



Alcatel  
Mobile Phones Division  
32, avenue Kléber  
92707 Colombes Cedex  
FRANCE

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**Subject :        Technical FAQ on TDD**

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**What can I do with TDD ?**

With TDD, I can download from a server :

- small to large iMelody and iAlcatel monophonic melodies
- small to large MSEQ polyphonic melodies
- small and large icons (Alcatel picture format)
- small and large animations (Alcatel animation format)
- e-cards (Alcatel e-card format)

**What happens if only two concatenated SMS out of three arrive on the handset ?**

A time out expires 5 minutes after the reception of the first SMS. If all the concatenated SMS did not arrive, the received data is lost and nothing is displayed. The end-user is not even aware that something was received.

**What happens if an independent SMS is received in the middle of concatenated SMS ?**

The handset is able to make the distinction thanks to the Message Reference.

**What is the maximum number of melody, icons, .... I can store in the phone ?**

45 of each type on One Touch™ 310/311

60 of each type on One Touch™ 511

**What are the maximum size for a melody, an icon, an animation, an e-card to fit in only one TDD SMS ?**

It is linked to many parameters : width and height of the picture(s), number of frames in an animation, size of the name or title, complexity of the melody ...

Here are some examples that fit in one SMS :

- 32x32 pixels icon with a title  $\leq 3$  characters
- animation of 4 frames of 16x16 pixels with a title  $\leq 3$  characters
- iMelody melody of 10 to 15 notes (estimation : it depends very much on how the melody is coded).
- iAlcatel melody of 20 to 30 notes (depending also on how the melody is coded).

**If the melody, icon ... is not saved immediately, is it kept in the memory ?**

Yes, it is kept in the memory.

**Is there a limitation in the number of concatenated SMS that the phone is able to receive ?**

In TDD, no, the only limitation is the size of the downloaded data, that cannot be greater than 4000 bytes.

**Is it possible to have Chinese characters in the SMS ?**

Yes, in the text part of an e-card. On the other hand, the title or name defined in the TDD header can only use Latin characters.

**What are TPDU parameters ?**

TPDU parameters are parameters defined in the SMS header.

**What are the values of TPDU parameters that need to be set for Alcatel TDD protocol ?**

These values are defined in the FR TDD specification, in section 3.1.

**In case of concatenated SMS, can memory be saved by avoiding to repeat the name or title in the TDD header ?**

No, the whole TDD header (including the name) must be present in all the concatenated SMS. This is to be sure there will be no problem if the SMS are received in disorder.

**In case of concatenated SMS, does the length of data in the TDD header represent the size of the whole data or only the size of the data in the current SMS ?**

The length of data in the TDD header represents the whole data size.

**Do we need to use padding bytes when the data is smaller than the maximum size of an SMS?**

No, there is no need for padding bytes.

**What is the value of the IEDL field in the TDD header ?**

The IEDL field gives the length of the following IED field of the TDD header. The value is variable and depends on the length of the title/name.

For example, for a title containing 9 characters, the length of the IED field is :

1 byte (length of title + coding alphabet)  
+ 8 bytes (title coded on 8 bytes using 7bits GSM alphabet)  
+ 1 byte (type of data)  
+ 2 bytes (length of data)  
= 12 bytes.

Hence the value of the IEDL field in that case is 12 = 0C hexa.

You can find more examples in the 'examples' folder.

**Is it possible to define no name in TDD header ?**

Yes, in that case, the length of the name given in the first byte of the IED field must be equal to 0.

In that case also, the IEDL field value will be : 4 hexa.

**Are all the iAlcatel header parameters like Volume, Beat and Style mandatory ?**

Yes, all information must be present. The default values are given to help the coding.

**Is it possible to change the beat or the style during a melody ?**

No, the beat and the style are defined once for the whole melody in the iAlcatel header.

**Is it possible to refer to a pattern later in the melody ?**

No, a pattern is the sequence of notes and special bytes defined between the "begin pattern" and the "end pattern" and cannot be refer to later in the melody.

**What happens if the received icon is bigger than the maximum supported size ?**

If the received icon is bigger than the screen size (96x65), it is truncated to be displayed.

**Can the pictures of an animation be of different sizes ?**

Of course, every picture of an animation can have a specific size.

**How many SMS are required to download a 15 seconds melody with two instruments ?**

This depends on the number of notes in the melody. To give an idea, such a melody will usually fit on 1 or 2 SMS. If many notes are played (fast tempo or many chords) then it can go up to 4 SMS or even more.

**If there are comments tracks in a format 1 MIDI file, what happens during the conversion to format 0 ?**

The comments are ignored. The conversion is successful.

**What is the meaning of the limit values 43 and 107 of the product bandwidth ?**

These values represent the lowest and highest notes that can be played by the product. These values correspond to the notes codes in MIDI format.

**What kind of file is a .seq file ?**

A .seq file is a binary file.

**If the MSEQ melody doesn't hold in one SMS, does the MSEQ Builder divide the melody into several parts that hold each in one SMS ?**

No, the MSEQ Builder delivers a .seq file that contains the whole melody. This .seq file has then to be split by the developer into several parts that will hold each in one SMS.

**Why isn't it possible to use the MSEQ Builder to convert MIDI files to iMelody or iAlcatel files, by selecting only one instrument in the configuration ?**

Because the MSEQ Builder provides a .seq file, which content is completely different from an iMelody or an iAlcatel file content.

**I try to send a TDD content to the One Touch™ 311 or One Touch™ 310 but the phone does not display anything. Why?**

This is normal, One Touch™ 310/311 do not support TDD protocol but only EMS protocol.

**Which value should I use for TP-PID?**

For both EMS and TDD transfers, we recommend using the value TP-PID=0.

**For a TDD transfer, the SMS seems to be received by the phone but nothing is displayed. Why?**

The most common mistake is to set the title/name length in the TDD header to a wrong value. Check that the title/name length is set to the number of characters and not the number of bytes. For example, if the title is "Alcatel song", the number of characters is 12, hence the title length shall be set to 12. However the number of bytes to code this title using GSM 7bits alphabet is only 11 bytes (=7\*12/8 rounded up). This is described in the FRD\_TDD specification section 3.2.1.

**For a TDD or EMS transfer, the SMS seems to be received by the phone but nothing is displayed. Why?**

Check with Alcatel contact person that you have the correct version for the phone software. Type \*#06# to get the software version.

**How do I send the .seq file to the phone?**

When using the MSEQ tool to convert a midi file, the result of the conversion is a .seq file. This is the file you need to send to the phone. To send this file, no further conversion is needed. Just send the content of the .seq file as it is (binary). Don't forget to add before the .seq file the TDD header (see FRD\_TDD specification section 3.2.1) and the concatenation header if the melody needs to be split over several SMS messages.

**I send an iMelody version 1.1 or 1.2 to the phone but the melody is not played. Why?**

The first software releases for One Touch™ 310/311 and One Touch™ 511 only support iMelody version 1.0.

**I send an iMelody to the phone and the melody is played but some notes are wrong. Why?**

Make sure the octave prefix (see EMS Guidelines specification) only applies to the immediately following note. If not specified, the default octave prefix is \*4. i.e. A=880Hz.