fects, so that `\qu{''A'A}` is equivalent to `\qu{ah}` and that the `\transpose` parameter is only reset to its initial value (not necessarily zero) when changing staff or instrument (i.e. | or `&`) or at `\enotes`. Since this may be confusing, it is useful tu use the `!` prefix to reset the `\transpose` register explicitely to the value it had when entering `\notes`[7]. Thus `\qu{!a'a}` always gives the note `a` and its upper octave `h` *shifted by the value of* `\transpose` *at the beginning of the current* `\notes...\enotes` group (or `\Notes...\enotes`, etc.) whatever the number of previous grave and acute accents occurring in-between.

The above processes indeed change the vertical position of the note heads and associated symbols (note stems, accents and beams) but they do not take care of the necessary changes of accidentals when transposing, i.e. the fact that an $F\sharp$ occuring with a zero signature should become a $B\natural$ when transposing from the tonality of C major to F major where the normal B is the $B\flat$. Since the intent of the composer is not obvius – he may want to shift a group of notes within the same tonality or conversely to transpose it in another tonality – this is not done automatically. Thus the `\sh`, `\fl`, `\na`, `\dsh` and `\dfl` symbols *are not affected* by a change of the `\transpose` register.

But the composer/typesetter may ask MusicTEX to do that work. In this case, he should code `\Sh`, `\Fl`, `\Na`, `\dSh` and `\dFl` (or `\bigSh`, `\bigFl`, `\bigNa`, `\bigdSh` and `\bigdFl` or `\smallSh`, `\smallFl`, `\smallNa`, `\smalldSh` and `\smalldFl`) instead of the usual lower case accidental symbols. The symbol `\Sh` (resp. `\bigSh` and `\smallSh`) means that the corresponding pitch has to be raised by *one half pitch* with respect to its normal value *according to the current signature*. Thus `\Sh b` means a $B\sharp$ if the signature is zero or positive, and a $B\natural$ if it is negative. The same logic applies for all accidentals having an upper case forelast letter.

Obviously, the computation is done after taking account of the value of the `\transpose` register.

The compact codes `^`, `_`, `=` are normally not affected by transposition and signatures, but their behaviour can be changed by saying `\relativeaccidentals` and reset by `\absoluteaccidentals` (the default situation).

Although *relative accidental coding* is an easy and safe way of coding *transposable* scores, care should be exercised in getting rid of the habit of saying `\na b` to rise the pitch of a B when the tonality is F major (i.e. with `\signature`*n*`=-1` or `\generalsignature{-1}`). An example of sophisticated transposition is given in the score `souvenir.tex` (which `\inputs` `souvenix.tex`.

Besides, the typical piano octave transposition *8* - - - - - can be obtained by coding :

`\octfin` *p n*

which puts the 8 and dotted line symbols at the pitch p (usually `p` to `r`). The length is n`\noteskip`. This obviously fit for short octaviation denotations. To transpose a whole line, use `\octline` p. Since `\octfin` terminates with a small hook down, to indicate clearly where octaviation stops, you may also like to use `\octsup` which behaves like `\octfin` without the final hook. All this supposes you have an idea of the actual line breaking of your score in that section, and this is admittedly difficult to handle when octave transposition is supposed to long a large number of lines. In that latter case, you can use the `\def\everyline{...}` to insert whatever code you like at each new line of score. This has been used to set octaviation in the score of the *Toccata in F* by Charles-Marie WIDOR[8] : at each bar (or virtual bar, namely `\zbarre`), the \everystaff procedure is updated to produce the convenient code, in case of the line breaking happening before the next definition.

2.11 Ties and slurs

They have been implemented in a way which may look rather ugly, but we think it is the only way of implementing *in one pass* ties and slurs which run *across glue*.

Slurs and ties must be initiated within the pair `\notes...\notes` before the spacing note is coded. They must be terminated also before the last note is coded.

`\itenu` *np*

(*ten* stands for the italian word *tenuto*) initiates an upper tie (convex) at pitch p. Just like beams, ties have a reference number n, from 0 to 6 (or 9 if `musicadd` is included. `\itenl` *np* initiates a lower tie (concave).

The tie of reference number n is terminated by `\tten` n.

Slurs are initiated with `\ilegu` *np* and `\ilegl` *np*, where *leg* stands for the italian word *legato*, and they are terminated with `\tleg` n. Except that slurs start before the note position and stop after, ties and slurs work the same way with the same syntax. They also share the same registers so that slurs nesting tied notes should have numbers n distinct from each other.

2.12 Bars and spacing

Ordinary *bars* a coded using the macro `\barre` (this is a french word[9]). This macro provides an optional (dis-

[7] This value is saved in another register named `\normaltranspose`.

[8] A French organist (1844-1937) and composer who was in charge of the organ of St-Sulpice in Paris, from 1864 to 1934.

