

Trackfile Description

Version 1.3



History of changes

Version	Release date	Note
1.1	05/98	Mailbox-Number recipient is "0070002001PHONOTRACK" Improvement of tagfields pp. 9 – 12 for the set types 02-06.
1.2	09/99	Specification: ASCII-CODE-SET 437 must be delivered. Excluding track announcements. You can find the relevant parts in PhonoNet-rules "Track-Einzeichnungen".
1.3	01/04	Specification of FSK data (now just like article master data interface). Specification of ISRC reference for classical, PhonoNet track-ID added. Specification of general principle classical (see attachement 2), character set(see attachement 3).

Field Description

The format of a trackfile (PhonoNet Verbandsformat trackdata) is designed to be generated or processed by very different electronic data processing systems and operating systems.

A message is divided into fields referring to a file, a message or a position. At the beginning of the message fields referring to a file or a message have to be delivered only once. Afterwards any number of positions can follow.

Only those fields marked with "Status M" (s. Verbandsformat trackdata) have to be delivered. The separation between head information and the position is done by tagfield 0000000000, the separation between the positions by tagfield 0000000001. Each row is to be closed with Carriage-Return/Line-Feed.

The format for the delivery of all fields is the ASCII-Codepage 437, more exactly all printable elements of this DOS-ASCII-set the ISO-8859-1 (LATIN 1) contains (see attachment 3). Thus, please care for delivering DOS-umlauts and accents! Do not use Windows-ANSI!

Fields referring to a file or a message

Mailbox-number sender (0070001001)

Please enter the VAN-mailbox-number here. This number consists of the four-digit Phono-Net number and a mnemonic short-expression of the company name (e.g. 8002SonyBMG).

Mailbox-number recipient (0070002001)

The VAN-mailbox-number of the 'trackfile server' is: PHONOTRACK.

These fields serve for unambiguously identifying the article master data transfer between sender and recipient and for ensuring the correct further processing.

Fields referring to a position

General Agreements:

In contrast to the main article files (Artikelstammdaten), no change status is processed (announcement / change / deletion). The last delivered trackfiles are considered as actual. It is not possible to change single fields. When the track data is changed all information regarding the sound recording has to be delivered.

A sound recording consists of max. 999 tracks, a track can include up to 99 subtracks, which can again consist of up to 99 series. Fundamentally, track means work, subtrack signifies parts of that and element enumerates co-operators/ contributors and texts sequentially.

Every sound recording includes at least 1 track title (set type 3). Consequently, only the delivery of set type 3 is compulsory.

There are 6 set types defined.

A set type is designed for the delivery of fields with similar or related content.

Every set type is displayed in one row consisting of max. 220 characters.
 Spaces at the end of a row ("trailing spaces") may be left out.

Every set type is generally built in the same way:
 position 1-40: header
 from position 41 on: actual fields
 reserved: position end of last field + 1 up to position 220 (may be filled up with blanks)

Header (position 1-40), general structure:

Tagfield (position 1-10)

To unambiguously identify the set type, e.g. "0070005001".

Supplier-ID (position 11-14)

Relates to the Phono-number of the PhonoNet-main article files (Artikelstammdaten, the first four digits of the PhonoNet-mailbox-number, e.g. 8003).

Barcode (position 15-27)

The following formats will be accepted: EAN: 13 or 8 digits, UPC: 12 or 7 digits.

In conjunction with the Phono-number the EAN/UPC-Code is unambiguous, i.e. supplier-specific unambiguous. The EAN/UPC should correspond to the barcode on the product.

Set RN (reference number) (position 28-31)

Describes the relation between the track data and the sound recording.

Example: "0101" (most likely): means 1 of 1, "0201" = e.g. first CD of altogether 2 units.

Special case: relation to whole CD: SET-RN = "0000", e.g. one artist for the whole recording.

With set type 01 (title of line) and type 02 (data of sound recording) SET-RN is always "0000".

Title reference (position 32-38)

Reference of the title is to be given in the form TTTSSSeSe (track/subtrack/series).

Track means enumeration of the title like printed on the recording. Subtrack always

means: ongoing number of parts of the title, e.g. medley for pop or for classical music the number of parts of the whole work. Series means: ongoing number for the musicians (artists, composer and so on) or explanations of the text. Concerning set types 01, 02, 03, 06 the series is always "00".

Examples: "0010000": means first track.

"0010001": means first musician of 1st track.

