. Buttons in the right column below T4 are D1, D2, D3, and D4 from top to bottom.

A2.16. The other buttons are 1 through 9, *, 0 and # arranged just like a telephone keypad.

A2.17. Note that only 5 is physically the same in horizontal and vertical orientations.

A2.18. On the front, the speaker is above T2 and T3, and the microphone is below 0 and #.

A2.19. On the left side, AUDIO is next to T1, KEYBOARD is next to 1 and POWER is next to *.

A2.20. On the right side, the earphone hole is next to T4 and D1, and the USB port is next to D2.

A3. Command Notation

A3.1. Pressing a button is denoted by its button name for brevity. For example, 1 stands for pressing the button 1.

A3.2. A sequence of button names separated by a comma denotes pressing the corresponding buttons successively as in the sequence. For example, 1, 2 stands for pressing button 1, followed by pressing button 2.

A3.3. A plus sign after a button name denotes a combination of buttons. For example, L1 + 1 stands for holding down the button L1 and then pressing the button 1.

A3.4. A plus sign after a button name followed by a sequence of button names separated by a comma denotes holding down the first button before the plus sign, pressing the other buttons successively as in the sequence, and then releasing the first button. For example, L1 + 1, 2 stands for holding down the button L1 and then pressing the buttons 1 and 2 successively, and then releasing L1.

A4. Charging the Battery

A4.1. Rivo is charged with a micro USB cable. It takes about 3 hours for a full charge and can be used for more than 15 days when only the keyboard is used. Using the audio or the phone function will shorten this time.

A4.2. When Rivo is plugged to charge, there is a vibration and the red LED is turned on, which changes to GREEN with a vibration when fully charged.

A4.3. To check the battery level, press POWER, KEYBOARD, and AUDIO together. The number of short vibrations indicates the battery level in 5 levels with 5 vibrations for full and 1 vibration for low.

A4.4. When the battery level reaches below low, there are 2 short vibrations twice at a 10-second interval.

A4.5. When the battery level is too low, Rivo turns off automatically.

A5. Vertical Orientation

- A5.1. Rivo can be used in either the horizontal or the vertical orientation depending on the setting.
- A5.2. Horizontal orientation is the default, and even if Rivo is set in the vertical orientation, it will reset to horizontal orientation when turned on.
- A5.3. Buttons in horizontal orientation are directly mapped to corresponding buttons in the vertical orientation by the name.
- A5.4. L1, L2, L3, and L4 are mapped to T1, T2, T3, and T4, respectively.
- A5.5. R1, R2, R3, and R4 are mapped to D1, D2, D3, and D4, respectively.
- A5.6. The other buttons are mapped to buttons with the same names.
- A5.7. To set Rivo in horizontal orientation, press L3 + R3.
- A5.8. To set Rivo to the vertical orientation, press L3 + R3, R3. When set to the vertical orientation, there is a vibration.
- A5.9. Basically, most commands in horizontal orientation are directly mapped to the commands in vertical orientation just by mapping the button names.
- A5.10. Some commands use the same physical buttons in both orientations. These are keys for orientation setting, media mode setting, Phone shortcuts, Bluetooth pairing/connection/device numbers, and Rivo settings.
- A5.11. Some commands may not be provided in the vertical orientation.
- A5.12. Media shortcut commands in horizontal orientation also work in vertical orientation using the same physical buttons.

B. Common

B1. Power, Bluetooth Pairing, Keyboard Mode, Audio Mode

- B1.1. If you hold down POWER until there is a vibration, Rivo is turned on or off. There is one long vibration when turned on and two when turned off.
- B1.2. Turn on the Bluetooth of the device.
- B1.3. To pair the Rivo and a device, Rivo needs to be in the pairing mode. If Rivo has never been paired previously, it is automatically put in the pairing mode when turned on, and there are three short vibrations and the blue LED blinks. Otherwise, hold down KEYBOARD and AUDIO together until there are three short vibrations to put Rivo in the pairing mode. Alternatively, you may press L3 + 0, #.
- B1.4. After a while, "Rivo" will appear on the screen. Select and double-tap it to connect.
- B1.5. To use Rivo while hearing sound from the device speaker, press KEYBOARD. This will set Rivo to the Keyboard mode with a short vibration. If there is no vibration, either turn it on or unlock it.
- B1.6. To use Rivo while hearing sound from the Rivo speaker, press AUDIO. This will set Rivo to the Audio mode with a short vibration. If there is no vibration, either turn it on or unlock it.
- B1.7. Rivo always starts in the Keyboard mode when connected to a device.
- B1.8. If you ever hear sound from the Rivo speaker after you set Rivo to the Keyboard mode, Rivo has been set to the Audio mode automatically by requests from the device. If this happens, press L3 + L1, 7, 4, 5. This is to set Rivo to reject audio connection requests from the device. If you want to cancel this setting, press L3 + L1, 7, 4, 4.

