MegaSig

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TT 626 高精度转台

用户手册

TT 626 High-precisionTurntable

User Manual

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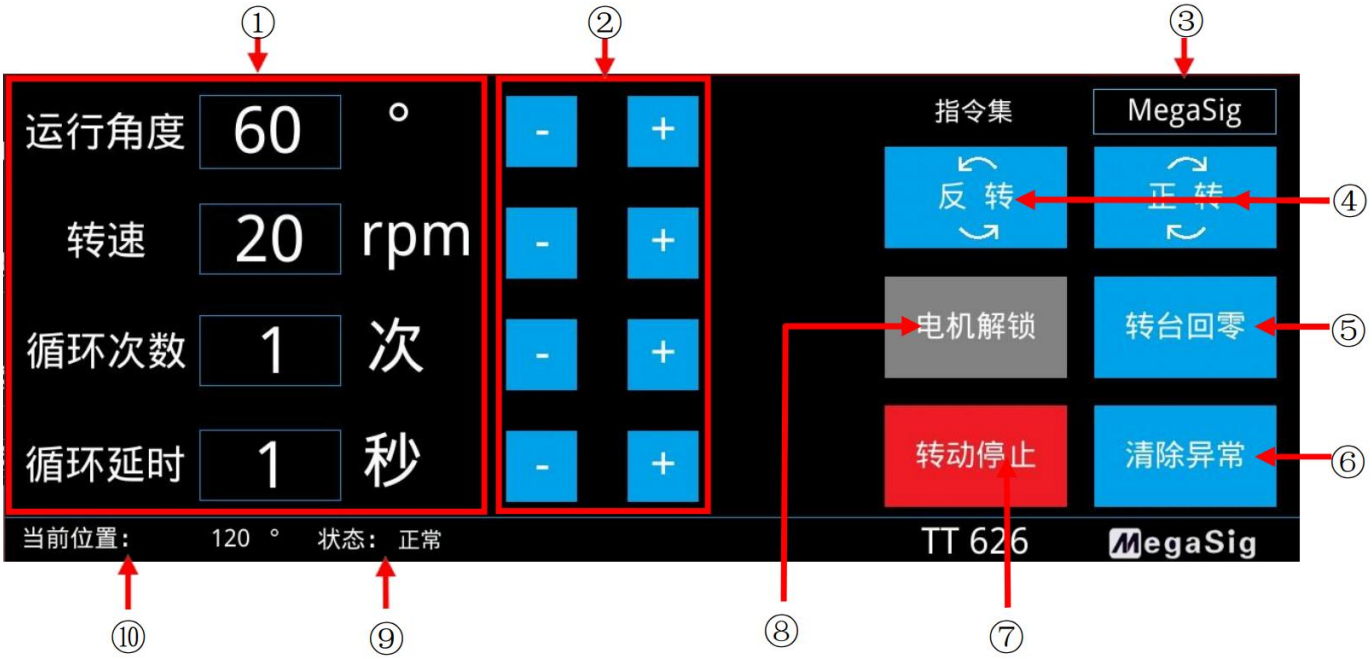

