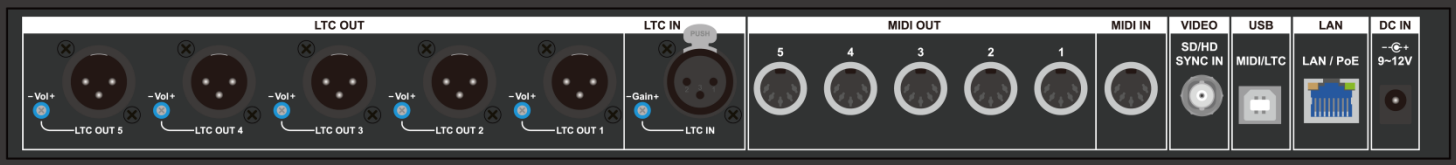
DOREMiDi
www.doremidi.cn

MIDI Timecode Center Pro
MTC-30 Pro



Instructions

1. Product Introduction

MIDI Timecode Center Pro (MTC-30 Pro) is a multifunctional timecode center designed by DOREMiDi. It can be used for timecode synchronization and conversion among computers, MIDI devices, lighting control systems, audio equipment, video sync devices, and LTC timecode devices.

MTC-30 Pro supports multiple timecode formats, including:

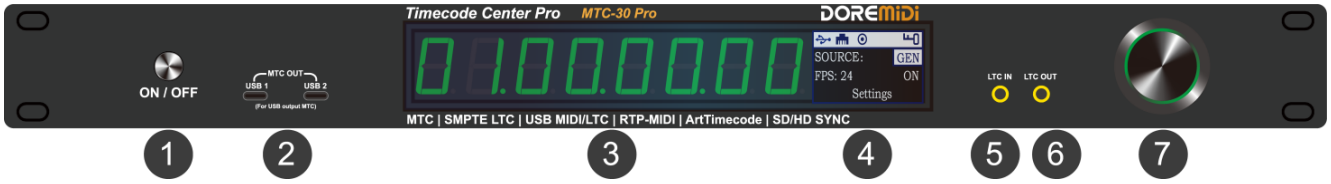
- MIDI Timecode (MTC)
- SMPTE LTC timecode
- USB MIDI timecode
- USB LTC audio timecode
- RTP-MIDI network timecode
- Art-Net timecode / ArtTimecode
- SD/HD video frame sync

MTC-30 Pro supports timecode generation, reading, conversion, and distribution. It can be controlled via the standard MMC (MIDI Machine Control) protocol, and can connect to different systems via USB, 5-pin MIDI ports, LTC ports, Ethernet, and other interfaces.

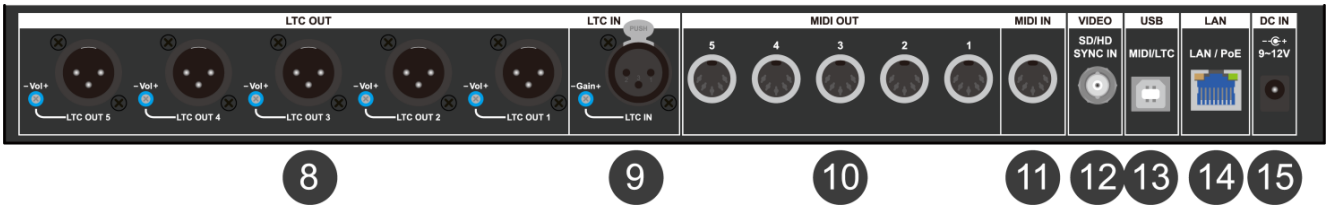
Compared with MTC-30, MTC-30 Pro provides more interfaces and stronger on-site expansion capability, including multiple MIDI OUT ports, multiple LTC OUT ports, front-panel 3.5 mm LTC input/output ports, and two MTC OUT ports. It is suitable for stage performances, lighting synchronization, audio production, video playback, timecode distribution, and similar applications.

In addition, MTC-30 Pro features an Ethernet port with PoE capability, allowing the product to be powered through a PoE gateway device. It uses an 8 x 0.8-inch numeric display plus a 2.0-inch display, making it easy to view timecode and configure operating parameters.

2. Product Appearance



No.	Name	Description
❶	**ON/OFF**	Power switch. Click to turn the device on/off.
❷	**MTC OUT**	USB 1 and USB 2 output MIDI Timecode (MTC) to other computer devices. Note: These ports do not support input.
❸	**Timecode Display**	Eight 0.8-inch green numeric displays show the current timecode.
❹	**Display**	Displays operating parameters such as timecode source, timecode frame rate, IP address, etc.
❺	**LTC IN**	3.5 mm audio jack supporting LTC input. Note: This port cannot be used simultaneously with the rear-panel XLR LTC IN.
❻	**LTC OUT**	3.5 mm audio jack supporting LTC output.
❼	**Knob**	Knob with button function. Rotate, click, or press and hold to select parameters, confirm settings, and configure menus.



