

TT 627 转台

用户手册

TT 627 Turntable

User Manual

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目录

1. 硬件说明 1

2. 操作说明 2

 2.1 触摸屏操作 2

 2.2 程控操作..... 4

1. Hardware manual..... 7

2. Operation manual..... 8

 2.1 Touch screen operation 8

 2.2 Program-controlled operation 10

1. 硬件说明

供电、通讯接线:

- 220V AC设备供电
- 可通过 DB9 串口线连接 TT627
- 可通过 RJ-45 网线连接 TT627



2. 操作说明

2.1 触摸屏操作

操作界面介绍：

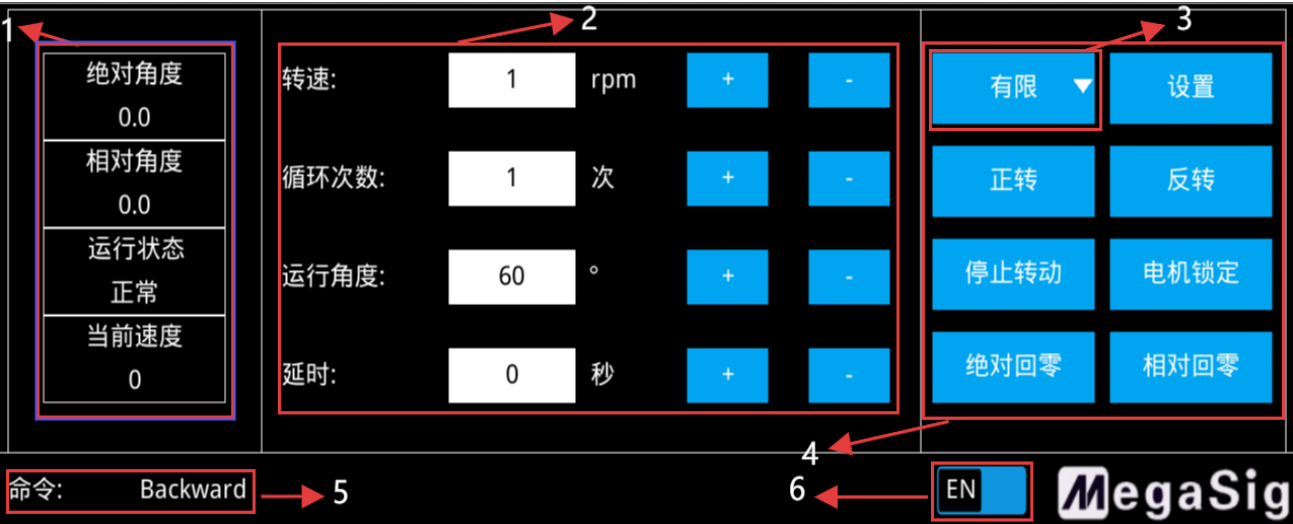


图 2-1

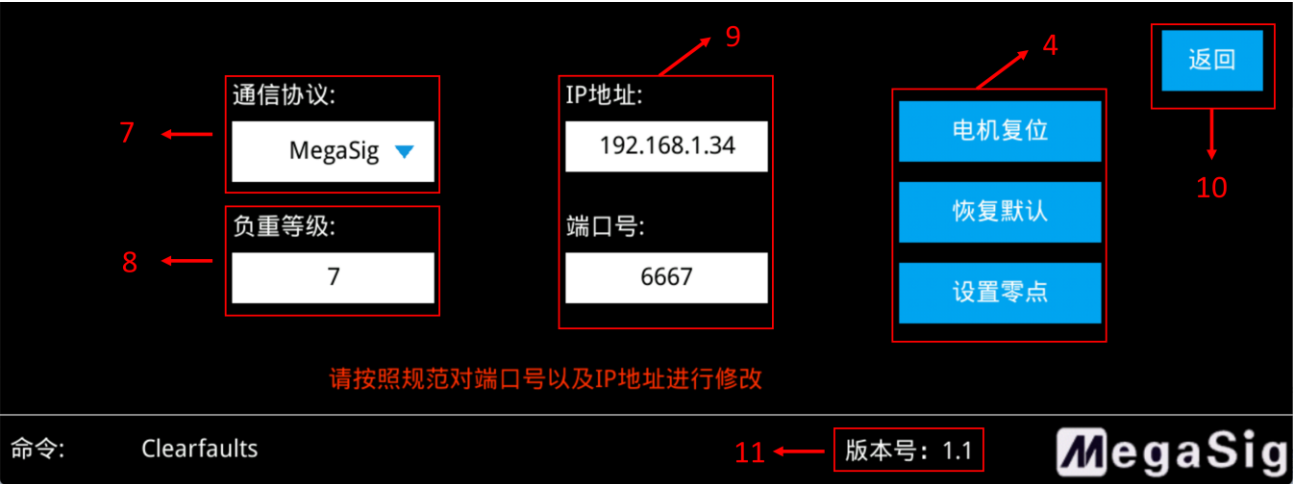


图 2-2

- 1、转台的显示窗口，主要显示转台当前的绝对角度、相对角度、状态、速度。
- 2、转台运行参数设置，点击白色区域弹出输入键盘，输入框中会显示该参数的范围，通过输入器可设置参数如图 2-3，同时还可以通过右侧的按钮进行参数进行调整。



图 2-3

3、转台模式切换设置，用于显示转台当前模式，点击下拉菜单修改转台当前模式，一共有 3 种模式，分别是有限、连续与往复。

有限模式：通过调整转速控制转台转动指定角度；

连续模式：控制转台以固定速度进行连续转动；

往复模式：以指定频率控制转台进行正弦运动。

4、转台功能显示窗口。

设置	切换的设置界面
正/反转	转盘进行正/反向转动
停止转动	转盘停止转动
电机锁定/解锁	电机锁定状态不可转动
绝对回零	转盘快速回到绝对零度位置，并清零显示窗口的绝对角度与相对角度
相对回零	转盘快速回到零度位置，并清零显示窗口的绝对角度与相对角度
电机复位	清除电机故障，恢复默认：将IP地址、端口号以及负重等级恢复成默认状态
设置零点	转盘设置指定零点（开机时可设置）

5、命令提示窗口，点击对应功能，命令提示窗口会显示MegaSig当前功能的串口/网口指令。