图 2-1

① 转台运行参数设置，点击相应的数字弹如下输入键盘，通过输入器可设置参数

图 2-2

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1)、接口说明

● 通过连接TT626 的DB9 接口进行程控操作，串口通信参数

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（注：‘\r\n’代表回车换行， Hex 为0D0A）

名称	发送	反馈	备注
电机保持	en\r\n	en\r\n	保持电机后，电机才可运动
电机禁止	k\r\n	k\r\n	电机禁止状态下不可运动
电机按绝对位置运动	moveabs <角度> <速度>\r\n 例：moveabs 60 20\r\n	moveabs <角度> <速度>\r\n	角度：电机停止运动的角度位置 速度：电机运动的速度
电机按相对位置运动	moveinc <角度> <速度>\r\n 例：moveinc 60 20\r\n	moveinc <角度> <速度>\r\n	角度：电机停止运动位置距离初始位置的角度距离 速度：电机运动的速度
加速度设置	acc <参数> \r\n	acc <参数> \r\n	设置用于速度上升期间的加速度
减速度设置	dec <参数> \r\n	dec <参数> \r\n	设置用于速度下降期间的减速度
查询故障	FLT\r\n	FLT\r\n	查询电机故障信息
查询角度	PFB\r\n	PFB\r\n	角度：电机当前的绝对值位置
查询运动状态	stopped\r\n	stopped\r\n	状态： -1=运动被中断（例如，由于禁用或保持） 0=未完成 1=轮廓已完成 2=轮廓已完成并且驱动器处于位置
运动停止	stop\r\n	stop\r\n	使电机停止运动
清除故障	clearfaults\r\n	clearfaults\r\n	清除故障
相对回零	>RELATIVE_ORIGIN=X \r\n	>ok\r\n	X 为速度(1-200 设置范围),如果直接发 送 ">RELATIVE_ORIGIN\r\n" 或者 ">ABSOLUTE_ORIGIN\r\n" 则 以屏幕设置的速度为默认速度
绝对回零	>ABSOLUTE_ORIGIN= X\r\n	>ok\r\n	X 为速度(1-200 设置范围),如果直接发 送 ">RELATIVE_ORIGIN\r\n" 或者 ">ABSOLUTE_ORIGIN\r\n" 则 以屏幕设置的速度为默认速度

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。

port 设置为6667。（通过控制软件调整）。

可使用的控制软件须支持控制ET 250-3D。

在控制软件中选择设备型号为：ET 250-3D 即可控制本设备。

3. AudioExpert 指向性测试说明（AudioExpert 软件需另购）

3.1 软件：AudioExpert；

3.2 操作介绍(详细可看Audio Expert 的用户手册3.9 章)

打开Audio Expert 中的“快速工具”，选择“极性测试”，看到下图 3-1界面

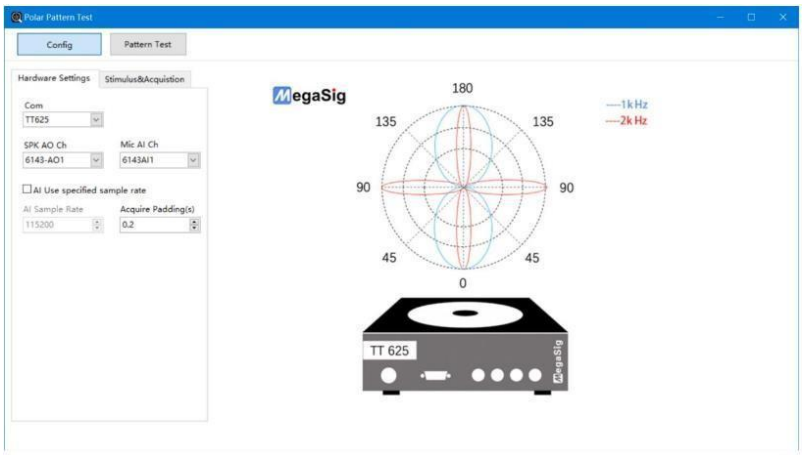


图 3-1

Config： 软硬件配置界面；

Pattern Test： 指向性测试界面；

Hardware Setting： 硬件设置；

Stimulus & Acquisition：激励信号与信号采集设置；

Com：选择TT 626 对应串口；

SPK AO Ch： 声源播放喇叭对应的AO 通道；

Mic AI Ch： 采集麦克风对应的AI 通道软件；

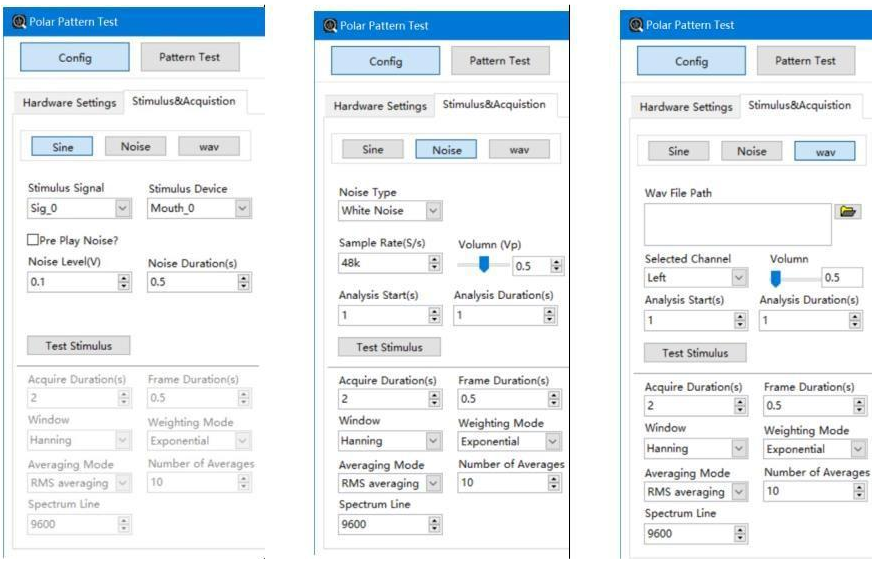
AI Use specified sample rate： 勾选后， AI 通道的采集设备使用指定采样率；