No.	Name	Description
❽	**LTC OUT 1~5**	Five standard 3-pin XLR connectors for LTC output, used to connect devices with LTC input. The LTC output audio level can be adjusted with the Vol knob.
❾	**LTC IN**	Standard 3-pin XLR connector for LTC input, used to connect devices with LTC output. The LTC input gain can be adjusted with the Gain knob.
❿	**MIDI OUT1~5**	Five standard 5-pin MIDI DIN output ports for outputting MIDI Timecode (MTC).
⓫	**MIDI IN**	Standard 5-pin MIDI DIN input port for inputting MIDI Timecode (MTC).
⓬	**SD/HD SYNC IN**	BNC connector for SD/HD video sync signal input.
⓭	**USB MIDI/LTC**	USB-B connector. When connected to a computer, it works as a standard USB MIDI device and USB audio device, transmitting MIDI Timecode (MTC) and LTC. It can also be powered by USB 5VDC.
⓮	**LAN/PoE**	Ethernet port with PoE capability. Supports RTP-MIDI timecode and Art-Net timecode, and also supports power supply via PoE equipment.
⓯	**DC IN 9~12V**	Product power input. Supports 9-12VDC adapter power; adapter current must be >=500 mA. DC plug specification: 5.5 x 2.1 mm, center positive.

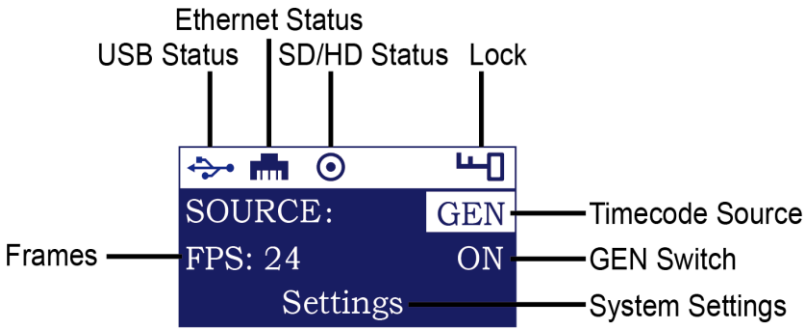
3. Product Specifications

Name	Description
Model	MTC-30 Pro
Dimensions (L x W x H)	482×140×45mm
Net Weight	1260g
Operating Voltage	USB-B: 5VDC DC port: 9-12VDC LAN: Refer to PoE standard
Operating Current	155mA@9V, 120mA@12V, 220mA@USB-5V
Timecode Frame Rate	Supports timecode frame rates of 24, 25, 30DF, and 30 fps.
LTC Compatibility	Compatible with SMPTE LTC audio signals. Supports 24, 25, 30DF, and 30 frame rates. Note: If the LTC input frame rate is 23.976FPS, it will be recognized as 24FPS; if the input frame rate is 29.976FPS, it will be recognized as 30FPS.
LTC Output	Impedance = 110 ohm; voltage range: 0.48 V to 1.6 V.
LTC Input	Impedance = 10K ohm; voltage range: 0.1 V to 2.8 V.
USB Compatibility	Compatible with Windows, macOS, iOS, Android, and other systems. Plug and play; no driver installation required.
MIDI Compatibility	Compatible with all MIDI devices using standard 5-pin MIDI interfaces.
MIDI Communication	MIDI communication includes MIDI IN, MIDI OUT 1-5, USB MIDI/LTC, and RTP-MIDI. This product is used for MTC timecode input, output, and distribution. USB MIDI also supports MMC control commands, but is not used for ordinary MIDI note or controller messages.
USB MIDI/LTC	The USB MIDI/LTC interface is USB-B. It works as a standard USB MIDI and USB audio device, transmitting MTC/LTC to Windows, macOS, iOS, Android, and other systems. It can also power the device via USB 5V.
Ethernet	Supports static IP and automatic IP acquisition (DHCP). When the product works in DHCP mode, the IP address is assigned by a gateway with DHCP capability.

Art-Net Communication	Standard Art-Net communication protocol, used only for Art-Net timecode (ArtTimeCode) communication.
RTP MIDI	RTP-MIDI transmits MTC timecode through the LAN/PoE network interface and uses the fixed port 5004. MTC-30 Pro can act as a Listener and be connected by an RTP-MIDI session on a computer. It is recommended that the computer and device be on the same subnet.
SD/HD SYNC	Supports SD/HD video signal input, including 1080P, 720P, 480i, and 576i video formats.

4. Operation Panel

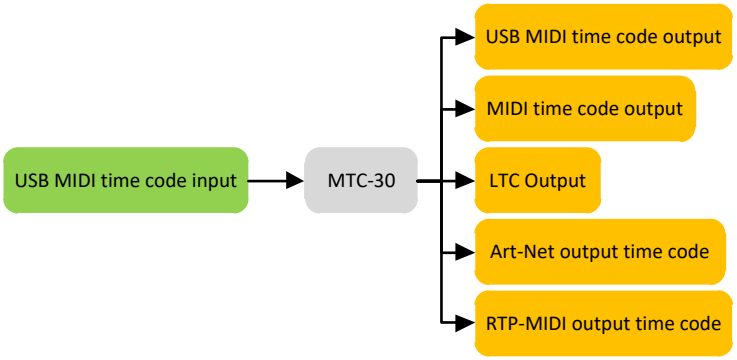
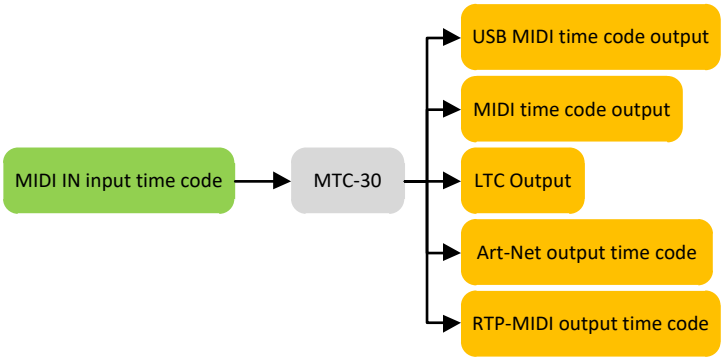
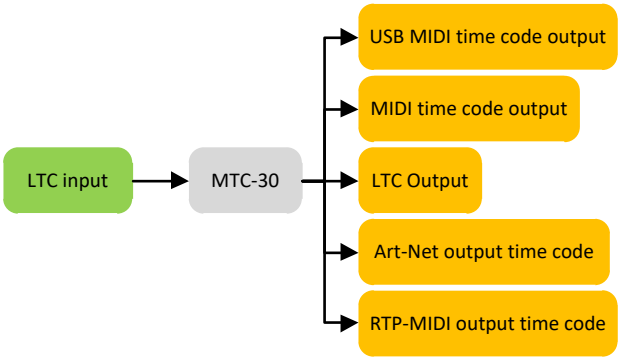
4.1. Main Screen

