

# MIDI

This is not a full-fledged compendium about MIDI as such. If you are looking for details about MIDI in general you may start at <https://en.wikipedia.org/wiki/MIDI> or at <https://www.midi.org/>. Here, we'll concentrate on Titan's capabilities to be controlled by MIDI, or to control other devices by MIDI.

## Trivia

Some basic trivia:

- MIDI was invented in the early 1980s, and is thus older than DMX
- originally it was just a way to control electronic musical instruments from other instruments/devices
- essentially MIDI is a signal connection. 'Real' MIDI is a 5pin cable, the connector being a round 'DIN' connector. But over the years, many developments have occurred. The most important thing is USB-MIDI: transmitting MIDI information over USB interfaces. Then, there is a way to route MIDI over IP networks (rtp-MIDI), MIDI data can be stored in files (not relevant for Titan), and more.
- unlike DMX which strives to semi-permanently send the status of a whole system (i.e. a dmx universe), MIDI only transmits events: a key has been pressed or released, a parameter has changed etc. Hence, the data rate of MIDI is much smaller.
- MIDI messages usually comprise of up to 3 bytes. One bit of every byte is used to determine whether it's a status byte or a data byte. Hence, the 'resolution' of MIDI is 7 bit, or 0...127.
- the specification explains in great detail which message translates to which note or other value. This way you could be sure that when you pressed e.g. the note C on a MIDI keyboard this triggered the C on a sampler or expander.
- Nowadays there are also other uses for MIDI, e.g. [MIDI Show Control](#) (triggering cues in a show), [MIDI Machine Control](#) (sending transport commands to e.g. audio workstation programs), or [MIDI Timecode](#)

## MIDI and Titan

In general MIDI has been implemented in Titan consoles right from the beginning. However, there are some limitations. E.g. the Titan One and T1 do not provide for MIDI at all, the T2 can only do USB-MIDI (as there is no hardware MIDI outlet), and the Titan Mobile and Quartz can only receive MIDI but cannot send it (as there is no MIDI output provided). USB-MIDI was only added in Titan v12, output via USB-MIDI in Titan v13.

Here is an overview:

Console Type	MIDI In	MIDI Out	USB-MIDI In	USB-MIDI Out
Titan One	no	no	no	no
T1	no	no	no	no
T2	no	no	yes (v12 and up)	yes (v13 and up)
Titan Mobile	yes	no	yes (v12 and up)	yes (v13 and up)

Console Type	MIDI In	MIDI Out	USB-MIDI In	USB-MIDI Out
Quartz	yes	no	yes (v12 and up)	yes (v13 and up)
Tiger Touch (non-pro) Pearl Expert (non-pro)	yes	yes	no	no
Tiger Touch Pro Pearl Expert Pro Tiger Touch II Arena Sapphire Touch	yes	yes	yes (v12 and up)	yes (v13 and up)

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