AI Sample Rate： AI 采样率，勾选“ AI Use specified sample rate”后，使用此处自定义的采样率；

Acquire Padding(s)： 在AO 播放结束后， AI 延长采集的时间；

a). **配置Stimulus & Acquisition**

Config”下点击“ Stimulus & Acquisition”， 激励信号与信号采集设置界面如下图 3-2所示。



a、激励信号为扫频b、激励信号为Noise c、激励信号为wav 文件

图 3-2

激励信号设为Sine 扫频时

Stimulus Signal：选取激励信号；

Stimulus Device：激励设备。选择后，可调取校准过的人工嘴的幅值信息；

Pre Play Noise：勾选是否要预播放一段白噪声；

Noise Level（V）：预播放白噪声的幅值； Noise

Duration（s）：预播放白噪声的长度； Test

Stimulus：单步测试播放设置的扫频信号；

激励信号设为Noise 噪声时

Noise Type：噪声类型，可选白噪、粉噪；

Sample Rate(S/s)：信号采样率；

Volume(VP)：输出音量值；

Analysis Start(s)：分析开始时间；

Analysis Duration(s)：分析周期；

Acquire Duration(s)：采集周期；

Frame Duration(s)：分析的数据宽度；

Window：窗函数选择。内置多种函数可供选择；

Weighting Mode：加权方式。可选“ Linear”线形，“ Exponential”指数型；

Averaging Mode：求平均值的模式；

Number of Averages：做平均的点数；

Spectrum Line：TTF 线数；

激励信号选择 wav 文件时

Wav File Path：选择要播放的wav 文件；

Selected Channel：选择左右声道；

其他配置模块与“ Noise”所述一样，不再赘述。

b). **Pattern Test**

点击“ Pattern Test”，指向性测试界面如下图 3-3所示

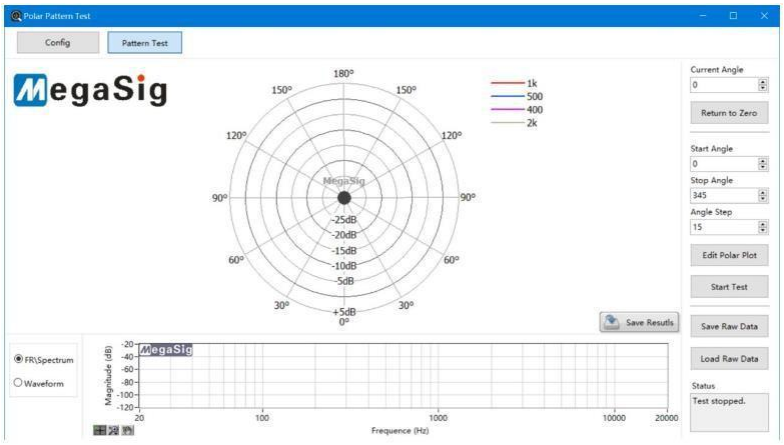


图 3-3

Current Angle：当前角度;

Return to Zero：以转盘当前位置进行角度归零;

Start Angle：开始角度;

Stop Angle：停止角度;

Angle Step：每次测试的角度偏移;

Edit Polar Plot：编辑不同频点的极性坐标。单击进入后可添加、编辑、删除频点，可更改频点极性颜色;

Start Test：单击开始测试;

Save Raw Data：保存原始数据;

Load Raw Data：加载原始数据;

Status：当前测试状态;

FR\Spectrum：频响曲线;

Waveform：时域波形图;

Save Results：保存当前测试结果;