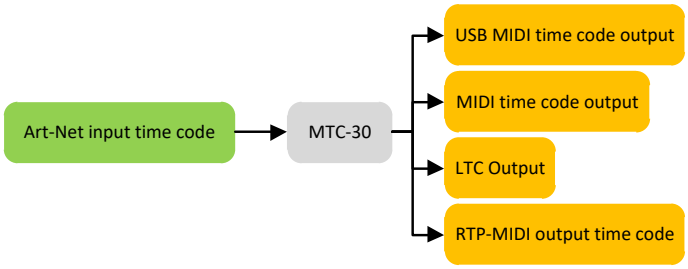
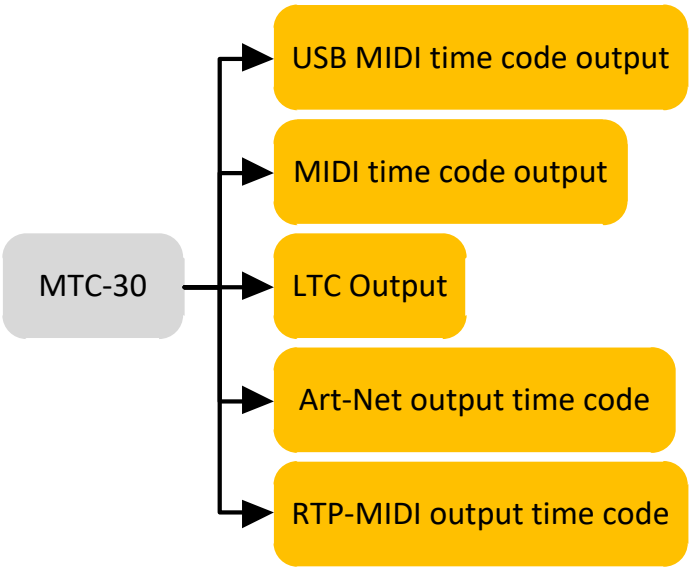


Name	Description	Operation
USB Status	Displayed when the USB MIDI/LTC or MTC OUT USB interface is connected to a computer and recognized by the system. It is used to confirm the USB MIDI/LTC or MTC output link status.	/
Ethernet Status	Displayed when the Ethernet port is connected to the network.	/
SD/HD Status	SD/HD video input status. Displayed when a video signal is present.	/
Screen Lock	On the main screen, to prevent accidental operation, the screen locks when there is no operation for more than 10 seconds.	Press and hold the knob for 3 seconds to exit the locked state.
Timecode Source	MTC-30 Pro supports timecode sources such as USB, MIDI, LTC, GEN, ART-NET, and RTP-MIDI. The current display item confirms whether the device is receiving, generating, or synchronizing timecode over the network.	Click the knob to select “SOURCE”, then rotate the knob to select a different timecode source.
Frame Rate	Displays the current frame rate of the product. Supports 24, 25, 30DF, and 30.	Click the knob to select “FPS”, then rotate the knob to select a different timecode frame rate.
GEN Switch	When the timecode source is “GEN”, this is used to turn timecode generation on or off.	Click the knob to select “GEN”, then rotate the knob to turn timecode generation on/off.
Settings	Settings menu entry.	Click the knob to select Settings, then press and hold the knob to enter the settings menu.

4.2. **Timecode Source Settings**

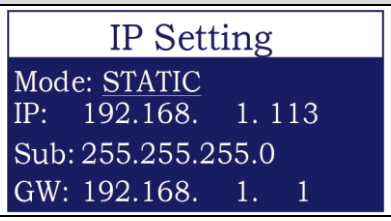
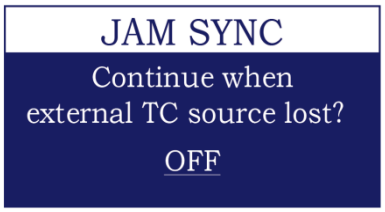
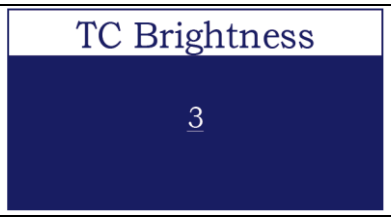
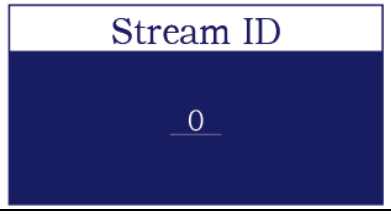
MTC-30 Pro supports six timecode sources: USB, MIDI, LTC, GEN, ART-NET, and RTP-MIDI. Click to select “SOURCE”, then rotate the knob to choose a different timecode source. The six timecode input sources are described below:

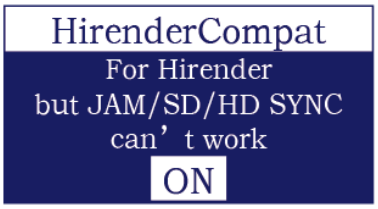
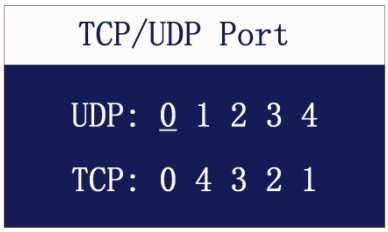
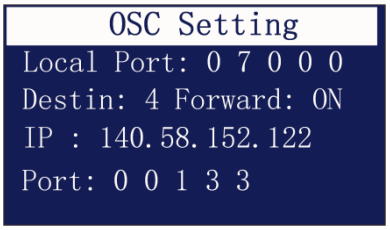
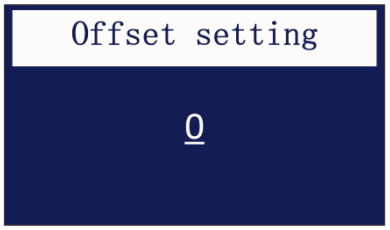
Timecode Source	Display	Description
USB		Timecode is input from USB, and output via USB / MIDI OUT / LTC OUT / ART-NET / RTP-MIDI: 
MIDI		Timecode is input from MIDI IN, and output via USB / MIDI OUT / LTC OUT / ART-NET / RTP-MIDI: 
LTC		Timecode is input from LTC IN, and output via USB / MIDI OUT / LTC OUT / ART-NET / RTP-MIDI: 
ART-NET		Timecode is input from ART-NET, and output via USB / MIDI OUT / LTC OUT / GEN / RTP-MIDI:

		
RTP-MIDI		Timecode is input from RTP-MIDI, and output via USB / MIDI OUT / LTC OUT / ART-NET / RTP-MIDI: 
GEN		In GEN mode, MTC-30 Pro generates or calibrates timecode according to the video sync signal input from SD/HD SYNC IN. Before use, select the correct video format and frame rate in the “SD/HD” menu and confirm that the input signal is stable.

4.3. **Settings Menu**

After clicking the knob to select “Setting”, press and hold the knob to enter the settings interface. You can set IP (IP Setting), JAM SYNC, timecode brightness (TC Brightness), SD/HD sync configuration (SD/HD), ArtTimecode ID, Hirender compatibility mode, lock time (Lock Time), TCP/UDP port, OSC parameters, timecode offset (Offset setting), and factory reset (Factory reset). Rotate the knob to select different setting items, click the knob to enter the selected item, and press and hold the knob to complete the setting and return to the previous menu.

Setting Item	Parameter	Function Description
IP Setting		Mode:IP acquisition mode. Supports automatic IP acquisition (DHCP) and manual static IP setting (STATIC). When set to “STATIC”, you can set the IP address, subnet mask (Sub), and gateway (GW).
JAM SYNC		JAM SYNC switch. It is off (OFF) by default. When turned on (ON), if the timecode source is an external input (USB / MIDI / LTC / ART-NET / RTP-MIDI) and the external timecode stops, the product automatically generates timecode to fill the gap. When the external timecode resumes, the device uses the external timecode again.
TC Brightness		Sets the brightness of the numeric timecode display. Parameter range: 1-7.
SD/HD		Sets the SD/HD video input sync switch. This interface shows the input video format and supports 1080P, 720P, 480i, and 576i video formats. It also sets the external video sync specification used in GEN mode. Select the corresponding format according to the signal connected to SD/HD SYNC IN. When the timecode source is set to “GEN”, the device uses the video sync signal as a reference to generate or calibrate timecode.
ArtTimecode ID		Sets identification parameters such as Net / SubNet / Universe for Art-Net Timecode. These parameters mark the ArtTimecode data received or output by MTC-30 Pro. During demonstrations, they must match Timecode Expert, the lighting console, or the receiving device.

Hirender Compat		Sets the Hirender software compatibility switch. When enabled (ON), JAM SYNC and SD/HD SYNC functions cannot work.
Lock Time		Sets the lock screen time to prevent accidental operation during use. If the knob is not operated for longer than this time, operation will be locked. Press and hold the knob for 3 seconds to exit the locked state.
TCP/UDP Port		Sets the network control interface port. UDP and TCP port numbers.
OSC Setting		Local Port: local OSC port. Destination: target OSC device for forwarding; MTC-30 Pro supports forwarding to up to 4 target OSC devices. Forward: forwarding switch; ON = enabled, OFF = disabled. IP: IP address of the forwarding target device. Port: port of the forwarding target device.
Offset Setting		Sets the timecode offset, with a range of +/-15 frames, used to advance or delay the output or currently running timecode. Set to 0 frames when no offset is required.
Factory reset		Restores factory settings and returns user configuration to default values. Before executing, it is recommended to record key parameters such as current IP, OSC, TCP/UDP, ArtTimecode ID, brightness, and lock time. Do not power off during reset. After completion, network and demonstration-related parameters must be configured again.