B2. Lock, Unlock, Status

- B2.1. If you hold down KEYBOARD until there are two short vibrations, Rivo is disconnected from the device and buttons get locked.
- B2.2. If you press KEYBOARD and POWER together, there is a short vibration and Rivo connects to the device again in the Keyboard mode and buttons get unlocked.
- B2.3. If you hold down AUDIO until there is a short vibration, Rivo is set to the Audio mode and buttons get locked.
- B2.4. If you press AUDIO and POWER together, there is a short vibration and Rivo is set to the Audio mode and buttons get unlocked.
- B2.5. If you press KEYBOARD and AUDIO together, Rivo gets unlocked and set to the Phone mode.
- B2.6. If you press POWER shortly, there are one, two, or three short vibrations depending on the current status of Rivo. If there is one, it is unlocked and connected. If there are two, it is disconnected and buttons are locked. If there are three, buttons are locked in the Audio mode.

B3. Bluetooth Connection, Device Management

- B3.1. Whenever Rivo is turned on, it automatically tries to connect to the last device connected.
- B3.2. To save the current device as device n, press L3 + 0, n, R3, where n can range from 1 to 6. For example, L3 + 0, 1, R3 saves the current device as device 1.
- B3.3. There are no duplicate devices in Rivo. That is, if you save a device already saved again as a different device, the device is saved only as a new device.
- B3.4. To remove the device n saved in Rivo, press L3 + 0, n, R1. For example, L3 + 0, 1, R1 removes device 1.
- B3.5. To disconnect, or to cancel the current connection request in progress, press L3 + 0, *.
- B3.6. To connect to device n, press L3 + 0, n. For example, L3 + 0, 1 connects Rivo to device 1.
- B3.7. To connect to the last device again, press L3 + 0, 0. Device 0 is always treated as the last device in Rivo.
- B3.8. To put Rivo in the pairing mode, hold down KEYBOARD and AUDIO together until vibration. There are three short vibrations and the blue LED blinks. Alternatively, you may press L3 + 0, #.
- B3.9. Any changes in Rivo settings are saved automatically together with the device connection information.

B4. Media Shortcuts and Media Mode

- B4.1. To play or pause music, press * + 5.
- B4.2. To increase or decrease the audio volume, press * + 2, or * + 8.
- B4.3. While an earphone is plugged in, press * + #, or * + 0 to increase or decrease only the Rivo earphone volume without changing the device volume.
- B4.4. To mute the audio, press * + 9.
- B4.5. To skip to the previous or the next track, press * + 4, or * + 6.
- B4.6. To rewind or fast forward the track, hold down * + 4, or * + 6.
- B4.7. To set Rivo to the Media mode, press L3 + *. In the Media mode, you don't need to hold down * in the above media shortcuts.

B5. Phone Mode

- B5.1. To set Rivo to the Phone mode, press KEYBOARD and AUDIO together. In the Phone mode, Rivo works only in the vertical orientation, which is set automatically.
- B5.2. To receive the first incoming call, press T1.
- B5.3. To receive the second incoming call, press T1.
- B5.4. To switch between the first call and the second call, press T1.
- B5.5. To end the current call, press T4.
- B5.6. To end the first call and receive the second incoming call, press T4.
- B5.7. To reject the first incoming call, press T4.
- B5.8. To reject the second incoming call, press D4 + T4.
- B5.9. To dial DTMF touch tones, press the corresponding number buttons while in a call.
- B5.10. To enter a phone number to call, press the corresponding number buttons. The maximum length of a phone number is 20 digits.
- B5.11. To delete the last digit entered one by one, press T4.
- B5.12. To clear the whole number entered, hold down T4.
- B5.13. To call a phone number, enter the phone number, and press T1.
- B5.14. To place the last outgoing call again, press T1.
- B5.15. To toggle the speakerphone, press T2. When the speakerphone is turned on, there is a vibration.
- B5.16. To mute the mic while in a call, press T3. When the mic is muted, there is a vibration.
- B5.17. To transfer audio between Rivo and the smartphone during a phone call, press D3 + 0. While there is an incoming call, it receives the call and automatically switches the audio channel between Rivo and the smartphone. In this case, Rivo can dial the DTMF touch tones while talking over the smartphone or a Bluetooth earphone connected to the smartphone.
- B5.18. To increase or decrease call-related volumes in the Phone mode, press D1 or D2. You may control volumes for the call, ringtone, ringback tone, and earphone.
- B5.19. To set Rivo to vibrate and play ringtone on a phone call, press D3 + D4.
- B5.20. To set Rivo to play ringtone on a phone call, press D3 + D4, D4.
- B5.21. To mute the ringtone or vibration, press D3 + 4, or D3 + 6.
- B5.22. To use the smartphone with the screen reader during a phone call, press AUDIO to set Rivo to the Audio mode.

