NAME

solfa — translate pitch-related representations to tonic solfa syllables (`**solfa`)

SYNOPSIS

solfa [**-tx**] [*inputfile ...*] [> *outputfile.sol*]

DESCRIPTION

The **solfa** command transforms various pitch-related inputs to the corresponding tonic solfa syllables. The command outputs one or more Humdrum `**solfa` spines — where pitches are designated by the syllables *do, re, mi, fa, so, la,* and *ti* — or their chromatic alterations: *di, da, ri, ra,* etc. (see below). Tonic solfa syllables can be determined only with reference to some prevailing key. For example, the pitch C is the tonic (`do`) in the key of C major, but the mediant (`mi`) in the key of A-flat major. The **solfa** command expects a tandem interpretation indicating the key of the input passage; **solfa** will adapt to specified changes of key within an input stream. If no key information is provided prior to the first pitch-related data, **solfa** issues an error message and terminates.

There are various systems for extending the tonic solfa syllables in order to representing chromatic alterations. The system used by **solfa** is tabulated below. (Pronunciations are indicated in parentheses.)

basic	**raised**	**lowered**
do (*doe*)	di (*dee*)	de (*day*)
re (*ray*)	ri (*ree*)	ra (*raw*)
mi (*me*)	my (*my*)	me (*may*)
fa (*fah*)	fi (*fee*)	fe (*fay*)
so (*so*)	si (*see*)	se (*say*)
la (*la*)	li (*lee*)	le (*lay*)
ti (*tee*)	ty (*tie*)	te (*tay*)

Summary of **solfa** *Signifiers*

The **solfa** command differs from the **deg** and **degree** commands in that pitches are represented without regard to major or minor *mode*. For example, in the key of C major, **deg** and **degree** will characterize A-flat as a lowered sixth scale degree, whereas the same pitch will be a normal sixth scale degree in the key of C minor. In the case of **Bsolfa**, the A-flat will be characterized as `le` — whether or not the key is C major or C minor. As in the case of **deg** and **degree**, the amount of chromatic alteration is not represented; once a pitch is "raised," raising it further will not change the output representation. For example, where the tonic pitch is B-flat, both B-natural and B-sharp are represented by `di`.

The **solfa** command is able to translate any of the pitch-related representations listed below. For descriptions of the various input representations (including `**solfa`) refer to Section 2 *(Representation Reference)* of this reference manual.

It is recommended that output files produced by the **solfa** command should be given names with the distinguishing .sol extension.

`**kern`	core pitch/duration representation
`**pitch`	American National Standards Institute pitch notation (e.g. "A#4")
`**solfg`	French solfège system (fixed 'doh')
`**Tonh`	German pitch system

Input representations processed by **solfa**.

OPTIONS

The **solfa** command provides the following options:

-h displays a help screen summarizing the command syntax
-t suppresses printing of all but the first note of a group of tied notes
-x suppresses printing of non-`**solfa` signifiers

Options are specified in the command line.

The **-t** option ensures that only a single output value is given for tied notes; the output coincides with the first note of the tie.

In the default operation, **solfa** outputs non-pitch-related signifiers in addition to the degree value. For example, in the key of D, the `**kern` token "4Gz" will result in the output "4faz" — that is, after translating G to fa, the "4...z" signifiers are retained in the output. For some applications, echoing non-pitch-related signifiers in the output is useful. However, in other situations, the result can prove confusing. The **-x** option is useful for eliminating non-pitch-related signifiers from the output.

EXAMPLES

The following example illustrates the use of **solfa.** The input contains four pitch-related spines — one of which (`**MIDI`) cannot be processed by **solfa.** In addition, there is one non-pitch-related spines (`**embell`).

```
!! 'solfa' example.
**kern    **Tonh    **MIDI       **solfg    **pitch    **embell
*M2/4     *M2/4     *M2/4        *M2/4      *M2/4      *M2/4
*C:       *d:       *G#:         *a:        *F:        *F:
=1        =1        =1           =1         =1         =1
8ee-      Gis2      /60/         do3        F4foo      ct
.         .         /-60/        .          .          .
8f        H2        /62/         fa3        G4bar      upt
.         .         /-62/        .          .          .
8dd-      B2        /70/         mi3        E4         ct
.         .         /-70/        .          .          .
8d--      Cis4      /61/         r          F4         sus
.         .         /-61/        .          .          .
=2        =2        =2           =2         =2         =2
[4a-      r         .            mi_b3      F4 A4      .
.         Heses2    .            re3        G4 Bb4     ct
4a-]      C3        /48/ /52/    do3        E4 C5      ct
.         .         /-48/        .          .          .
.         H2 E3     /-52/        la3        G4         ct
=3        =3        =3           =3         =3         =3
r         A2 F3     .            r          F4         .
==        ==        ==           ==         ==         ==
*-        *-        *-           *-         *-         *-
```

Executing the command:

```
solfa -tx input > output
```

produces the following result:

```
!! 'solfa' example.
**solfa   **solfa   **MIDI      **solfa   **solfa   **embell
*M2/4     *M2/4     *M2/4       *M2/4     *M2/4     *M2/4
*C:       *d:       *G#:        *a:       *F:       *F:
=1        =1        =1          =1        =1        =1
me        fi        /60/        me        do        ct
.         .         /-60/       .         .         .
fa        la        /62/        le        r         upt
.         .         /-62/       .         .         .
ra        le        /70/        so        ti        ct
.         .         /-70/       .         .         .
ra        ti        /61/        r         do        sus
.         .         /-61/       .         .         .
=2        =2        =2          =2        =2        =2
le        r         .           so        do mi     .
.         le        .           fa        re fa     ct
.         te        /48/ /52/   me        ti so     ct
.         .         /-48/       .         .         .
.         la re     /-52/       do        re        ct
=3        =3        =3          =3        =3        =3
r         so me     .           r         do        .
==        ==        ==          ==        ==        ==
*-        *-        *-          *-        *-        *-
```

Both processed and unprocessed spines are output. Notice that the tied note at the beginning of measure 2 in the `**kern` spine has been rendered as a single note rather than as two notes (due to the **-t** option). Also notice that the non-pitch-related signifiers (e.g. foo) in the first notes of the `**pitch` spine have been stripped away (due to the **-x** option).

FILES

The file `x_option.awk` is used by this program when the **-x** option is invoked.

PORTABILITY

DOS 2.0 and up, with the MKS Toolkit. OS/2 with the MKS Toolkit. UNIX systems supporting the *Korn* shell or *Bourne* shell command interpreters, and revised *awk* (1985).

SEE ALSO

****deg** (2), **deg** (4), ****degree** (2), **degree** (4), ****kern** (2), **kern** (4), ****pitch** (2), **pitch** (4), ****solfa** (2), ****solfg** (2), **solfg** (4), ****Tonh** (2), **tonh** (4)