

# NWV EDUCATION SERIES



**DCC Sound Installation  
KATO HO GP-35**

# Step 1- Disassembly

- Remove Couplers
- Remove Shell
- Remove Drive Linkage
- Remove Trucks
- Remove Motor



Front

Rear

Original Kato GP-35 Frame

# Step 2 - Modify Frame

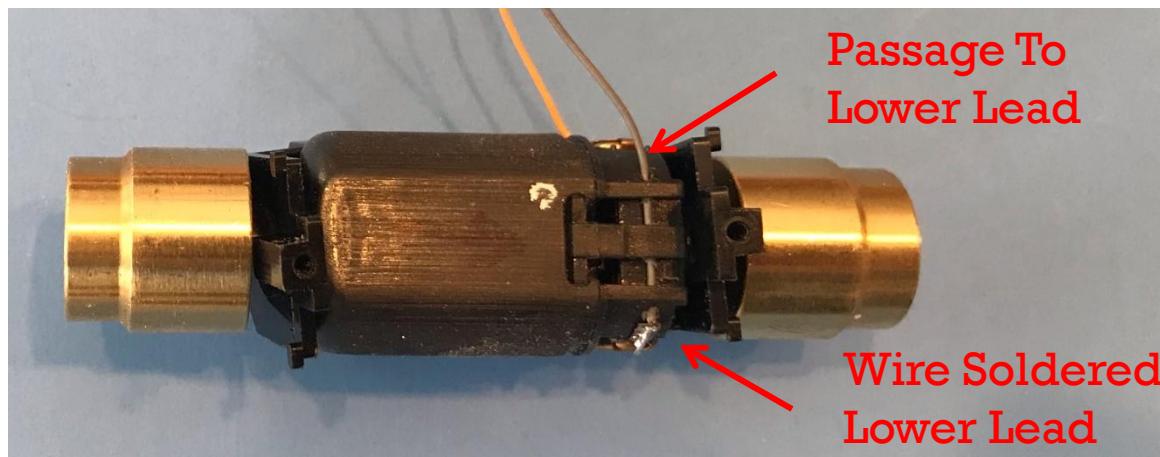
- Cut Rear Section of Frame
  - Hold Frame in a Vise
  - Cut Notch w/ a Hack Saw
  - Smooth Cut Edges w/ a File
  - Provides Platform for Speakers



Modified Kato GP-35 Frame

# Step 3 - Wire Motor

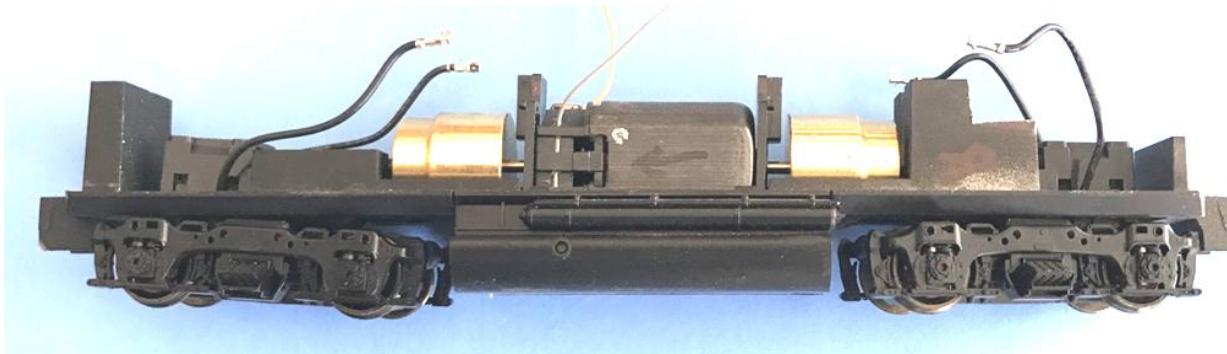
- Shorten Motor Leads
- Drill 0.020" Passage Along Side of Motor
- Feed Wire Thru Passage to Lower Lead
- Solder Wires to Each Lead