[9] Whose advantage is that it differs from `\bar` which is already defined in TEX.

cretionary) line or page break[10]. It also provides some *glue* in order to expand the text over an evenly filled line.

However, since the number of bars in a score line is generally small, it may be convenient to allow *glue* not only on each sides of *bars*. This can be done using the macro `\temps` (the french word for *beat*). This macro has two effects :

1. it inserts some *glue* but prevents line breaking[11],
2. if some ties or slurs are pending it expands them across the glue by writing an `\hrule` which overlaps the unfinished tie and makes it look prolungated.

Whatever the care you exercize in adjusting the size of the `\elemskip`, you are still likely to find some broken ties (which indicate excessive glue disassembling the gliding tie `\hrules`) or some unexpected (and unwanted) line breaks or some Over[aw]full `\hboxes`. A useful means of estimating the remaining space to be filled with glue consists in declaring `\raggedlinestrue` : after that, an `\hfil` will be inserted by MusicTeX before each computed (when using `\autolines`) or forced line break. Thus, all the musical text will be packed on the left of the line and you will clearly see the amount of remaining space. Then, it will be up to you do decide changing some spacing parameters.

Important : *do not use* `\temps` *when beams are pending, otherwise their spatial synchronization would fail. In other words, ties and slurs can jump over glue (because horizontal rules may overlap and thus have some elasticity) but beams (as well as any oblique lines) cannot.*

Unless otherwise specified, bars are numbered. This is a good means of finding errors provided that the MusicTeX user has put comments in his source text recording the (expected) bar number. However, this can look unpleasant for final outputs, since the habit is to number bars only each other five or ten bars. This is not a serious problem since the frequency of bar numbering is defined as :

`\freqbarno{1}`

If you replace the `1` by `5`, bar numbering will occur each other five bars. Conversely, whenever you want to putthe bar number, you just say `\wbarno`. You can also inhibit any bar number printing by telling

`\def\wbarno{}.`

The bar counter is also accessible, its name is `\barno`. This has nothing to do the the bar counting inveoked by `\autolines`, so you can change it without any dramatic consequence.

2.13 Line and page breaking

Bars provide a line breaking mechanism which is supposed to enable TeX to break a full score into lines and pages, with an optimal distribution of the text into lines and pages. Unfortunately, this does not work correctly for scores of more that approximately one page. The reason is that TeX must compile the entire contents of a paragraph, before it tries to break it into lines and pages. Therefore, one cannot rely on TeX to make that work which automatically results in the diagnostic `TeX capacity exceeded, memory....`

To circumvent this dramatically restrictive capacity[12] unless you use some BigTeX[13] another mechanism must be invoked to break lines.

The first one is the manual one : you replace some of the `\barre` macro calls by either `\alaligne` (equivalent to `\break` within text (in fact it contains a `\break` plus some (many) other things. In the same way, you can code `\alapage` to force an `\eject` with proper reinitialization of staffs, clefs and signatures.

The second one is fit for scores whose bars are of regular length : after `\debutmorceau`, you code the following macro :

`\autolines` tml

where t is the number of *elementary spacings* (the lenghth of `\notes...\enotes`) in an average bar, m is the number of bars you wish in a line and l is the number of lines you wish in a page[14].

This sets some parameters, namely `\maxbarsinline` and `\maxlinesinpage` which are simply used to count the bars, optionally perform `\alaligne` or `\alapage` instead of the normal `\barre`. You may freely alter the values of these parameters, once they have been established by `\autolines`. Moreover, you can still force line breaking of page ejection using `\alaligne` or `\alapage` without problem since these macroes actually reset the bar counters appropriately.

On the other hand, you may want to forbide line breaking at a bar, then you replace `\barre` by `\xbarre`.

Conversely, you may want to break a line *not at a bar*[15]. This is allowed by `\zbarre` (optional line break) or forced by `\zalaligne` or `\zalapage`.

The final heavy double bar of a piece is provided by `\finmorceau`. If you just want to terminate

[10] Unless it is triggered according to bar counting when `\autolines` has been invoked.

[11] This could unpleasantly occur if you insert a space...

[12] TeX has been designed to type text, not music.

[13] Whose drawback is that it is very slow on ordinary PCs.

[14] After having coded nearly one hundred of pages of music, I strongly recommend the use of `\autolines` except when inserting short excerpts of less than one line, such as in musicographic books.

[15] For example, you may prefer to turn the page at a place where the pianist has one hand free.

the text with a simple bar, you say `\suspmorceau`. If you want to terminate it without a bar, you code `\zsuspmorceau`. Once you have stopped the score by any of these means, you can restart it using `\reprmorceau`.

If you want the next vertical bar to be a double bar, you have to declare `\setdoublebar` before the `\barre` (or the `\suspmorceau` or `\alaligne` or `\alapage`) to be marked with a double thin bar.