"0020101": means first musician of 1st subtrack of the 2nd track.

Special case: "0000001": means e.g.: artist for entire recording.

With set type 01 (title of line) and type 02 (data of recording) the title reference is = "0000000".

Set type (position 39-40)

A set type is designed for the delivery of fields with similar or related content. E.g. "01"

Set type 1: title of line (starting with tag field 0070005001)

Tag field (position 1-10)

Follow description header, *in this case*: "0070005001".

Supplier-ID (position 11-14)

Follow description header

Barcode (position 15-27)

Follow description header

Set-RN (position 28-31)

Follow description header, *in this case: "0000"*

Title reference (position 32-38)

Follow description header, *in this case: "0000000"*.

Set type (position 39-40)

Follow description header, *in this case: "01"*

Title of line (position 41-160)

Title for a series of publications of one company, e.g. "Duo", "Baroque Esprit"

Reserved (position 161-220)

May be filled up with blanks.

Set type 2: Data of the sound recording (starting with tag field 0070005002)

Tag field (position 1-10)

Follow description header, *in this case: "0070005002"*.

Supplier-ID (position 11-14)

Follow description header.

Barcode (position 15-27)

Follow description header.

Set-RN (position 28-31)

Follow description header, *in this case: "0000"*

Title reference (position 32-38)

Follow description header, *in this case: "0000000"*.

Set type (position 39-40)

Follow description header, *in this case: "02"*

Title of sound recording (position 41-160)

The title of the recording. Here with information concerning a sequel, e.g. "MIB Vol. 2".

Remarks for all TKK-fields: follow PhonoNet-regulations "track-information"!!!

FSK – Freiwillige Selbstkontrolle der Filmwirtschaft (position 161-162)

Information concerning the rating of a film (recommended age). Values have to be given corresponding to the values from the article master data interface.

Accepted values and their interpretation:

- without limitation = "00"
- passed from the age of 6 years = "06"
- passed from the age of 12 years = "12"
- passed from the age of 16 years = "16"
- not passed for the age younger than 18 years = "18"
- unrated articles = "98"
- articles being on index = "99"

Thus, accepted values are: "00", "06", "12", "16", "18", "98", "99".

Repertoire Ind. (position 163-167)

Field (momentarily) not in use.

Repertoire Retailers (position 168-172)

Field (momentarily) not in use.

Country of Origin (TT) (position 173-175)

Country of origin of the sound recording. Following the 3 digit alphanumerical ISO-CODE 3166 e.g. "GBR" for United Kingdom Great Britain and Northern Ireland

Total playing time (position 176-180)

The total playing time of the recording in the form of [mmss], e.g. "06524".

Reserved (position 181-220)

May be filled up with blanks.

Set type 3: Track data title (starting with tag field 0070005003)

Tag field (position 1-10)

Follow description header, *in this case*: "0070005003".

Supplier-ID (position 11-14)

Follow description header.

Barcode (position 15-27)

Follow description header.

Set-RN (position 28-31)

Follow description header.

Title reference (position 32-38)

Follow description header, *in this case*: TTTSS00. The series is always "00" (2 zeros) in ST 03.

Set type (position 39-40)

Follow description header, *in this case*: "03"

Track title (position 41-160)

Most important field. Basic rule: 1 track = 1 work, subtrack: = parts of work belonging to this track. Here information about the track title, with title reference track or subtrack.

The most likely, simple example: track title, title reference track 1: We Are The Champions

Remarks for all TKK-fields: follow PhonoNet-regulations "track-information"!!!

ISRC (position 161-172)

International standard for sound and audio-visual recordings. Please care for the correct title reference:

a) regular case: track without subtrack, e.g. (syntax TTSS) track 00100 --> ISRC on track level

b) parts of a work for classical music, e.g. Track 00100 and subtrack 00101 --> ISRC only on subtrack level

c) medley, e.g. track 01700 with subtracks 01701, 01702, 01703 --> ISRC only on track level

Language (position 173-175)

Language heard. Following the 3 digit alphanumerical ISO-CODE 3166

e.g. "FRA" for France.

Duration (position 176-180)

The duration or playing time of the track in the format [mmss], e.g. "00354".

Live recording (position 181-181)

A live recording is to be marked with "L" or a blank is to be left if it is not a live recording.

Repertoire track (position 182-186)

Field (temporarily) not in use.

