

1 MAPPET: Music Analysis Software Package

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1MAPPET: Music Analysis Software Package

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1 Summary

MAPPET: Music Input, Analysis and Playback Programme for ESAC Transcriptions - this is the name of a set of programs developed at Essen University for analysis and manipulation of one-part melodies in ESAC (Essen Associative Code)1).

Originally the input-part of MAPPET was developed for Micro-Computers while the analysis-parts could only be performed in mainframe computers. The present version runs completely on any IBM (compatible) Micro using MS/DOS. Any output is prepared for use in AskSam-databases, but there is also a "neutral" version with numbers instead of mnemonics that can be used in any program. AskSam-versions only use ASCII-Codes. The following graph explains the configuration of MAPPET:

\MAPPCON\

MAPPET: integrates the following single programs for the user's convenience. Any program can be called from a menu. Short explanations can be chosen by the F1-key. Melody files that should be used by different MAPPET programs can be named using the function key F2 for any of those programs.

MIDI-Input: can be used to play in one-part melodies on a MIDI-keyboard. They are automatically translated into ESAC and the

complete documents are stored as AskSam-Documents.

SYNTAX: controls syntax and formatting of ESAC melodies and prints a list containing line numbers and explanations.

PLAY: plays back ESAC melodies either via MIDI-keyboard or via the computer's generator. When you choose the generator, you also can listen to the songs in any of five different temperaments.

1) cf. Schaffrath/Jesser: Encoding Music with ESAC, Essen 1987

ANALYSIS: provided there are no mistakes (use SYNTAX!) ANALYSIS provides 12 options for analyzing melodic attributes. The results (including the previously written data) are stored in a file that has special features for AskSam-databases. One can choose any of the 12 parameters (alternatively or cumulatively).

TRANS: this program translates AskSam files into "neutral" STAIRS files, which contain line-numbers instead of German or English mnemonics. Thereby one can transfer one's data between the two languages, because the originally English file can now be re-translated into German mnemonics and vice versa. One should, however, only translate unanalyzed files if possible2).

The following paragraphs describe the single programs. If you use MAPPET, you do not have to call the specific program. Restrictions in the length of melodies and further paragraphs will be described along with the respective programs. After storing new data files, either by MIDI-Input or by typing on the computer's keyboard, we strongly recommend that you use the SYNTAX program before you call ANALYSIS. You then have a chance to correct the mistakes first. Use the PLAY-program for proof-reading (proof-listening). It can also be used to play back any result of an (ASCII-coded) database search3). Further mistakes will only be detected by the ANALYSIS program. ANALYSIS controls the number of notes (beats) within the bar. If this is not correct, an error message will be printed on the screen. One should in any case first correct these mistakes and repeat the analysis, for any incorrect bar can cause several analytical results to be wrong.

The programs reserve some specific file types, but any other type

can be used. The file type of unanalyzed AskSam files is .SM, the type of analyzed files is .SAM.

The programs also function when there are documents without melodies. This can happen when one uses the same database for tape (or record-) protocols as for storing melodies. The single paragraphs must, however, consist only of the respective mnemonics. Otherwise the program will try to read a melody and either writes many error messages or collapses.

Any program can be started by hitting the F9-key. In most cases they can be interrupted by <ESC> or aborted by <CTL-C> <CTL-Pause> respectively.

Provided the path is defined one can begin any program from any directory. It is therefore reasonable to use the directory where one has stored the data files and to start any program from there.

-
- 2) There is the program "STRIP" (at this moment only a German version) which can "de-analyze" the files.
 - 3) it also can play analyzed documents.

2. MIDI-Input

2.1 Usage

One can input one-part melodies using a synthesizer. The melody will be translated into ESAC and stored in a datafile. At the same time verbal information on the songs/melodies can be stored. The system was developed to store ethnomusicological material under certain conditions. The format of the output files follows the format of the input files for many Essen databases as LIED, BALL, LIAO etc.

The program was not designed to copy exactly what has been played (as is the case with many commercial sequencer programs) but tries to find the most correct way of notation a melody using conventional staff notation. It was intended to develop software that translates traditionally notated music in a machine-readable code. Quite a few "irregularities" for the input of melodies have been empirically tested. MIDI-Input tries to adapt those irregularities to the original notation.

2.2 The Program

From MIDI-signals those parameters are selected and stored which can be encoded in ESAC: Pitch and dynamics4). Since it is not possible to store tone-lengths directly, we used the pulses which are sent from the MPU (internal clock and clock to host). We thereby store the respective (system-) time at the beginning and at the end of every single tone. As long as the melodies are not

in free meter the bar accents (represented by a high beep tone of the MPU-metronome) are also stored in system time.

A sub program now computes the tone-length belonging to the respective pitches and corrects "irregularities" under different aspect:

- a smaller duration than the "smallest metrical unit" which had been chosen by the user will not be stored.
- upbeats and repetitions of short tones which mostly are performed too short are prolonged.
- bars (i.e. two BLANKS in ESAC) are added in melodies of constant meter. The rhythmical values are now adapted to the bars as far as possible.
- should one have sounded two tones 'simultaneously' then the secondly played tone will be deleted. This is of special importance when the player has chosen a particularly "legato" manner of performance. When the "second voice" contains only small durations, they are also deleted.

4) "dynamics", because we used a synthesizer that controls "NOTE-OFF" via dynamics. Other methods or synthesizers are also considered, however.

If there are distinct overlap, unidentifiable pitches or durations, then the program writes error messages to inform the user that some corrections may be necessary.

Then a sub-program translates the corrected MIDI-code into ESAC symbols and prints the result in a specific editor on the screen. Simultaneously the melody is played again, because it still can contain user- or program-caused mistakes. One now can correct the melody and define the length of phrases. When there are too many mistakes, one should perhaps use the option to play the melody again.

Finally one can read the melody along with any previously stored verbal information in a complete document. In this stage further corrections are not possible (use another editor!).

2.2.1 Details

Files: The program writes text-files of variable record length.

Initialising the MPU: the following parameters are used by the MPU:

TIMEBASE	\$C8	(= 192 internal pulses per beat)
CLOCK TO HOST	\$E7	(= results into 192 pulses per
	\$04	beat to the computer)

This allows a very high resolution of the incoming signals. Variable, i.e. changeable by the user, are the following commands:

SET TEMPO	\$E0	(takes the value to be regulated. The default value is 64 per quarter.)
MIDI/METRO	\$E4	(takes the value of the denominator, i.e. the "beep-rate" of the metronome)
METRO/MEAS	\$E6	(takes the value of the numerator, i.e the beat)

2.2.2 Restrictions

The program restricts the input of melodies according to the following rules:

- the ambitus is C - b'''. Depending on the governing key in ESAC this equals --1 to ++7 for tonic C, -2b to ++1 for tonic B respectively etc.
- the smallest metrical unit is 1/32. In this case minor inaccuracies are possible, however.
- Triplets and the like cannot be played. We recommend you omit one tone from triplets and add it along with the brackets when the melody is edited.