2.14 Changing score attributes

As seen before, you can change the signature of the whole set of instruments by `\generalsignature` n where $n > 0$ means a number of sharps, $n < 0$ means a number of flats. Or, you may prefer to change the signature of only one or two instruments by the statement :

`\signature`r=s

where r is the roman numeral of the instrument considered, and s its specific signature. Since you may change simultaneously (with respect to the score) but consecutively (with respect to your code) the signatures of several instruments, this change takes place only when you say `\changesignature` (within a bar) or `\changecontext` (after a single vertical rule) or `\Changecontext` (after a double vertical rule. In the same way, you may want to change the active clefs. This is done by

\cleftoks$r$={{$s1$}{$s2$}{$s3$}{$s4$}}%

where r is the roman numeral of the instrument, $s1$ specifies the clef of the lower staff, $s2$ the clef of the second staff, etc. One must always give four values with the above syntax, otherwise... $s1 = 6$ means the *bass* clef (*clef de fa* in french), $s1 = 0$ means the *violin* clef (*clef de sol* in french), $s1 = 1$ through $s1 = 5$ mean the *alto* clef set on first (lower) through fifth (upper line of the staff). As seen above in the case of signatures, several clefs may be changed at the same time ; thus all the clef changes become operational only when the macro `\changeclefs` is coded. Normal usage consists in issuing this command before the bar, not after (this helps the music player when the change happens across a line break).

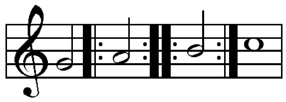
Meter changes are implemented the same way :

`\metertoks`r`={{`$m1$`}{`$m2$`}{`$m3$`}{`$m4$`}}%`

where r is the roman numeral of the instrument, $m1$ specifies the meter of the lower staff, $m2$ the meter of the second staff, etc. One must always give four values with the above syntax, otherwise... Since meter changes are meaningful only across bars, they are actually taken in account with `\changecontext` or `\Changecontext` or `\alaligne` or `\alapage`.

2.15 Repeats

To insert a *repeat bar* you can use several sets of procedures. The simplest consists in using the commands `\leftrepeatsymbol`, `\rightrepeatsymbol` and `\leftrightrepeatsymbol` – coded outside the `\notes...\enotes` pairs – which will simply insert these colon adorned double bars at the requested place. For example :



has been coded as :

```
\notes\hu g\enotes
\leftrepeatsymbol
\notes\hu h\enotes
\leftrightrepeatsymbol
\notes\hu i\enotes
\rightrepeatsymbol
\Notes\wh j\enotes
\suspmorceau
```

However, the previous way of coding does not provide for line breaking at repeat bars, nor does it advance the bar numbering. In fact, this way of coding if only fit for repeats occuring in the middle of a bar.

A second way of coding consists in saying `\setleftrepeat`, `\setrightrepeat` or `\setleftrightrepeat` before a bar (`\barre`), `\suspmorceau` or `\changecontext`). In this case, the next next vertical bar will be replaced with the selected repeat bar. This meets the traditional music typesetting conventions in the only case of the *right repeat* but, unfortunately, left and left/right repeats use to behave in a different manner when in the middle of a line and at a line break.

The third coding, namely the correct coding – i.e. transforming in the correct manner when occuring at a line break – is obtained by substituting the `\barre` command with `\leftrepeat`, `\rightrepeat` and `\leftrightrepeat`.

Now, if you want to force a new line at a repeat, you should code respectively :

```
\setrightrepeat\alaligne
\setrightrepeat\suspmorceau
\alaligne\leftrepeatsymbol
\reprmorceau\leftrepeatsymbol
\debutmorceau\leftrepeatsymbol
```

or the combination of two of these in the case of a left/right repeat.

2.16 Miscellaneous

Special macros are provided to help the composer to set any TEX text on the staffs. The macro

`\charnote` p{ text }

sets the given text with its base line at pitch p of the current staff (this means it must be coded inside `\notes...\enotes`. Whatever the length of the text, the spacing is `\noteskip`. If you do not want it to cause spacing, you code `\zcharnote`. If you want the possible spilling text to expand on the left rather than on the right, then you can use `\lcharnote`.

To place some text at the mid-position between the two staffs of a keyboard instrument, you may code :

```
\midtwotext{ text }  % (spacing)
\zmidtwotext{ text }  % (non spacing)
```

being however careful, a) to put it inside `\notes...\enotes`, b) to code it in the text of the lower staff.

A text to be put above the current staff is introduced by `\uptext{...}`. This may however cause some collision with bar numbering or notes above the staff ; it is then wise to use `\Uptext{...}` which puts the text two pitches higher (recommended to post the tempo).