Wired Motor

# Step 4 - Reinstall Motor & Trucks

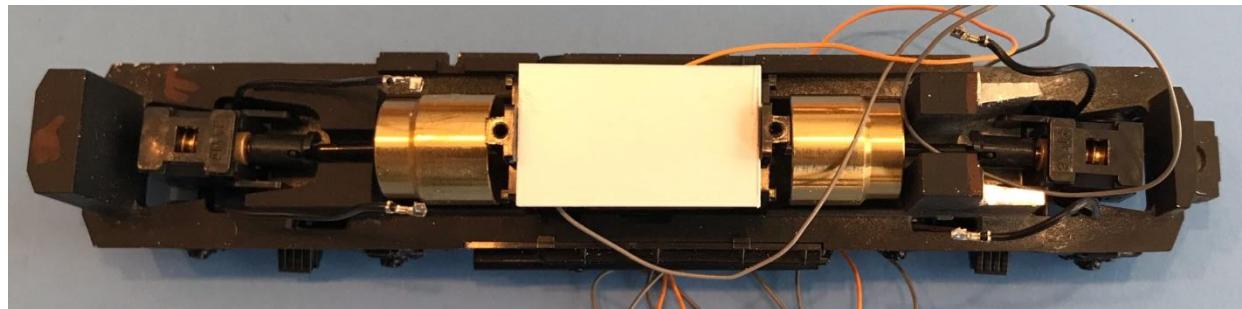
- Reinstall Motor
- Reinstall Trucks



Installed Motor & Trucks

# Step 5 - Cut Back Motor Mount

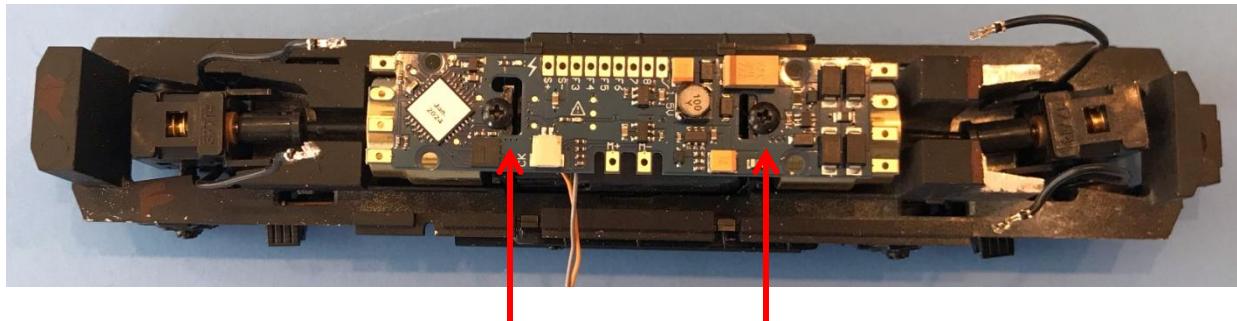
- Place 0.040 Plastic Across Motor
- Mark Motor Mounts at Top of Plastic
- Cut Off Mounts at Mark



Measure Mount Height

# Step 6 - Mount Decoder

- Place Decoder on Shorten Mounts
  - Using SoundTraxx Tsunami2 EMD-2
- Secure with Original Kato Screws