1. Hardware manual

Power supply and communication wiring:

a). Power supply for 220V AC equipment

b). It can be connected to TT 626 via a DB9 serial port cable

2. Operation manual

2.1 Touch screen operation

Introduction to operation interface：

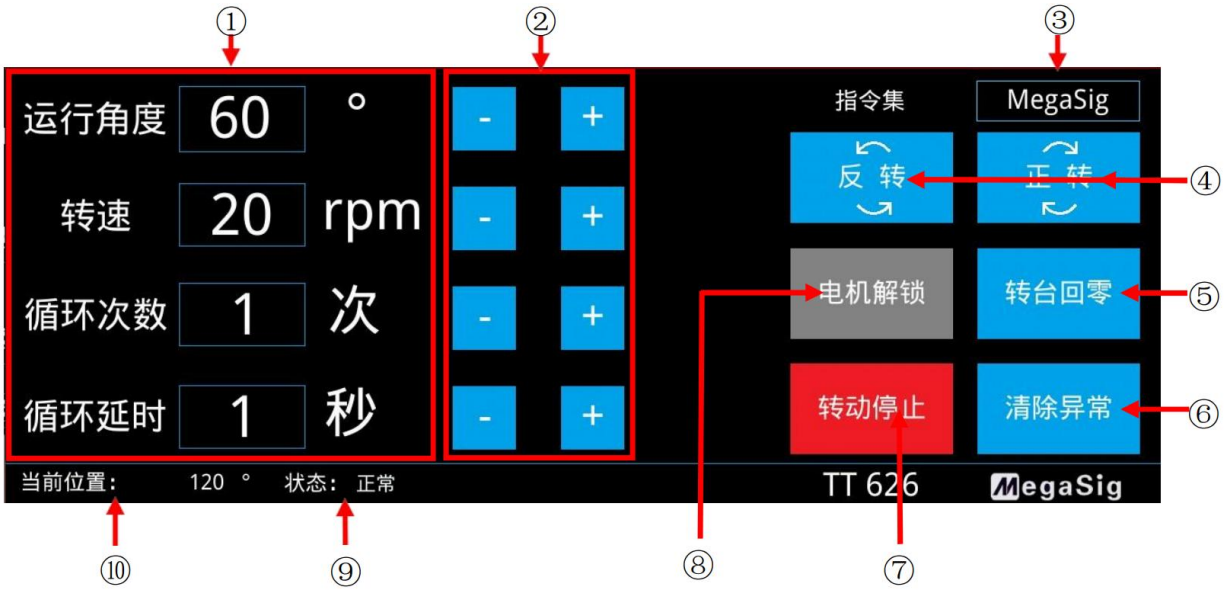


Figure 2-1

① To set the operating parameters of the turntable, click on the corresponding number and enter it through the keyboard as shown in Figure 2-2 below. The parameters can be set using the input device

Figure 2-2

② Parameter adjustment button

③ Instruction set selection

④ The turntable operates in forward/reverse rotation according to the settings on the left side

⑤ Make the turntable quickly return to the zero degree position.

⑥ When the turntable status is abnormal, after clearing the source of the abnormality, press to restore the turntable

⑦ Stop the rotation of the turntable

⑧ Set motor status, lock/unlock

⑨ Real-time status display

⑩ Real-time location display

2.2 Program-controlled operation

1)、DB9 Interface Description

- Perform program control operations through the DB9 interface connected to TT626, and set serial communication parameters

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

- Program Control Instruction Table

（Note: '\r\n' represents carriage return and line feed, with Hex code 0D0A）

Item	Send	Feedback	Note
Motor hold	en\r\n	en\r\n	After holding the motor, the motor can move
Motor disable	k\r\n	k\r\n	In the disabled state, the motor cannot move
Move to absolute position	moveabs < Angle > < Speed >\r\n Example:moveabs 60 20\r\n	moveabs < Angle > < Speed >\r\n	Angle: The angular position when the motor stops moving. Speed: The speed at which the motor moves
Move to relative position	moveinc < Angle > < Speed >\r\n Example：moveinc 60 20\r\n	moveinc < Angle > < Speed >\r\n	Angle: The angular distance from the initial position to the stopped position of the motor. Speed: The speed at which the motor moves
Set acceleration	acc < parameter > \r\n	acc < parameter > \r\n	Sets the acceleration used during speed increase
Set deceleration	dec < parameter > \r\n	dec < parameter > \r\n	Sets the deceleration used during speed decrease
Query fault	FLT\r\n	FLT\r\n	Queries motor fault information.
Query angle	PFB\r\n	PFB\r\n	Angle: The current absolute position of the motor
Query motion status	stopped\r\n	stopped\r\n	Status： -1 = Movement interrupted (e.g., due to disable or hold) 0=Incomplete 1 = Profile completed 2 = Profile completed and drive is in position
Stop motion	stop\r\n	stop\r\n	Stops the motor
Clear fault	clearfaults\r\n	clearfaults\r\n	Clears faults

