Package User Manual
`undar-digitacion`

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1 Usage

The package use the following syntax:

- `\flauta`: Double Hole Recorder (Flute)

- `\flautaB`: Single Hole Recorder (Flute)

- `\quena`: Quena

- `\pinkullo`: Pinkullo Huanuqueño

- `\saxofon`: Saxophone

All these commands use three optional and two mandatory parameters.

1.1 Mandatory Parameters of Main Commands

The mandatory parameters are: Musical Note and Octave (including accidentals and variants). The first required parameter is the note name:

- `C`: Note do (Latin)

- `D`: Note re (Latin)

- `E`: Note mi (Latin)

- `F`: Note fa (Latin)

- `G`: Note sol (Latin)

- `A`: Note la (Latin)

- B: Note si (Latin)

The second mandatory parameter is the octave (first letter), accidentals (second letter) and variant position of the instrument for same note (third letter).

- Octave can be: 3, 4, 5 or 6

- Accidentals can be: empty (natural), b (flat), B (double flat), s (sharp), S (double sharp)

- Variant can be empty by default (for notes that do not have variants in instrument) or the number of the variant to be used: 2, 3 or 4.

Command examples:

- `\flauta{C}{4}` This shows a figure of Double Hole Recorder (Flute) showing the position of fingering to play the C note in the 4th octave.

- `\flauta{D}{4b}` This shows a figure of Double Hole Recorder (Flute) showing the position of fingering to play the D flat note in the 4th octave.

- `\flauta{C}{5s2}` This shows a figure of Double Hole Recorder (Flute) showing the second variant fingering position for playing the note C sharp in the 5th octave.

This command contains an internal command `\zcharnote` so for it to work correctly it is important to place it before specifying the note in Musixtex.
Command usage example:

```
\begin{frame}{}
  \begin{music}
      \startextract
          \NOTEs
              \saxofon{B}{5}\wh{p}
          \en
      \endextract
  \end{music}
\end{frame}
```
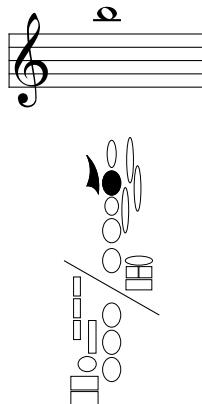
1.2 Optional Parameters of Main Commands

Optional parameters are: Instrument tuning, vertical position and horizontal position. They are specified in that order respectively. In optional parameter: instrument tuning, for this current package version, are available the following configurations:

- Para `\flauta` and `\flautaB`: spn(soprano by default), spnn(sopranino)

- Para `\quena`: sol (by default), la, fa and re

- Para `\pinkullo`: la (by default), sib (si flat) and si

- Para `\saxofon`: applies to any tuning

Keep in mind that the tunings of the Saxophones: Soprano, Alto, Tenor, Baritone Saxophone, etc. they all have the same fingering. By default the vertical position parameter of the figure have the following values:

- For `\flauta` and `\flautaB`: -88

- For `\quena`: -60

- For `\pinkullo`: -48

- For `\saxofon`: -62

The default horizontal position is 0.5 so that the figure appears in the middle of the note. Command examples with default parameters:

- `\flauta[spnn]{D}{5s2}` This would produce a figure of Double Hole Recorder showing the second variant of fingering for playing the note D sharp in the 5th octave in sopranino

- `\flauta[spnn][12]{C}{4}` This would produce a figure of Double Hole Recorder at the top of the score showing the position of fingering for playing the note C in the 4th octave in sopranino

- `\flauta[spnn][12][0]{D}{4b}` This would produce a figure of Double Hole Recorder at the top of the score, to the right of note and showing the position of fingering for playing the D flat note in the 4th octave in sopranino

2 Secondary Functions

Secondary functions use the following commands:

- `\flautaManual, \flautaBManual, \quenaManual, \pinkulloManual, \saxofonManual` (all of these work with `\addTikz`)

