



*PROPRIETARY  
INFORMATION*

# ***ORBIT READER 20***

## ***Localization User Guide***

**30<sup>th</sup> March, 2018  
Version 0.08**

# Table of Contents

<b>REVISION HISTORY</b>	<b>3</b>
<b>1 INTRODUCTION</b>	<b>4</b>
<b>2 BACKGROUND</b>	<b>4</b>
2.1 GENERAL CONCEPT	4
2.2 OR-20'S CONTEXTS OF LOCALIZATION	4
<b>3 SYSTEM DEFAULT BEHAVIOR</b>	<b>5</b>
<b>4 PERFORMING LOCALIZATION OF THE OR-20</b>	<b>5</b>
4.1 CREATING LOCALIZATION FILES	5
4.1.1 <i>The file naming conventions</i>	5
4.2 UPLOADING LOCALIZATION FILES	6
4.3 LOAD LANGUAGE	6
4.3.1 <i>Load locale</i>	6
4.3.2 <i>Load .loc only</i>	6
4.3.3 <i>Load .loc only</i>	7
<b>5 USING THE DEVICE WITH LOCALIZATION</b>	<b>7</b>
5.1 SWITCHING BETWEEN DEFAULT AND LOCAL	7
5.1.1 <i>Switch the locale</i>	7
5.1.2 <i>Switch the .loc only</i>	7
5.1.3 <i>Switch the .lan only</i>	7
5.2 CREATING UNICODE FORMATTED FILES	8
<b>6 GUIDELINES</b>	<b>8</b>
6.1 FORMAT OF .LAN FILE	8
6.2 CUSTOM TRANSLATION RULES SECTION IN THE LAN FILE.	9
6.3 DIGIT SECTION IN THE LAN FILE.	10
6.4 FORMAT OF .LOC FILE	10
<b>7 QUICK STEPS TO APPLY LOCALIZATION</b>	<b>11</b>
<b>8 KNOWN LIMITATIONS</b>	<b>12</b>
<b>9 APPENDIX 1</b>	<b>12</b>
<b>10 APPENDIX 2</b>	<b>16</b>

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## Revision History

## 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*

You need to 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
  - c. Sample message strings for the French language is covered in Appendix 1 of this document.
- B. The table file
  - a. It consists of the translation table for Unicode to braille translation
  - b. It is named as .lan file.
  - c. An example of such table is captured in Appendix 2.

#### 4.1.1 The file naming conventions

You should follow the following naming conventions 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".

Detailed steps for how to create these files are covered in later sections of this document.

## **4.2      *Uploading localization files***

Once you have localization files ready, copy them to the "locale" folder available in the root of the SD card. In case, the folder is not available you should create it. Now, you can 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 .loc 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 the 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.

The format cannot be changed while any file is open for editing.

## 6 Guidelines

### 6.1 *Format of .lan file*

You should open the sample file “.OR-20-fr-FR.lan” with notepad or any other plain text editor and replace the default braille dot numbers with a new braille dot number for each index. Please do not modify the Index and period preceding the braille dot pattern numbers from the example file. It should be kept as it is.

Table file has three sections.

Section 1 : Unicode to braille table – one to one

Section 2 : Unicode to braille table – custom

Section 3 : Digit section (optional)

An example of such table is captured in Appendix 2

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

#### #Rules Unicode – Braille table

#	Specification	Values	Example
1	The string format of Unicode to braille	[Unicode number][.][Braille pattern][NEW LINE CHARACTER	0001.1234678 And



	table - one to one	(ENTER)]	0901.12367
1	String format of Unicode to braille table – custom	[Unicode number][-][Unicode number][.][Braille pattern][-][Braille pattern][NEW LINE CHARACTER (ENTER)]	091C-094D-091E.156 And 091A-094D.4-14
2	File extension	.lan	
3	File Name format	<prefix>-<language>-<REGION>.<extension>	.OR20-en-US.lan

***Please note the maximum number of entries allowed in this section is 2048***

## **6.2 Custom translation rules section in the lan file.**

There are scenarios in some languages where one Unicode character represents multiple braille symbols. Also, there are instances where single braille symbol represents multiple Unicode values.