B5.23. To switch between the earphone mic and the Rivo mic, press D3 + #. There is a vibration when the Rivo mic is selected.

B6. Phone Shortcuts

B6.1. Phone shortcuts use the same buttons combined with * regardless of the current mode and orientation.

B6.2. To receive the first incoming call, press * + R1. It works even when buttons are locked, but the lock status is maintained.

B6.3. To receive the second incoming call, press * + R1.

B6.4. To switch between the first call and the second call, press * + R1.

B6.5. To end the current call, press * + R4. It works even when buttons are locked, but the lock status is maintained.

B6.6. To end the first call and receive the second incoming call, press * + R4. It works even when buttons are locked, but the lock status is maintained.

B6.7. To reject the first incoming call, press * + R4. It works even when buttons are locked, but the lock status is maintained.

B6.8. To toggle the speakerphone, press * + R2. When the speakerphone is turned on, there is a vibration.

B6.9. To mute the mic while in a call, press * + R3. When the mic is muted, there is a vibration.

B6.10. To transfer audio between Rivo and the smartphone during a phone call, press * + L2. While there is an incoming call, it receives the call and automatically switches the audio between Rivo and the smartphone. In this case, Rivo can be used to dial the DTMF touch tones while talking over the smartphone or a Bluetooth earphone connected to the smartphone.

B6.11. To increase or decrease call-related volumes, press * + #, or * + 0. You may control volumes for the call, ring tone, ringback tone, and earphone.

B6.12. To set Rivo to vibrate and play ringtone on a phone call, press * + L4.

B6.13. To set Rivo to play ringtone on a phone call, press * + L4, L4.

B6.14. To mute the ringtone or vibration, press * + 2, or * + 8.

B7. Setting Keyboards

B7.1. Up to two languages can be set in Rivo; one mandatory language at L3 and another optional language at L4.

B7.2. In the iPhone, Rivo requires appropriate keyboards at Settings / General / Keyboard / Keyboards as well as appropriate hardware keyboard for each of the keyboards at Settings / General / Keyboard / Hardware Keyboard.

B7.3. In Android, the default keyboard needs to be changed to the Google keyboard, Gboard. Find and install the "Gboard - Google Keyboard" app on the Google Play Store and move to Settings / General management / Language and input. Then, set Gboard active at On-screen keyboard / Manage keyboards and set the Gboard as the default keyboard at Default keyboard.

B7.4. The mandatory language at L3 can be any Roman alphabet language. The initial factory setting is English.

B7.5. To set a language at L3, press L3 + L1, 6, followed by pressing the language code. For example, the language code for English is 1 9.

B7.6. To set Rivo to the L3 language typing mode, press L3.

B7.7. The optional language at L4 can be any language. The initial factory setting is none.

B7.8. To set a language at L4, press L3 + L1, L4, 6, followed by pressing the language code.

B7.9. To unset the language at L4, press L3 + L1, L4, 6, R1.

B7.10. To set Rivo to the L4 language typing mode when a language is set at L4, press L4. Note that when a language is not set at L4, Rivo is set to the number typing mode when L4 is pressed; otherwise, Rivo can be set to the number typing mode by pressing L4 + R4.

B7.11. This manual describes general details on typing letters focusing on the common English language.

B7.12. The "Typing with Rivo" document contains information about all the supported languages and necessary settings.

B7.13. Rivo currently supports these languages officially for iOS: Arabic, Belgian, British, Bulgarian, Catalan, Czech, Danish, Dutch, English, Finnish, Flemish, French, German, Greek, Hebrew, Hungarian, Icelandic, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Swedish, Swiss, Turkish, Ukrainian.

B7.14. Rivo currently supports these languages officially for Android: English, Korean.

B8. Synchronizing Keyboards when Typing Text

B8.1. When typing text, make sure that the current language of the phone is the same as the current language of Rivo.

B8.2. Switching between keyboard entries on the smartphone can be done by pressing L3 or L4 repeatedly. That is, if you set Rivo to a language typing mode with L3 or L4, but the typed letters are not as expected, switch the current smartphone keyboard to the one for the current Rivo language by pressing L3 or L4 repeatedly until you select the right keyboard on the smartphone.

B8.3. The default behavior of switching keyboards by repeatedly pressing L3 or L4 can be disabled. To change the keyboard switching setting, hold down L3, then press and hold L4 until vibration. There is one vibration when the keyboard switching is enabled and two when disabled.

B8.4. When the keyboard setting is disabled, the keyboard is not switched when L3 or L4 is pressed more than once.

B8.5. The keyboard can always be switched manually by L3 + L4 regardless of the keyboard switching setting.