- `\flautaId, \flautaBId, \quenaId, \pinkulloId, \saxofonId` (all of these work with `\tikzmark`)

- `\flautaLoop, \flautaBLoop, \quenaLoop, \pinkulloLoop, \saxofonLoop`

2.1 Manual Functions

These functions have the same purpose as the Main Commands, and handle the same optional and mandatory parameters, the difference is that these commands save a position with tikz and then call a function that inserts the instrument's figure in the saved position. It is useful to use `\vspace` so that the figure does not overlap the text. Remember that you must have to enter the commands in the same order that you enter the `\addTikz`. Command usage example:

```
\vspace{7.4cm}
\begin{frame}{}
  \begin{music}
      \startextract
          \NOTEs
              \addTikz\wh{p}
              \addTikz\wh{c}
          \en
      \endextract
  \end{music}
  \flautaManual{B}{5}
  \flautaManual{C}{4}
\end{frame}
```

.
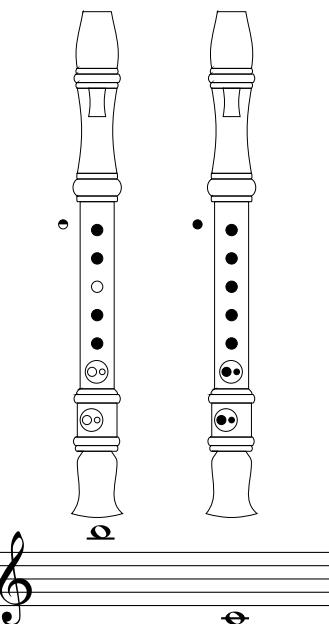
2.2 Id Functions

These functions have the same purpose as the Manual Functions, and handle the same optional parameters but have an identifier as additional mandatory parameter. The difference is that these commands save a position with tikz by inserting a unique identifier and then call a function which inserts the instrument figure into the saved position. It is important to also use \vspace so that the figure does not overlap the text. With this command it is not necessary to keep an order, but it is important that the identifiers are not repeated and that the \tikzmark and the command Id have the same identifier. Command usage example:

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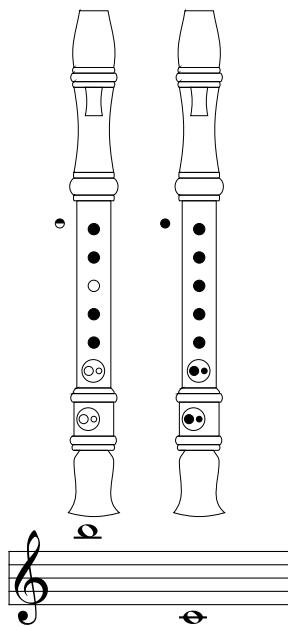
```
\vspace{7.4cm}
\begin{frame}{}
  \begin{music}
      \startextract
          \NOTEs
              \tikzmark{a}\wh{p}
              \tikzmark{b}\wh{c}
          \en
      \endextract
  \end{music}
  \flautaId{C}{4}{b}
  \flautaId{B}{5}{a}
\end{frame}
```

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2.3 Loop Functions

These functions summarize all the commands of the instruments and also of Musixtex so that with a single command you can create a complete score. What can be done with the command is quite limited but it can save a lot of time and space for situations in which simple scores are required. It consists of one optional parameter and two mandatory parameters. The optional parameter is tuning of pitch, and the two required parameters are spacing and note list. For spacing, the following are accepted: r(round), b(half note), n(quarter note), c(eighth note), sc(sixteenth note), f(fusa), sf(semi-fusa), g(scrawl). The list of notes are separated by commas and each one consists of three elements separated by /. The first element is the musical note, the second is the octave with the alterations and/or variations, and the third is the type of note, it admits the same as the spacing. Command usage example:

- \flautaLoop{r}{C/4s/r,D/4/n}

.

