

Loos City - BN Wiring Colors



Pin

PINS AND HOUSING CONNECTORS

MALE HOUSING

The housing is hollow and each pin sticks up within the outer wall that will encircle the female housing.



Sleeve



FEMALE HOUSING

The female pins are inset within the housings to maintain them being separated when inserting the male pins.

Note this is the way that we started using the housings over 30 years ago.



THIS FILE WAS CREATED ORIGINALLY FOR BETHESDA NORTH HOSPITAL TRAIN LAYOUT

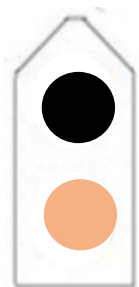
All DC Negative wiring is attached to one common BLACK Wire no matter the voltage.

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.

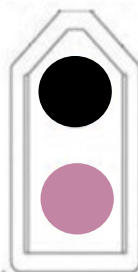
3 Volt DC Female Housing



Negative—Black

Positive—Tan

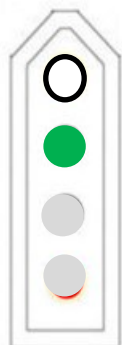
4.5 Volt DC Male Housing



Negative—Black

Positive—Purple

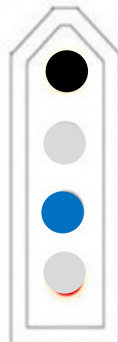
6 Volt AC Male Housing



Common—White

Hot—Green

6 Volt DC Male Housing



Negative—Black

Positive—Blue

Loos City - BN Wiring Colors

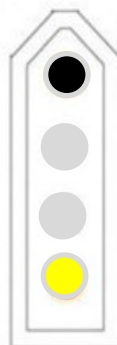
9 Volt AC Male Housing



Common—White

Hot—Pink

9 Volt DC Male Housing



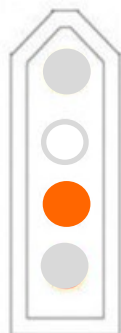
Negative White—9 Pin #6

New Black

Positive Black—9 Pin #5

New Yellow

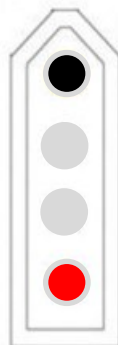
12 Volt AC Male Housing



White AC Common

Orange AC Hot

12 Volt DC Male 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.

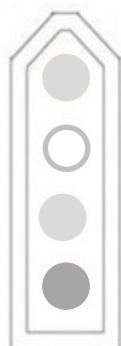
12 Volt DC RCA Female Plug



This Female plug is
Attached to 12 Volt
Power Supply.

Using Red Positive
And Black Negative.

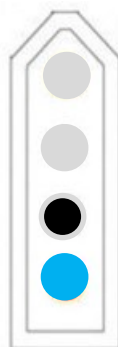
14 Volt AC Male Housing



Common—White

Hot—Gray

14 Volt DC Male Housing

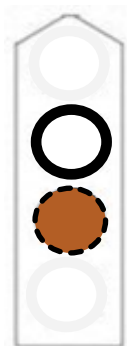


Negative—Black

Positive—Blue Marked

Loos City - BN Wiring Colors

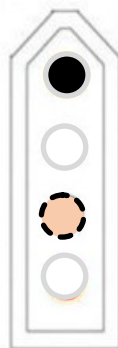
16 Volt AC Female Housing



Common—White

Hot—Brown Marked

16 Volt DC Male Housing



Negative—Black

Positive—Tan Marked

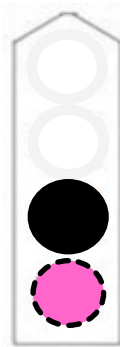
18 Volt AC Female Housing



Common—White

Hot—Green Marked

18 Volt DC Female Housing



Negative—Black

Positive—Pink Marked

24 Volt AC Female Housing



Common—White

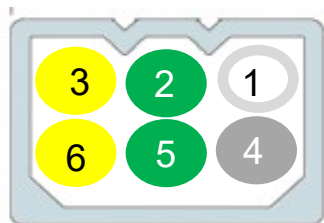
Hot—Gray Marked

24 Volt DC Female Housing



Negative—Black

Positive—Yellow Marked



Connection for any activated building such as the FIRE HOUSE with Sound.