B9. Typing Text

B9.1. To type in a text field in the iPhone, it needs to be activated first. To activate it, select the text field, and then press 5. Note that the quick navigation is turned off temporarily, but it will be turned on again automatically when the VoiceOver focus comes out of the text field.

B9.2. Instead of activating the text field in the iPhone, you may alternatively turn the quick navigation off manually with R1 + 1. In this case, be sure to turn the quick navigation back to on when finished with R1 + 1 again. Sometimes when you cannot activate the current text field or you need to move the VoiceOver cursor to read the screen while still typing letters in a text field, you may have to use this alternative, but be sure to turn the quick navigation back to on afterward.

B9.3. Letters in each language are assigned to number buttons as described in the corresponding language section of the "Typing with Rivo" document.

B9.4. Letters with diacritic accent marks in a language are typed in the form of R2 + X while Rivo is in the language typing mode as described in the corresponding language section of the "Typing with Rivo" document.

B9.5. Roman alphabet languages share the Rivo QWERTY layout and the ABC layout as in section B12. Rivo QWERTY and B13. ABC.

B9.6. Rivo QWERTY is the default layout when typing letters, which is set by pressing L3 + L1, 4, 1.

B9.7. ABC can be set by pressing L3 + L1, 4, 2.

B9.8. Rivo QWERTY is highly recommended for efficiency when typing letters and for consistency when typing letters with diacritic accent marks as well as for mnemonics of commands.

B9.9. To type capital letters, set Rivo to either the sentence mode or the caps lock mode. In the sentence mode, only the first letter is capitalized, and in the caps lock mode, all the successive letters are capitalized. Note that uppercase versions of letters with diacritic accent marks are typed in these modes.

B9.10. To set Rivo to the L3 language lowercase typing mode, press L3.

B9.11. To set Rivo to the sentence mode of the language set at L3, press R1 + L3.

B9.12. To set Rivo to the caps lock mode of the language set at L3, press R1 + L3, L3.

B9.13. To set Rivo to the L4 language lowercase typing mode when a language is set at L4, press L4.

B9.14. To set Rivo to the sentence mode of the language set at L4, press R1 + L4.

B9.15. To set Rivo to the caps lock mode of the language set at L4, press R1 + L4, L4.

B9.16. Note that some languages set at L4 may not distinguish lowercase and uppercase letters.

B9.17. To type a letter in a button where multiple letters are assigned, press the button repeatedly until the right letter is typed.

B9.18. To type another letter in the same button right after typing a letter, press L2 or R2. For example, to type www, press 1, 1, R2, R2, 1, 1.

B9.19. To type a tab to enter the tab character or to jump to the next text field, press L1.

B9.20. To type a backtab to jump to the previous text field, press R4 + L1, L1.

B9.21. To type a backspace to delete a letter backward, press R1.

B9.22. To type an enter, press R3, and to type an enter with option modifier on, press R4 + R3. Depending on apps, one of these starts a new line while the other triggers an event like sending a message.

B9.23. To type a space, press #.

B9.24. Symbols are typed in the symbol mode, where the layout of symbols is as in section B14. Rivo Symbols.

B9.25. To set Rivo to the symbol mode while in any text mode, press *. Then, type a symbol just like typing a letter with multi-tapping.

B9.26. After typing a symbol, Rivo returns back to the previous text mode automatically.

B9.27. The period at 0, and the number sign at #, are the only symbols at the buttons; thus, when one of these buttons are pressed after pressing *, the corresponding symbol is typed, and Rivo returns back to the previous typing mode immediately.

B9.28. The other buttons, however, have more than one symbol; thus, multi-tapping selection is necessary to type a symbol at one of these buttons. When the right symbol is typed, you can finish, return to the previous typing mode, and continue typing more by pressing another button including L2 and R2.

B9.29. Note that those symbols assigned at * can be typed with L2 or R2 after pressing *.

B9.30. If you don't want to type a symbol right after pressing *, press R1 to cancel the temporary symbol typing mode and return to the previous text typing mode.

B9.31. To type a letter in the same button right after typing a symbol, press L2 or R2. For example, to type @i, press *, 6, L2.

B9.32. There can be some additional symbols depending on the current language as described in the corresponding language section of the "Typing with Rivo" document. They are typed in the form of *, R2 + X.

B9.33. Numbers are typed in the number mode or with number shortcuts.

B9.34. To set Rivo to the number mode when no language is set at L4, press L4.

B9.35. To set Rivo to the number mode when a language is set at L4, press L4 + R4.

B9.36. Numbers are typed also with number shortcuts in any mode without changing to the number mode by holding down L4, followed by pressing the number buttons. These number shortcuts are convenient when you type a small number while typing letters or typing passcode while in the navigation mode.

B9.37. A backspace can also be typed with L4 + R1 in any mode, and an enter with L4 + R3.

B9.38. Two symbols, * and # can also be typed with L4 + *, and L4 + #.