Metronomic indication deserves a special macro. The mention :

= 60

is coded by `\metron{\hup}{60}` (normally embedded in `\Uptext` which is in turn embedded within `\notes...\enotes`).

The macro `\zcharnote` is fit for coding special notations like accents above or below the notes. It behaves like `\charnote` but causes no spacing.

Arpeggios (i.e.) can be coded with the macro

`\arpeggio` pm

where p is the pitch of the base of the arpeggio symbol and m is its multiplicity (one period is equal to one space between staff lines, i.e. 5 points). This macro causes a space of one note head width. If should be issued before the concerned chords. Its variant `\larpeggio` sets the arpeggio symbol slightly more on the left, in order to avoid collision with accidentals in front of the chords.

Trills can be coded in several ways. `\trille` l (where l is a TEX dimension) yields while `\Trille` l (where l is a TEX dimension) yields *tr* . To put these patterns at a given pitch, one may use `\xtrille` pl or `\xTrille` pl. On the other hand `\ntrille` pn is equivalent to `\xtrille` p{n`\noteskip`} and `\nTrille` pn is equivalent to `\xTrille` p{n`\noteskip`}

Other *ornaments* are available :

- `\mordant` p for ,
- `\pince` p for ,
- `\Pince` p for ,
- `\upz` p (upper *pizzicato*) to put a dot above a note head at pitch p,
- `\lpz` p (lower *pizzicato*) to put a dot below a note head at pitch p,
- `\usf` p (upper *sforzando*) to put a $>$ accent above a note head at pitch p,
- `\lsf` p (lower *pizzicato*) to put a $>$ accent below a note head at pitch p,
- `\ust` p (upper *staccato* or *portato*) to put a hyphen above a note head at pitch p,
- `\lst` p (lower *staccato* or *portato*) to put a hyphen below a note head at pitch p,
- `\Upz` p (upper strong *pizzicato*) to put an apostrophe above a note head at pitch p,
- `\Lpz` p (lower strong *pizzicato*) to put a reversed apostrophe below a note head at pitch p.

The procedure named `\everystaff` is executed each time a new system is typed. It is normally void, but it can be defined (simply by `\def\everystaff{...}`) to tell MusicTEX to post anything reasonable at the beginning of each system.

The procedure named `\atnextline`, normally void, is executed at the next computed (through `\autolines`) or forced line break (using `\alaligne` or `\alapage`). More precisely, it is executed after the break and before the next system is typed. Thus it is fit for posting new definitions of layout parameters, when no system is pending[16].

2.17 Staff size

You may also want to write some parts of your score in 20pt staff size and in 16pt staff size. This cannot be done – at least presently – in the same system, but only for distinct parts of pieces. Changing the size is done by saying :

`\musicsize=16\computespecifics` or

`\musicsize=20\computespecifics`

respectively.

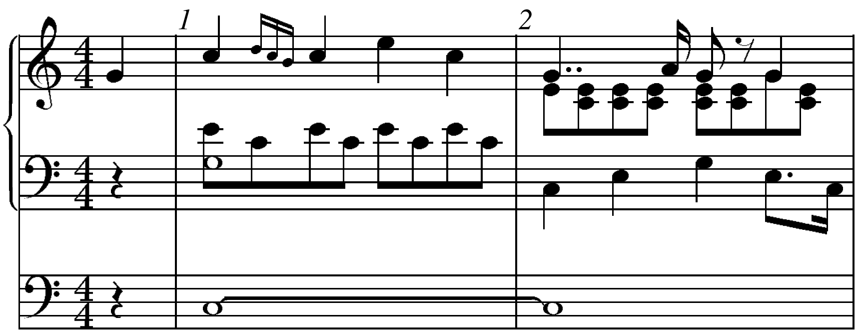
2.18 Small and tiny notes

Ornaments and *cadenzas* usually need to be written using smaller notes[17]. This can be done everywhere by stating `\smallnotesize` or `\tinynotesize`. Normal note size is restored by `\normalnotesize`.

These macros only have a local scope. Thus, if these macros are invoked outside the `\notes...\enotes` pair, the change is valid for the rest of the piece unless explicitely modified but, if they are invoked inside, their effect is local to the current staff of the current `\notes...\enotes` pair. As an example, the following excerpt (beginning of the Aria of the Creation by Joseph HAYDN)

[16] Its logic is similar to plain TEX's `\vadjust` command.