- Songs in FREE METER and songs containing changes of meter can only be played without accented tones. Double BLANKS representing the bar have to be added manually in the editor.
- tonic "1" is always in the one-line octave.
- only songs containing a maximum of 20 melody lines (phrases) can be played. Larger melodies have to be copied from documents using another editor. One can also enlarge verbal information in any other editor.

2.2.3 Hardware requested

The compiled software MIDI-Input runs on any IBM XT/AT (compatible). A Roland Interface (MPU-IPC) and a synthesizer are also needed.

2.3 Rules of usage

2.3.1 Input Rules

Program calls: One calls the program directly by typing "MIDI".

File names: The program asks for a name of up to eight characters. The file-type (.SM) is automatically added to guarantee compatibility especially with the PLAY program. It is, however, possible to use any different type.

When the respective file name already exists, one can add, overwrite or choose another name. Then the program asks for the document's name (maximum is 9 digits), which will be valid for the entire data file. One is also asked for the respective source mnemonic (a single letter).

A very simple example is the following:

FILE NAME:

Lieder <return>

DOCUMENT NAME

Frauen <return>

SOURCE

F <return>

Should one intend to add pieces to an existing file, the document's name and the source code are not requested again.

Input mask: The verbal informations are written into a mask which contains the maximum length for running text lines. Hit <return> at the end of any line to save your input. You cannot correct a

line that has been saved by <return>, because you are not using an editor. The paragraph names (or fields) TITLE, REGION, TRD, FCT

and REM may contain any ASCII-code5). The lines can also remain empty. An equal (=) sign at the beginning of any line following the paragraph repeats the text of the preceding line automatically. This was programmed because when one inputs songs, the first line and the title of the song may be identical.

The following rules are important for the last lines:

NUMBER: Numbers up to four digits

VARIANT: one further ASCII-sign (may be dropped)

KEY: two digits for # (sharps) and b (flats) which have to be placed after the key note

METER: numeric (except for FREE); input without fraction stroke (i.g. 34 instead of 3/4, for example). Up to three different meters can be used. They must be separated by one BLANK. FREE meter can be shortened by FR .

SH NOTE (Shortest note): numeric, maximum two digits. Only the denominator of the smallest unit should be written (for example 4 for quarter notes). Only durations from half to 1/32 are allowed.

If one violates any of the above mentioned rules, the program prompts until you give a correct answer (watch the bottom line!).

Example for a ready mask (German female song):

```

+-----+
TITLE:  |Der Mann das ist ein Lustobjekt      |
        |Mein Freund steht auf dem Fussballplatz |
        |und ich steh in der K}che.           |

```

REGION	Bundesrepublik Deutschland	
SOURCE	Quelle: Frauenliederbuch, Dortmund 1986	
	Musik: Angy Domdey	
FUNCTION:	Frauen - Lied	
COMMENTS:	gekuerzt	
NUMBER:	1	
VARIANT:		
KEY:	a	
METER:	44	
SH. NOTE:	8	

5) see also rules of documentation of the database ETNO, Essen 1984.

2.3.2 MIDI-Input, Editing, Storing

To play a melody: The panel following the mask specifies the metronome's beat. For example:

The metronome will count quarter notes

The bottom line contains the options CHANGE TEMPO, START, ABORT. If you choose the option T then the metronome starts playing one quarter = 64, one eighth = 128. The high beep tones signify the first beat in the bar, the lower beeps the remaining beats. If you choose FREE meter (including songs with variable meters), then you only hear single pitch beeps.

You can now accelerate or slow down the metronome by hitting the plus- or minus- keys). This is also the place to test the tempo or to practice the melody without storing it. The menu informs you that it is only a TEST. Use F9 to begin storing the melody. When you hear the metronome, you can start play. Any (computer-) key will then stop the MIDI-Input.

To edit: After any error-messages which draw your attention to the need for corrections, a special editor is called by hitting a key. It contains the complete melody in ESAC. At the same time the synthesizer plays the melody once more.

The following keys can be used for correcting and storing your data:

Arrow keys: control cursor movements
 Insert: chooses insert-mode
 Delete: deletes the sign above the cursor
 BACKSP <-: deletes the sign left of the cursor
 F8: marks the phrase end before the cursor's position
 and files the line. Use this key after correcting
 the respective line.
 F9: ends editing and shows the whole document as a
 result.
 <ESC> back to the previous level. The MIDI-input is
 then deleted.

Any of the alpha-numeric keys can be used. The program does not respond to special keys.

The above quoted German (p. 7) example now looks like the following in the editor:

```

5 +1_5_5_+1 7b4_7b_.04 3b_1_2_-7b_ 1_1_0_5_ 4_4_
4_4_ 5_11_.05 4_4_4_4_ 55_.057b+1 +3b_+1_5_3b 43
b_5_.02 3b_1_2_-7b_ 2_1_0_. //

```

```

=====
-> <- Ins Del End Home Accept Line: F8 Continue: F9 Abort: <ESC>

```

6) Care: do not hit too hastily! The computer needs some time to transmit your wishes to the MPU.

=====

To save: The complete document will be printed when hitting the F9-key. No further changes can then be made. One can choose now to play the song again or to saved it and proceed to another melody.

The complete example in AskSam format looks like this:

FRAUEN

CUT[Der Mann das ist ein Lustobjekt

Mein Freund steht auf dem Fussballplatz
und ich steh in der Kueche.]

REG[Bundesrepublik Deutschland]

TRD[Quelle: Frauenliederbuch, Dortmund 1986

Musik: Angy Domdey]

KEY[F0001 08 A 4/4]

MEL[+1_5_5_+1_ 7b4_7b_.0

3b_1_2_-7b_ 1_1_0_

5_ 4_4_4_4_ 5_11_.0

5 4_4_4_4_ 55_.0

57b+1 +3b_+1_5_3b_ 43b_5_.0

2 3b_1_2_-7b_ 2_1_0_. //] >>

FCT[Frauen - Lied]

REM[gekuerzt]

Melody ok? (Y/N) (No = play again)

2.3.3 General rules for MIDI-Input

- 1) Try to play NON LEGATO!
- 2) Listen carefully to the METRONOME (and the first beat)!
- 3) Play DURATIONS and PAUSES accurately!
- 4) Do not press two keys at the same time!

If you do not follow these rules, the program may print error messages. When there are only a few mistakes, use the editor for corrections. If there are many, it is better to play the melody again.