B9.39. To show or hide the on-screen keyboard manually in the iPhone, press L4 + R4, R4.

B10. Editing Text

B10.1. To edit in a text field in the iPhone, it needs to be activated first. To activate it, select the text field, and then press 5. Note that the quick navigation is turned off temporarily, but it will be turned on again automatically when the VoiceOver focus comes out of the text field. Then, set Rivo to a text typing mode to edit.

B10.2. Instead of activating the text field in the iPhone, you may alternatively turn the quick navigation off manually with R1 + 1. In this case, be sure to turn the quick navigation back to on when finished with R1 + 1 again.

B10.3. Remember that editing text is only possible when Rivo is in a text typing mode. And the quick navigation needs to be turned off in the iPhone.

B10.4. All the edit commands are shortcuts in the form of R4 + X.

B10.5. To move the cursor letter by letter, press R4 + 4, or R4 + 6.

B10.6. To move the cursor word by word, press R4 + L2, or R4 + R2.

B10.7. To move the cursor to the start or the end of the current line on the screen, press R4 + 1, or R4 + 7.

B10.8. To move the cursor line by line, press R4 + 2, or R4 + 8.

B10.9. To delete a letter forward, press R4 + R1. Remember that R1 deletes a letter backward.

B10.10. To select a text block, move the cursor to the starting position first. Hold down R4, press 5 to start selecting

a text block, move the cursor to mark the opposite end of the text block, and then release R4.

B10.11. To select the whole text in the current text field, press R4 + 9.

B10.12. To cut or copy the selected text block to the clipboard, press R4 + *, or R4 + 0.

B10.13. To paste a text block from the clipboard, press R4 + #.

B10.14. There are more edit shortcut commands in an extension group which can be set by holding down R4, and then pressing L1 without releasing R4. That is, these edit extension commands are in the form of R4 + L1, X.

B10.15. To move the cursor to the top of the current text field, press R4 + L1, 3.

B10.16. To move the cursor to the bottom of the current text field, press R4 + L1, 9.

B10.17. To delete a letter backward, press R4 + L1, 4.

B10.18. To delete a letter forward, press R4 + L1, 6.

B10.19. To delete a word backward, press R4 + L1, L2.

B10.20. To delete a word forward, press R4 + L1, R2.

B10.21. To delete all the letters to the start of the current line on the screen, press R4 + L1, 1.

B10.22. To delete all the letters to the end of the current line on the screen, press R4 + L1, 7.

B10.23. To delete all the letters in the current line on the screen, press R4 + L1, 5.

B10.24. To undo, press R4 + L1, *.

B10.25. To redo, press R4 + L1, #.

B11. Language Settings for English

B11.1. The English language is set at L3 by default. The language code (EN) is 1 9, and to reset to the language at L3, press L3 + L1, 6, 1, 9.

B11.2. Rivo QWERTY is the default layout when typing alphabet letters, which is set by pressing L3 + L1, 4, 1.

B11.3. ABC can be set by pressing L3 + L1, 4, 2.

B11.4. Confirm in the iPhone that there is an English keyboard at Settings / General / Keyboard / Keyboards.

B11.5. Confirm in the iPhone that an appropriate hardware type such as Automatic, U.S., Australian, or Canadian English is selected for the English keyboard at Settings / General / Keyboard / Hardware Keyboard.

B11.6. Settings for all the supported languages are described in the corresponding language section of the "Typing with Rivo" document.

B12. Rivo QWERTY

Alphabet letters are assigned to each number button as follows:

1: e, w, q

2: t, u, y

3: o, p

4: a, d, z

5: r, f, v

6: i, l, j

7: s, c, x

8: h, g, b

9: n, m, k

B13. ABC

Alphabet letters are assigned to each number button as follows:

2: a, b, c

3: d, e, f

4: g, h, i

5: j, k, l

6: m, n, o

7: p, q, r, s

8: t, u, v

9: w, x, y, z

B14. Rivo Symbols

Common keyboard symbols are assigned to each number button as follows:

- 1: exclamation mark, slash, backslash
- 2: question mark, tilde, grave
- 3: minus, plus, vertical bar
- 4: single quotation mark, less-than sign, opening bracket
- 5: double quotation mark, equal, underscore
- 6: at sign, opening parenthesis, opening brace
- 7: semicolon, greater-than sign, closing bracket
- 8: colon, ampersand, dollar
- 9: comma, closing parenthesis, closing brace
- *: asterisk, percent sign, circumflex
- 0: period
- #: number sign

C. Apple iOS VoiceOver

C1. Setting VoiceOver

C1.1. Turn on iPhone VoiceOver at Settings / General / Accessibility / VoiceOver. Later you may try adjusting VoiceOver options here.