5. Connection Diagram

6. Quick Start

Power Supply Method	Description
Power via USB port	Power via USB connection to a computer/adapter. Only 5V is supported.
Power via DC port	The DC port supports 9-12V adapter power, center positive.
Power via PoE	Power via Ethernet. Make sure your router/switch supports PoE.

6.1. Connect to a computer: Connect the computer through the USB MIDI/LTC (USB-B) interface. This interface works as a standard USB MIDI and USB audio device for MTC/LTC transmission and MMC Tool parameter settings. The USB 1/USB 2 ports of MTC OUT are used for MTC output.

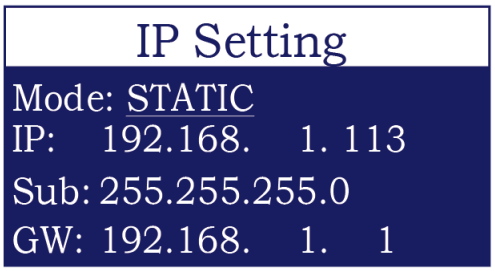
6.2. Connect MIDI devices: Use standard 5-pin MIDI cables to connect MIDI OUT 1-5 of MTC-30 Pro to MIDI devices that need to receive MTC. To receive external MTC, connect the external MIDI device OUT to the MIDI IN of MTC-30 Pro.

6.3. Connect LTC devices: MTC-30 Pro supports 3.5 mm LTC IN/OUT, XLR LTC IN, and LTC OUT 1-5. To output LTC, connect LTC OUT to the receiving device. To receive external LTC, connect the external LTC signal to 3.5 mm LTC IN or XLR LTC IN. Note: It is not recommended to use 3.5 mm LTC IN and XLR LTC IN at the same time.

6.4. Set the timecode input source: Click to select “SOURCE”, then rotate the knob to select a different timecode source. MTC-30 Pro supports USB, MIDI, LTC, GEN, ART-NET, RTP-MIDI, and other sources. For network demonstrations, select ART-NET or RTP-MIDI; for external video sync, select GEN.

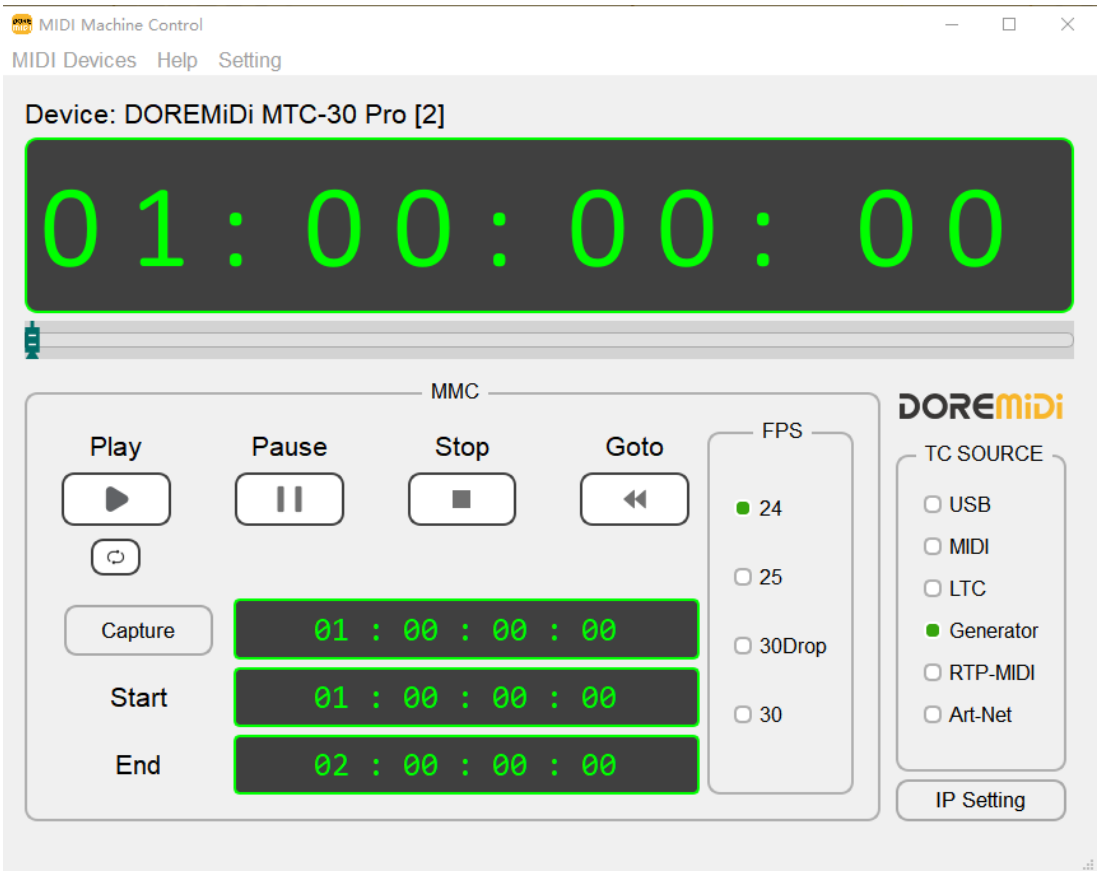
6.5. Set IP Address

Click the knob to select “Setting”, then press and hold to enter the settings menu. In the settings menu, click the knob to select “IP Setting”, then click to select Mode, IP, Sub, GW, and other setting items. Rotate the knob to set parameters, and press and hold the knob to complete the setting and return to the previous menu. (See: 4.3 Settings Menu)



