

4 Exact Spacing and Score Formatting

4.1 Page layout and spacing

4.1.1 \units

The \units tag specifies the physical units in which absolute dimensions are specified per default.

\units<s>

Parameters

- *type* - one of "mm", "cm", "m", "in", "pt", "pc", "hs".
 - "mm" - millimeter
 - "cm" - centimeter
 - "m" - meter
 - "in" - inch
 - "pt" - point
 - "pc" - pica
 - "hs" means halfspaces of the current staff.

Default: "cm"

Range: none

Remarks:

- The \unit tag should be specified at the beginning of the piece, preferably before the first note of the first voice.

Example:

```
{ [ \units<"in"> ... ] }
```

4.1.2 \pageFormat

The \pageFormat is used to specify the physical size of the output pages and to define the printable area.

\pageFormat<type>

\pageFormat<type,lm,tm,rm,bm>

\pageFormat<w,h,lm,tm,rm,bm>

Parameters:

- *type*- paper type, one of "A4", "A3", "letter".
- *w,h*: width and height; if no units are specified, the units specified by the \units tag are used.
- *lm,tm,rm,bm*: left, top, right, bottom page margins; if no units are specified, the units specified by the \units tag are used.

Defaults: If \pageFormat is not specified, "A4" is assumed. If the margins are not specified, the following values are assumed as default-values: lm=2cm, rm=2cm, tm=5cm, bm=3cm.

Range: none

Remarks:

- The `\pageFormat` tag should be defined at the beginning of a piece before the first note of the first voice. Later on, it should only be used at the beginning of pages (see `\newpage`)

Examples:

4.1.3 `\newPage`

The `\newPage` tag is used to specify exact locations for pagebreaks. In pieces with multiple voices (segments), it should be consistently used in one specific voice (controlling voice).

Parameters: none

Range: none

Examples:

4.1.4 `\space`

The `\space` tag is used to specify exact horizontal spacing between notational elements. For multiple voices, voice coordination is preserved in the following way: if at a given metrical position, the information provided by the `\space` tags occurring in the different voices is incompatible, extra space is inserted where needed. This can also happen, if in one of more voices no `\space` information occurs - in which case automatic spacing is used for these voices. However, spaces specified via `\space` are never compressed or ignored.

`\space<dd>`

Parameters:

- *dd* - the horizontal distance that is inserted at the current position; if no units are specified, halfspaces of the current system are taken as default units.

Range: none

Remarks:

- The `\space` tag is also used to realise spacing before and after barlines, clefs, key signatures, etc.

Examples:

`{ [c \space<10.2> d] }` % forces 10.2 halfspaces between the c and the d.

4.1.5 `\staff`

As in Basic GUIDO, the `\staff` tag is used to assign the current voice to a staff. Here, an additional parameter is introduced to explicitly specify the vertical spacing between staves.

`\staff<id,dy>`

Parameters:

- *id* (integer; obligatory) - specifies the number of the staff the current voice is assigned to; staves are numbered 1,2,etc.
- *dy* - vertical space between bottom line of this staff and top line of next staff; if no units are specified, the units defined by the `\units` tags are used.

Range: none.

Semantics: If *dy* is specified, it defines the vertical space between the bottom line of staff *id* and the top line of the next staff. The next staff is the one which occurred next to the first occurrence of staff *id*.

Remarks:

Examples:

4.2 Staff and system layout

The appearance and format of a system and staff can be specified using the following tags.

4.2.1 `\staffFormat`

The `\staffFormat` tag can be used to specify the format and size of the current staff.

`\staffFormat<style,size>`

Parameters:

- *style* - either "standard" or "n-line", where n is an integer from 0 to 7(?).
Default: "standard"
- *size* - a float number, defining the size of one halfspace in this system. If no units are specified, the units defined by the `\units` tag are used. **Default:** 3pt (= ca. 1.0583mm)

Range: none

Remarks:

- If the type is n-line, the lines are numbered from bottom to top (this is important when using the `\clef` tag, e.g.).

Examples:

4.2.2 `\accol`

The `\accol` tag is used to group staves into accolades (staff groups).

`\accol<id,range,style>`

Parameters:

- **id** (integer or string; obligatory) - identifier for the accolade group specified by the tag.
- **range** (string; obligatory) - identifies the staff which are part of the accolade group specified by this tag; the string is of the form "*m-n*", where *m* and *n* are integers identifying the staves which are part of this accolade group. "*m*" can be used synonymously to "*m-m*".
- **type** (string; optional) - graphical appearance of the accolade brace, one of "standard" = "straightBrace", "curlyBrace", "thinBrace", "none".
Default value: "standard"

Range: none.

Remarks:

- Accolades can arbitrarily overlap but always involve consecutively numbered staves.
- To specify the vertical spacing within and between accolades, the `\staff` tag is used.

Examples:

4.2.3 `\systemFormat`

The `\systemFormat` tag is used for specifying which staves are displayed within the system. It allows also to specify a horizontal displacement of the beginning of the system w.r.t. the left margin of the printable area. The `\systemFormat` tag should be used directly after a `\newSystem` tag.

`\systemFormat<staves,dx>`

Parameters:

- **staves** - A string of the form "1,3,5-8" which specifies which staves to display. Inside this string, the staves are referred to by using the id as specified by the `\staff` tag. If not specified, all staves are displayed.
- **dx** - The horizontal distance between beginning of the current system and the left margin of the printable area. If no units are specified, the units defined by the `\units` tag are used.

Default: 0

Range: none

Remarks: none

Examples:

4.2.4 `\newSystem`

The `\newSystem` tag is used to explicitly specify system breaks. `\newSystem` needs to be specified only in one voice, multiple occurrences at the same metrical position are interpreted as a single system break.

`\newSystem`

`\newSystem<dy>`

Parameters:

- **dy** - The vertical distance between the top of the current system to the top of the following system. The

top of system is given by the top line of the first staff.

Range: none

Remarks:

For indentation of systems, the `\systemFormat` tag is used.

Examples:

```
{ [ c d e \newSystem c d e], [ c0 d e f \newSystem g h] }
```

% this will create three systems with two staves each.

4.2.4 `\staffOff`, `\staffOn`

The `\staffOff` tag makes the current staff invisible starting from the position where it occurs until the next `\staffOn` is encountered. While the staff is invisible, all notational elements fixed to it (notes, rests, dynamic markings, etc.) also become invisible.

```
\staffOff  
\staffOn
```

Parameters: none

Range: none

Remarks:

For indentation of systems, the `\systemFormat` tag is used.

Examples: