MOLEX PLUGS

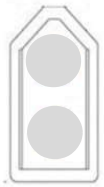
There are three files combined on this document and all are related.

This Lebre Office Draw file New 2-3-4-6-9-12-MOLEX PLUGS.odg

Page 6 shows the Standard 6 pin Molex Plug Wiring for the Queen City HiRailers connecting the display modules.

It is included in this document and can be found in the QCHR Module Standards documents.

Page 8 shows the 0 Gauge Color Chart.XLSX and is a simple chart of colors to be used and developed for use at both Bethesda North Hospital train display and at EnterTRAINment Junction and is being converted to the HiRailers for independent use.



PINS AND HOUSING CONNECTORS

MALE MOLEX HOUSING

The housing is hollow and will Insert into the Female Molex Housing. We Insert the Female pins into the Male Housing. This helps to keep the female pins from seperating making a more secure connection.



Sleeve



FEMALE HOUSING

The Female Molex Housing is recesed with a wall around the connection areas. The Male Molex Plug is inserted into the Female Molex Housing. The Female housing has the Male pins inserted and the connections stick up inside the houseing with no actual protection. Note this is the way that we started using the housings over 30 years ago.



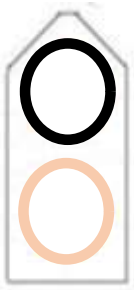
Pin

THIS FILE WAS CREATED ORIGINALLY FOR BETHESDA NORTH HOSPITAL TRAIN LAYOUT

All DC Negative wiring is attached to one common BLACK Wire no matter the voltage. All AC Common wiring is connected to the common WHITE wire no matter the voltage. The color wires assigned are to be used in the plugs to help identify the voltage by the installer and or the trouble shooter.

Note that all listed plugs are attached to the power source.

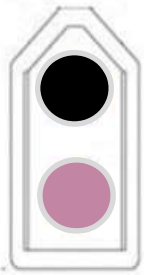
3 Volt DC Female Housing



Negative—Black

Positive—Tan

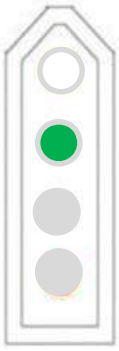
4.5 Volt DC Male Housing



Negative—Black

Positive—Purple

6 Volt AC Male Housing



Common—White

Hot—Green

6 Volt DC Female Housing

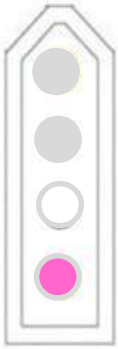


Negative—Black

Positive—Blue

BN Wiring Color Coding

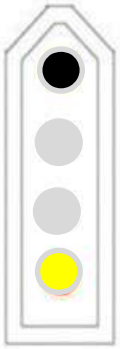
9 Volt AC Male Housing



Common—White

Hot—Pink

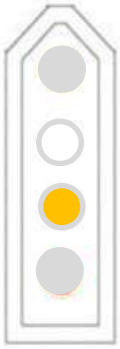
9 Volt DC Male Housing



Negative—Black

Positive—Yellow

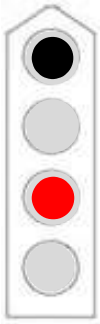
12 Volt AC Male Housing



Common—White

Hot—Orange

12 Volt DC Female Housing



Negative—Black

Positive—Red

12 Volt DC RCA Male Plug



This Male plug is Attached to the item That is to be operated.

Using Red Positive And Black Negative.

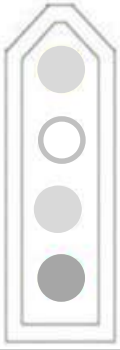
12 Volt DC RCA Female Plug



This Female plug is Attached to 12 Volt Power Supply.

Using Red Positive And Black Negative.

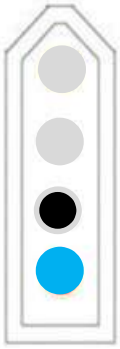
14 Volt AC Male Housing



Common—White

Hot—Gray

14 Volt DC Male Housing

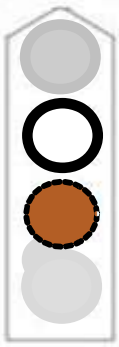


Negative—Black

Positive—Blue Marked

BN Wiring Color Coding

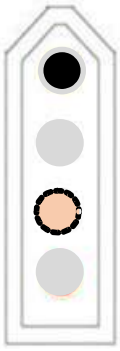
16 Volt AC Female Housing



Common—White

Hot—Brown Marked

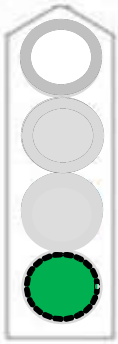
16 Volt DC Male Housing



Negative—Black

Positive—Tan Marked

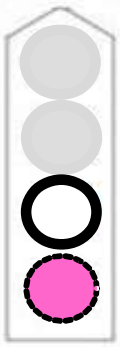
18 Volt AC Female Housing



Common—White

Hot—Green Marked

18 Volt DC Female Housing



Negative—Black

Positive—Pink Marked

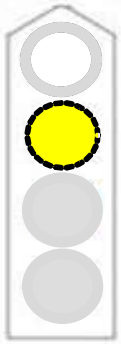
24 Volt AC Female Housing



Common—White

Hot—Gray Marked

24 Volt DC Female Housing



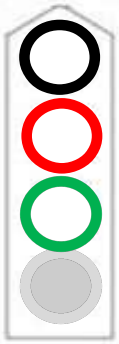
Negative—Black

Positive—Yellow Marked

BN Wiring Color Coding

Female Housing Used for Button Relays

Using 3 pins in 4 pin housing

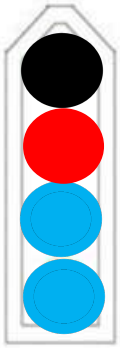


Common—White or Black

Positive or Hot

Hot Activated by relay or button

Using 4 pins for activation of timer



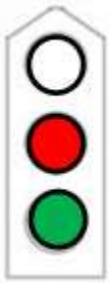
Negative—Black for LED Light

Positive— Red for LED light

Timer Activation Wires to
The Push button

This plug is used to attach to the activation push button with a light to activate an item.

3 Pin Female Housing from a relay control



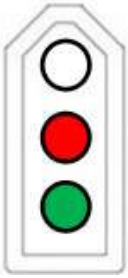
Common—White or Black

Hot when relay not activated

Hot after relay is activated

This plug is used to attach the item to be operated such as a block signal light or flashing lights that will flash alternately through the use of a relay

3 Pin Male Housing from a relay control



Common—White or Black

Hot when relay not activated

Hot after relay is activated

This plug is used to attach the item to be operated such as a block signal light or flashing lights that will flash alternately through the use of a relay

PLEASE NOTE

These Pages are just the basic application of connections as there are many ways to use the plugs for other applications within the wiring that you may be using.

QCHR Module 6 Pin Wiring Housings

You are looking at the coupling ends of the plugs
The wires themselves protrude out of the back end of the plugs

Pin 1 = Track 1 Outer Track (Blue Wire) (Outside Loop)

Pin 2 = Track 2 Middle Track (Black Wire) (Outside Loop)

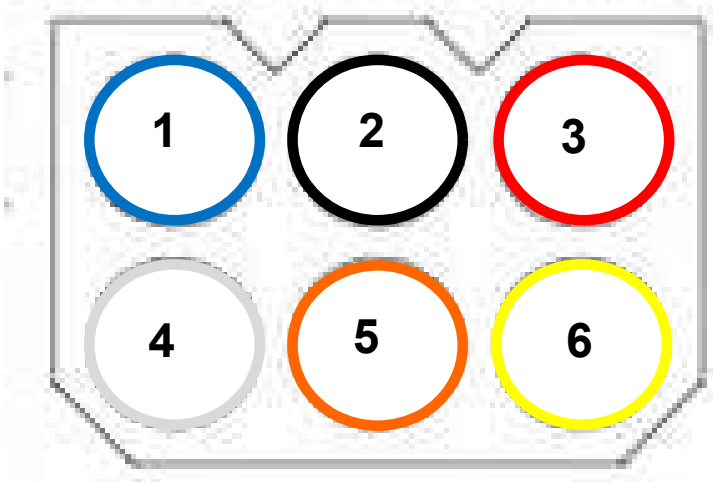
Pin 3 = Track 3 Inside Track (Red Wire) (Inside Loop)