[17] This is independent of the staff size.



can be coded as :

```
\def\DS{\hbox{\ds}}
\def\FS{\hbox{\kern 0.3\noteskip\soupir}\kern -0.3\noteskip}
\def\qbl#1#2#3{\ibl{#1}{#2}{#3}\qb{#1}{#2}}%
\def\qbu#1#2#3{\ibu{#1}{#2}{#3}\qh{#1}{#2}}%
\def\nbinstruments{2}%
\generalmeter{\meterfrac{4}{4}}%
\signaturegenerale{0}%
\nbporteesi=1\relax
\nbporteesii=2\relax
\cleftoksi={{6}{0}{0}{0}}
\cleftoksii={{6}{0}{0}{0}}
\etroit
%
%  end of preliminary definitions
%
\debutextrait
\NOTes\soupir&\soupir|\qu g\enotes
% mesure 1
\advance\barno by -1\relax
\barre\NOtes\itenu2J\wh J&\zw N\ibl0c0\qb0e|\qu j\enotes
\notes&\qbl0c0|\noteskip=0.6\elemskip\tinynotesize
\Ibbu1ki2\qh1{kj}\tqh1i\qsk\enotes
\Notes&\qb0e\tbl0\qb0c|\qu j\enotes
\temps\Notes&\ibl0c0\qb0{ece}\tbl0\qb0c|\ql l\sk\ql j\enotes
% mesure 2
\barre\Notes\tten2\wh J&\ql J\sk\ql L|\ppt g\rlap{\qu g}\qbl1e0\relax
       \zq c\qb1e\zq c\qb1e\relax
       \zq c\tbl1\rlap{\qb1e}\ \ \ccu h\enotes
\temps\Notes&\ql N\sk\pt L\ibl0L{-4}\qb0L|\ibl1e0\zq c\rlap{\qb1e}\cu g\relax
       \zq c\rlap{\qb1e}\raise\Interligne\DS \rlap{\qu g}\qb1g\enotes
\notes&\sk\tbbl0\tbl0\qb0J|\tbl1\zq c\qb1e\enotes
\finextrait
```

2.19 Layout parameters

Most layout parameters are set by MusicTEX to reasonable default values. However, sophisticated scores[18] may need more place below the lowest staff, between staves, etc.

`\interligne`**:** vertical interval between lines

`\nullthick`**:** reserved height above base line for zero staff lines (text of songs)

`\bottommargin`**:** margin below the first staff of the lowest instrument. If not assigned a non zero dimension, it is set to `\bottomfacteur\Interligne` at the next system.

`\topmargin`**:** margin above the upper staff ot the upper instrument

`\internote`**:** the half of `\Interligne`

`\interbeam`**:** vertical distance between beams

`\Interligne`**:** vertical distance between the base of staff lines (`\interligne` is the size of the blank space between lines. The difference is the line thickness `\lthick`.

[18]To our knowledge, the most complicated scores are those written for the piano, during the romantic and post-romantic periods.

`\interportee`: the distance between the top of one staff and the bottom of the next one. If not assigned a non zero value, it is set to `\interfacteur\Interligne` at the next system.

`\interinstrument`: the additional vertical distance between two different instruments. This means that the distance between the upper staff of the previous instrument and the lowest line of the current instrument is equal to `\interportee+\interinstrument`. This value is normally zero, but it helps putting additional space between distinct instruments for the sake of clarity. This is a general dimension which holds for each of the vetical spaces between instruments, except the upper one, in which case this interval is irrelevant. However, this parameter can be overriden for the space above a specific instrument. For example (see the example `angescao.tex`) one can state :

```
\def\interinstrumenti{5pt}
```

to force an additional spacing of 5 points above instrument i, whatever the value of `\interinstrument`.

`\systemheight`: the distance from the bottom of the lowest staff to the top of the highest staff of the upper instrument. This is the height of the vertical bars (single, double, repeats, etc.).

In addition, when handling notes of a given staff of a given instrument, the following dimensions are available (note these are not true registers, but *equivalenced symbols* through a `\def`) :

- `\altitude` : the altitude of the lowest line of the lowest staff of the current instrument.
- `\altportee` : the altitude of the lowest line of the current staff.

Most of these values can be changed, but only between the end of the previous system and the beginning of the next one. This can be inserted between a `\suspmorceau` and a `\reprmorceau`, but it is wiser to say, for example :

```
\def\atnextline{\global %
\bottommargin=5\Interligne}
```

When doing so, the MusicTEX user should be aware that this could disturb pending *slurs* or *ties*, since the altitude of these is stored in an absolute way, starting from the baseline of the systems. Therefore, changing the `\bottommargin` dimension can also be made by means of `\advancebottom{`$<$ *dimension* $>$`}` which updates all pending slur and tie altitudes by the given dimension. This has been used in `pacifiqn` and `pacifiqb`.

2.20 MusiclaTEX

As said before, the amount of memory used by MusicTEX makes it hardly compatible with LaTEX. However, Nicolas BROUARD succeeded in building a `\musictex.sty` which is now included in the distribution. This is not recommended to make separate music scores. Its purpose is rather to provide a means of inserting short musical excerpts in books or articles witten with latex. Then, the `\documentstyle` command should include `musictex` in the options.