Do ♯   Re
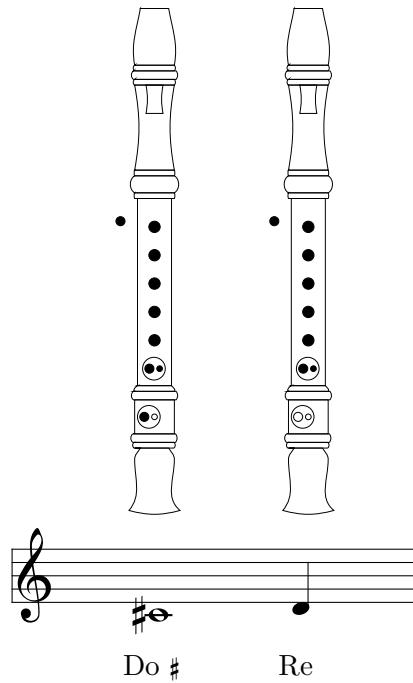
- `\flautaLoop[spnn]{b}{C/5/b,D/5s/b,D/5s2/b}`

Do   Re ♯   Re ♯
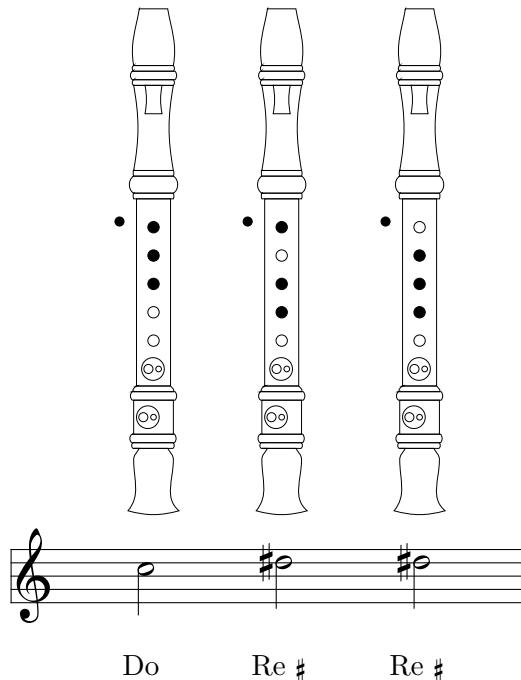
2.4 Additional functions

`\notaParaMusixtex` is a command that can help understand the score, it transforms a normal note into a note for Musixtex. It has four mandatory parameters: The note, the octave, the type of note (r, b, n, etc.), and accidentals. Command usage example:

```
\begin{frame}{}
  \begin{music}
      \startextract
          \NOTEs
              \flauta{B}{5}\notaParaMusixtex{B}{5}{r}{}
              \flauta{C}{4s}\notaParaMusixtex{C}{4}{b}{s}
          \en
      \endextract
  \end{music}
\end{frame}
```


.
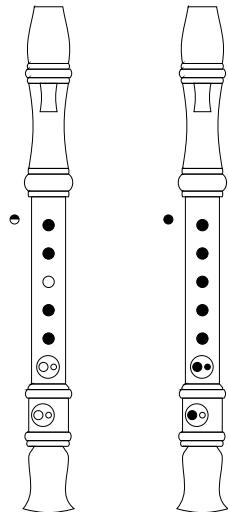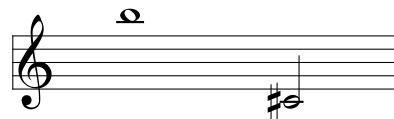
3 Examples

Below are some examples of fingering supported by the package.

3.1 Double Hole Soprano Recorder (Flute)

3.2 Double Hole Sopranino Recorder (Flute)

3.3 Single Hole Soprano Recorder (Flute)

3.4 Single Hole Sopranino Recorder (Flute)

3.5 Pinkullo Huanuqueño in A

3.6 Pinkullo Huanuqueño in Bb

3.7 Pinkullo Huanuqueño in B

3.8 Quena in A

3.9 Quena in D

3.10 Quena in F

3.11 Quena in G

3.12 Saxophone

4 Credits