



*PROPRIETARY  
INFORMATION*

# **Orbit reader 20 Localization User Guide**

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## 1 Introduction

This document covers guidelines to apply and use localization feature of the OR-20. It also covers the reasons for the need of the localization, process of performing localization on the device and how to use the localization feature during usage. Example and samples are covered in the appendix.

## 2 Background

### 2.1 General concept

Generally, in any file (.txt, .brf or .brl), depending on the file type, the content is internally stored in the form of ASCII values or Unicode values. Whenever a file is opened by any application, it reads these values and converts them into an appropriate form for display to the user.

For example, if the notepad reads 0x41 hex code in an ASCII encoded file (or 0x0041 in a Unicode formatted file), it displays the symbol “a” on the screen for inserted value. This is done through translation tables within the software.

Similarly, when you write in the file, an ASCII or Unicode code corresponding to the key pressed is written in the file. For example, if you press “a” from the keyboard, the hex code 0x41 is written in an ASCII encoded file (Or 0x0041 for Unicode formatted file).

### 2.2 OR-20's contexts of localization

Similarly, when the OR-20 reads the files stored on the SD card, it converts the read values to the corresponding braille pattern using a translation table and demonstrates on the display. The same analogy applies while writing the files on the OR-20.

There are several standards available for this translation table. Different languages and standards may have a different corresponding braille pattern for particular ASCII or Unicode code. It is impractical to accommodate support for all the standards available within the device firmware.

Further, in some of the local language, text files can be read/edited in Unicode format only. Without Unicode support, it is not possible to read/edit these files on the OR-20.

Similarly, just like the files, system messages (such as ‘low battery’, ‘charging’, ‘copying’ etc.) are also stored in the form of ASCII codes within the device firmware. The same translation table is used for displaying such system messages. If you simply change the translation table only, it does not solve the purpose (problem) and you need to modify an entire phrase appropriate to the description of the message in the local language.

So, for the context of the OR-20, localization means

- a. Enabling you to add the braille translation tables as per the standards appropriate to your language.
- b. Enabling you to write down and use your own customized versions of the system messages appropriate to your language.
- c. Enabling you to read/edit Unicode formatted files.

In summary, if you are willing to do localization, you need to perform the following

1. Add Unicode to braille translation table
2. Add a localized version of the system messages (Optional, but recommended)

### 3 System Default behaviour

The default translation table for the OR-20 is English Braille ASCII, which comes preloaded on the device. The default table is always available on the device. You can switch back to the Default table even after performing localization of the device.

The Unicode Braille support is not available by default. But you can enable the support by adding a Unicode to the braille translation table.

## 4 Performing Localization of the OR-20

Localization of the OR-20 can be performed by first creating the localization files and then uploading these files to the device.

### 4.1 Creating localization files

Create two files – the system message file and the table file.

- A. The system message file
  - a. It consists of localized versions of the system messages
  - b. It is named as .loc file
- B. The table file
  - a. It consists of the translation table for Unicode to braille translation
  - b. It is named as .lan file.

#### 4.1.1 The file naming conventions

Following naming convention is followed while creating these files.

The pattern is <prefix>-<language>-<REGION>.<extension>.

- It is essential to keep the prefix as .OR20.
- Language is a lowercase ISO 639 language code. The codes from ISO 639-1 are used when available. Otherwise, codes from ISO 639-2/T are used.
- REGION specifies an uppercase ISO 3166-1 country/region identifier.

- It is necessary to use an extension as it specifies the type of file to be used for messages (.loc) or language (.lan).
- Length of the file name should be less than 20 characters.

For example, the table file name of English (United States) is ".OR20-en-US.lan" and system messages file name of English (United States) is ".OR20-en-US.loc".

#### 4.1.2 Guidelines for creating localization files

Localization files for many languages are already there. Before creating new localization files, check the website at <http://www.orbitresearch.com/support/orbit-reader-20-support/orbit-reader-localization-download/> for already existing languages.

If you do not find desired localization files on our website, you can send a request at [techsupport@orbitresearch.com](mailto:techsupport@orbitresearch.com) <<mailto:techsupport@orbitresearch.com>> asking for the desired localization files.

Orbit Research team will create the localization files for you with your support and may ask you for some details about the local language, such as Unicode to braille translation or any existing literature available in the local language.

##### 4.1.2.1 Creating .lan file

For creating .lan file, all the characters and it's braille pattern of the local language will be required. For example, English letter 'a' represents braille pattern dot 1. English letter 'b' represents braille pattern dots 12.

Such information will be required for creating a new .lan file. Orbit Research team will create the .lan file after obtaining this information.

##### 4.1.2.2 Creating .loc file

The .loc file contains system messages, menu items and other messages like file properties and editor context menu items.

Open the sample file ".OR20-en-US\_loc.txt" with notepad or any other plain text editor and replace the default strings with its translated version for each index. Do not modify the Index and period preceding the message string from the example file. It should be kept as it is.