In general it is helpful to use the PLAY-programs to listen for corrections after having stored a larger number of melodies. The software SIDEKICK could perhaps help to make corrections directly in the original file.

3. SYNTAX - Analyze Mistakes

3.1 How to use the program

The Syntax program is one of the important supports in MAPPET for analyzing mistakes. Not only the ESAC code will be analyzed but also the explicit field signs like "[" in AskSam. Any possible syntactic mistake will be reported.

3.2 To Start the program

```
Write: SYN <filename.type>
or     SYN <filename>
or     SYN
```

The missing information will either be added or asked for. The entire file will be searched for mistakes. This can, of course, take some time depending on the file's size. You will hear an acoustic signal when SYNTAX has finished. Then a table is printed on the screen containing the kind of mistakes, the running line numbers of the file and some more specific remarks on the kind of mistake. For example:

```
+-----+
| Error type      | line number | comments      |
+-----+
syntax           5      bar line in inadmissible form
Syntax          105     length symbol after a bar line
```

Syntax

355

final bar line missing

Press any key to continue...

Up to 20 error messages can appear on one screen which can be printed up to a maximum of 140 lines by <screen prt>. One should correct mistakes anyway before starting the next diagnosis run.

3.3 Error messages

3.3.1 Format, Meter, Key, Line-Length

These mistakes refer to the field KEY[in AskSam documents, which contain formatted information on meter, key and time. The program first searches for information after the signature (5 digits). If there is information, this means that a melody should really follow. If not it could be reported that the final symbol "//" is missing because this has to end any melody. If the key line is not completed but a melody exists then you read messages like the following:

Format	4	incorrectly placed spaces
Key	4	incorrect or incorrectly placed
meter	4	missing

When the keyline is completed, then it will be tested if the BLANKS are in the correct places and if the key (A, B, C# etc.) is correct7). When one line is longer than 80 columns, this also results in an error message.

The next step is to control the species of time. Some mistakes can be caused by putting the time in the wrong column. Melodies in quintuple time or 7-beat measure etc. will also be controlled for additional information (3+2, 2+3 or 4+3 etc.) which has to appear because some analysis-programs must consider this mode. The following diagnoses are possible:

line length	2	contains more than 80 characters
meter	16	inadmissible: 2/3
meter	95	insuficciently defined
bar line	105	missing
meter	201	insufficient or format (%) incorrect

3.3.2 Indentations and Paragraphs

The database fields contain an indentation of 4 spaces for every paragraph. They are divided by "[]". If there is no indentation or dividing mark, then the following messages appear:

Indentation	15	incorrect sign π
Paragraph	21] missing

It was necessary to restrict the number of lines per document for some of the analysis programs. 17 lines are allowed before the KEY paragraph. The melodies themselves can contain up to 59 lines. Syntax reports if there are more:

line number	4	more than 17 lines before KEY
line number	435	more than 20 lines after MEL
line number	555	more than 59 Melody lines

3.3.3 Syntax errors

The largest number of possible mistakes refers to ESAC syntax, i.e. "spelling" of notes, bar lines, final symbols, triplets etc. The controlling strategies were developed by experience from typical encoding mistakes. Only the following mistakes are detected:

7) cf. also Schaffrath/Jesser: Encoding Music with ESAC, Essen 1987

- The characters used in ESAC are: 0 1 2 3 4 5 6 7 ~ x + - _ .
b

#. Then there are special signs like () / and the BLANK. Any other character would be marked as "unidentified".

Syntax 15 incorrect character π

- Accidentals have to be placed after the pitch symbol. Otherwise this will cause an error message.

Syntax 333 accidental incorrectly placed

- The bar in ESAC is signified by two BLANKS. Should there be only one or three and more, then an error message will appear.

- the symbol for the end of melodies is "//". If this missing or incomplete or follows after too many blanks, the program prints an error message.

Syntax ... final bar line missing

Syntax ... final bar lin incorrect

- If the Underline is misplaced by BLANKS, then the following messages may appear:

Syntax ... length symbol after a bar line

- Brackets signify triplets in ESAC. The program checks if the brackets within one melody line are correctly closed. It also checks for the correct symbols within the brackets:

Syntax ... triplets contain incorrect character
 Syntax ... triplet parantheses not closed

- ESAC-pitches between --1 and ++7 are allowed for the analysis programs. Both lower and higher notes would cause error messages. Messages will also be printed when one uses legitimate signs in illegitimate combination like

+ -5__ , 7bb, -3b_.__ or 1_.. :

Syntax ... invalid pitch +-5
 Syntax ... invalid duration _._

It is also possible for one mistake to cause two or three different error messages.

In any case we highly recommend that the analysis programs are only used after checking the melodies with SYNTAX!

4. PLAY - the listening programs for corrections

4.1 Usage

The programs were developed to play melodies of the Essen databases successively. The melodies have to follow the "Rules of encoding", i.e. they must follow the formats and only contain melodies in ESAC. The reserved file-type for AskSam datafiles are .SM and .SAM. Other filetypes are possible, however.

4.2 Special features and restrictions

The basic abilities of the PLAY programs are:

- they read ESAC from --1 to ++7
- they read songs in order of succession, but jumping to higher song number is possible. Use the F10-key to call a counter showing the running number of the melody. With the arrow-key "->" you can spool the file. It is not possible to read backwards.
- Melodies can be repeated as often as one likes. During any repetition the tempo may be changed. Afterwards the "original" tempo is active again.

- You can at any time use <ESQ> to stop the actual part of the program. The same can be done to stop the whole process of playing.
- The programs are guided by a bottom line.

The programs transpose the melodies into the respective keys. Very short caesuras are inserted at the end of each line to make it possible to hear phrase-ends. The program has a default tempo which has been traced empirically using many German folksongs. But during the process of repeating one can choose "one's own" tempo within reasonable limits.

The "instrument" has to be 'marked' after calling the program. Any micro computer has its tone generator. If you want to use a synthesizer, you must have the respective interface.

The synthesizer version has two additional features for listening to large numbers of melodies for checking. The program accentuates the strong beats (only the first tone in the bar). This makes it easier to follow unknown melodies on the screen. One can also change the synth sounds before one falls asleep during prolonged playback using.

Using the PC's generator, however, enables one to listen to five different temperaments in which the tone numbers 1 to 7 can be tuned. You have to mark first if only well tempered scales are

requested or others. One may then choose between the following scales:

Major/Minor (equal temperament), Pelog, A Thai Scale, An African Scale, Chinese "Pythagorean" temperament.

Accidentals are ignored (except in Major/Minor), i.e. only scales using up to a maximum of 7 different tones are possible. In other cases accidentals are simply ignored.

This mode of the program does not transpose the songs to the original key but plays any melody in tonic 1=C. If you just want to listen to a demonstration of the Scales, please call the program "SCALES".