C1.2. If you select the VoiceOver option at Settings / General / Accessibility / Accessibility Shortcut, VoiceOver can be turned on or off just by quickly pressing the iPhone home button triple times, or triple-click the side button for an iPhone without the home button.

C2. Setting Rivo for VoiceOver

C2.1. Rivo is set to the VoiceOver mode by default and keeps the last mode set.

C2.2. To set Rivo to the VoiceOver mode, press L3 + L1, 3, 4, 6.

C2.3. When connected to a device saved, Rivo is automatically set to the last mode set of device.

C3. Quick Navigation Setting in the iPhone

C3.1. The quick navigation setting of the iPhone needs to be turned on for Rivo to operate properly. If it is turned off, some commands may not work.

C3.2. To toggle the quick navigation setting, press R1 + 1.

C3.3. When you activate a text field by pressing 5 to start typing some text in, iPhone turns the quick navigation off, but when you navigate out of the text field, iPhone will turn it on again automatically.

C4. Navigation Mode for VoiceOver

C4.1. To set Rivo to the Navigation mode, press R4. This is the default mode when Rivo is turned on.

C4.2. To select the previous or the next item on the screen, press 4 or 6.

C4.3. To select the previous or the next items on the screen with autorepeat, hold down 4 or 6.

C4.4. To jump to the previous or the next 5th item, press L1 + 4, or L1 + 6.

C4.5. To select the previous or the next container, press L1 + 2, or L1 + 8.

C4.6. To select the first or the last item on the screen, press 1 or 7.

C4.7. To scroll the page up or down, press 3 or 9.

C4.8. To scroll the page left or right, press L2 or R2.

C4.9. To activate the current item, press 5.

C4.10. To force touch the current item, press L1 + 5.

C4.11. To press the iPhone home button, press 0.

C4.12. To activate Siri, press R1 + 3. Siri will be activated with a beep sound. If the iPhone has a home button, you may press and hold 0, and if not, you may press and hold L1 + R4.

C4.13. To deactivate Siri, press 0 shortly.

C4.14. To switch between the earphone mic and the Rivo mic to use Siri, press * + L3. There is a vibration when the Rivo mic is selected.

C4.15. To open the app switcher, press 0 twice quickly.

C4.16. To close an app from the app switcher, select the app to close, then press 9.

C4.17. To close the app switcher, press 0. iPhone returns to the previous app if it has not been closed already; otherwise, iPhone returns to the home screen.

- C4.18. To start or stop VoiceOver, press 0 triple times quickly if the iPhone has a home button. If the iPhone doesn't have a home button, hold down L1 and press R4 triple times quickly. To do this, the VoiceOver item must be selected in Settings, General, Accessibility, Accessibility Shortcuts.
- C4.19. To select the next rotor, press #. To select the previous rotor, press # + *, or just * right after selecting a rotor.
- C4.20. To change the value of the current rotor, press 2 or 8.
- C4.21. To return to the previous menu or close a pop-up, press *. Right after selecting a rotor, press R4 first before pressing *.
- C4.22. To read the status bar, press L1. Then, use 4 or 6 to navigate further.
- C4.23. To leave the status bar and return to where you have left, press L1.
- C4.24. To open the notification center, press L1 + 3, or L1, 3.
- C4.25. To open the control center, press L1 + 9, or L1, 9.
- C4.26. To close either the notification center or the control center, press *.
- C4.27. To read items successively starting from the current one, press R1.
- C4.28. To pause or resume reading items, press R3, or L1 + R3.
- C4.29. To search in the iPhone, press L1 + R1, 3 for the spotlight search textbox, or just press 3 on the home screen.
- C4.30. To lock or unlock the screen, press L1 + R4.
- C4.31. To start or stop the current media, press L1 + R1, R1. When playing the music or video, it plays or pauses whatever is the current media.
- C4.32. To receive an incoming call from the iPhone or end the current call, press L1 + R1, R1. That is, when there is an incoming call or while in a phone call, the phone call is the current media.
- C4.33. To double-tap and hold the current item, press and hold L1 + R1, 5. For example, while L1 + R1, 5 is held down at audio recording buttons in apps like iPhone Messages or WhatsApp, a voice message can be recorded. Specifically, hold down L1, press and release R1, then press and hold 5 to start recording. When done, release L1 and 5.
- C4.34. To open the item chooser of the current screen, press L1 + R1, 6.
- C4.35. To edit the label of the current item, press L1 + R1, 1. If you delete the whole text of the label, the default label of the item is restored.
- C4.36. To search in the current screen, press L1 + R1, 8. Change Rivo to a text typing mode and type a search text. After typing, be sure to press R3 to type an enter followed by R4 to return to the Navigation mode. If you press R4 without typing a text, the search is canceled.
- C4.37. To navigate in the search result, press L1 + R1, 7 for the previous match, and press L1 + R1, 9 for the next match.
- C4.38. To toggle the quick navigation setting, press R1 + 1.
- C4.39. To read the current line, press R1 + 2.
- C4.40. To read the description of the current item, press R1 + 5.
- C4.41. To read the item wholly, letter-by-letter, or verbosely, press R1 + 8.
- C4.42. To toggle VoiceOver speech, press R1 + R3.
- C4.43. To toggle the screen curtain, press R1 + R4.
- C4.44. To copy the last speech to the clipboard, press R1 + 7.
- C4.45. To switch between the previous or the next apps, press L1 + L2, or L1 + R2.
- C4.45. To toggle iPad dock, press L1 + 0.
- C4.46. To open the VoiceOver Settings, press R1 + L1, 1.
- C4.47. To access the VoiceOver page in the iPhone Settings, press R1 + L1, 7. That is, it opens iPhone Settings, General, Accessibility, VoiceOver.
- C4.49. To turn on the VoiceOver help, press R1 + L1, *. To turn it off, press *.
- C4.50. Note that navigation commands in the form of L1 + X, or R1 + X work even when Rivo is not in the Navigation mode.