PhonoNet track-ID (position 187-198)

Unambiguous identification code for a track. Internal information and only given by PhonoNet. if the 10th digit is "@": --> automatically generated track-ID, if the 10th digit is "I": --> manually generated track-ID

Reserved (position 199-220)

May be filled up with blanks.

Set type 4: Track data artist (starting with tag field 0070005004)

Tag field (position 1-10)

Follow description header, *in this case*: "0070005004".

Supplier-ID (position 11-14)

Follow description header.

Barcode (position 15-27)

Follow description header.

Set-RN (position 28-31)

Follow description header.

Title reference (position 32-38)

Follow description header.

Set type (position 39-40)

Follow description header, *in this case*: "04"

Type of contribution (position 41-43)

The type of contribution is to be given following the code "type of contribution".
E.g. "131" for main artist (Pop-vocal), "401" for composer.

Contributor (position 44-163)

The contributor is to be given (just one artist, composer etc. per set type).

Remarks for all TKK-fields: follow PhonoNet-regulations "track-information"!!!

Reserved (position 164-220)

May be filled up with blanks.

Set type 5, Track data text: (starting with tag field 0070005005)

Tag field (position 1-10)

Follow description header, *in this case*: "0070005005".

Supplier-ID (position 11-14)

Follow description header.

Barcode (position 15-27)

Follow description header.

Set-RN (position 28-31)

Follow description header.

Title reference (position 32-38)

Follow description header.

Set type (position 39-40)

Follow description header, *in this case: "05"*

Explanation of text (position 41-110)

Free to enter a comment to the text or any text lines such as lyrics.

Reserved (position 111-220)

May be filled up with blanks.

Set type 6: Track data techn. (starting with tag field 0070005006)

Tag field (position 1-10)

Follow description header, *in this case: "0070005006"*.

Supplier-ID (position 11-14)

Follow description header.

Barcode (position 15-27)

Follow description header.

Set-RN (position 28-31)

Follow description header.

Title reference (position 32-38)

Follow description header, *in this case: TTTSS00. The series is always "00" (2 zeros) in ST 03.*

Set type (position 39-40)

Follow description header, *in this case: "06"*

Country of Origin (position 41-43)

Country of origin of the track. Following the 3 digit alphanumerical ISO-CODE 3166 e.g. "GBR" for United Kingdom Great Britain and Northern Ireland

Date of recording (position 44-51)

The date of the recording in the format [yyyymmdd], e.g. "19970201".

Quality of recording (position 52-71)

aad, add, ddd

Type of tracks (position 72-74)

Audio = default, CD-ROM, interactive (field values: def, rom, I)

Reserved (position 75-220)

May be filled up with blanks.

Interface track data (Verbandsschnittstelle Trackdaten)

Fields relating to a file or a message:

<u>Tag field</u>	<u>Name</u>	<u>M/K</u>	<u>Content</u>
0070001001	Mailbox-Nb. sender	M	(follow list of suppliers)
0070002001	Mailbox-Nb. recipient	M	("PHONOTRACK")
0000000000	End head information	M	

Fields relating to a position:

Status:
M = Mandatory
K = Optional

<u>From</u>	<u>To</u>	<u>Length</u>	<u>Name</u>	<u>Sort</u>	<u>M/K</u>	<u>Content</u>	<u>GEMA-Ref.</u>
ST 01, title of line						(Option)	
1	10	10	Tag field	N	M*	0070005001	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	0000	21/32
32	38	7	Title reference	N	M*	0000000	
39	40	2	Set type	N	M*	01	
41	160	120	Title of line	AN	K	e.g. Golden Baroque	
161	220	60	Reserved	AN	M*	Filled up with blanks	
ST 02, data of sound recording						(Option)	
1	10	10	Tag field	N	M*	0070005002	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	0000	21/32
32	38	7	Title reference	N	M*	0000000	
39	40	2	Set type	N	M*	02	
41	160	120	Title of sound recording	AN	M*		21/29
161	162	2	FSK	AN	K	00,06,12,16,18,98,99	
163	167	5	Repertoire Ind.	AN	-	Not in use	

168	172	5	Repertoire Retail	AN	-	Not in use	
173	175	3	Country of Origin (TT)	AN	K	ISO 3166	
176	180	5	Total playing time	N	K	Mmmss	21/19
181	220	40	Reserved	AN	K	Filled up with blanks	

SA 03, Track data title

(compulsory)