Item	Send	Feedback	Note
Relative return to zero	>RELATIVE_ORIGIN=X\r\n	>ok\r\n	X is the speed (setting range 1-200). If ">RELATIVE_ORIGIN\r\n" or ">ABSOLUTE_ORIGIN\r\n" is sent directly, the speed set on the screen will be used as the default speed.
Absolute return to zero	>ABSOLUTE_ORIGIN=X\r\n	>ok\r\n	X is the speed (setting range 1-200). If ">RELATIVE_ORIGIN\r\n" or ">ABSOLUTE_ORIGIN\r\n" is sent directly, the speed set on the screen will be used as the default speed.

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.

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

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

3. AudioExpert Directivity Test Instructions（AudioExpert sold separately）

3.1 Software：AudioExpert

3.2 Operation introduction (for details, please refer to Chapter 3.9 of the Audio Expert user manual)

Open "Quick Tools" in Audio Expert, select "Polarity Test", and you will see the interface shown in Figure 3-1 below

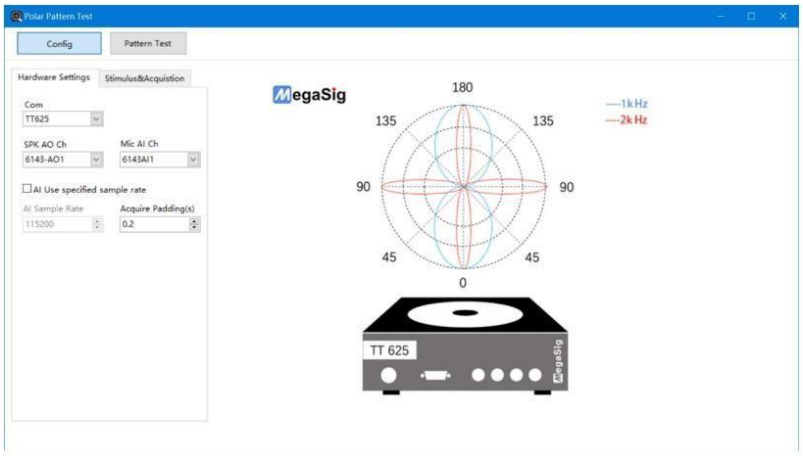


Figure 3-1

Config： Hardware and software configuration interface;

Pattern Test： Directivity test interface;

Hardware Setting： Hardware Setting;

Stimulus & Acquisition： Stimulus signal and signal acquisition settings;

Com： Select TT626 corresponding serial port;

SPK AO Ch： AO channel corresponding to the sound source playback speaker;

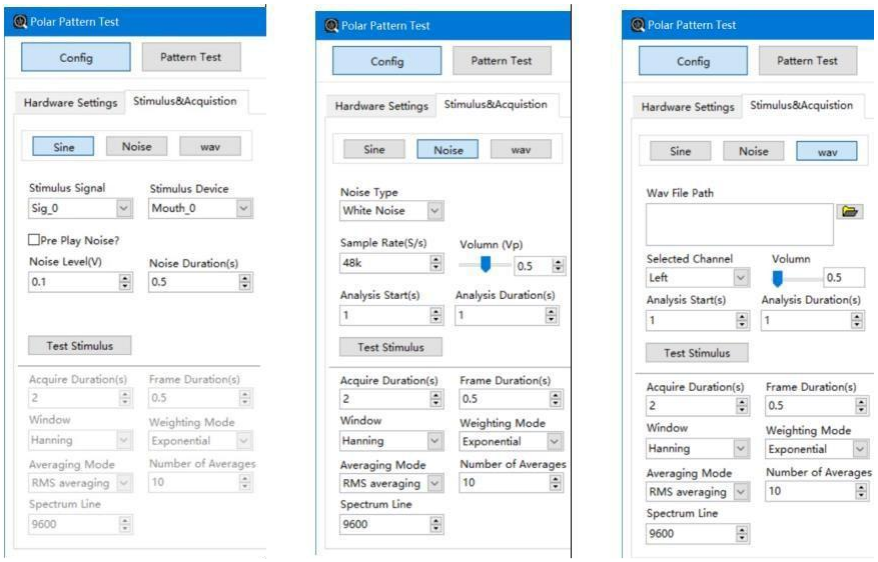
Mic AI Ch： Collect the AI channel software corresponding to the microphone;;