Restrictions: the upper limit for long melodies is 800 tones.

4.3 Running the programs

To begin the program you simply call PLAY or PLAY <song> or PLAY <song.ft>. Missing information will be added or asked for.

Hardware necessary: the compiled PLAY- programs run on any IBM XT/AT and compatible machines. If one uses the version for synthesizer, one also needs a Roland MIDI-Interface with the MIDI chip (MPU-IPC).

5 ANALYSIS - the program to analyze Melodies

5.1 Description

ANALYSIS analyzes ESAC melodies for 12 attributes which will be stored together with the complete documents. The methods are derived from occidental folk music and can be used for other musics only under certain conditions⁸⁾. The rules of encoding contain the formats for the results of analysis. The program considers automatically the file type .SM for input files and outputs the same file including analytical results as .SAM.

Call ANALYSIS either by the word ANA or ANA <song> or ANA <song.ft>. Again the missing information is either asked for or added. The following parameters can be chosen for any run:

8) Parameters and strategies preceding the algorithms are set out in B. Jesser: Interaktive Melodieanalyse, Essen 1989. This dissertation contains also a discussion of possibilities of usage. It exists only in German language.

[ANA]

Any of the parameters can be selected by <return>. The function-key F9 starts the program.

There are some special marks in AskSam files: >> will be found at several places to control the screen paging. The contour lines and the accented tones do not contain BLANKS as it seems but a hidden ASCII character (255) which allows special search strategies.

If the number of durations within one bar does not match the respective meter, error messages are created containing the line number of the bar. Sometimes one has to search for these mistakes as well in the preceding as in the following line. It is of vital importance to correct these mistakes because quite a few of the sub-programs rely on the correctness of this notation.

After every error the program stops to make sure that the user has read the message. The program can be continued by hitting any key. One should in any case correct the mistakes first and then repeat the analysis.

5.2 Restrictions

- the (unanalyzed) documents are restricted to a length of 95 lines. The paragraphs preceding the melody (KEY) are restricted to 17, the melody itself must not be larger than 59

lines. After the melody another 20 text lines may follow.

- the general length of 80 characters per line must not be exceeded.

- melody lines in ESAC must not contain more than 40 note symbols.

If any of these restrictions are exceeded, ANALYSIS may truncate lines. Another good reason for using SYNTAX before ANALYSIS.

6. TRANS - the transformation program for databases

The program TRANS translates AskSam melodies into a kind of "neutral" (STAIRS) format. This has the advantage that one also can exchange any mnemonics used for AskSam files for other purposes or softwares. A STAIRS file contains line numbers instead of mnemonics. As the English mnemonics of MAPPET differ from the German ones, one can translate German sourcefiles into STAIRS and then retranslate them into the English version and vice verse. This, however, should only be done with the unanalyzed files. For the German version there exists also a program "STRIP", which reduces the analyzed files to the unanalyzed version.

TRANS operates the same way as the other programs. If you translate the file SONG.SM then the resulting file would be named SONG.IN and vice verse. The "direction of translation" can be detected by the program itself. It refuses to translate files that do not follow either STAIRS or AskSam formats.

7 Addenda

7.1 Literature

Information about ESAC Code and the STAIRS database formats is provided in a manual which exists in German and English. There is, however, no manual for documents in AskSam which differ only slightly from STAIRS formats. The most detailed description of

analysis parameters and rules are in Chapt. 6 of the dissertation "Interaktive Melodieanalyse" by Barbara Jesser. This

unfortunately - only in German.

Since many aspects of the project can be better appreciated by understanding the preceding processes, the following list also contains articles on archiving:

Grupe, G., Michel, U.: The Data Base 'ETNO': A computer based system for the documentation of traditional music at Essen University, W.Germany. In: The World of Music, Nov.. 1985

Jesser, Barbara: Input and Representation of Tunes and their Solution in the Essen analysis project. In: Maschinenschriftliches Manuskript des Vortrags zum Meeting der ICTM Study Group on Computer Aided Research Edinburgh 28.9. - 1.10. 1988. 1988

Jesser, Barbara: Interaktive Melodieanalyse. Methodik und Anwendung computergestützter Analyseverfahren in Musikethnologie und Volksliedforschung: typologische Untersuchung der Balladensammlung des DVA. Essen 1989

Schaffrath H.: Datenbank zur Erfassung von Musik auf Tonträger "ETNO". In: Universität - Gesamthochschule Essen: Zukunftstechnologie Neue Medien. Schriften und Berichte Band 9. 1986, S.59-65. 1986

Schaffrath, H.: Computer Cataloging. A Database System for Ethnic Music at Essen University, West Germany. In: IASA phonographic bulletin, No 39/July. 1984

Schaffrath, H.: Computer Cataloging. Database System for Ethnic Music at Essen University, West Germany. In: IASA phonographic bulletin, No 39/July, S.35-39. 1984

Schaffrath, H.: Der Umgang mit Information über Musik. Am Beispiel einer Datenbank ethnomusikologischer Schallplatten der Universität Essen. In: Musikpädagogische Forschung, Band 6, Laaber, S.253-263. 1985

Schaffrath, H.: Die vollautomatische Weichware. In: Computernjuz Nr. 26. Essen (Universität Essen) 1988

Schaffrath, H. et al.: Datenbanksystem zur Dokumentation von Schallplatten... ERFASSUNGSREGELN. Universität GHS Essen
1984ff

Schaffrath, H.: How to retrieve one-part Melodies and their Variants. Ideas and Strategies for Computer-Aided Analysis at Essen, FRG. In: Maschinenschriftliches Manuskript des Vortrags auf der Tagung "Computers in Music Research" Lancaster, April 1988. (1990: Academic Press?)

Schaffrath, H. und Jesser, B.: Erfassungsregeln zur Melodiedatenbank. In: Handbuch. Universität Essen 1987

7.2 Source code

One can ask for the source code under certain conditions (see address on the licence agreement).

