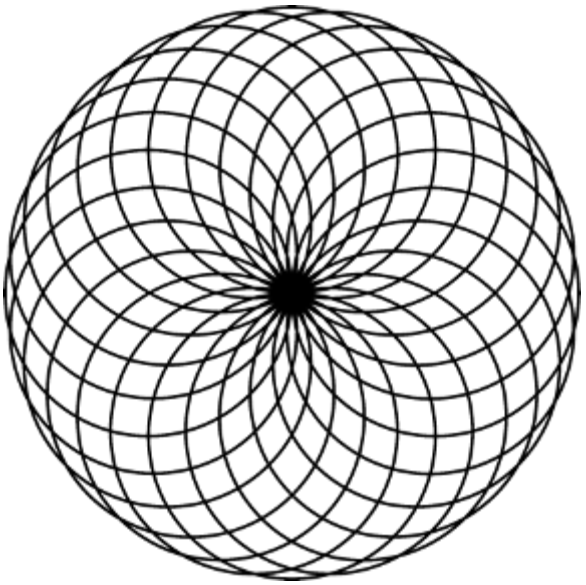


Rosetta

Standards & Interfaces

Version 0.02
16 January 2025

Overview **3**
Cable Types **3**
Cable Colours **3**
Stepper Motors (CAT-5/CAT-6) 3
Limit Switches (RJ-11) 3
Cable Pinouts **4**
Stepper Motors (CAT-5/CAT-6) 4
Limit Switches (UTP phone cable {POTS}) 5

Overview

This is to document the decisions as we go. The final document will be in a more completed form.

Cable Types

Cable Use	Cable Type	
	Minium	Recommended
Stepper Motors	Ethernet, CAT-5	1. Shielded CAT-6 2. Use strain relief boot 3. <10 ft long
Limit Switches	Phone Cable (POTS) UTP	1. Use strain relief boot 2. <10 ft long

Cable Colours

Stepper Motors (CAT-5/CAT-6)

Cable Colour	Used For
Black	Spindle
White	Rosettes Drive
Blue	X Axis
Green	Z Axis
Red	Configurable Axis 1
Yellow	Configurable Axis 2
Pink	Configurable Axis 3
Purple	Configurable Axis 4

Notes:

1. These colours will also be used to colour code:
    - Surround for jacks on box panel
    - Filament colour used when printing the end caps for the stepper motors.
2. The use of these colours is to make operation easier for the user.

Limit Switches (RJ-11)

No standard is established for this.

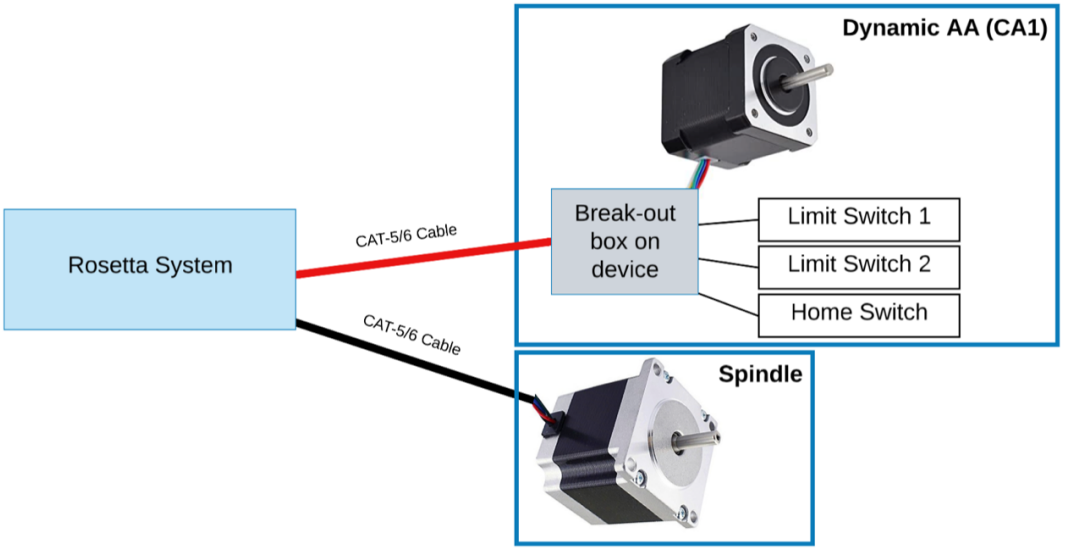
Cable Pinouts

Stepper Motors (CAT-5/CAT-6)

Ethernet Cable		Stepper Motor	
Wire	Wire Color	Used For	StepperOnline Wire Colours
1	White/Green	Limit Switch 1	n/a
2	Green	A-	Green
3	White/Orange	Limit Switch 2	n/a
4	Blue	B-	Blue
5	White/Blue	Home Switch	n/a
6	Orange	B+	Red
7	White/Brown	GND	n/a
8	Brown	A+	Black

Notes:

1. Cable colours are based on EIA/TIA-568A
2. Striped wires are backups for solid coloured wires.
3. Typical, off-the-shelf cables will carry the respective signal separately; the implication is that the junction ends can tie the respective colours together (e.g., Blue with White/Blue).
4. Stepper motor wire colours for other vendors may use different colour schemes; consult the vendor's specifics to ensure the bipolar connection is correct.



Limit Switches (UTP phone cable {POTS})

Wire	Wire Colour	Used For
1		UNUSED
2	White/Orange	GND
5	Orange	
3	Blue	Signal Pin / +V
4	White/Blue	
6		UNUSED

Notes:

1. Striped wires are backups for solid coloured wires.
2. Typical, off-the-shelf cables will carry the respective signal separately; the implication is that the junction ends can tie the respective colours together (e.g., Blue with White/Blue).
3. Pins 1 & 6 are part of the RJ-12 standard, so are shown here though they will be unused.