The LaTEX style file `musictex.sty` is the simple concatenation of the following files :

- `musicpre.tex`
- `musicnft.tex`
- `musictex.tex`
- `musicvbm.tex`
- `musicpos.tex`

In the case of a LaTEX user wanting to use accidental transposition facilities, he should invoke `musictrp` in the options of the `\documentstyle` command. The `musicpos.tex` file merely overrides the `\catcodes` of the | and `&` symbols which are modified by MusicTEX. To have access to these symbols when coding music, on should then enclose the scores or excerpts within `\begin{music}` and `\end{music}`. But there is also another possibility, i.e. to say `\nextinstrument` instead of `&` and `\nextstaff` instead of |. And in case of `TeX capacity exceeded...`, use a "BiglaTEX" (after checking there is no visible error in the source code).

2.21 Implementation and restrictions

The macroinstruction file MusicTEX contains approximately 2500 lines of code, that is 80 000 bytes approximately. This requires your score to be compiled by the most extended versions of TEX (65 000 words of working memory). It is therefore wise to set `\tracingsstats` to 2 in order to have an information about the memory used in each page. In desperate situations, we recommend using the "BigTEX" processors which, unfortunately, perform a great deal of disk input/outputs (on PCs) which make them awfully slow.

In particular, the number of registers it uses and the amount of memory used by LaTEX macros makes it doubtfully compatible with LaTEX, unless using BigLaTEX.

Other precautions are necessary : beware of end-of-line spaces ; they corrupt layout and may cause unwanted line breakings after which music symbols seem to *float* in the air without staffs. To avoid that, it is recommended to use `\relax` rather than `%` at the end of source lines, since it allows indentation at the following source line.

3 Installation

As seen before, all the files are available at *anonymous ftp* `rsovax.ups.circe.fr` (130.84.128.100) in the directory

`[anonymous.musictex]`.

This directory normally contains `musictex.zip` which contains all the distribution for PC (MS-DOS) computers. This is only for `ftp`-ing convenience since all source files are directly available in the same directory.

The VMS files are also packed into `musictex.bck`. Notwithstanding the fact that files are packed together or not, the files provided are of two kinds :

1. the basic files ;
2. the example files.

All *basic files* are either of the form `music*.*` (exclusing of course `*.zip` and `*.bck`) and `beamn*.*`. Other files (`*.tex` or `*.dvi`) are example files.

Fonts are provided as `*.mf` files but also as `*.tfm` and `*.pk` files for 300 dpi printers or previewers. Additional values of the dpi parameter are provided in `musicpk.zip`.

REMARK : introducing these files in a *format* (with INITEX) is a means of saving computer time.

4 Examples

Three examples are displayed in the following pages, namely a transcription for organ and song of the beginning of the *Aria* of *The Creation* by Joseph Haydn, a *motet* for Christmas by Praetorius – in the original pitch and transposed down by one pitch in smaller size – and a transcription of a concerto for oboe by Benedetto Marcello.

REMARK : the examples are given at the end of the document because their require a BigLaTEX to be produced. Thus a trial TEX-ing with standard LaTEX can produce anything but the large examples (they can be more easily produced using *plain TEX* rather than LaTEX.

People who want to produce some of the given examples sould take care of the fact that many given files are supposed to be included (by means of `\input`) in other files. Thus the good files to be directly TEX-ed are those which begin with \input musicnft.

Suggested tests are :