7.3 FIELD mnemonics of a complete file

The results of automatic analysis appear additively. The line-numbers would be changed accordingly, should one use less analytical programs.

```

+-----+
| TITLE OF THE PIECE                                     (Line no. 1) |
|=====|
| Field- | Contents                                             |
| Names: | (mostly percentages)                                   |
|=====|
| STN[]  | Soundtrack-No.                                         | | |
| ST[]   | Soundtrack (tape, video, etc.)                         |
| UN[]   | Unison (Primen)                                       (Line no. 2) |
| 2S[]  | Second minor ("small")      +-----+               |
| 2M[]  | Second major                |ASCENDING|         |
| 3S[]  | Third minor                  +-----+               |
| 3M[]  | Third major                 |
| 4P[]  | Fourth perfect              |
| 4A[]  | Fourth augmented            |
| 5P[]  | Fifth perfect               |
| 6S[]  | Sixth minor                 |
| 6M[]  | Sixth major                 |
|
|.....+-----+.....|
| 7S[]  | Seventh minor                |ASCENDING|         (Line no. 3) |
| 7M[]  | Seventh major                +-----+               |
| 8P[]  | Octave perfect              |

```

8L[]	larger than Octave	
SI[]	Sum of Intervals ascending (%)	
ABS[]	Absolute No. of Intervals	
SA[]	Steps ascending (%)	
LA[]	Leaps ascending (%)	
.....		
SB[]	Sum of bars (absolute no)	(Line no. 4)
2s[]	second minor	+-----+
2m[]	" major	DESCENDING
3s[]	third minor	+-----+
3m[]	" major	
4p[]	fourth perfect	
4a[]	" augmented	
5p[]	fifth perfect	
6s[]	sixth minor	
6m[]	" major	
.....		
7s[]	seventh minor	(Line no. 5)
7m[]	" major	
8p[]	Octaves perfect	
8l[]	larger than Octave	
si[]	Sum of descendent Intervalle (%)	
dt[]	Descendence tendency (pos., neg., 0)	
sd[]	Steps descend.(%)	
ld[]	leaps descend.(%)	
+-----+		

Field-	Contents
Names:	
1D[]	Duration: smallest unit (Line no. 6)
2D[]	Duration: double length
3D[]	Duration: triple length
4D[]	Duration: quadruple length
LL[]	longer Durations (length)
DD[]	double dotted
TD[]	triple "
QD[]	quadr. "
TS[]	Triplets/Sextuplets
SD[]	Sum of different durations (absolute)
SL[]	Sum of all durations (incl. pauses; absolute)
LD[]	Degree lower than -3b (Line no. 7)
L3M[]	lower third degree (minor)
L3[]	" " " major
L4[]	" fourth "
L4A[]	" " " augmented
L5[]	" fifth "
L6M[]	" sixth " minor
L6[]	" " " major
L7M[]	" seventh " minor
L7[]	" " " major
M1[]	middle first degree ("Tonic") (Line no. 8)
M2M[]	" second " minor
M2[]	" " " major

M3M[]		"	third	"	minor		
M3[]		"	"	"	major		
M4[]		"	fourth	"			
M4A[]		"	"	"	augmented		
M5[]		"	fifth	"			
M6M[]		"	sixth	"	minor		
M6[]		"	"	"	major		
.....							
M7M[]		"	seventh	"	minor	(Line no. 9)	
M7[]		"	"	"			
U1[]		upper	first	"			
U2M[]		"	second	"	minor		
U2[]		"	"	"	major		
U3M[]		upper	third	"	minor		
U3[]		"	"	"	major		
HD[]		Higher degrees					
=====							
PB[]		Publisher [next screen = (Line no 10f)]					
CUT[]		Title of Cut (Take)					
CNR.		Cut number of tape etc.					
REG[]		Region					
ETH[]		Ethnic group (also language-family etc.)					
SRC[]		Source / way of tradition					
RHY[]		Rhythm. Incipit					
KEY[]		Key - line		NP[] No of Phrases			
MEL[]		Melody notation					

Field-	Contents
Names:	
MOD[]	Scale/Mode RANGE [] ()<- low - high tone
CAD[]	Cadential tones
ACC[]	accented tones
FOP[]	FORM pitch
FOR[]	" rhythm
FOC[]	FORM contour
PHRAS[]	up/down-beat of phrases
FCT[]	Function
CMT[]	Comment

7.4 Material in databases:

+-----+

|ETHNO | contains ethnomusicological sound material. As some
+-----+ different material has the same format, it is also
stated here. The following databases exist in AskSam or
in ASCII-Format: (STATUS: 12/89)

NAME	BYTES (in AskSam)	no. of pieces
AFRIKA	878627	831
ASIEN1	266032	251
ASIEN2	304241	325
ASIEN3	649711	555
EUROPA1	167494	146
EUROPA2	362264	323
EUROPA3	322326	346
FOLKL1	1232093	845
FOLKL2	57387	45
PAZIFIK	90205	52
ROCK	114382	86
S		

MAPPET is public domain but we want you to sign the licence agreement.

To start: write MAPPET.

To start any program within MAPPET: use F9.

To end: use ESC or <ctrl.+break>.

Follow the prompts (which are still in German only).

Use F1 key to read short explanations on the resp. program.

To start the SINGLE programs use their names:

PLAY (fn.ft) (plays the melody for "proofreading")

SYNTAX (fn.ft) (controls for allowed codes, lengths etc.)

MIDlin (fn.ft) (translates the played-in melody into ESAC) *)

ANALys (fn.ft) (has 12 additive options to analyse the melody)

TRANSL translates German AskSam-files into STAIR-format (*.IN) and vice verse.

TRANSE translates English files ... (see above)

SCALES demonstrates different scales (temperaments).

NOTE translates input files into Personal Composer Record files for staff notation (works best with version 1.35, but also later versions).

PATTERN transposes any ESTAFF pattern on different steps of Scales.

With the program goes a MAPPET user's guide.

*) You must have a MIDI-interface and a Synthesizer to start this!

ADDITIONS (Jan. 1991)

ANA had to be re-constructed and improved. Copy ANAE.TXT as ANA.TXT to have the English edition and ANAD.TXT for the German.

PATTERN has be renamed into PATTERN1. There is an English text-file (PATTE.TXT) but still use the German answers for <D>ur and <M>oll.

We are still working on it.

There will be new editions with international textfiles soon. Also a new concept concerning the input of (some?) lyrics. Then ANA will be re-written.