6、中英文切换按键，点击按键切换中文界面或者英文界面。

7、通信设置，点击白色区域下拉菜单切换通信协议。

8、负重等级设置，通过提高负重等级，转台负重也会提高，负重大的情况下转速不能过高。并且转台不能急停。

9、IP地址与端口号设置，显示转台当前的IP地址与端口号。

10、界面切换设置，返回主界面。

11、显示转台版本号。

2.2 程控操作

1)、接口说明

● 串口通讯参数

串口通讯参数	
波特率	115200
数据位	8
奇偶校验位	None
停止位	1
流控制	None

● 程控指令表

名称	发送	反馈	备注
加减速 度设置	Acc<加减速速度> 例: Acc20	Acc<加减速速度>	用于设置速度上升与下降期间的 加速度与减速度 加减速速度: 有限模式下转动的加/ 减速度大小范围: 20-500rpm
往复模式 下振幅设 置	Amplitude<振幅>	Amplitude<振幅>	振幅: 往复模式左右摆动的角度 范围: 0-360°
有限模式 下运行角 度设置	Angle<运行角度>	Angle<运行角度>	运行角度: 有限模式转台运行的 角度 范围: 0-360°
绝对回零	Abs	Abs	转台停止后绝对角度归零
转台反向 运动	Backward	Backward	设置转台反向旋转
清除故障/ 转台复位	Clearfaults	Clearfaults	清除故障/转台复位
连续模式	Continuous	Continuous	设置转台为连续模式
有限模式 下延时设 置	Delay<延时>	Delay<延时>	延时: 转台到达运行角度后停留 的时间 范围: 1-10000s
转台解锁	En	En	解锁转台后, 转台才可运动
ET250_3D 连接模式	ET250_3D	ET250_3D	网口通信模式切换为适配 ET250_3D与AP连接的模式
查询故障	Fault	Fault<故障信息>	查询转台故障信息
往复模式 下频率设 置	Frequency<频率>	Frequency<频率>	频率: 设置往复模式的频率大小 范围: 0.01-1
转台正向 运动	Forward	Forward	转台正向运动
有限模式	Finite	Finite	设置转台为有限模式