Pin 1 Common AC -

Pin 4 Hot AC 14 Volt being used

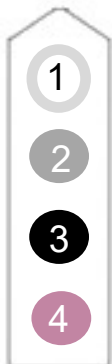
Pin 2 and Pin 5 are the activation wires from the button

Pin 3 and Pin 6 are the wires to external speaker if used

Male plug on the board and Female plug comes from building

Loos City - BN Wiring Colors

Combination 4.5 V DC and 14 V AC



Connection for any building with 14 V AC Lights and any 4.5 volt item such as an operating sign with the Female plug on the board

Male plug comes from building - Pin assignment:

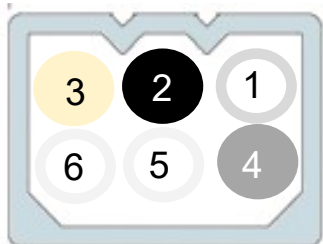
Pin 1 Common AC - Building Lights

Pin 2 Hot AC - Building Lights

Pin 3 Negative DC - For Miller Sign

Pin 4 Positive 4.5 V DC - For Miller Sign

Combination 3 V DC and 14 V AC



Connection for any activated building and 3 Volt DC Accessory

Male plug on the board and Female plug comes from building

Pin 1 - Common AC - White Wire

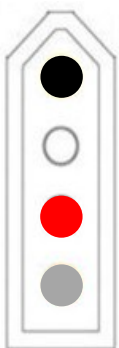
Pin 2 - Negative DC - Black Wire

Pin 3 - Positive 3 Volt DC - Tan Wire

Pin 4 - Hot AC 14 Volt - Gray Wire

Pin 5 & Pin 6 - Are left empty

Special—House on Fire and IRS on Fire



Lionel House on Fire and the IRS Building on Fire Connection Plug with or without added 12 V DC LED lights

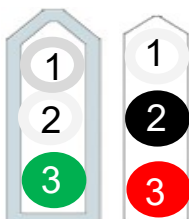
Pin 1 - 12 V DC Negative Black Wire for Lights

Pin 2 - Common AC - White Wire

Pin 3 - 12 V DC Positive **Red Wire** for Lights

Pin 4- Hot AC 14 Volt - Gray Wire for the Smoke

External Power Sources



External Power Sources oly for temp use not to the Buss wires

Pin 1 - Common AC - White Wire—DC is not in use

Pin 2 - AC is Not in use—Black for 12 V DC Negative Lights

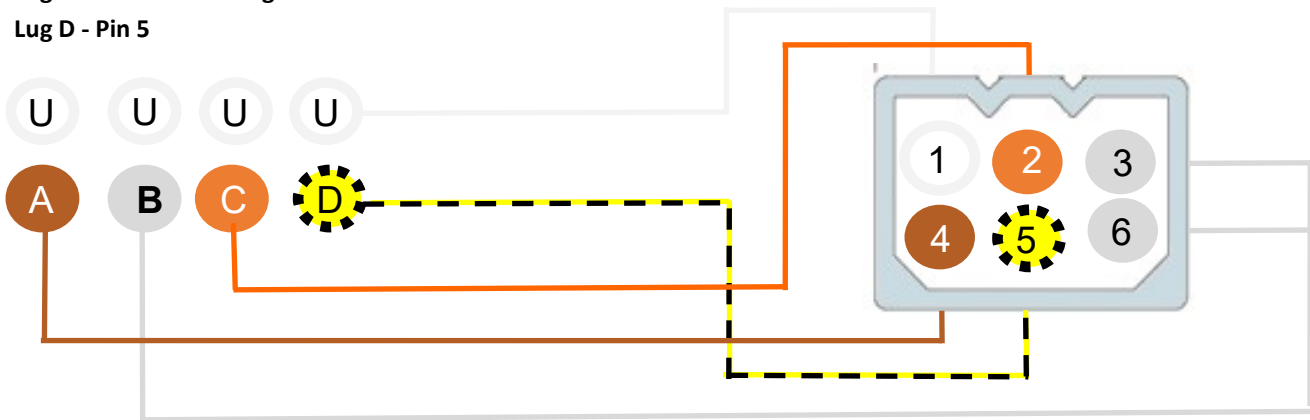
Pin 3 - Hot wire is Green for AC—Red for 12 V DC Pos-

L-3 Standalone Operation

Special Molex Connections

Cable - ZW LUGS to Male Molex Connector

Lug U - Pin 1
Lug B - Pin 3 & 6
Lug D - Pin 5
Lug A Pin 4
Lug C Pin 2



Under Board Female Molex Connector



Pin 1 Common White for AC Direct to Buss and to the Rectifier

Pin 2 Orange for 12 V AC Direct to Buss

Pin 3 Gray for 14 V AC Direct to Buss

Pin 4 Brown for 16 V AC connected to the Trolley Timer

Pin 5 Yellow Marked for Variable AC Trolley Operation To (Connected to the Red wire connected to the center rail)

