SST-06 V3.0

SUB SYSTEM 06 STEPER MOTOR INTERFACE

SST-06 V3.0 is Stepper Motor Interface that can operate stand alone or through commands sent from UART Port

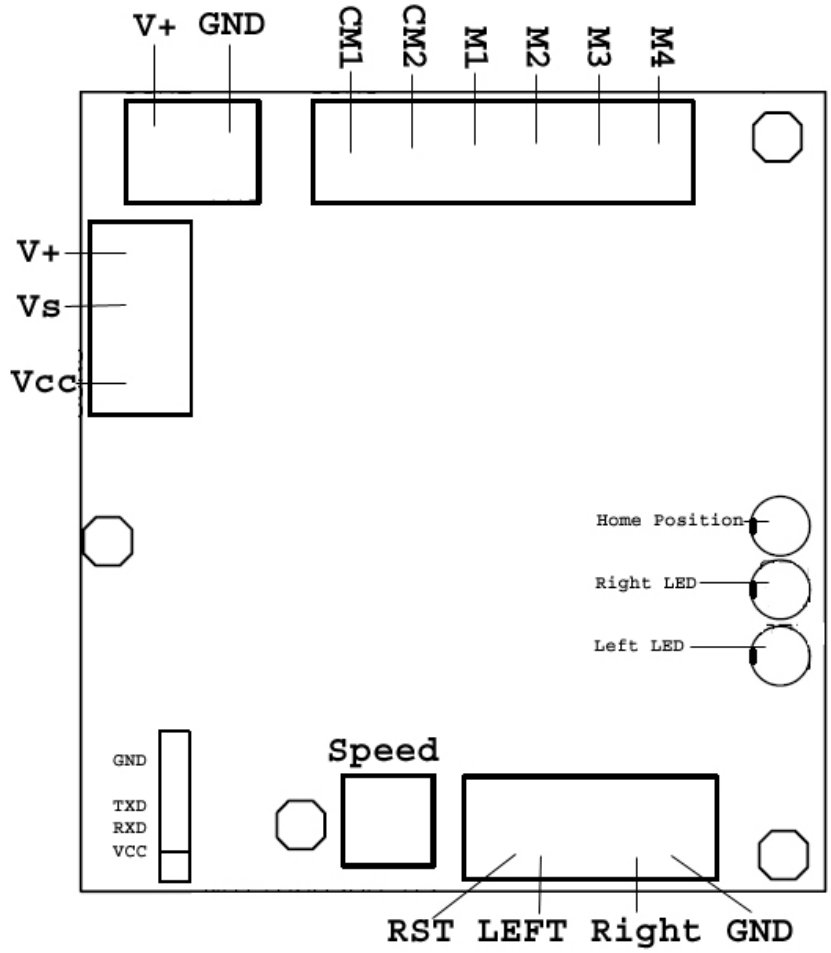

Figure 1. SST-06 Silkscreen Lay out

Description

- V+ is supply voltage for SST-06 input and stepper motor
- VS is supply voltage for DC motor that can be chosen between VCC (5volt) or V+

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www.delta-electronic.com
www.robotindonesia.com
www.deltakits-sby.com

- Vcc is supply voltage 5 Volt from SST-06
- TXD is serial output from SST-06's UART
- RXD is serial input from SST-06's UART
- RST is control input for home position. Strap this pin to GND and the stepper will move to the home position
- LEFT is control input for left direction. Strap this pin to GND and the stepper will move to the left manually
- RIGHT is control input for right direction. Strap this pin to GND and the stepper will move to the right manually
- Home Position LED, will blinking when the stepper move to the home position
- Right LED, will blinking when the stepper move to the right
- Left LED, will blinking when the stepper move to the left
- Speed, control button for the stepper's speed

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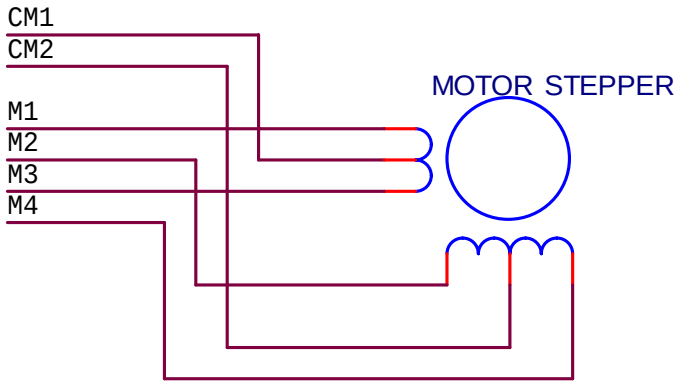