7. Using MMC Tool

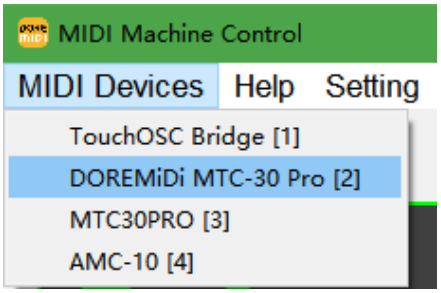
After MTC-30 Pro is connected to a computer through the USB MIDI/LTC interface, MMC Tool can be used for parameter settings and demonstration control. The software can set OSC IP, UDP/TCP port, timecode source, frame rate, user data, start/stop/continue functions, etc. The USB 1/USB 2 ports of MTC OUT are used to output MTC to a computer and are not used as parameter setting interfaces.



7.1. Connect Device

Click “MIDI Devices” -> select “DOREMiDi MTC-30 Pro” or the MTC-30 Pro MIDI device name recognized by the system.

Note: One USB MIDI port can only be connected by one software program at a time. If the connection fails, check whether another program is occupying the product and disconnect it.



7.2. TC SOURCE

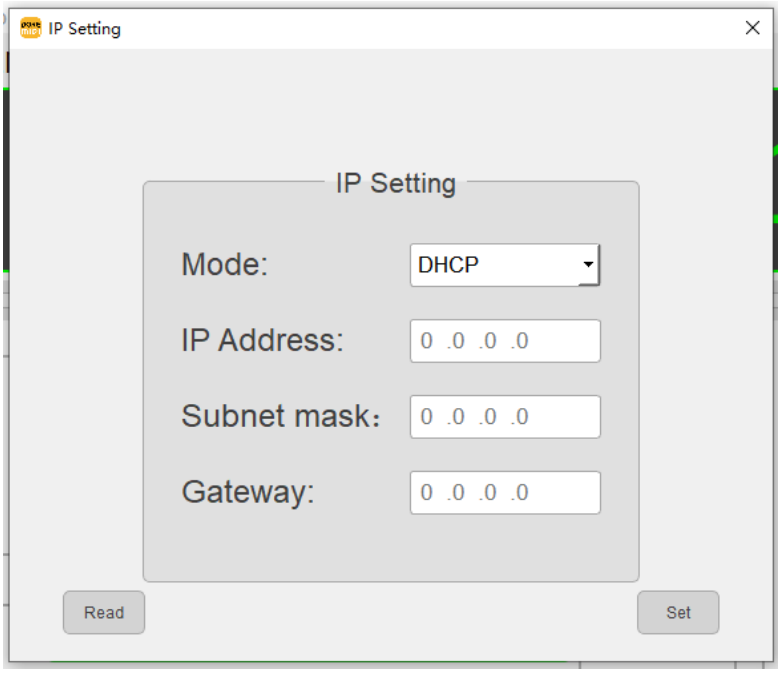
Remotely control the timecode source of MTC-30 Pro. Supports USB / MIDI / LTC / GEN / RTP-MIDI / Art-Net timecode sources, and can work with OSC, TCP/UDP, ArtTimecode ID, Offset setting, and other parameters for network function demonstrations.

7.3. MMC

- When the timecode source is “GEN” or the device is generating timecode internally, MMC Tool can control start, pause, stop, capture, locate, and other operations. Controls include:
- Play: Start timecode playback.
- Pause: Pause timecode playback. After pausing, click “Play” again to continue from the current timecode.
- Stop: Stop timecode playback. After stopping, click “Play” again to restart playback from the “Start” timecode.
- Capture: Capture timecode. Click “Capture” to capture the timecode currently running on the product.
- Start: Set the playback start time.
- Stop: Set the playback end time.
- FPS: Set the timecode frame rate. Supports 24, 25, 30DF, and 30.

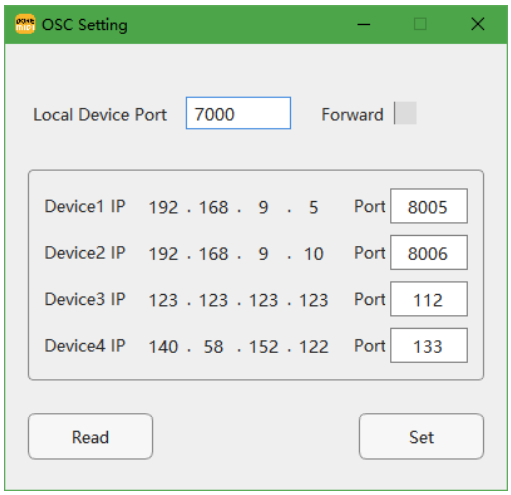
7.4. IP Setting

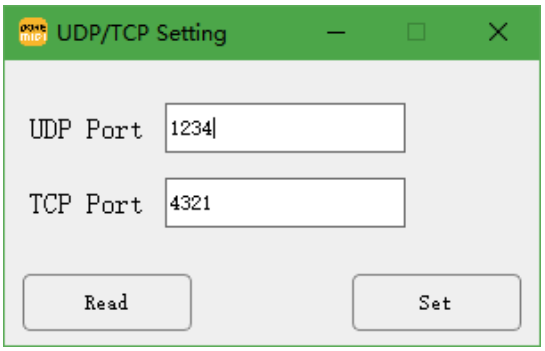
This product supports setting IP parameters through MMC_Tool, including IP mode (Mode), IP address (IP Address), subnet mask, and gateway. The IP mode supports automatic IP acquisition (DHCP); after setting, the IP address is assigned by a gateway with DHCP capability. It also supports manual IP setting (Manually); after setting, the product uses a static IP address. Click “Read” to obtain the product IP address, and click “Set” to set the IP address information.