名称	发送	反馈	备注
转台锁定	K	K	转台禁止状态下不可运动
循环次数	Loops<循环次数>	Loops<循环次数>	循环次数：设置有限模式运行角度的循环次数 范围：1-16。1-15 是按照循环次数设置转动相应的次数就会停止，16 是一直循环转动，只有点击停止转动才会停止。
查询绝对角度	Pfb	Pfb<角度>	角度：转台当前的绝对值位置
有限/连续模式下的速度设置	Rev<速度>	Rev<速度>	速度：设置有限/连续模式下转台运行的速度大小 范围：1-300rpm
相对回零	Relative	Relative	转台停止后相对角度归零
查询相对角度	Re	Re	角度：转台当前的相对与原点的角度
查询运动状态	Stopped	Stopped<状态>	状态：0=未完成 1=轮廓已完成
运动停止	Stop	Stop	使转台停止运动
往复模式	Swing	Swing	设置转台为往复模式
转台按绝对位置运动	Moveabs,<角度>,<速度> 例：Moveabs,60,20	Moveabs,<角度>,<速度>	角度：转台停止运动的角度位置 速度：转台运动的速度
转台按相对位置运动	Moveinc,<角度>,<速度> 例：Moveinc,60,20	Moveinc,<角度>,<速度>	角度：转台停止运动位置距离初始位置的角度距离 速度：转台运动的速度
MegaSig 通信模式	MegaSig	MegaSig	通信模式切换为 MegaSig 模式
负重等级	Rigidity<等级数> 例：Rigidity4	Rigidity<等级数>	负重等级范围：1-30 建议设置 10 以下
IP 地址设置	Ip<Ip 地址> 例：Ip192.168.1.34	Ip<Ip 地址>	Ip 地址按照规范设置
端口号设置	Port<端口号> 例：Port666	Port<端口号>	按照端口号范围设置
查询负重等级	Rigidity?	Rigidity<等级数>	查询负重等级信息
查询 Ip 地址	Ip?	Ip<Ip 地址>	查询 Ip 地址信息
查询端口号	Port?	Port<端口号>	查询当前端口号
设置零点	Zero	Zero	将当前角度设置为零点

2)、LAN接口说明使用

转台的网络IP地址为192.168.1.34，须控制转台的PC机IP设置为192.168.1.X。网口协议采用UDP 协议。port设置为6667。（通过控制软件调整）。

（注：美格信模式下的网口指令和串口指令是一致的）

使用ET250-3D通信协议时，控制软件须支持控制ET250-3D。

在控制软件中选择设备型号为：ET250-3D即可控制本设备。

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1. Hardware manual

Power supply and communication wiring:

- Power supply for 220V AC equipment
- It can be connected to TT627 via a DB9 serial port cable
- The TT627 can be connected via an RJ-45 network cable



2. Operation manual

2.1 Touch screen operation

Introduction to operation interface:

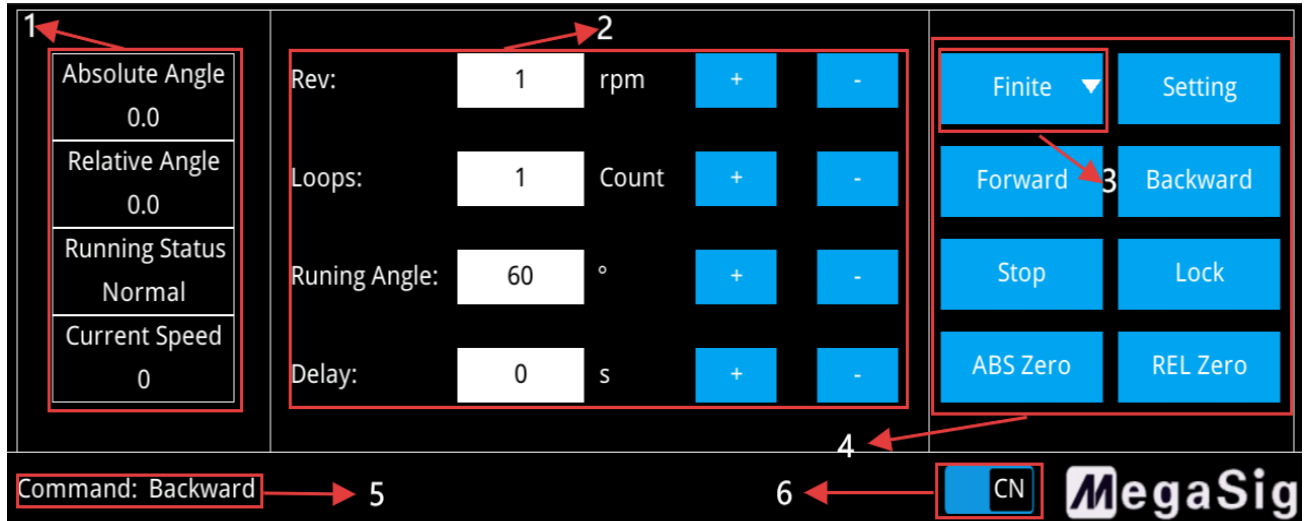


Figure 2-1

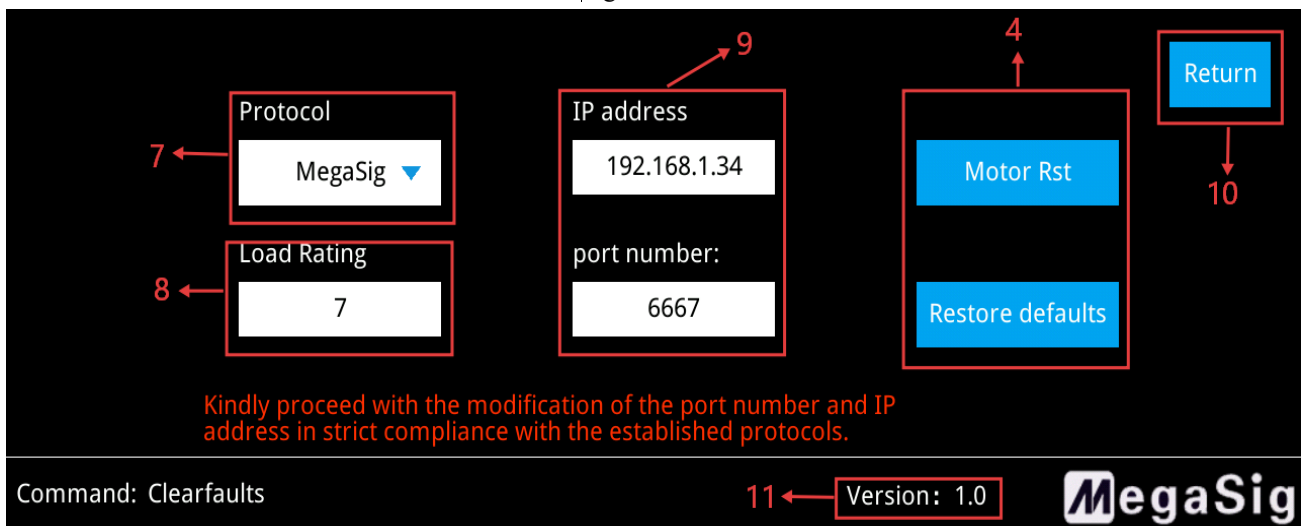


Figure 2-2

- 1、 The display window of the turntable mainly shows the current absolute angle, relative angle, status, and speed of the turntable.

- 2、To set the operating parameters of the turntable, click the white area to pop up the input keyboard. The range of the parameter will be displayed in the input box. You can set the parameter through the input device as shown in Figure 2-3. Meanwhile, you can adjust the parameters through the button on the right side.

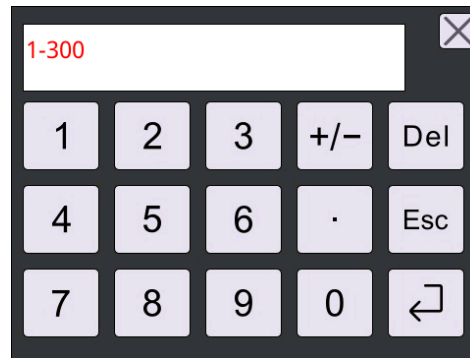


Figure 2-3

- 3、Rotating platform mode switching settings, used to display the current mode of the rotating platform. Click the dropdown menu to modify the current mode of the rotating platform. There are three modes: limited, continuous, and reciprocating.

Finite mode: Control the turntable to rotate a specified angle by adjusting the rotational speed;

Continuous mode: Control the turntable to rotate continuously at a fixed speed;

Swing mode: Control the turntable to perform sinusoidal motion at a specified frequency

4、Turntable function display window

Setting	Switch to the setting interface
Forward/Backward	The turntable rotates in a forward or reverse direction
Stop	The turntable stops rotating
Lock/unlock	Motor locked, rotation not allowed.
ABS Zero	The turntable quickly returns to the absolute zero position and resets the absolute and relative angles displayed in the window
REL Zero	The turntable quickly returns to the zero degree position and resets the absolute and relative angles displayed in the window
Motor Res	Clear motor faults and restore defaults: Reset the IP address, port number, and load level to their default settings

- 5、Command prompt window: click the corresponding function, and the command prompt window will display the current serial/network port command of megasig.

- 6、CN/EN Switch Button: click the button to switch between chinese and english interfaces.

- 7、Communication Settings: click the white area drop-down menu to switch the communication protocol.
- 8、Load rating setting: increasing the load level will increase the turntable load capacity. do not set an excessively high rotation speed under heavy load, and avoid sudden stop of the turntable.
- 9、IP Address and Port Number Settings: displays the current ip address and port number of the turntable.
- 10、Interface switching, return to the main interface.
- 11、Display turntable version number.