To support this there is a specific section in the .lan file where you can define such combinations. In the second section of lan file, you can define such custom translation rules.

Following list of the different combination of custom translation is supported by the OR-20.

### **1. One to many:**

When one Unicode value represents more than one braille combination.

Format: [Unicode value].[Braille pattern 1]-[Braille pattern 2][New line]

Example: 0960.6-1235

### **2. Many to many**

When a combination of more than one Unicode values represents more than one braille combination.

Format: [Unicode value 1]-[Unicode value 2].[Braille pattern 1]-[Braille pattern 2]  
[New line]

Example: 095A-094D.4-1245

### **3. Many to one:**

When a combination of more than one Unicode values represents one braille combination.

Format: [Unicode value 1]-[Unicode value 2].[Braille pattern][New line]

Example: 091C-094D-091E.156

**Please note the maximum number of entries allowed in this section is 2048**

### 6.3 Digit section in the lan file.

There are some languages which have digits other than English digits. In that case, you can define digits in local language by putting Unicode and braille values in the digit section. This section is optional.

Format: [Unicode value of digit].[Braille pattern 1]-[Braille pattern 2][New line]

Example: 0030.356

**Please note the maximum number of entries allowed in this section is 10**

### 6.4 Format of .loc file

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

You should open the sample file “.OR20-en-US.loc” with notepad or any other plain text editor and replace the default strings with its translated version for each index. You should 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 you can refer to “Localization.xls” file that contains a detailed description of each string.

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.

## 7 Quick steps to apply localization

Once the locale folder is created in the root of the SD card and it contains valid language files, you are ready to apply the localization. Please refer following example steps to apply Spanish localization.

1. Press Space + Up and to get preference menu. The message will be "charging xx%" or "battery xx%"

.. : .    ⠢⠆⠨⠶⠢⠆⠨⠶⠢⠆⠨⠶ xx⠒ or : .    ⠢⠆⠨⠶⠢⠆⠨⠶⠢⠆⠨⠶ xx⠒

2. Press Down arrow **7 times** and to get an option of “Load language”

3. Press right arrow to get sub-menu item “Load locale”

4. Press select to get “Default English”

5. Press down arrow key to get “.OR20-es-ES”

6. Press select to apply the localization and the message will be “Localizaci+n efec” (Localization OK in Spanish)

## 8 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 3 braille characters is not supported and may result in garbage display
4. Similarly, a braille character that is translated from more than 3 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.

## 9 Appendix 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 décroï.  
55.Tri: consul. crois.  
56.Tri: consul. décroï.  
57.Tri: nom crois.  
58.Tri: nom décroï.  
59.Tri: taille crois.  
60.Tri: taille décroï.  
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

## 10 Appendix 2

Example of the table file “.OR20-xx-YY.lan”

0000.

0001.1234678

0002.1258

0003.123468

0004.14578

0005.158

« Total 256 lines»

00fb.156

00fc.1256

00fd.13456

00fe.245

00ff.256

0600.

0601.123467

0602.125

0603.12346

0604.1457

0605.15

« Total 1792 lines»

06fb.156

06fc.1256

06fd.13456

06fe.245

06ff.25

\*\*\*\*\*

061C-064D-091E.156

0615-064D-0937.12345

0615-064D.4-13

0616-064D.4-46

0617-064D.4-1245

« Total 2048 lines»

0660.6-1235

0661.6-123

0662.5-123



0663.6-123  
0665.256-256  
#####  
0030.356  
0031.2  
0032.23  
0033.25  
0034.256  
0035.26  
0036.235  
0037.2356  
0038.236  
0039.35  
\*\*\*\*\*