- `PACIFIQN` for a long original piano work (11 pages) ;
- `HADAGIM` for a typical organ score ;
- `CARILLON` for a sophisticated piano score (use BigTEX !) ;
- `PRAETORI` to get an ancient polyphonic song with three transpositions ;
- `ANGESCAM` if you like Christmas carols with four voices, a three-staff organ score and the same transposed to meet ordinary singer's limitations ;
- `HPRELFUG` if you like imitations of J.-S. Bach...
- `MARCELLO` if you likepre-baroque musicé;
- `RECUEIL` if you want to get all the organ works of the author in a single book (43 pages) ;
- `HCREATIM` to get an unfinished transcription of the Creation by J. HAYDN.
- `HWIDOR` and `NWIDOR` to get the Toccata by Charles-Marie WIDOR in two different sizes.

```
\input musicnft
\input musictex
\input musicsty

\def\nbinstruments{2}%
\generalmeter{\meterfrac{4}{4}}%
\signaturegenerale{0}%
\hsize   190mm     \vsize 275mm
\hoffset -10mm     \voffset -10mm
\centerline{\enorme Aria No. 24}
\medskip\centerline{\moyen (La Cr\'eation)}
\medskip\centerline{\moyen Joseph HAYDN}
%
\rightline{Transcription pour Orgue et T\'enor, D. Taupin (1990)}
\medskip
\nbporteesi=1\relax
\nbporteesii=2\relax
\def\qbl#1#2#3{\ibl{#1}{#2}{#3}\qb{#1}{#2}}%
\def\qbu#1#2#3{\ibu{#1}{#2}{#3}\qh{#1}{#2}}%
\etroit
\def\DS{\hbox{\ds}}\def\FS{\hbox{\kern 0.3\noteskip\soupir}\kern -0.3\noteskip}
\cleftoksi={{6}{0}{0}{0}}
\cleftoksii={{6}{0}{0}{0}}
\debutmorceau
\NOTes\soupir&\rlap{\rmidtwotext{\bf II}}\soupir|\qu g\enotes
% mesure 1
\advance\barno by -1\relax
\barre\NOtes\itenu2J\wh J&\zw N\ibl0c0\qb0e|\itenl0j\ibu1l0\qh1j\enotes
\notes&\qbl0c0|\nbbu1\nbbbu1\tten0\qh1{jkj}\tbu1\qh1i\enotes
\Notes&\qb0e\tbl0\qb0c|\qu j\enotes
\temps\Notes&\ibl0c0\qb0{ece}\tbl0\qb0c|\ql l\sk\ql j\enotes
% mesure 2
\barre\Notes\tten2\wh J&\ql J\sk\ql L|\ppt g\rlap{\qu g}\qbl1e0\relax
       \zq c\qb1e\zq c\qb1e\relax
       \zq c\tbl1\rlap{\qb1e}\ \ \ccu h\enotes
\temps\Notes&\ql N\sk\pt L\ibl0L{-4}\qb0L|\ibl1e0\zq c\rlap{\qb1e}\cu g\relax
       \zq c\rlap{\qb1e}\raise\Interligne\DS \rlap{\qu g}\qb1g\enotes
\notes&\sk\tbbl0\tbl0\qb0J|\tbl1\zq c\qb1e\enotes
% mesure 3
\barre\NOtes\itenl2G\wh G&\zw N\raise 3.5\Interligne\ds
|\rlap{\cl f}\itenl0k\ibu1m0\qh1k\enotes
\notes&\qbl0b0|\nbbu1\nbbbu1\tten0\qh1{klk}\tbu1\qh1{^j}\enotes
\Notes&\zq d\qb0f\tbl0\qb0b|\qu k\enotes
\temps\Notes&\ibl0d0\zq d\qb0{fb}\zq d\qb0f|\qu m\sk\pt k\qbu1k{-4}\enotes
\notes&\tbl0\qb0b|\sk\tbbu1\tbu1\qh1i\enotes
% mesure 4
\alaligne\Notes\tten2\wh G&\ql G\sk\ql I|\rlap{\qupp g}\ibl1c0\qb1g\relax
       \zq{bd}\qb1f\zq{bd}\qb1f\relax
       \zq{bd}\tbl1\rlap{\qb1f}\ \ \ccu h\enotes
\temps\Notes&\ql K\sk\pt I\qbl0I{-4}|\ibl1d0\rlap{\qb1b}\cu g\relax
       \zq{bd}\rlap{\qb1f}\raise\Interligne\DS \rlap{\qu g}\qb1g\enotes
\notes&\sk\tbbl0\tbl0\qb0G|\tbl1\zq{bd}\qb1f\enotes
% mesure 5
\barre\Notes\hu J&\rlap{\lhu J}\ibl0M0\qb0J\zq N\qb0c\zq N\qb0c\tbl0\zq N\qb0c\relax
      |\rlap{\hl e}\qu j\sk\qbu1l{-4}\tbu1\qh1j\enotes
\temps\Notes\hu K&\rlap{\lhu K}\ibl0M0\qb0K\zq N\qb0b\zq N\qb0b\tbl0\zq N\qb0b\relax
      |\rlap{\hl f}\ibu1k0\qh1{ikm}\tbu1\qh1k\enotes
% mesure 6
\barre\Notes\wh L&\zw N\raise 3.5\Interligne\ds\qbl0c0\qb0e\relax
      |\rlap{\hl g}\ppt j\qu j\enotes
\notes&\tbl0\qb0c|\sk\ccu l\enotes
\temps\Notes&\ibl0c0\qb0{ece}|\rlap{\hl g}\qu n\sk\raise 2\Interligne\DS\enotes
\notes&\tbl0\qb0c|\ibbu1m{-3}\qh1m\tbu1\qh1l\enotes
```