To understand the details of the string, refer to "Localization.xls" file that contains a detailed description of each string. All this information is available on the website at <http://www.orbitresearch.com/support/orbit-reader-20-support/orbit-reader-localization-download/>

Following rules need to be followed while generating the .loc files:

### #Rules

#	Specification	Values	Example
1	String format	[INDEX NUMBER][.][TRANSLATED STRING][NEW LINE CHARACTER (ENTER)]	5.Sort Name
2	The maximum allowed string length	20 characters*	
3	File extension	.loc	
4	File Name format	<prefix>-<language>-<REGION>.<extension>	.OR20-en-US.loc

Please take the following notes into consideration while creating .loc file.

1. Size of few messages is less than 20 characters.

The OR-20 needs few characters reserved at the end of the few system messages and menu items. You should check the recommended maximum length of the message from “Localization.xls” file while creating the .loc file.

2. Selection of different options on the menu:

While working with Menu, the selected item is shown by raising dot 7 and dot 8 for the text containing the selected item.

For example, selecting “Filter Dot 7 On” from the menu, OR-20 underlines the last word “On” by raising dot 7 and 8 up. While working with local languages, The OR-20 assumes that the last word of the entire message string is a menu item. So, it highlights the last word of the entire string on display.

3. If there are trailing spaces in message string, it is removed while loading the file.

### 4.2 Uploading localization files

Once you have localization files with you, copy them to the “locale” folder available in the root of the SD card. In case, the folder is not available, create one. Now, upload these files to the device using the available menu options.

These are the menu items available in preference menu for localization.

1. Load language
2. Switch language

### 4.3 Load Language

There are following sub-menu items available under “Load language” option in the preference menu.

1. Load locale
2. Load .loc only
3. Load .lan only

#### 4.3.1 Load locale

When you select this menu choice, the OR20 shows REGION Code name list for the languages that has both the table files (.lan) and messages files (.loc) available in “locale” folder of the SD card. It also shows an option as “Default English”. If there are no files, the list only have “Default English”.

You can navigate through these names and press select button to apply the choice.

#### 4.3.2 Load .loc only

This menu shows a list of the messages file (.loc) along with “Default English” option. If there are no files, the list only have a “Default English” option.

You can navigate through these files and press select button to apply the choice.

Note that you need to ensure that the Unicode to braille table (.lan file) required for displaying the messages correctly has been uploaded. The OR-20 unit may show garbage display otherwise.

#### 4.3.3 Load .lan only

This menu choice shows a list of the table files(.lan) along with “Default English” option. If there are no files, the list only have “Default English” option.

Please take note of the following

1. Once you load localization files you can remove these files from SD card. The files are now stored and accessed from the internal memory of the OR-20.
2. Only one additional language can be added at a time. If you Load another language while you already had one language loaded to the device, it overwrites the previously loaded language.

## 5 Using the device with localization

You can switch between the user defined language and the default language. In addition, you can create the Unicode formatted files using the Editor and read files using the Reader.

## **5.1 Switching between default and local**

Once you upload any locale, it becomes the current set language for the device. However, you can switch back and forth between the system default and user defined language if required. Note that once localization files are loaded into the ROM of the device, the files can be removed from SD card.

Following sub-menu items are available under “Switch language” option in the preference menu.

1. Switch locale
2. Switch .loc only
3. Switch .lan only

### **5.1.1 Switch the locale**

When you select this option, the device switches both system messages versions and the table.

### **5.1.2 Switch the .loc only**

When you select this option, the device only switches the system message versions between default set and user-defined.

### **5.1.3 Switch the .lan only**

When you select this option, the device only switches between default table and user-defined table.

## **5.2 Creating Unicode formatted files**

You can create the text files with encoding format ANSI or Unicode. Unicode has further few variants. Text file for some of the languages can be created in Unicode only.

In order to enable you to create local language text files, OR-20 allows you to choose the encoding format for the file.

ANSI is the default set option. You can choose the following encoding format for the new file to be created.

1. ANSI
2. UNICODE16LE
3. UNICODE16BE
4. UTF-8

You should choose the ANSI if you are trying to create the BRF/BRL files or the file might be unreadable by other programs or applications.

This setting is only applied to the files created using the “create new” command. It has no impact on the existing files being opened for editing.



## 7 Known limitations

1. A character which represents multiple braille value is not supported and may result in garbage display.
2. Same Braille translation for multiple Unicode values is not supported. It may lead to garbage display.
3. For one to many translation, a Unicode value that translates to more than 5 braille characters is not supported and may result in garbage display
4. Similarly, a braille character that is translated from more than 4 Unicode values is not supported and may result in garbage display
5. System message length is limited to 20 characters.
6. Only one additional language can be loaded and supported at a time.