1	10	10	Tag field	N	M*	0070005003	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	e.g. 0201 = 1 of 2	21/32
32	38	7	Title reference	N	M*	TTTSS00 = Track/Subtrack/00	
39	40	2	Set type	N	M*	03	
41	160	120	Track title	AN	M		31/27
161	172	12	ISRC	AN	K		31/26
173	175	3	Language	AN	K	Like Country of Origin	
176	180	5	Duration	N	K	mmmss	31/19
181	181	1	Live recording	AN	K	L or blank	31/23
182	186	5	Repertoire Track	AN	-	Not in use	
187	198	12	PhonoNet track-ID	AN	K	internal	
199	220	22	Reserved	AN	K	Filled up with blanks	

SA 04, Track data artist

(Option)

1	10	10	Tag field	N	M*	0070005004	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	e.g. 0201 = 1 of 2	21/32
32	38	7	Title reference	N	M*	TTTSSSeSe = Track/Subtrack/Serie	
39	40	2	Set type	N	M*	04	
41	43	3	type of contribution	AN	K	follow code list	
44	163	120	Contributor	AN	M*		
164	220	57	Reserved	AN	K	Filled up with blanks	

SA 05, Track data text

(Option)

1	10	10	Tag field	N	M*	0070005005	
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11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	e.g. 0201 = 1 of 2	21/32
32	38	7	Title reference	N	M*	TTTSSSeSe = Track/Subtrack/Serie	
39	40	2	Set type	N	M*	05	
41	110	70	Explanation of text	AN	M*		
111	220	110	Reserved	AN	K	Filled up with blanks	

SA 06, Track data techn.

(Option)

1	10	10	Tag field	N	M*	0070005006	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	e.g. 0201 = 1 of 2	21/32
32	38	7	Title reference	N	M*	TTTSS00 = Track/Subtrack/00	
39	40	2	Set type	N	M*	06	
41	43	3	Country of origin	AN	K	ISO 3166	
44	51	8	Date of recording	N	K	yyyymmdd	
52	71	20	Quality of recording	AN	K	aad, add, ddd	
72	74	3	type of tracks	AN	K	Audio=def, rom, l	(21/24)
75	220	146	Reserved	AN	K	Filled up with blanks	

1	10	10	Tag field	N	M	0000000001	
							(End information on position. For each sound recording marked with EAN/UPC).

Legend (Explanation of Symbols):

AN	Alphanumerical	(If no entry in optional, to be filled up with blanks)
N	Numerical	(If no entry in optional, to be filled up with zeros)
M	compulsory	
M*	These fields are only compulsory if related set type is delivered.	
K	Optional	

Numerical fields are ranged right and are to be filled up with leading zeros, e.g. playing time 5 minutes 10 Sec. => "00510", EAN: "090317239026" => "0090317239026"

Alphanumeric fields are ranged left and are to be filled up with blanks on the right.

Summary:

- No change status is processed. The last delivered track files are considered as actual.
- It is not possible to change single fields. When the track file is changed **all** information regarding the sound recording has to be delivered.
- There are 6 set types ST defined. A sound recording consists of max. 999 tracks, a track can include up to 99 subtracks which can again consist of up to 99 series.
- Every sound recording includes **at least 1 track title** (set type 3), consequently:
- **Only the delivery of set type 3 is compulsory.**
- Header: Must be delivered with a set type and always has the same structure for digits 1-40:

1	10	10	Tag field	N	M*	e.g. 0070005005	
11	14	4	Supplier-ID	AN	M*	e.g. 8030	21/3
15	27	13	Barcode	N	M*	e.g. 0090317239026	21/23
28	31	4	Set-RN	N	M*	e.g. 0201 = 1 of 2	21/32
32	38	7	Title reference	N	M*	TTTSSSeSe = Track/Subtrack/Serie	
39	40	2	Set type	N	M*	01, 02, 03, 04, 05, 06	
- The collecting society (GEMA)-entry has to be put in the table.
- In ST 01 and 02 (title of line, data of recording) Set-RN and title reference are = "00000000000"
- If ST 04 (track data artist) and ST 05 (track data text) relate to the whole work, the Set-RN is always "0000" and title reference addresses the contributors and texts from 01 to 99.
- Contributors (artists, composers and the like) are addressed by the series (ongoing number) in field title reference (TTSSSeSe, that means Track/Subtrack/Series).
With ST 01, 02, 03, 06 the series is always "00" (two zeros).
- ST 03, 04, 05, 06 may relate either to tracks or to subtracks.
- With the use of the 2 digit series figure max. 99 contributors or text rows can be addressed for every subtrack. If there is no subtrack, TTTSSSeSe is always nnn0000. ST 04 and ST 05 (contributors and texts) are addressed by the last 2 figures.
- Please see attachment 2 for the correct input of parts of classical works.
- Track title, title reference track 1, subtrack 0 for classical works:
As a rule the input of contributors for classical works (both sampler with parts of a work, excerpts, composite recording) is based on/ related to tracks (thus, title reference e.g. 0010001).
- For each track only a single type of contribution 131 (main artist pop) is allowed. This must contain all main artists relevant to that track, separated by "/" (see file MITW_ART.DOC).
- Important for all TKK (fields for track, artist, composer): make sure to read the PhonoNet policy "Track information"!
- Principle: track numeration must correspond to the sound recording numeration. Every new set therefore starts again with track number 001 and is not serially numbered.
- The length of every set type is fixed to 220 digits and may be filled up with blanks.
- **Examination: The catalogue number has to be given completely and in the right order within the digits 1-30 (more precisely: with tag field position 11-40).**

Attachement 1: TWO SIMPLE EXAMPLES for the minimal delivery of track titles:

```

HEADER-----
Tagfield  LiefBarcode      SetkTTTTSSFFSaFELDER
=====
           10           20           30           40           50           60           70
1234567890123456789012345678901234567890123456789012345678901234567890
    
```

- Pop, Main Artist: ROD STEWART, A SPANNER IN THE WORKS:

```

00700050028005009362458672200000000000002A Spanner in the works
00700050048005009362458672200000000000104131Stewart, Rod
0070005003800500936245867220101001000003Windy Town
0070005003800500936245867220101002000003The Downtown Lights
0070005003800500936245867220101003000003Leave Virginia Alone
0070005003800500936245867220101004000003Sweetheart Like You
0070005003800500936245867220101005000003This
0070005003800500936245867220101006000003Lady Luck
0070005003800500936245867220101007000003You're the Star
0070005003800500936245867220101008000003Muddy, Sam And Otis
0070005003800500936245867220101009000003Hang On St. Christopher
0070005003800500936245867220101010000003Delicious
0070005003800500936245867220101011000003Soothe Me
0070005003800500936245867220101012000003Purple Heather
    
```

```

Row 1: ST: 02, Set-RN: whole, title reference: whole, title of recording
Row 2: ST: 04, Set-RN: whole, title reference: whole + 1 contributor,
Code Type of contribution (Main Artist), contributor
Row 3: ST: 03, Set-RN: 0101, title reference: track 1, track title
Row 4: ST: 03, Set-RN: 0101, title reference: track 2, track title
...
    
```

- POP, SAMPLER: BRAVO HITS 15, various artists, 2 CDs

```

0070005002800600954834869220000000000002Bravo Hits 15
0070005003800600954834869220201001000003Too Much Love Will Kill You
0070005004800600954834869220201001000104131Queen
0070005003800600954834869220201002000003Every Baby
0070005004800600954834869220201002000104131Kelly Family, The
0070005003800600954834869220201003000003I Love You Always Forever
0070005004800600954834869220201003000104131Lewis, Donna
0070005003800600954834869220201004000003A Neverending Dream
0070005004800600954834869220201004000104131X-Perience
0070005003800600954834869220201005000003Beyond The Invisible
0070005004800600954834869220201005000104131Enigma
... usw. ...
    
```

```

Row 1: ST: 02, Set-RN: whole, title reference: whole, title of recording
Row 2: ST: 03, Set-RN: 0201, title reference: track 1, track title
Row 3: ST: 04, Set-RN: 0201, title reference: track 1 + 1 contributor,
Nature of contribution (Main Artist), contributor
Row 3: ST: 03, Set-RN: 0201, title reference: track 2, track title
Row 4: ST: 04, Set-RN: 0201, title reference: track 2 + 1 contributor,
Type of contribution (Main Artist), contributor
...
    
```

Note: This second **track related** variant on the input of contribution information should generally be preferred to the first variant of contribution information input which refers to sound recordings. For more examples please see the PhonoNet-regulations "track-information"!!!