Figure 2 Wiringi Diagram SST-06 and Stepper Motor

Stepper Control Manually

- Make sure that the Left, Right and Reset Control do not connect to ground
- There are 100 speed steps. Press speed button until you reach the desired speed
- The step will increase one step for every pressed button
- The speed step will return to step 1 when reach the step 100
- Speed of each motor could be monitoring by the speed of blink from Indicator LED when the motor moving

Connection between SST-06 and USB Port

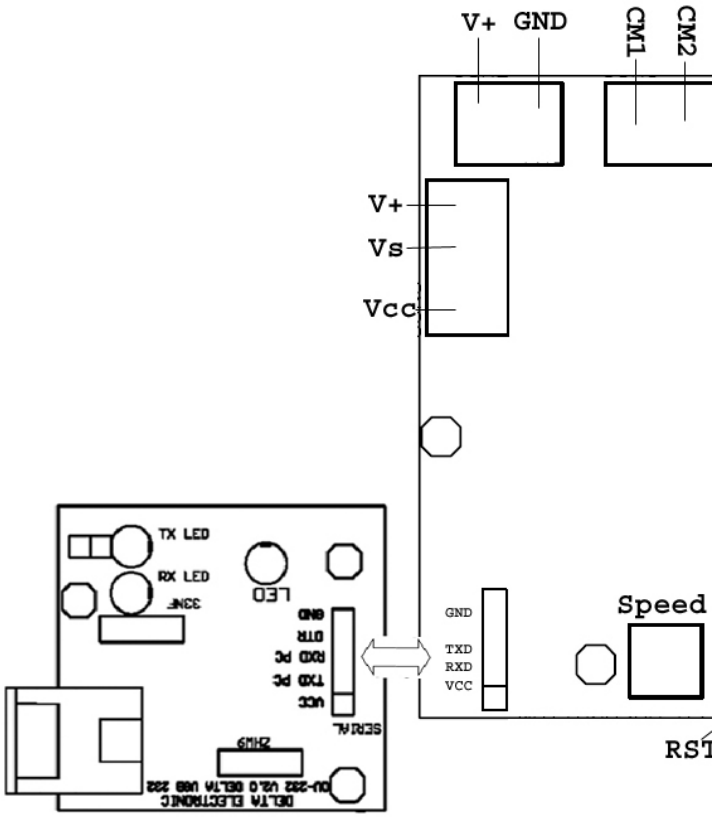

Figure 4 Connection between SST-06 and DU-232

PROTOCOL

UART interface requires a protocol which is a packet data between a PC / Notebook / Microcontroller Master to SST-06 and vice versa. The protocol used is Delta Subsystem Protocol as described in the table above.

Protocol command from PC/Notebook/Master Mikrokontroler to SST-06

Data sent from PC/Master to SST-06			
Byte		**Value**	**Description**
00	Header	1E	Header Packet Data
01	Destination ID	06	ID Subsystem
02	Destination Number	01-FF	Number of Sub System
03	Source ID	00	ID Sender 00 = Master (PC/Microcontroller)

04	Source Number	01-FF	Number of Master
05	Length		Data Packet Length
06	Perintah	01	Start Motor Continuous mode
		02	Stop Motor
		03	Start Motor to the desired position
		04	Set the speed of motor
		05	Set Home Position

Start Motor in Continuous Mode			
Byte		**Value**	**Description**
07	Set Direction	00/01	00 CCW/01 CW

Stop Motor			
Byte		**Value**	**Description**

Start Motor to the desired direction			
Byte		**Value**	**Description**
07	Set Direction	00/01	00 CCW/01 CW
08	Count of turn	00 - FF	
09	Count of step	00 - 200	Untuk sudut 1.8 derajat / step

Set Motor's Speed			
Byte		**Value**	**Direction**
07	Speed	00 - 100	
Set Home Position			
Byte		**Value**	**Description**