ZUCCAL

CUT["Mailied"]

DER MAI TRITT EIN MIT FREUDEN]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z1262 08 Bb 3/4] ZZ[8]

MEL[-5_ 1_.231 -5_.-3

-4-5 -6_.-71-6 -5_-4_

-3_ -4_-6_-5-4 -3_-5_

1_ 321_-7_ 1_

12 3_1_5_ 2_1_

-7_ 1_-6_2_-7_-5_

-5_ -6_.-71-6 -5_1_

3_ 321_-7_ 1_ //] > >

FOP['a_b_c_d_bs'cs'bw_dw_]

FCT[Natur und Welt]

ZUCCAL

CUT["Mailed"]

DER MAI TRITT EIN MIT FREUDEN]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z1262 08 Bb 3/4] ZZ[8]

MEL[-5_ 1_.231 -5_-.3

-4-5 -6_-.71-6 -5_-4_

-3_ -4_-6_-5-4 -3_-5_

1_ 321_-7_ 1__

12 3_1_5_ 2_1_

-7_ 1_-6_2_ -7_-5_

-5_ -6_-.71-6 -5_1_

3_ 321_-7_ 1__ //] >>

MOD[HEPTATONIC IONIAN]

ACC[1-5_-6-5_-4-3_31_32_1-7_-6-5_31_]

FOR['a_b_c_d_e_ev_bv_d_]

FOC['^d_^_~a^_^_^d_~a__]

FCT[Natur und Welt]

ZUCCAL

UN[6] 2S[13] 2M[17] 3S[2] 3M[6] 4P[8] 4A[0] 5P[2] 6S[0] 6M[0]
7S[0] 7M[0] 8P[0] 8L[0] SI[47] ABS[53] SA[30] LA[17]
SB[16] 2s[9] 2m[19] 3s[9] 3m[6] 4p[4] 4a[0] 5p[0] 6s[0] 6m[0]
7s[0] 7m[0] 8p[0] 8l[0] si[47] dt[0] sd[28] ld[19]
1D[37] 2D[52] 3D[4] 4D[0] LL[0] DD[7] TD[0] QD[0] TS[0] SD[4] SL[54]
LD[0] L3M[0] L3[6] L4[7] L4A[0] L5[17] L6M[0] L6[11] L7M[0] L7[11]
M1[26] M2M[0] M2[11] M3M[0] M3[9] M4[0] M4A[0] M5[2] M6M[0] M6[0]
M7M[0] M7[0] U1[0] U2M[0] U2[0] U3M[0] U3[0] HD[0] > >

CUT["Mailied"]

DER MAI TRITT EIN MIT FREUDEN]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z1262 08 Bb 3/4] ZZ[8]

MEL[-5_ 1_.231 -5_.-3
-4-5 -6_.-71-6 -5_-4_
-3_ -4_-6_-5-4 -3_-5_
1_ 321_-7_ 1__
12 3_1_5_ 2_1_
-7_ 1_-6_2_ -7_-5_
-5_ -6_.-71-6 -5_1_
3_ 321_-7_ 1__ //] > >

FCT[Natur und Welt]

SAM Files with Music Available

ZUCCAL

CUT["Nachtgruss"

GUTEN ABEND GUTE NACHT]

REG[Europa, Mitteleuropa, Deutschland, Nord - Deutschland]

KEY[Z1363 16 Eb 3/4] ZZ[8]

MEL[1_ .1 5_ .4 3_ 3_

1_ 2_ 2_ 2_ 4_ 4_

3_ 5_ 3_ 4_ 5_ .6_ 5_

5_ 3_ 4_ 3_ 0_

2_ 4_ 3_ 4_ 2_ 3_ .45_ 0_

2_ 4_ 3_ 4_ 2_ 3_ .45_ 0_

5_ 5_ 3_ 3_ 5_ +1_ 3_

6_ 5_ 5_ 4_ 3_ 4_ 2_ 1_ //] > >

FOP['a_ b_ c_ d_ cs'cs'e_ ds']

FCT[Kinder - Lied]

ZUCCAL

CUT["Nachtgruss"

GUTEN ABEND GUTE NACHT]

REG[Europa, Mitteleuropa, Deutschland, Nord - Deutschland]

KEY[Z1363 16 Eb 3/4] ZZ[8]

MEL[1_1 5_4 3_3_

1_2_2_2_4_4_

3_5_3_4_5_6_5_

5_3_4_3_0_

2_4_3_4_2_3_45_0_

2_4_3_4_2_3_45_0_

5_5_3_3_5_+1_3_

6_5_5_4_3_4_2_1_ //] >>

MOD[SIX-TONE-SKALE MAJOR ?]

ACC[53_24_55_53_23_23_55_51_]

FOR['a_b_c_cw_d_d_bw_dw_]

FOC['^a/_/_/_~a~a_Sd_]

FCT[Kinder - Lied]

ZUCCAL

UN[19] 2S[13] 2M[13] 3S[9] 3M[0] 4P[4] 4A[0] 5P[2] 6S[0] 6M[0]

7S[0] 7M[0] 8P[0] 8L[0] SI[42] ABS[53] SA[26] LA[15]

SB[16] 2s[11] 2m[11] 3s[11] 3m[2] 4p[2] 4a[0] 5p[0] 6s[2] 6m[0]

7s[0] 7m[0] 8p[0] 8l[0] si[40] dt[+2] sd[23] ld[17]

1D[5] 2D[39] 3D[40] 4D[7] LL[0] DD[5] TD[4] QD[0] TS[0] SD[6] SL[57]

LD[0] L3M[0] L3[0] L4[0] L4A[0] L5[0] L6M[0] L6[0] L7M[0] L7[0]

M1[7] M2M[0] M2[15] M3M[0] M3[26] M4[24] M4A[0] M5[22] M6M[0] M6[4]

M7M[0] M7[0] U1[2] U2M[0] U2[0] U3M[0] U3[0] HD[0] > >

CUT["Nachtgruss"

GUTEN ABEND GUTE NACHT]

REG[Europa, Mitteleuropa, Deutschland, Nord - Deutschland]

KEY[Z1363 16 Eb 3/4] ZZ[8]

MEL[1_.1 5_.4 3__ 3__

1__ 2__ 2__ 2__ 4__ 4__

3__ 5__ 3__ 4__ 5__ .6_ 5__

5__ 3__ 4__ 3__ 0__

2__ 4__ 3__ 4__ 2__ 3__ .45__ 0__

2__ 4__ 3__ 4__ 2__ 3__ .45__ 0__

5__ 5__ 3__ 3__ 5__ +1_ 3__

6__ 5__ 5__ 4__ 3__ 4__ 2__ 1__ //] > >

FCT[Kinder - Lied]

ZUCCAL

CUT[ICH HAB' DIE NACHT GETRAEUMET]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0052 16 G 6/8] ZZ[4]

MEL[-5_ 1_ 2_ 3b_ 2_ 1_ 5_ .5_

4_ 3b_ .21_ -7_ 1_ 2_ 0_ .

1_ 5_ 5_ 3b_ 1_ +1_ .6b_

4_ 3b_ .21_ 2_ .1-7_ 1_ 0_ . //] >>

FOP['a_ b_ c_ d_]

FCT[Sagen - Lied, Romanze, Tod]

ZUCCAL

CUT[ICH HAB' DIE NACHT GETRAEUMET]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0052 16 G 6/8] ZZ[4]

MEL[-5_ 1_ 2_ 3b_ 2_ 1_ 5_ .5_

4_ 3b_ .21_ -7_ 1_ 2_ 0_ .