7.5. OSC, TCP/UDP Settings

On the OSC, TCP/UDP settings page of MMC Tool, you can configure the local OSC port, OSC forawrding targets, forwarding switch, and TCP/UDP network control port of MTC-30 Pro.

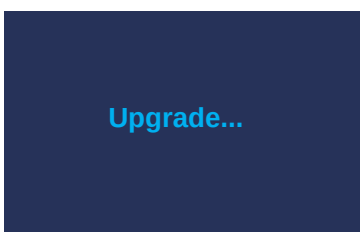


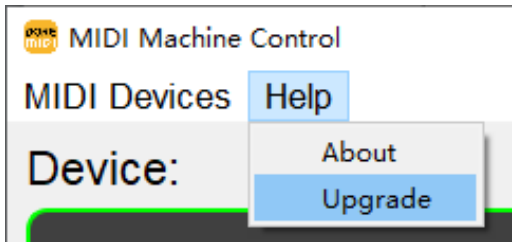


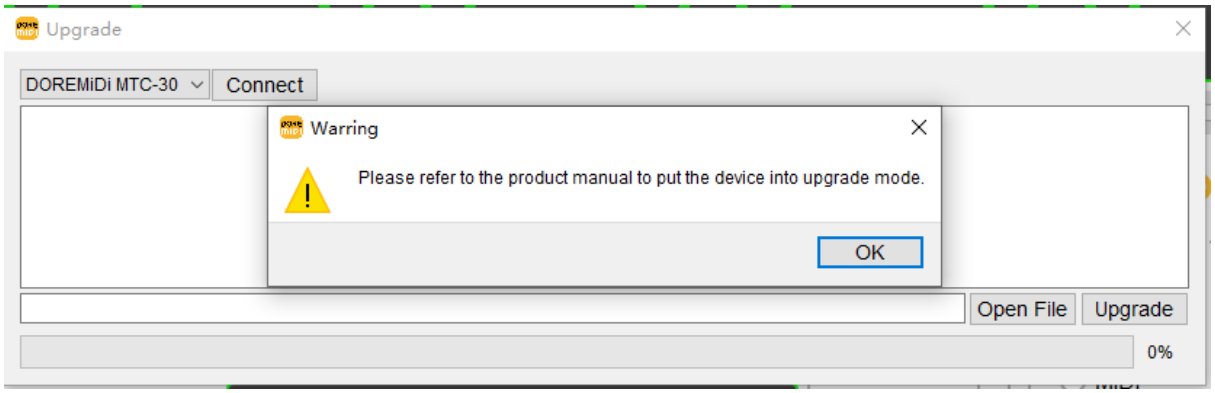
7.6. Firmware Upgrade

This product supports firmware upgrade through MMC_Tool. Reference steps: press and hold the knob -> power the product -> release the knob -> the product enters upgrade mode -> open MMC Tool -> Help-Upgrade -> click “Open File” and select the firmware downloaded from the official website -> click “Upgrade” to start upgrading -> after the upgrade is completed, wait 5 seconds and power the product on again.

Note: If firmware updates are available, they will be released on the official website. Please follow the official website notices.







Precautions

- This product contains circuit boards.
- Exposure to rain or immersion in water may cause product failure.
- Do not heat, crush, or damage internal components.
- Non-professional maintenance personnel must not disassemble the product.
- The DC input voltage of the product is 9-12VDC, and the USB input voltage is 5VDC. Using a voltage lower or higher than the specified voltage may cause abnormal operation or damage.

8. OSC, TCP/UDP Commands

Application-layer control commands for OSC and TCP/UDP on MTC-30 Pro. OSC commands can be used with OSC control software; TCP/UDP commands can be used for network functions. Replace <NUM> in the examples with the actual parameter. Command names, capitalization, and semicolons must remain unchanged.

OSC Application-Layer Command Table

The following table lists OSC message addresses, parameter types, sending examples, and command descriptions. During configuration, set Host to the device IP of MTC-30 Pro, and use the current OSC/TCP/UDP port configured on the device as the sending port.