Pin 6 Gray for 14 V AC to the Rectifier Under the board

Do not attach this lead to the Buss only Pin 3 to the buss for Gray

Rectifier from incoming Connector for 14 V Under board

White Common AC to Rectifier then continue to the Buss

Black for 12 V DC Negative Rectified from the White

Red Wire for 12 V DC Positive Rectified from the Gray

Gray 14 V AC to Rectifier and does not continue to the Buss

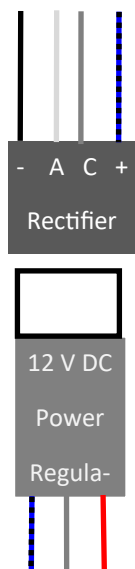
12 V Power Regulator are from the rectified wires then to Buss

Blue Marked to left leg of Power Regulator from the Rectifier

Black to the Center leg of Power Regulator

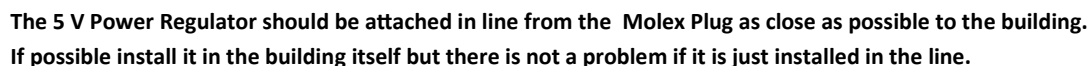
Black from the Center leg to the Black DC Negative Buss

Red from the right leg of Power Regulator to Red Positive Buss



L-3 Standalone Operation

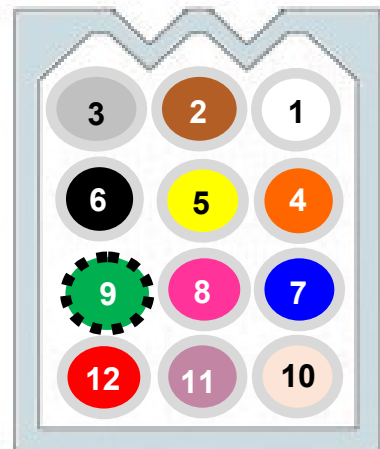
Under Board Wiring



Loos City New Wiring Colors

**All 12 Pins are filled on LL2 - LL4 - LL1
On LL3 LL5 and LL6**

- Pin 1 = White - Common AC Ground
- Pin 2 = Brown - 16 Volt AC
- Pin 3 = Gray - 14 Volt AC
- Pin 4 = Orange - 12 Volt AC
- Pin 5 = Yellow - 9 Volt DC
- Pin 6 = Black - DC Negative
- Pin 7 = Blue - Variable AC Voltage City Streets
- Pin 8 = Pink - Variable AC Voltage City Streetw
- Pin 9 = Green Marked - 18 Volt AC
- Pin 10 = Tan - Power for Bumper Trolley
- Pin 11 = Purple - 4.5 V DC
- Pin 12 = Red - 12 V DC



Male
Molex
Plug



Female
Molex
Plug

Pin Voltage

11 4.5 V DC

5 9 V DC

12 12 V DC

4 12 Volt AC

3 14 Volt AC

2 16 Volt AC

9 18 Volt AC

6 Neg DC Black

1 Common AC White

7 City Streets Variable

8 City Streets Variable

10 Bumper Trolley

City Streets Buss Connection

7

Pin 7 = Blue - Variable DC Voltage

8

Pin 8 = Pink - Variable DC Voltage

Bumper Trolley Buss Connection

1

Pin 1 = White - Variable AC Common

10

Pin 10 = Tan - Variable AC Hot

Suggested Building locations for set up

LL2 (6 Foot) (Super Streets front/back/left side)

- Jenny Bakery/Breyer's Ice Cream Sign on top (thin corner MTH Building)
- Grand American Maple Donuts (thin MTH Building)
- Store with Coke Machine in front (thin MTH Building)
- Irish Brewing Company/O'Mara's (thin MTH Building)
- Dewey, Cheatum, and Howe Attorneys (thin MTH Building)
- Internal Revenue Service (thin MTH Building w/action – on fire)
- House on Fire (MTH Building w/action – fire and smoke, on a button)
- Firehouse (MTH Building w/action – firetruck exits building)

LL4 (4 Foot) (Super Streets front/back)

- Ford Dealership (MTH Building w/action – showroom cars rotate, sound)
- Starlite Diner (lighted interior)
- Madison Hardware (Lionel – moving miniature trains inside – plan to put on a button)