AI Use specified sample rate： After checking this, the acquisition device of the AI channel will use the specified sampling rate;

AI Sample Rate： AI sampling rate. After selecting "AI Use specified sample rate", the sampling rate customized here will be used;

a). **Configuration Stimulus & Acquisition**

Click "Stimulus & Acquisition" under "Config". The interface for setting excitation signals and signal acquisition is shown in Figure 3-2 below.



a、Excitation signal: sweep b、Excitation signal: noise c、Excitation signal: WAV file

Figure 3-2

When the excitation signal is set to Sine and frequency is swept

Stimulus Signal： Select excitation signal

Stimulus Device: Incentive device. After selection, amplitude information of the calibrated artificial mouth can be retrieved;

Pre-play Noise: Check if you want to pre-play a white noise segment;

Noise Level (V): The amplitude of the pre-played white noise; Noise

Duration (s): Length of pre-played white noise; Test

Stimulus: Sweep signal for single-step test playback settings;

When the excitation signal is set to "Noise"

Noise Type: Noise type, with options including white noise and pink noise;

Sample Rate (S/s): Signal sampling rate;

Volume(VP): Output volume value;

Analysis Start(s)： Analysis start time;

Analysis Duration(s)： Analysis period;

Acquire Duration(s): acquisition period;

Frame Duration(s)： Width of the data being analyzed;

Window: Selection of window function. Multiple built-in functions are available for selection;

Weighting Mode: Weighting method. Options include "Linear" and "Exponential";

Averaging Mode: The mode for calculating the average value;

Number of Averages: The number of points used for averaging;

Spectrum Line: TTF line count;

When selecting a wav file as the excitation signal

Wav File Path: Select the wav file to play;

Selected Channel: Select left or right channel;

Other configuration modules are the same as those described in "Noise", so we will not go into details again.

b). **Pattern Test**

Click "Pattern Test", and the directional test interface is shown in Figure 3-3 below

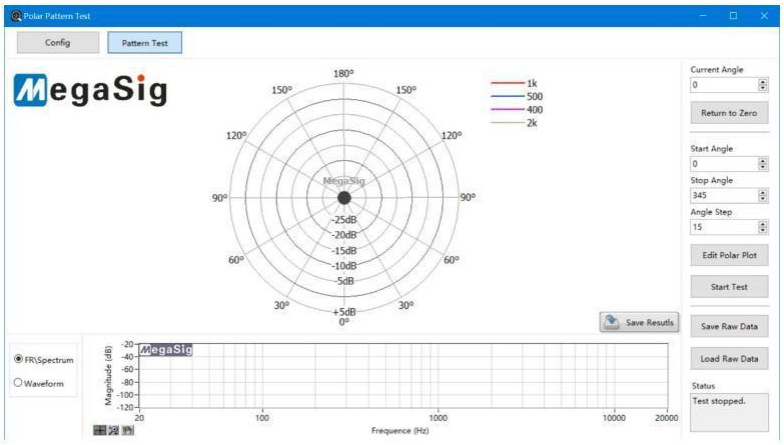


Figure 3-3

Current Angle： Current angle;

Return to Zero： Reset the angle to zero based on the current turntable position

Start Angle： Start angle;

Stop Angle： Stop angle;

Angle Step： Stop angle;

Edit Polar Plot： Edit the polar coordinates of different frequency points. Click to enter, then add, edit, or delete frequency points, and change the polar color of frequency points;

Start Test： Click to start the test;

Save Raw Data： Save raw data;

Load Raw Data： Load raw data;

Status： Current test status;

FR\Spectrum： Frequency response curve;

Waveform： Time-domain waveform;

Save Results： Save current test results;