2.2 Program-controlled operation

1)、Interface Description

● Serial communication parameters

Serial communication parameters	
Baud Rate	115200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

● Program Control Instruction Table

Item	Send	Feedback	Note
Acceleration/ deceleration setting	Acc<Acc/Dec> Example: Acc20	Acc<Acc/Dec>	Set acceleration and deceleration for speed ramp-up and ramp-down periods: Acceleration/Deceleration: range of acc/dec magnitude for rotation in finite mode: 20-500 rpm
Amplitude setting in reciprocating mode	Amplitude<Amplitude>	Amplitude<Amplitude> >	Amplitude: angle of left-right oscillation in reciprocating mode Range: 0-360°
Operating angle setting in limited mode	Angle<Angle setting>	Angle<Angle setting>	Operating angle: angle of rotation for the turntable in finite mode Range: 0-360°
Absolute return to zero	Abs	Abs	Absolute angle resets to zero after turntable stops
Turntable reverse movement	Backward	Backward	Set turntable to rotate in reverse direction
Clear fault / turntable reset	Clearfaults	Clearfaults	Clear faults/reset turntable
Continuous mode	Continuous	Continuous	Set turntable to continuous mode

Item	Send	Feedback	Note
Delay setting in limited mode	Delay<Delay>	Delay<Delay>	Delay: time the turntable remains stationary after reaching the operating angle Range: 1-10,000S
Turntable unlock	En	En	The turntable can only move after being unlocked
ET250_3D connection mode	ET250_3D	ET250_3D	Switch network port communication mode to a mode compatible with ET250_3D and AP connection
Query fault	Fault	Fault<Fault >	Query turntable fault information
Frequency setting in reciprocating mode	Frequency<Frequency>	Frequency<Frequency >	Frequency: set the frequency magnitude for reciprocating mode Range: 0.01-1
Turntable forward movement	Forward	Forward	Turntable moves in the forward direction
Limited mode	Finite	Finite	Set turntable to finite mode
Turntable lock	K	K	Turntable cannot move when locked
Loop count	Loops<Loops>	Loops<Loops>	Number of cycles: set the number of cycles for the operating angle in finite mode Range: 1-16. For cycles 1-15, the turntable will rotate the corresponding number of times as set and then stop. For cycle 16, it will rotate continuously in a loop and will only stop when the stop rotation command is given
Query absolute angle	Pfb	Pfb<Angle>	Angle: the current absolute position of the turntable
Speed setting in limited/continuous mode	Rev<Speed>	Rev<Speed>	Speed: sets the rotational speed in limited/continuous mode Range: 1–300 rpm
Relative return to zero	Relative	Relative	Relative angle resets to zero after turntable stops
Query relative angle	Re	Re	Angle: current relative angle of the turntable from the origin
Query motion status	Stopped	Stopped<Status>	Status: 0 = Incomplete, 1 = Profile completed
Motion stop	Stop	Stop	Stops turntable movement
Reciprocating mode	Swing	Swing	Sets the turntable to Reciprocating Mode
Turntable movement by absolute position	Moveabs,<Angle>,<Speed> Example: Moveabs,60,20	Moveabs,<Angle>,<Speed>	Angle: The angular position where the turntable stops Speed: The rotational speed of the turntable
Turntable movement by relative position	Moveinc,<Angle>,<Speed> Example: Moveinc,60,20	Moveinc,<Angle>,<Speed>	Angle: The angular distance between the stopping position and the initial position Speed: The rotational speed of the turntable

Item	Send	Feedback	Note
MegaSig communication mode	MegaSig	MegaSig	Communication mode switched to MegaSig mode
Load level Rigidness	Rigidness< level > Example: Rigidness4	Rigidness< level >	Load level range: 1-30 It is recommended to set it below 10
Setting IP address	Ip<Ip address > Example: Ip192.168.1.34	Ip<Ip address >	Set the IP address according to the specifications
Setting Port	Port< Port > Example: Port666	Port< Port >	Set according to the port number range
Query Rigidness	Rigidness?	Rigidness< level >	Query load level information
Query Ip address	Ip?	Ip<Ip address >	Query IP address information
Query Port	Port?	Port< Port >	Query the current port number
Set zero	Zero	Zero	Set the current angle as the zero point.

2)、LAN Interface Instructions

The network IP address of the turntable is 192.168.1.34, and the IP setting of the PC controlling the turntable must be set to 192.168.1.X. The network port protocol uses the UDP protocol.

Set the port to 6667. (Adjust through the control software).

(Note: In MegeSig mode, the network port commands and serial port commands are identical.)

When using the ET250-3D communication protocol, the control software must support the control of ET250-3D. Select the device model as ET250-3D in the control software to control this device

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