## 8 Appendices

### 8.1 Content of Message file “.OR20-fr-FR.loc”

1. Erreur SD
2. Erreur accès fichier
3. Carte SD pleine
4. Signet ajouté
5. Signet supprimé
6. Ajout signet
7. Dernier signet
8. Occupé
9. Tri impossible
10. Chargeur connecté
11. Suppression signet
12. Copié
13. Mémoire insuffisante
14. Mémoire insuffisante
15. Opération réussie
16. Date:
17. Suppression
18. Fin de fichier
19. Connexion invalide
20. Connexion valide
21. Quitter préférences
22. Fich. lecture seule
23. Fichier non trouvé
24. Fichier protégé
25. Fichier non protégé
26. Action invalide
27. KB
28. Clavier verrouillé
29. Clavier déverrouillé
30. Mode local

31. Marqueur effacé
32. Marqueur fin
33. Marqueur début
34. Nouveau dossier
35. Aucun signet
36. Aucun fichier
37. Plus de signet
38. Carte SD absente
39. Non trouvé
40. Appairage Ok
41. Opération réussie
42. Position:
43. Initialisation SD
44. Protégé
45. Recherche signet
46. Actualisation...
47. Connexion bluetooth
48. Connexion mode HID
49. Connexion en Cours
50. Connexion série
51. SD déconnectée
52. Taille:
53. Tri: date crois.
54. Tri: date décro.
55. Tri: consul. crois.
56. Tri: consul. décro.
57. Tri: nom crois.
58. Tri: nom décro.
59. Tri: taille crois.
60. Tri: taille décro.
61. Début de fichier
62. Erreur système
63. Non protégé
64. Protégé en écriture
65. Copie en cours
66. Nouveau fichier
67. Batterie faible
68. Batt. en charge
69. Batterie chargée
70. Batterie
71. Tri:
72. Tri: par nom
73. Tri: par date
74. Tri: par taille
75. Tri: dernier fich.
76. Tri: croissant

- 77.Tri: décroissant
- 78.Mots coupés
- 79.Mots coupés oui
- 80.Mots coupés non
- 81.Filtrer point 7
- 82.Filtrer point 7 oui
- 83.Filtrer point 7 non
- 84.Organiser texte
- 85.Organiser texte oui
- 86.Organiser texte non
- 87.Texte compressé
- 88.Texte compressé oui
- 89.Texte compressé non
- 90.Version
- 91.Réinitialiser
- 92.Série
- 93.Bluetooth
- 94.Bluetooth auto
- 95.Bluetooth non
- 96.USB
- 97.USB série
- 98.USB HID
- 99.Émulation
- 100.Émulation RB18
- 101.Émulation non
- 102.Curseur clignot.
- 103.E quitté
- 104.M marqueur
- 105.C copier
- 106.V coller
- 107.X couper
- 108.Charge déconnecté
- 109.USB Stockage
- 110.Mode stockage
- 111.Stockage
- 112.Localisation Ok
- 113.Fichier non trouvé
- 114.Erreur localisation
- 115.SD protégé écriture
- 116.Mémoire atteinte
- 117.Changement invalide
- 118.Mémoire tampon
- 119.Appairage
- 120.Appairage sans pin
- 121.Appairage code pin
- 122.Appairage codes Ok

123.Valider action?  
124.Mode  
125.Mode local  
126.Mode bt  
127.Mode USB  
128.Dossier  
129.éléments:  
130.Charge la langue  
131.Charger localisation  
132.Charger .loc  
133.Charger .lan  
134.Changer de langue  
135.Changer localisation  
136.Changer .loc  
137.Changer .lan  
138.Pas de dossier local  
139.Pas de fichier local  
140.Connexion Ok  
141.Connexion erreur  
142.Connexion impossible  
143.Récupération erreur  
144.Protection SD oui  
145.Protection SD non  
146.Codage:  
147.Codage: ANSI  
148.Codage: Unicode le  
149.Codage: Unicode be  
150.Codage: UTF-8  
151.F rechercher  
152.Erreur marqueur  
153.Appairage annulé  
154.Appairage réussi  
155.Appairage refusé  
156.Appairage accepté  
157.RAZ historique PIN  
158.Message tronqué  
159.Réinitialisé l'usine  
160.S enregistrer  
161.Bluetooth manual  
162.seconde spiral  
163.Spiral taux

## 8.2 Revision History

Rev.	Date	Description of Changes	Author
0.0	6 <sup>th</sup> March, 2017		Orbit
0.1	30 <sup>th</sup> March 2017		Orbit
0.2	5 <sup>th</sup> April, 2017		Orbit
0.3	26 <sup>th</sup> April, 2017		Orbit
0.4	31 <sup>st</sup> May, 2017	Quick steps to apply localization added	Orbit
0.5	12 <sup>th</sup> July, 2017	Format of lan file section modified	Orbit
0.6	31 <sup>st</sup> of July, 2017	Few notes added in format of loc file section	Orbit
0.07	18 <sup>th</sup> Jan, 2018	Message added in loc message section	Orbit
0.08	30 <sup>th</sup> Mar, 2018	Number of entries allowed is increased	Orbit
0.09	22 <sup>nd</sup> Oct, 2018	Sample files from/to Orbit Research	Orbit
0.10	25 <sup>th</sup> Oct 2018	Edits	Orbit
0.11	31 <sup>st</sup> Oct 2018	Section of guidelines for creating localization files is moved up	Orbit
0.12	11 <sup>th</sup> April 2019	Changed message "Localizaci+n efec" to "Localización exitosa"	Orbit
0.13	17 <sup>th</sup> April 2019	Auto scroll message added in Appendix section	Orbit