1_ 5_ 5_ 3b_ 1_ +1_ .6b_

4_ 3b_ .21_ 2_ .1-7_ 1_ 0_ . //] > >

MOD[HEPTATONIC HARMONIC MINOR]

ACC[13b55_3b-72_53b+16b_3b21_]

FOR['a_ b_ c_ d_]

FOC[' ~a_ Vd_ ^a_ _]

FCT[Sagen - Lied, Romanze, Tod]

ZUCCAL

UN[7] 2S[10] 2M[10] 3S[0] 3M[0] 4P[3] 4A[0] 5P[7] 6S[0] 6M[0]

7S[0] 7M[0] 8P[3] 8L[0] SI[34] ABS[29] SA[21] LA[14]

SB[8] 2s[17] 2m[28] 3s[7] 3m[7] 4p[0] 4a[0] 5p[0] 6s[0] 6m[0]

7s[0] 7m[0] 8p[0] 8l[0] si[59] dt[-25] sd[45] ld[14]

1D[9] 2D[44] 3D[25] 4D[0] LL[0] DD[9] TD[13] QD[0] TS[0] SD[5] SL[32]

LD[0] L3M[0] L3[0] L4[0] L4A[0] L5[3] L6M[0] L6[0] L7M[0] L7[7]

M1[30] M2M[0] M2[20] M3M[13] M3[0] M4[7] M4A[0] M5[13] M6M[3] M6[0]

M7M[0] M7[0] U1[3] U2M[0] U2[0] U3M[0] U3[0] HD[0] > >

CUT[ICH HAB' DIE NACHT GETRAEUMET]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0052 16 G 6/8] ZZ[4]

MEL[-5_ 1_ 2_ 3b_ 2_ 1_ 5_ .5_

4_ 3b_ .21_ -7_ 1_ 2_ 0_ .

1_ 5_ 5_ 3b_ 1_ +1_ .6b_

4_ 3b_ .21_ 2_ .1-7_ 1_ 0_ . //] > >

FCT[Sagen - Lied, Romanze, Tod]

ZUCCAL

CUT[IM WALD UND AUF DER HAIDE]

REG[Europa, Mitteleuropa, Deutschland, Anclam]

KEY[Z0204 16 C 6/8] ZZ[8]

MEL[-5_ -5_ -5_ -5_ -5_ -5_ 3_ 1_ -7_

1_ -6_ -6_ -6_ -6_ -6_ 4_ 2_ 1_

2_ -7_ -7_ -7_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_

1_ 2_ 3_ 333_ 33_ 5_.

5_ 4_ 3_ 2_ 2_ 2_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_.

5_ 4_ 2_ 2_ 2_ 2_ 1_ 2_ 1_ 0_ //] >>

FOP['a_ as' b_ c_ d_ e_ c_ ew_]

FCT[Jaeger - Lied]

ZUCCAL

CUT[IM WALD UND AUF DER HAIDE]

REG[Europa, Mitteleuropa, Deutschland, Anclam]

KEY[Z0204 16 C 6/8] ZZ[8]

MEL[-5_ -5_ -5_ -5_ -5_ -5_ 3_ 1_ -7_

1_ -6_ -6_ -6_ -6_ -6_ 4_ 2_ 1_

2_ -7_ -7_ -7_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_

1_ 2_ 3_ 333_ 33_ 5_.

5_ 4_ 3_ 2_ 2_ 2_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_.

5_ 4_ 2_ 2_ 2_ 2_ 1_ 2_ 1_ 0_ //] >>

MOD[HEPTATONIC IONIAN]

ACC[-5-5-51_-6-6-62_-7-73_41-711_335_5223_41-71_52211_]]

FOR['a_a_b_bv_c_bv_bv_bv_]]

FOC['/_S_Va_Vd/_Vd_Vd__]]

FCT[Jaeger - Lied]

UCCAL

UN[36] 2S[9] 2M[14] 3S[1] 3M[0] 4P[0] 4A[0] 5P[1] 6S[1] 6M[1]

7S[0] 7M[0] 8P[0] 8L[0] SI[29] ABS[69] SA[23] LA[6]

SB[16] 2s[9] 2m[19] 3s[6] 3m[1] 4p[0] 4a[0] 5p[0] 6s[0] 6m[0]

7s[0] 7m[0] 8p[0] 8l[0] si[35] dt[-6] sd[28] ld[7]

1D[6] 2D[68] 3D[18] 4D[3] LL[0] DD[0] TD[6] QD[0] TS[0] SD[5] SL[71]

LD[0] L3M[0] L3[0] L4[0] L4A[0] L5[9] L6M[0] L6[10] L7M[0] L7[11]

M1[20] M2M[0] M2[21] M3M[0] M3[17] M4[7] M4A[0] M5[4] M6M[0] M6[0]

M7M[0] M7[0] U1[0] U2M[0] U2[0] U3M[0] U3[0] HD[0] > >

CUT[IM WALD UND AUF DER HAIDE]

REG[Europa, Mitteleuropa, Deutschland, Anclam]

KEY[Z0204 16 C 6/8] ZZ[8]

MEL[-5_ -5_ -5_ -5_ -5_ -5_ 3_ 1_ -7_

1_ -6_ -6_ -6_ -6_ -6_ 4_ 2_ 1_

2_ -7_ -7_ -7_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_

1_ 2_ 3_ 333_ 33_ 5_.

5_ 4_ 3_ 2_ 2_ 2_ 1_ 2_ 3_.

4_ 3_ 2_ 1_ 1_ -7_ -6_ -7_ 1_.

5_ 4_ 2_ 2_ 2_ 2_ 1_ 2_ 1_ 0_ //] > >

FCT[Jaeger - Lied]

ZUCCAL

CUT[MORGEN MUSS ICH WEG VON HIER]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0287 16 G 3/4] ZZ[8]

MEL[5_ .3_ 6_ 5_ 5_ .43_ 0_

2_ 3_ 4_ 6_ 5_ 4_ 4_ 3_ 0_

5_ .3_ 6_ 5_ 5_ .43_ 0_

2_ 5_ 7_ .65_ 4#_ 6_ 5_ 0_

4_ .3_ 2_ 1_ -7_ .12_ 0_

6_ .5_ 4_ 3_ 2_ .32_ 0_

5_ .3_ 4_ 5_ 6_ 7_ +2_ +1_ 7_ 6_

5_ .434_ 2_ 2_ 3_ 0_ //] >>

FOP['a_ b_ a_ bw_ c_ cs'd_ dw_]

FCT[Lyrisches Lied, Romanze, Abschieds - Lied]

ZUCCAL

CUT[MORGEN MUSS ICH WEG VON HIER]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0287 16 G 3/4] ZZ[8]

MEL[5_3_6_5_ 5_.43_0_

2_3_4_6_5_4_ 4_3_0_

5_3_6_5_ 5_.43_0_

2_5_7_.65_4#_ 6_5_0_

4_3_2_1_ -7_.12_0_

6_.5_4_3_ 2_.32_0_

5_3_4_5_ 6_7_+2_+1_7_6_

5_.434_2_ 2_3_0_ //] >>

MOD[EIGHT-TONE-SKALMAJOR ?]