Pin 4 = Common Ground (White Wire

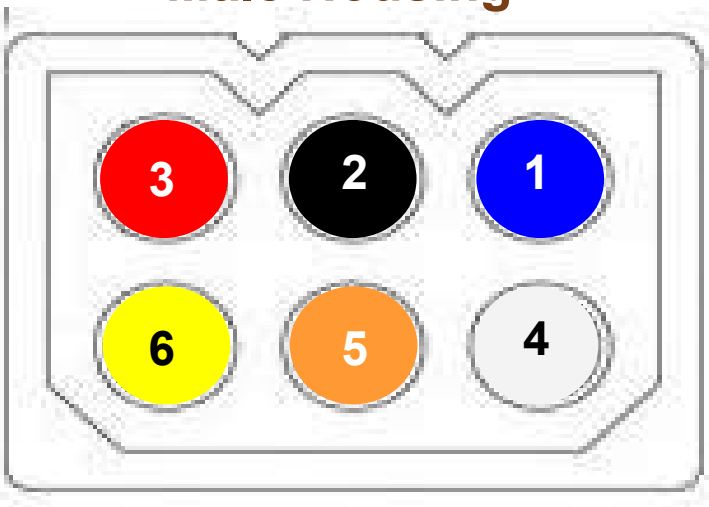
Pin 5 = 14 Volt Accessory (Orange Wire)

Pin 6 = Track 4 Inside track (Yellow Wire) (Inside Loop)

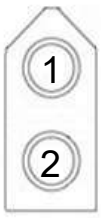
Female Housing

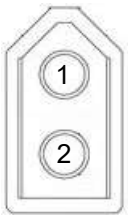


Male Housing

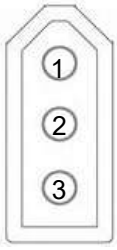


Female Housing Pins and Male Housing Pins



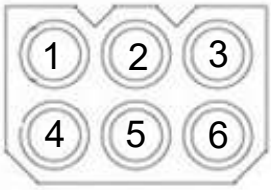


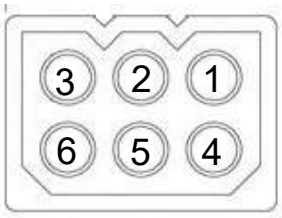


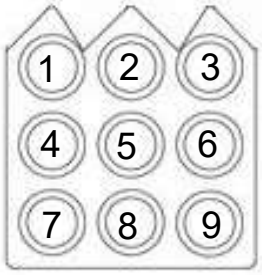




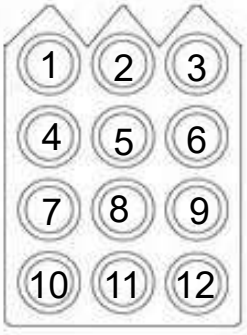














Wiring Colors for Various Voltages

All Molex connections listed are from the power source

Check File "All - Wiring A - 2-3-4-6-9-12-MOLEX-PLUGS" for Pin & Wire Color Locations

Wiring Colors for Various Marked Colors are with Dashes by Permanent Marker

Original Fille is located "All - Chart A -Wiring Colors for Various Voltages.pub"

VOLTAGE	MOLEX PINS
3 V DC	2 Female
4.5 V DC	2 Male
6 V AC	4 Male
6 V DC	4 Male
9 V AC	4 Male
9 V DC	4 Male
12 V AC	4 Male
12 V DC	4 Female
14 V AC	4 Male
14 V DC	4 Male
16 V AC	4 Female
16 V DC	4 Male
Common	Alternating
Negative	Direct
18 V AC	4 Female
18 V DC	4 Female
24 V AC	4 Female
24 V DC	4 Female

HOT / POS	COM / NEG
Tan	Black
Purple	Black
Green	White
Blue	Black
Pink	White
Yellow	Black
Orange	White
Red	Black
Gray	White
Blue Marked	Black
Brown	White
Tan Marked	Black
White	White
Black	Black
Green Marked	White
Pink Marked	Black
Gray Marked	White
Yellow Marked	Black

COLORS
Tan
Purple
Green
Blue
Pink
Yellow
Orange
Red
Gray
Blue Marked
Brown
Tan Marked
White
Black
Yellow Marked
Pink Marked
Gray Marked
Green Marked

Update this page 04-06-2026