D. Google Android TalkBack

D1. Setting TalkBack

- D1.1. To use TalkBack, install the "Android Accessibility Suite" app from the Play Store.
- D1.2. Turn on TalkBack at Settings / Accessibility / TalkBack.
- D1.3. Later you may try adjusting TalkBack options at Settings / Accessibility / TalkBack / Settings.
- D1.4. Confirm that "Default keymap" is selected at Settings / Accessibility / TalkBack / Settings / Keyboard shortcuts / Choose a keymap.

D2. Setting Rivo for TalkBack

D2.1. Rivo is set to the Apple iOS VoiceOver mode by default and keeps the last mode set.

D2.2. To set Rivo to the TalkBack mode, press L3 + L1, 3, 8, 4, 2.

D2.3. When connected to a device saved, Rivo is automatically set to the last mode of the device.

D3. Navigation Mode and Shortcuts for TalkBack

D3.1. To set Rivo to the Navigation mode, press R4. This is the default mode when Rivo is turned on.

D3.2. To select the left or the right item on the screen, press 4 or 6.

D3.3. To select the left or the right item on the screen with autorepeat, hold down 4 or 6.

D3.4. To jump to the previous or the next 5th item, press L1 + 4, or L1 + 6.

D3.5. To select the item above or below on the screen, press 2 or 8.

D3.6. To select the first or the last item on the screen, press 1 or 7.

D3.7. To scroll the page left or right, press L2 or R2.

D3.8. To click the current item, press 5.

D3.9. To press the Android home button, press 0.

D3.10. To activate the voice recognition, hold down 0 for a second, or press R1 + 3. Then, voice recognition will be activated with a beep sound. When R1 + 3 is pressed in the Keyboard mode, Rivo is automatically set to the Audio mode before activating the voice recognition.

D3.11. To deactivate the voice recognition, press 0 shortly.

D3.12. To switch between the earphone mic and the Rivo mic for voice recognition, press * + L3. There is a vibration when Rivo mic is selected.

D3.13. To open the list of recent apps, press R4 + 0, and to close the list, press 0.

D3.14. To select an app in the list of recent apps, press R4 + 4, or R4 + 6.

D3.15. To close an app in the list of recent apps, select the app to close, then press R4 + R1.

D3.16. To return to the previous menu or close a pop-up, press *.

D3.17. To move between the status bar, the navigation bar, and the main window, press L1 repeatedly.

D3.18. To open the notification center and the quick settings menu, press L1 + 3.

D3.19. To close the notification center and the quick settings menu, press *.

D3.20. To stop reading items, press R3, or L1 + R3.

D3.21. To lock or unlock the screen, press L1 + R4.

D3.22. To double-tap and hold the current item, press L1 + 5.

D3.23. To play or pause the current active media, press L1 + R1, R1.

D3.24. To receive or end the phone call, press L1 + R1, R1. While there is a phone call, it is the current active media.

D3.25. To show the list of the actions of the selected item, press L1 + R1, 2.

D3.26. To search the screen for an item, press L1 + R1, 7. Then, set Rivo to the typing mode, type a search text, then press R3. To return to the navigation mode, press R4.

D3.27. To show the TalkBack menu, press #.

D3.28. To read items successively starting from the next one, press R1.

D3.29. To read the previous or the next letter, press R1 + 4, or R1 + 6.

D3.30. To read the previous or the next word, press R1 + L2, or R1 + R2.

D3.31. To select the previous or the next reading control, press R1 + *, or R1 + #.

D3.32. To change the value of the current reading control, press R1 + 2, or R1 + 8.

D3.33. To toggle TalkBack speech, press R1 + R3.

D3.34. Note that navigation commands in the form of L1 + X, or R1 + X work even when Rivo is not in the Navigation mode.

