

Whedco IMJ-105D Setup

Please read through directions in completely before beginning installation.

1. Power:

The IMJ-105D accepts an alternating current in the range of 90-130 Volts which corresponds to the voltage from a wall socket. Thus, in order to connect the power to the Whedco take power from the wall socket and connect the (positive, negative and ground wires) to the (L, N and ground) connections respectively. These connections are located on the bottom of the front panel of the controller. When the connection is made the Whedco display will output a PF (Power Failure) message which simply means that the Whedco has not been reset and this display is expected.

2. Jumper Settings:

The Whedco should be operated in the 'Sourcing' mode which means that it operates with high inputs and high outputs. The jumper connections which must be made in order to establish this state are given below.

Jumper Connections
17,20
15,18,19

3. DIP Switch Settings:

Assuming that a serial port is being used for communication with the Whedco the only DIP switches which must be set are switches 6,7,8. These switches control the Baud Rate as given below.

Baud Rate	6	7	8
1,200	R	R	R
9,600	L	R	R
19,200	R	L	R
38,400	L	L	R

4. Serial Connection:

The serial connection is made on the top right of the Whedco. Keep in mind if making your own serial cable there is a one to one correspondence between the input and output connections. This serial connection may be made directly with the computer or through a terminal server.

5. Motor Connection:

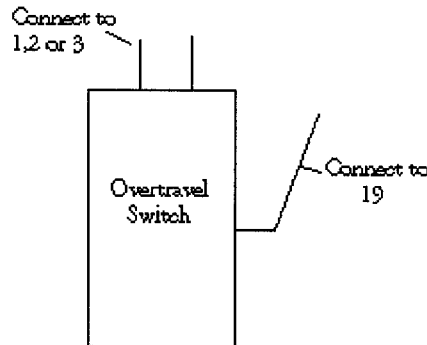
Various stepping motors have different wire configurations so this step is unique to each setup. Consult the specifications for the motor in order to determine the specific wire connections. In general the motors have a phase A and phase B with each have is an associated positive and negative. The A- and B- should be tied together connected to the A/B- connection on the front of the Whedco. The A+ and B+ should then be placed in their respective connections. Do not worry about reversing the A+ and A- because this merely changes the direction of the motor as

long as one is consistent. Each stepper motor has a different KM value which must be set using a Whedco command. This value is motor specific and is an integer value from 0 to 10. In order to determine the proper KM value consult the Whedco technical support number given below.

6. Overtravel Switches:

The overtravel or limit switches are typically connected so that there is a 12V potential from the Whedco in a current loop and when the switch is tripped the loop is broken and the Whedco immediately halts all motion. Connections may be made on the top of the Whedco for the overtravel switches as given below.

Pin	Function
1	Home
2	(+)Overtravel
3	(-) Overtravel
19	Com (+12V)



7. Communication:

At this point one should be able to communicate with the Whedco and thus with the motor. If one is using a terminal server in order to send information it may be easiest to start by establishing a telnet session with the server and send the some initial commands to make sure that the Whedco has been properly connected. The default address for the Whedco is 1 so each time one sends a command to the Whedco it must be prefaced with this address. One fact to keep in mind is that the Whedco always repeats the command line in its output to the computer so if one prompts the Whedco for a response the Whedco will return the prompt and then the response. When programming remember that the Whedco is always returning the prompt to its output even if the command does not require a response.

8. Basic Whedco Commands:

At this point one can make use of the Whedco programming manual in order to send commands to the Whedco. Below is a list of basic commands which will be useful in Whedco setup. The commands are listed in the appropriate order for testing the Whedco.

Command	Function
CURC	Sets the current supplied to the motor to a percentage of 5 amps (i.e. CURC=50 will set the current to 2.5 amps)
KM	Set KM to an integer (0-10); this is motor specific The default KM is zero; For the Pacific Scientist PowerMax II (KM=9)
RSF	Resets all Faults and supplies current to motor (Warm Boot) After performing this function PF output will be replaced by OK
STF	Sets Faults (Cold Boot)
OTE	Enables the overtravel switches (OTE=1)
URA	Unit Axis Ratio Setting: Recommend (URA=50,000) With this URA programming is in revolutions rather than pulses
MVL	Set the Motion Velocity equal to a floating point number (i.e. MVL=.3)
MAC	Set the Motion Acceleration equal to a floating point number
MDC	In order to have a different deceleration constant than acceleration
RVR	Runs Reverse
RVF	Runs Forward
ST	Stop - Decelerates Normally
HT	Halt- Halts Immediately
MPA	Absolute Move Position, Sets the Destination (i.e. MPA=position)
RPA	Runs to the Absolute Move Position
PSC	Returns the axis position (PSC?)
CIE	Enables the Computer Interface for returning status values (CIE=1)

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For Further Assistance:

The Generation D RTOS Programming Manual
DeviceNet Reference Guide
Whedco Technical Support: 1-734-665-7540