music example

```
% mesure 7
\barre\Notes\wh M&\zw a\raise 3.5\Interligne\ds\qbl0d0\qb0f\tbl0\qb0d\relax
      |\rlap{\hlp h}\qu k\sk\qu m\enotes
\temps\Notes&\ibl0d0\qb0f|\pt o\qbu1o{-3}\enotes
\notes&\zq d\qb0f\sk
\zq d\qb0f\sk\tbl0\zq d\qb0f|\sk\tbbu1\tbu1\qh1n\relax
      \ibbu1m{-3}\rlap{\raise -\Interligne\qp}\qh1{mlk}\tbu1\qh1j\enotes
% mesure 8
\alaligne\Notes\hu G&\lcharnote c{\bf I}\relax
\pz b\ibl0M3\qb0N\pz d\qb0b\pz f\qb0d\pz d\tqb0b|\ql i\rlap{\uptext{\bf I}}\sk\ds\ppz p\zq{km}\cl p\enotes
\temps\Notes\hu G&\ibl0M3\pz b\qb0N\pz e\qb0c\pz g\qb0e\pz e\tqb0c\relax
        |\zq{jl}\ql q\sk\ds\ppz l\zq{gj}\cl l\enotes
% mesure 9
\barre\Notes\hu G&\pz b\ibl0M3\qb0N|\zq{gi}\ql k\enotes
\notes&\nbbl0\qb0b\tqb0c\enotes
\zglu\Notes&\pz f\ibl0d{-4}\qb0d\pz d\tqb0b|\ds\ppz p\zq{km}\cl p\enotes
\temps\Notes\hu G&\pz b\ibl0M3\qb0N|\ppz q\ibl1m3\zq l\qb1q\enotes
\notes&\nbbl0\qb0c\tqb0d|\nbbl1\qb1q\tqb1p\enotes
\temps\notes&\pz g\ibl0e{-4}\qb0e\sk\pz e\tqb0c|\ibbl1p0\qb1{qpq}\tqb1s\enotes
% mesure 10
\barre\Notes\hu G&\zq{Nb}\ql d|\pz t\ibl1o{-3}\qb1r\enotes
\notes&|\nbbl1\qb1n\tqb1{^m}\enotes
\zglu\notes&\soupir|\ibbl1m0\qb1{nmn}\tqb1m\enotes
\temps\Notes\hpause&\ibl0I6\pz J\qb0G|\pz p\cl n\enotes
\notes&\nbbl0\qb0N\tqb0{^M}|\ibbu1g{-3}\qh1g\tqh1{^f}\enotes
\notes&\ibbl0N0\qb0{NMN}\tqb0M|\ibbu1g0\qh1{gfg}\tqh1f\enotes
\suspmorceau
\def\nbinstruments{4}%
\nbporteesiii=0\relax
% mesure 11
\reprmorceau
\NOtes\qu G&\ql N|\st n\qu g&&\hpause\enotes
\zglu\NOtes\soupir&\rlap{\rmidtwotext{\bf II}}\soupir|\zq d\qu{=f}&&\enotes
\temps\NOtes\hpause&\hpause|\zq c\qu e&&\soupir\enotes
\zglu\NOtes&|\zq b\qu d&Mit~&\ilegu0p\qu g\enotes
% mesure 12
\barre\Notes&\qu J|\zw N\zq c\ibu0e0\qh0e\zq c\qh0e&W\"urd~&\ql j\enotes
\Notes&\soupir|\zq c\qh0e\zq c\tqh0e&und~&\ql j\enotes
\temps\Notes\pause&\hpause|\zq c\ibu0e0\qh0e\zq c\qh0e&Ho-&\ql l\enotes
\Notes&\zcharnote C{\bf I}|\zq c\qh0e\zq c\tqh0e&heit~&\ql j\enotes
% mesure 13
\barre\Notes&\qu C|\zw N\zq c\ibu0e0\qh0e\zq c\qh0e&an-&\qup g\enotes
\Notes&\qu E|\zq c\qh0e\zq c\tqh0e&\sk ge-&\sk\cu h\enotes
\temps\Notes\pause&\qu G|\zq c\ibu0e0\qh0e\zq c\qh0e&tan,~&\tleg0\qu g\enotes
\Notes&\ibu1E{-3}\qhp1E|\zq c\qh0e&mit~&\ilegu0p\qu g\enotes
\notes&\sk\tbbu1\tqh1C|\zq c\tqh0e&&\enotes
% mesure 14
\barre\Notes&\qu G|\zw N\ibu0e0\zq{bd}\qh0f\zq{bd}\qh0f\relax
    &Sch\"on-&\ql k\enotes
\Notes&\soupir|\zq{bd}\qh0f\zq{bd}\tqh0f&heit,~&\ql k\enotes
\temps\Notes\pause&\hpause|\zq{bd}\qh0f\zq{bd}\qh0f&St\"ark~&\ql m\enotes
\Notes&|\zq{bd}\qh0f\zq{bd}\tqh0f&und~&\ibu2k{-4}\qh2k\tqh2i\enotes
\suspmorceau
\removelastskip\rightline{\sl\aujourdhui}
\bye
```