Attachement 2: Example for the correct information input of works with parts of the work in classical music:

TRACK/SUBTRACK	TRACKTITLE
Track 1, Subtrack 0:	<i>symphonie no. 1 A-Major op. 23</i>
Track 1, Subtrack 1:	<i>1. Allegro assai</i>
Track 2, Subtrack 2:	<i>2. Adagio sostenuto</i>
Track 3, Subtrack 3:	<i>3. Rondo</i>
Track 4, Subtrack 0:	<i>symphonie no. 2 D-Major op. 34</i>
Track 4, Subtrack 1:	<i>1. Moderato</i>
Track 5, Subtrack 2:	<i>2. Andante</i>
Track 6, Subtrack 3:	<i>3. Vivace</i>

The title of the work is registered by subtrack 0. Though the sets (parts of the work) are delivered on their correct respective track, they are delivered with a subtrack which is not 0. These subtracks are serially numbered, always starting from 1 until the beginning of a new work title (with subtrack 0).

(So in most of the cases the subtrack number corresponds to the number of the part (set number) of the work.)

To sum up: the track number must always correspond to the (physical) CD track number. This is the aim of the title reference of the track title registration introduced here.

Remark 1: input of incompletely rendered works by adding the identification "(excerpt)"/ "(Auszug)" to the work title (subtrack 0):

Track 1, Subtrack 0: Sonata for piano No. 8 c-minor op. 13 "Pathétique" (excerpt)/ (Auszug)

Track 1, Subtrack 1: 2. Adagio cantabile

(In this example on track 1 only the second set, the Adagio cantabile of the sonata, is rendered.)

Remark 2: For operas, passions and oratorios the additional identifications "(composite recordings)"/ "(Gesamtaufnahme)" and "(section)"/ "(Querschnitt)" can be used. For further information please see the PhonoNet-regulations "track-information"!!!

Attachement 3: Permitted character set PhonoNet track data of DOS/ASCII codepage 437

Character	Remark	CP437 (DOS) [hexa- decimal]	CP437 [decimal]	ISO-8859-1 (LATIN1) / CP1252 (MS- ANSI) [hexa- decimal]	notation
(blank/ space)		20	32	20	space
!		21	33	21	exclamation mark
"		22	34	22	quotation mark
#		23	35	23	number sign
\$		24	36	24	dollar sign
%		25	37	25	percent sign
&		26	38	26	ampersand
'		27	39	27	apostrophe
(28	40	28	left parenthesis
)		29	41	29	right parenthesis
*		2A	42	2A	asterisk
+		2B	43	2B	plus sign
,		2C	44	2C	comma
-		2D	45	2D	hyphen-minus
.		2E	46	2E	full stop
/		2F	47	2F	solidus
0		30	48	30	digit zero
1		31	49	31	digit one
2		32	50	32	digit two
3		33	51	33	digit three
4		34	52	34	digit four
5		35	53	35	digit five
6		36	54	36	digit six
7		37	55	37	digit seven
8		38	56	38	digit eight
9		39	57	39	digit nine
:		3A	58	3A	colon
;		3B	59	3B	semicolon
<		3C	60	3C	less-than sign

=	3D	61	3D	equals sign
>	3E	62	3E	greater-than sign
?	3F	63	3F	question mark
@	40	64	40	commercial at
A	41	65	41	latin capital letter a
B	42	66	42	latin capital letter b
C	43	67	43	latin capital letter c
D	44	68	44	latin capital letter d
E	45	69	45	latin capital letter e
F	46	70	46	latin capital letter f
G	47	71	47	latin capital letter g
H	48	72	48	latin capital letter h
I	49	73	49	latin capital letter i
J	4A	74	4A	latin capital letter j
K	4B	75	4B	latin capital letter k
L	4C	76	4C	latin capital letter l
M	4D	77	4D	latin capital letter m
N	4E	78	4E	latin capital letter n
O	4F	79	4F	latin capital letter o
P	50	80	50	latin capital letter p
Q	51	81	51	latin capital letter q
R	52	82	52	latin capital letter r
S	53	83	53	latin capital letter s

					letter s
T	54	84	54	latin capital letter t	
U	55	85	55	latin capital letter u	
V	56	86	56	latin capital letter v	
W	57	87	57	latin capital letter w	
X	58	88	58	latin capital letter x	
Y	59	89	59	latin capital letter y	
Z	5A	90	5A	latin capital letter z	
[5B	91	5B	left square bracket	
\	5C	92	5C	reverse solidus	
]	5D	93	5D	right square bracket	
^	5E	94	5E	circumflex accent	
_	5F	95	5F	low line	
`	60	96	60	grave accent	
	Do not use! Is to be replaced by apostrophe (dez 39)				
a	61	97	61	latin small letter a	
b	62	98	62	latin small letter b	
c	63	99	63	latin small letter c	
d	64	100	64	latin small letter d	
e	65	101	65	latin small letter e	
f	66	102	66	latin small letter f	
g	67	103	67	latin small letter g	
h	68	104	68	latin small letter h	