LL1 (6 Foot) (Super Streets front/back/right side)

- McDonalds (MTH Building w/action – car moves, sound, on a button)
- Dreyfuss Six-Story Building (wide MTH Building)
- Cook, Books & Hyde (wide MTH Building)
- Gateway Auto Parts (thin corner MTH Building)
- Car Wash (MTH Building w/action – car moves, sound, on a button)

LL3 (4 Foot) (Super Streets Trolley Start/End)

- Chippie's 72 Steak House (wide MTH Building)
- Smith Bros. Television & Appliances (Woodland Scenics w/activated TVs inside)
- Mel's Drive In (MTH Building w/action – car moves, sound, on a button)

L6 (4 Foot) (No Super Streets)

- Red Owl Supermarket (Menards, 4.5 volts)
- Red Owl Annex/J.R. Watkins (Menards, 4.5 volts)
- Piggly Wiggly (Menards, 4.5 volts)

C17 & C18 (Corner) (Car Show/Ballfield)

- Soft Serve Ice Cream Stand
- American Flag (Lionel – plan to put on button)
- Snack Time Junction
- Ticket Booth
- Ball Field/Bleachers/Small Tower/3 Floodlights
- Ticket Booth
- Outhouses

L5 (4 Foot) (Trailers/Balloons)

- Trailers (Three, Woodland Scenics)
- Playground Equipment

Or

- Balloons (Lionel)

Wiring Colors for Various Voltages

All Molex are from the power source

Check the chart for Pin Locations and Wire Color

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

Original Fille is located ["02 Info - BN -All Gauges Power Supplies on Each Board.pub"](#)

Pin # **Note Pin Numbers 7 & 8 are city streets with a Blue and Pink wire for Variable AC**

	VOLTAGE	MOLEX PINS	HOT / POS	COM / NEG	COLORS
10	3 V DC	2 Female	Tan	Black	Tan
11	4.5 V DC	2 Male	Purple	Black	Purple
	6 V AC	4 Male	Green	White	Green
	6 V DC	4 Male	Blue	Black	Blue
	9 V AC	4 Male	Pink	White	Pink
5	9 V DC	4 Male	Yellow	Black	Yellow
4	12 V AC	4 Male	Orange	White	Orange
12	12 V DC	4 Female	Red	Black	Red
3	14 V AC	4 Male	Gray	White	Gray
	14 V DC	4 Male	Blue Marked	Black	Blue Marked
2	16 V AC	4 Female	Brown	White	Brown
	16 V DC	4 Male	Tan Marked	Black	Tan Marked
1	Common	Alternating	White	White	White
6	Negative	Direct	Black	Black	Black
9	18 V AC	4 Female	Green Marked	White	Yellow Marked
	18 V DC	4 Female	Pink Marked	Black	Pink Marked
	24 V AC	4 Female	Gray Marked	White	Gray Marked
	24 V DC	4 Female	Yellow Marked	Black	Green Marked

Update this page 05-16-25

Buttons to operate various items

Note Items in Red for updating

LOOS CITY MODULES

LL2 (6 Foot) (Super Streets front/back/left side)

- House on Fire (**No Button / No Timer**)
- Add the IRS building on Fire to the operation with the House on Fire
- Firehouse (**Button / Timer / External Speaker**)

LL4 (4 Foot) (Super Streets front/back)

- Starlite Diner (**Button / No Timer / External Speaker**)
- Madison Hardware (Lionel – moving miniature trains inside (**No Button / No Timer**))
-
- Disappearing People at Station (**No Button / No Timer**)

LL1 (6 Foot) (Super Streets front/back/right side)

- McDonalds (**Button / No Timer / External Speaker**)
- Speedy Car Wash (**Button / No Timer / No External Speaker**)

LL3 (4 Foot) (Super Streets Trolley Start/End)

- Mel's Drive In (**Button / No Timer / No External Speaker**)
- Hobby Shop (**No Button / No Timer**)
- Disappearing People at the trolley stop (**No Button / No Timer**)

L6 (4 Foot)

C17 & C18 (Corner) (Car Show/Ballfield)

- American Flag (**No Button / No Timer**)

L5 (4 Foot) (Trailers/Balloons)

- Balloons (**Button / Timer**) (**Total rework is needed to reduce the confusion**)(This will be the last item to be updated due to complexity of the upgrade)
- **STANDARIZE ALL CONNECTIONS TO VOLTAGE AND PLUGS**
 - 11 Timers to build are needed
 - 5 New Buttons are needed