D3.35. For optional support of navigation in Android, Rivo supports the followings: hold down R4, then L1 for tab, L2 for backtab, 2 for up, 8 for down, 4 for left, 6 for right, 5 for enter, 1 for home, 7 for end, 3 for page up, 9 for page down, R1 for backspace, R3 for enter, # for space, and * for esc.

E. Google Android Voice Assistant

E1. Setting Voice Assistant

E1.1. "Voice Assistant" is a screen reader provided in recent Samsung smartphones.

- E1.2. Turn on Voice Assistant at Settings / Accessibility / Vision / Voice Assistant.
- E1.3. Later you may try adjusting Voice Assistant options at Settings / Accessibility / Vision / Voice Assistant / Settings.
- E1.4. Confirm that "Default key mapping" is selected at Settings / Accessibility / Vision / Voice Assistant / Settings / Keyboard shortcuts / Key mapping.

E2. Setting Rivo for Voice Assistant

- E2.1. Rivo is set to the Apple iOS VoiceOver mode by default and keeps the last mode set.
- E2.2. To set Rivo to the Voice Assistant mode, press L3 + L1, 3, 8, 4, 5.
- E2.3. When connected to a device saved, Rivo is automatically set to the last mode of the device.

E3. Navigation Mode and Shortcuts for Voice Assistant

- E3.1. To set Rivo to the Navigation mode, press R4. This is the default mode when Rivo is turned on.
- E3.2. To select the left or the right item on the screen, press 4 or 6.
- E3.3. To select the left or the right item on the screen with autorepeat, hold down 4 or 6.
- E3.4. To jump to the previous or the next 5th item, press L1 + 4, or L1 + 6.
- E3.5. To select the item above or below on the screen, press 2 or 8.
- E3.6. To select the first or the last item on the screen, press 1 or 7.
- E3.7. To scroll the page left or right, press L2 or R2.
- E3.8. To click the current item, press 5.
- E3.9. To press the Android home button, press 0.
- E3.10. To activate the voice recognition, hold down 0 for a second, or press R1 + 3. Then, voice recognition will be activated with a beep sound. When R1 + 3 is pressed in the Keyboard mode, Rivo is automatically set to the Audio mode before activating the voice recognition.
- E3.11. To deactivate the voice recognition, press 0 shortly.
- E3.12. To switch between the earphone mic and the Rivo mic for voice recognition, press * + L3. There is a vibration when Rivo mic is selected.
- E3.13. To open the list of recent apps, press R4 + 0, and to close the list, press 0.
- E3.14. To select an app in the list of recent apps, press R4 + 4, or R4 + 6.
- E3.15. To close an app in the list of recent apps, select the app to close, then press R4 + R1.
- E3.16. To return to the previous menu or close a pop-up, press *.
- E3.17. To move between the status bar, the navigation bar, and the main window, press L1 repeatedly.
- E3.18. To open the notification center and the quick settings menu, press L1 + 3.
- E3.19. To close the notification center and the quick settings menu, press *.
- E3.20. To read items successively starting from the next one, press R1.
- E3.21. To stop reading items, press R3, or L1 + R3.
- E3.22. To lock or unlock the screen, press L1 + R4.
- E3.23. To double-tap and hold the current item, press L1 + 5.
- E3.24. To select the next quick menu option, press #. Once # is pressed, the previous quick menu option is selected by pressing *.
- E3.25. To change the value of the current quick menu option, press 3 or 9.
- E3.26. To toggle Voice Assistant speech, press R1 + R3.
- E3.27. Note that navigation commands in the form of L1 + X, or R1 + X work even when Rivo is not in the Navigation mode.
- E3.28. For optional support of navigation in Android, Rivo supports the followings: hold down R4, then L1 for tab, L2 for backtab, 2 for up, 8 for down, 4 for left, 6 for right, 5 for enter, 1 for home, 7 for end, 3 for page up, 9 for page down, R1 for backspace, R3 for enter, # for space, and * for esc.

F. Apple watchOS

F1. Setting Rivo for watchOS

- F1.1. Rivo is set to the Apple iOS VoiceOver mode by default and keeps the last mode set.
- F1.2. To set Rivo to the watchOS mode, press L3 + L1, 3, 4, 1.
- F1.3. When connected to a device saved, Rivo is automatically set to the last mode of the device.
- F1.4. When Rivo is paired to a new device and the last mode was watchOS, Rivo is set to the Apple iOS VoiceOver.

F2. Commands for watchOS

F2.1. All the commands for Apple Watch is in the vertical orientation.

F2.2. If you press AUDIO, Rivo is set to the Media mode.

F2.3. If you press KEYBOARD, Rivo is disconnected.

F2.4. If you press KEYBOARD and AUDIO together, Rivo is set to the Phone mode.

F2.5. To use Siri, press * in the Media mode.