i		69	105	69	latin small letter i
j		6A	106	6A	latin small letter j
k		6B	107	6B	latin small letter k
l		6C	108	6C	latin small letter l
m		6D	109	6D	latin small letter m
n		6E	110	6E	latin small letter n
o		6F	111	6F	latin small letter o
p		70	112	70	latin small letter p
q		71	113	71	latin small letter q
r		72	114	72	latin small letter r
s		73	115	73	latin small letter s
t		74	116	74	latin small letter t
u		75	117	75	latin small letter u
v		76	118	76	latin small letter v
w		77	119	77	latin small letter w
x		78	120	78	latin small letter x
y		79	121	79	latin small letter y
z		7A	122	7A	latin small letter z
{		7B	123	7B	left curly bracket
	Needed as a separator, do not use as possible	7C	124	7C	vertical line
}		7D	125	7D	right curly bracket
~	Not recommended	7E	126	7E	tilde
Ç		80	128	C7	latin capital letter c with

					cedilla
ü	81	129	FC	latin small letter u with diaeresis	
é	82	130	E9	latin small letter e with acute	
â	83	131	E2	latin small letter a with circumflex	
ä	84	132	E4	latin small letter a with diaeresis	
à	85	133	E0	latin small letter a with grave	
å	86	134	E5	latin small letter a with ring above	
ç	87	135	E7	latin small letter c with cedilla	
ê	88	136	EA	latin small letter e with circumflex	
ë	89	137	EB	latin small letter e with diaeresis	
è	8A	138	E8	latin small letter e with grave	
ï	8B	139	EF	latin small letter i with diaeresis	
î	8C	140	EE	latin small letter i with circumflex	
ì	8D	141	EC	latin small letter i with grave	
Ä	8E	142	C4	latin capital letter a with diaeresis	
Å	8F	143	C5	latin capital letter a with ring above	
É	90	144	C9	latin capital letter e with acute	
æ	91	145	E6	latin small letter æ	
Æ	92	146	C6	latin capital letter æ	
ô	93	147	F4	latin small letter o with	

					circumflex
ö		94	148	F6	latin small letter o with diaeresis
ò		95	149	F2	latin small letter o with grave
û		96	150	FB	latin small letter u with circumflex
ù		97	151	F9	latin small letter u with grave
ÿ		98	152	FF	latin small letter y with diaeresis
Ö		99	153	D6	latin capital letter o with diaeresis
Ü		9A	154	DC	latin capital letter u with diaeresis
¢		9B	155	A2	cent sign
£		9C	156	A3	pound sign
¥		9D	157	A5	yen sign
á		A0	160	E1	latin small letter a with acute
í		A1	161	ED	latin small letter i with acute
ó		A2	162	F3	latin small letter o with acute
ú		A3	163	FA	latin small letter u with acute
ñ		A4	164	F1	latin small letter n with tilde
Ñ		A5	165	D1	latin capital letter n with tilde
^a	Not recommended	A6	166	AA	feminine ordinal indicator
°	Not recommended	A7	167	BA	masculine ordinal indicator
¿		A8	168	BF	inverted question mark
¬	Not recommended	AA	170	AC	not sign
½	Not in the Macintosh character set	AB	171	BD	vulgar fraction one half

	character set					
¼	Not in the Macintosh character set	AC	172	BC	vulgar fraction one quarter	
¡		AD	173	A1	inverted exclamation mark	
«	Not recommended	AE	174	AB	left-pointing double angle quotation mark	
»	Not recommended	AF	175	BB	right-pointing double angle quotation mark	
ß		E1	225	DF	latin small letter sharp (german)	s
µ	Not recommended	E6	230	B5	micro sign	
±	Not recommended	F1	241	B1	plus-minus sign	
÷	Not recommended	F6	246	F7	division sign	
°		F8	248	B0	degree sign	
·	Not recommended	F9	249	B7	middle dot	
²	Not in the Macintosh character set	FD	253	B2	superscript two	
	Not recommended	FF	255	A0	no-break space	