ACC[55_24_55_26_4-7_62_56_52_]

FOR['a_b_a_c_a_a_d_e_]

FOC['Sd^a_Sd^a_Vd_Sa_]

FCT[Lyrisches Lied, Romanze, Abschieds - Lied]

ZUCCAL

UN[7] 2S[7] 2M[12] 3S[5] 3M[3] 4P[7] 4A[0] 5P[2] 6S[0] 6M[0]

7S[0] 7M[0] 8P[0] 8L[0] SI[35] ABS[60] SA[18] LA[17]

SB[16] 2s[15] 2m[37] 3s[7] 3m[0] 4p[0] 4a[0] 5p[0] 6s[0] 6m[0]

7s[0] 7m[0] 8p[0] 8l[0] si[58] dt[-23] sd[52] ld[7]

1D[10] 2D[49] 3D[25] 4D[0] LL[0] DD[7] TD[9] QD[0] TS[0] SD[5] SL[68]

LD[0] L3M[0] L3[0] L4[0] L4A[0] L5[0] L6M[0] L6[0] L7M[0] L7[2]

M1[3] M2M[0] M2[13] M3M[0] M3[20] M4[16] M4A[2] M5[23] M6M[0] M6[13]

M7M[0] M7[5] U1[2] U2M[0] U2[2] U3M[0] U3[0] HD[0] > >

CUT[MORGEN MUSS ICH WEG VON HIER]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0287 16 G 3/4] ZZ[8]

MEL[5 _ .3 _ 6 _ 5 _ 5 _ .43 _ 0 _

2 _ 3 _ 4 _ 6 _ 5 _ 4 _ 4 _ 3 _ 0 _

5 _ .3 _ 6 _ 5 _ 5 _ .43 _ 0 _

2 _ 5 _ 7 _ .65 _ 4# _ 6 _ 5 _ 0 _

4 _ .3 _ 2 _ 1 _ -7 _ .12 _ 0 _

6 _ .5 _ 4 _ 3 _ 2 _ .32 _ 0 _

5 _ .3 _ 4 _ 5 _ 6 _ 7 _ +2 _ +1 _ 7 _ 6 _

5 _ .434 _ 2 _ 2 _ 3 _ 0 _ //] > >

FCT[Lyrisches Lied, Romanze, Abschieds - Lied]

ZUCCAL

UN[14] 2S[14] 2M[19] 3S[3] 3M[0] 4P[3] 4A[0] 5P[6] 6S[0] 6M[0]

7S[0] 7M[0] 8P[0] 8L[0] SI[44] ABS[36] SA[33] LA[11]

SB[10] 2s[14] 2m[14] 3s[6] 3m[6] 4p[0] 4a[0] 5p[3] 6s[0] 6m[0]

7s[0] 7m[0] 8p[0] 8l[0] si[42] dt[+2] sd[28] ld[14]

1D[20] 2D[73] 3D[7] 4D[0] LL[0] DD[0] TD[0] QD[0] TS[0] SD[3] SL[41]

LD[0] L3M[0] L3[0] L4[0] L4A[0] L5[3] L6M[0] L6[0] L7M[0] L7[8]

M1[32] M2M[0] M2[22] M3M[11] M3[0] M4[11] M4A[0] M5[14] M6M[0] M6[0]

M7M[0] M7[0] U1[0] U2M[0] U2[0] U3M[0] U3[0] HD[0] > >

CUT[VERSTOHLLEN GEHT DER MOND AUF]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z0036 16 C 2/4] ZZ[5]

MEL[-5_ 1_2_3b_1_ -7_1_2_0_

1_5_ 4_5_1_

1_2_2_4_4_ 4_53b2_0_

1_-712_0_ 1_-712_0_

1_5_5_ 3b_23b1_//] > >

FCT[Sagen - Lied, Romanze; + + + 265 nach Gehör geändert. + + +]

ZUCCAL

CUT[VERSTOHLLEN GEHT DER MOND AUF]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z0036 16 C 2/4] ZZ[5]

MEL[-5_ 1_2_3b_1_ -7_1_2_0_

1_5_ 4_5_1_

1_2_2_4_4_ 4_53b2_0_

1_-712_0_ 1_-712_0_

1_5_5_ 3b_23b1_//] >>

MOD[SIX-TONE-SKALE MINOR ?]

ACC[1-7_14_24_11_13b_]

FOR['a_b_c_d_e_]

FOC['~a_^_^a/_^_]

FCT[Sagen - Lied, Romanze; + + + 265 nach Gehör geändert. + + +]

ZUCCAL

CUT[VERSTOHLLEN GEHT DER MOND AUF]

REG[Europa, Mitteleuropa, Deutschland, Niederrhein]

KEY[Z0036 16 C 2/4] ZZ[5]

MEL[-5_ 1_2_3b_1_ -7_1_2_0_

1_5_ 4_5_1_

1_2_2_4_4_ 4_53b2_0_

1_-712_0_ 1_-712_0_

1_5_5_ 3b_23b1_//] >>

FOP['a_b_c_d_bw_]

FCT[Sagen - Lied, Romanze; +++ 265 nach Gehör geändert. +++]

ZUCCAL
 CUT["Nachtgruss"
 GUTEN ABEND GUTE NACHT]
 ([Europa, Mitteleuropa, Deutschland, Nord - Deutschland]
 KEY[Z1363 16 Eb 3/4] ZZ[8]
 MEL[1_1 5_4 3_3
 1_2 2_2 2_4 4_4
 3_5 3_4 5_6 5_5
 5_3 4_3 0_0
 2_4 3_4 2_3 .45 0_0
 2_4 3_4 2_3 .45 0_0
 5_5 3_3 5_+1 3_3
 6_5 5_4 3_4 2_1 //] >>
 FOP['a_b c_d cs'e ds']
 FCT[Kinder - Lied]

ZUCCAL

CUT[SAH EIN KNAB EIN ROESLEIN STEHN]

REG[Europa, Mitteleuropa, Deutschland]

KEY[Z0113 08 F 2/4] ZZ[4]

MEL[1111 211_ 5531 4_4_

1111 211_ 5531 444_

3243 3_2_

5353 +165_ 6+176 +2_+1_ //] > >

MOD[HEPTATONIC IONIAN]

ACC[1254_1254_33_5+16+2_]

FOR['a_b_c_a_]

FOC['~a_~a__Wa_]

FCT[Sagen - Lied, Romanze]