OSC Message	Parameter	Example	Command Description
/DOREMiDi/MTC30/Start	/	/DOREMiDi/MTC30/Start	Start timecode playback.
/DOREMiDi/MTC30/Pause	/	/DOREMiDi/MTC30/Pause	Pause timecode playback.
/DOREMiDi/MTC30/Set<NUM>	string	/DOREMiDi/MTC30/Set 23:59:59.24	Set time in hours, minutes, seconds, and frames.
/DOREMiDi/MTC30/Source<NUM>	Int32	/DOREMiDi/MTC30/Source 2	Set the MTC source parameter according to the protocol above.
/DOREMiDi/MTC30/DHCP	/	/DOREMiDi/MTC30/DHCP	Set mode to DHCP.
/DOREMiDi/MTC30/StaicIP<NUM>	string	/DOREMiDi/MTC30/StaicIP “ip” “subnet mask” “gateway” (add 3 string parameters)	Set static IP address, subnet mask, and gateway.
/DOREMiDi/MTC30/Jam<NUM>	Int32	/DOREMiDi/MTC30/Jam 0	Set sync switch: 0 = off, 1 = on.
/DOREMiDi/MTC30/Back<NUM>	Int32	/DOREMiDi/MTC30/Back 3	Set background brightness, 1-7.
/DOREMiDi/MTC30/SDI<NUM>	Int32	/DOREMiDi/MTC30/SDI 0	Set SDI switch: 0 = off, 1 = on.
/DOREMiDi/MTC30/ArtID<NUM>	Int32	/DOREMiDi/MTC30/ArtID 0	Set Art-Net ID, 0-255.
/DOREMiDi/MTC30/Hirender<NUM>	Int32	/DOREMiDi/MTC30/Hirender 0	Set Hirender switch: 0 = off, 1 = on.
/DOREMiDi/MTC30/LockTime<NUM>	Int32	/DOREMiDi/MTC30/LockTime 5	Set lock screen time. Parameters: 5, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60.

TCP/UDP Application-Layer Command Table

The following table lists ASCII control commands that can be sent via TCP/UDP. UDP can be sent directly to the device port. TCP must establish a connection first. If “could not connect” is displayed, check whether TCP is enabled, whether the port matches the setting, and whether the computer and device are on the same subnet.

Message	Parameter	Example	Command Description
DOREMiDi-MTC30-Start;	/	DOREMiDi-MTC30-Start;	Start timecode playback.
DOREMiDi-MTC30-Pause;	/	DOREMiDi-MTC30-Pause;	End timecode playback.
DOREMiDi-MTC30-Set=<NUM>;	string	DOREMiDi-MTC30-Set=23:59:59.24;	Set time in hours, minutes, seconds, and frames.
DOREMiDi-MTC30-Source=<NUM>;	Int32	DOREMiDi-MTC30-Source=2;	Set the MTC source parameter according to the protocol above.
DOREMiDi-MTC30-DHCP;	/	DOREMiDi-MTC30-DHCP;	Set mode to DHCP.
DOREMiDi-MTC30-StaicIP=NUM:NUM:NUM;	string	DOREMiDi-MTC30-StaicIP=“ip:subnet mask:gateway”;	Set static IP address, subnet mask, and gateway.
DOREMiDi-MTC30-Jam=<NUM>;	Int32	DOREMiDi-MTC30-Jam=0;	Set sync switch: 0 = off, 1 = on.
DOREMiDi-MTC30-Back=<NUM>;	Int32	DOREMiDi-MTC30-Back=3;	Set background brightness, 1-7.
DOREMiDi-MTC30-SDI=<NUM>;	Int32	DOREMiDi-MTC30-SDI=0;	Set SDI switch: 0 = off, 1 = on.
DOREMiDi-MTC30-ArtID=<NUM>;	Int32	DOREMiDi-MTC30-ArtID=0;	Set Art-Net ID, 0-255.
DOREMiDi-MTC30-Hirender=<NUM>;	Int32	DOREMiDi-MTC30-Hirender=0;	Set Hirender switch: 0 = off, 1 = on.
DOREMiDi-MTC30-LockTime=<NUM>;	Int32	DOREMiDi-MTC30-LockTime=5;	Set lock screen time. Parameter range: 00-11.

9. FAQ

Question: The timecode is always slightly faster or slower than other devices. How should I handle this?

Answer: Go to Setting > Offset setting to set the timecode offset, which can advance or delay the output or currently running timecode.

Question: The device parameters are incorrect, or I forgot the network IP. How can I recover it?

Answer: First use MMC Tool to read the current parameters. If recovery is still not possible, go to Setting -> Factory reset to restore factory settings and then configure the device again.

Question: LTC timecode cannot be converted to MIDI timecode.

Answer: Make sure the LTC timecode format is one of 24, 25, 30DF, or 30 fps. Other formats may cause timecode errors or dropped frames.

Question: Can MTC-30 Pro generate timecode?

Answer: Yes. Select “GEN” as the timecode input source.

Question: USB cannot connect to the computer.

Answer: First confirm whether the USB symbol is displayed on the device screen after connection. Then confirm whether the computer has recognized the USB MIDI device. Most computers include MIDI drivers. If the device is not recognized, try another USB cable or USB port, and install the appropriate MIDI driver for the system if necessary. Installation reference: https://windowsreport.com/install-midi-drivers-pc/

Question: Does MTC-30 Pro support 23.976FPS or 29.976FPS LTC input?

Answer: Yes. However, because the MIDI timecode standard does not include 23.976FPS or 29.976FPS, the MIDI timecode of MTC-30 Pro is output and displayed in 24FPS/30FPS format. The actual output frame rate of MTC-30 Pro is still 23.976FPS / 29.976FPS.

Question: When JAM SYNC is enabled, how does MTC-30 Pro run if the external timecode source is disconnected?

Answer: When JAM SYNC is enabled, if the external timecode source is unexpectedly disconnected, MTC-30 Pro will continue outputting timecode. The timecode frame rate will reference the frame rate before the external timecode was disconnected.

Question: How does the MIDI/LTC USB port output LTC?

Answer: When the MIDI/LTC USB port is connected to a computer, the computer recognizes both a MIDI device and a sound card device. Select MTC-30 Pro as the sound card to transmit LTC audio.

If the issue cannot be resolved, please contact customer service.

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