Parsomatic. How to parse TLVs? How to parse transaction data (EMV, MSR or MSD)?

Latest version: Click here

Now supports tags DFEF4B, DFEF4C, DFEF4D.

There have been many recent changes! For example, Apple Pay VAS tags are now comprehended. Also, MSR track data can now contain ASCII.

Open the file in Notepad to see a complete Change List at the top.

What This Is

This is a self-contained HTML form that you can open in any browser, offline. It provides 3 major types of functionalities:

1. Tag lookup. (Enter any TLV tag in the lookup field, then hit Enter to see what the tag means.)
2. Transaction-data parsing. (Enter a block of transaction data into the main text area, then click Parse to see the parsing of it.)
3. TLV parsing: Enter any block of TLVs into the text area, check the TLVs Only checkbox, and click Parse.

The parsing functionality is intended to provide a visualization of the parsing of any ID TECH product's transaction data, whether that data comes from a magstripe interaction (MSR) or EMV (tag data), whether contact or contactless. See screen shot below. (Click to enlarge.)

LIMITATIONS:

All data must be hex format. (But, see below for ASCII data.)

Parsomatic now includes an experimental feature that converts ASCII track data to hex, to simplify working with data that was obtained in USB-KB mode. Simply paste your data into Parsomatic as usual, then click off to the side (or tab out of the main text area) to make a new button appear, that allows you to convert ASCII track data to hex.

MSR data should, in general, be in the Enhanced Encrypted MSR format. The "old" (non-enhanced) encryption format is not supported.

See the Change List at the top of the source file (open it in Notepad) for latest enhancements and bug fixes.

Step-by-step Quickstart Guide

1. Paste transaction data into the text area. (First use the **Clear** button to clear the sample data that is automatically loaded when you first load Parsomatic.)
   a. All data must be hex data. If data is NGA, it should start with 02 and end with 03. If data is ViVOtech2 protocol, it will begin with 56. (If you are simply parsing TLV tags, check the **TLVs only** checkbox.)
   b. OPTIONAL: If bytes are not spaced, hit the Alt key on your keyboard to space out the data.
   c. Transaction data can be Enhanced Encrypted MSR data from any device that supports Enhanced Encrypted MSR format. (E.g., SecuRED, Augusta, Spectrum Pro, etc.) It can also contain ASCII track data (see discussion above). Data can also be EMV data from any ID TECH product.
   d. If the device supports NGA format but has been configured to prepend the data with a prefix, strip off the prefix. Also strip off any suffix. (Data should start with STX and end with ETX, unless it is ViVOtech2 data.)
   e. Data can be a block of TLVs: Check the **TLVs only** checkbox if your data is simply a block of TLVs.
   f. If you are parsing Vendi data containing an MSR data block inside a DFEE23 tag, manually cut and paste the contents of the DFEE23 tag into Parsomatic if you want to parse the MSR data.
2. Click **Parse**.

ⓘ Parsomatic was conceived of and created by Kas Thomas. Thanks to Kas for this very useful tool.

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