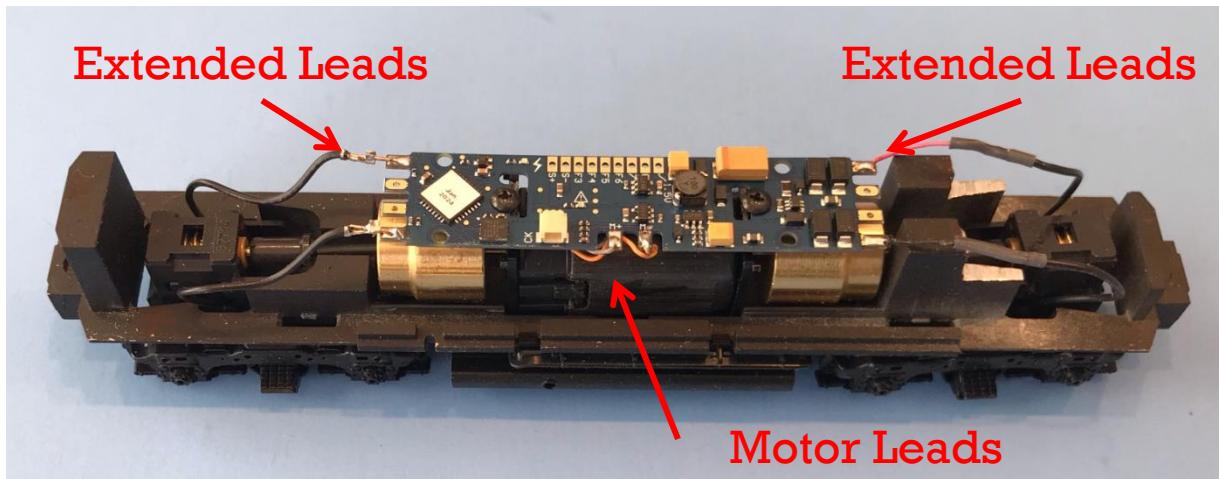


Mounting Screws

Decoder Mounted

# Step 7 - Connect Motor & Trucks

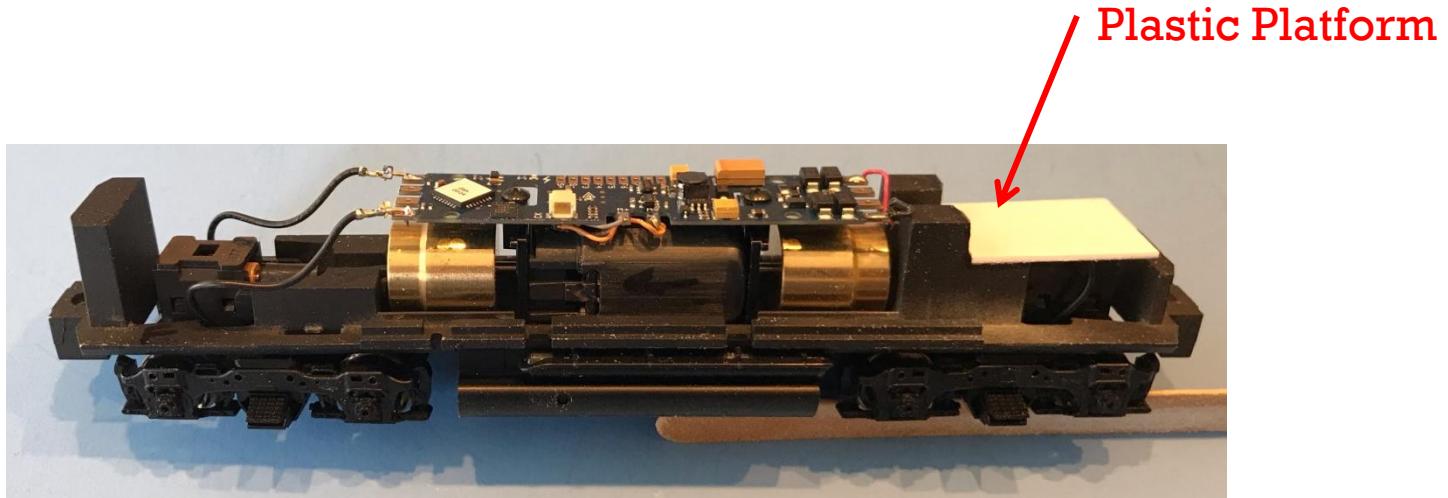
- Cut Motor Wires to Length
- Solder to Motor Terminals
- Wire Truck Leads To Decoder Board
  - Extend Leads to Board



Test Model Foreword & Backward

# Step 8 – Add Speaker Platform

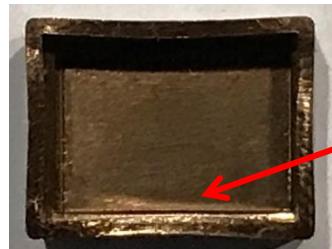
- Super Glue 0.040 Plastic Piece
  - Set into Frame Notch Cut in Step #2



Speaker Platform

# Step 9 – Prepare Speaker Enclosures

- Components: Tony's Train Xchange
  - TDS Super Sonic Mini Speaker
  - TDS Mini Speaker Enclosure
- Drag Hobby Knife Along Enclosure Inside Edge
  - Bevel Inside Edge To Allow Speaker to Snap into Place
  - Do Not Force Speaker into Enclosure

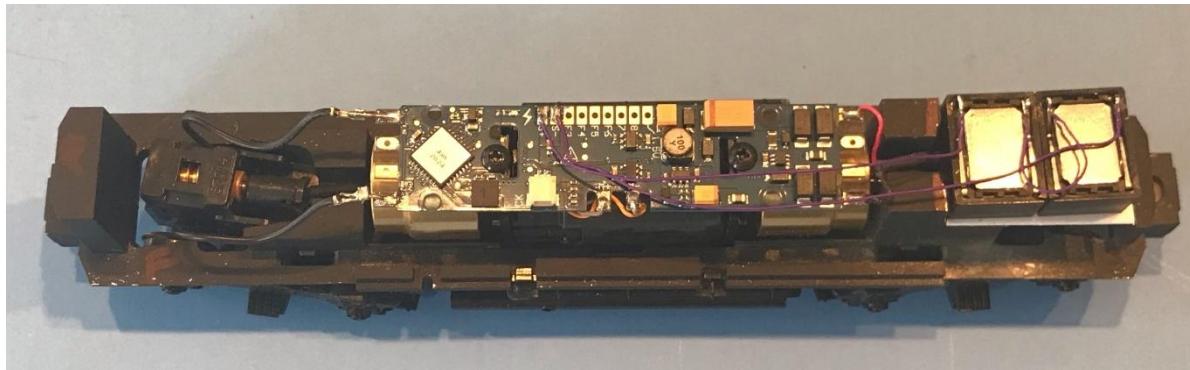


Bevel Inside  
Edge On All  
4 Sides

Speaker Enclosure

# Step 10 – Install 2 Speakers

- Super Glue 2 Speakers to Plastic Platform
  - TDS Super Sonic Mini Speakers & Enclosures
- Wire Speaker in Series
  - Follow Polarities Shown on Speaker Package
  - Connect to + & - Decoder Speaker Terminals



Test Decoder Sound

# Step 11 – Install Lights

- Install 3 mm LED's w/ a 1K Resistor
  - Head Lights - Blue / White Wires
  - Rear Lights – Blue / Yellow Wires

1K Resistor  
Connected to  
LED Long Lead /  
Blue Wire

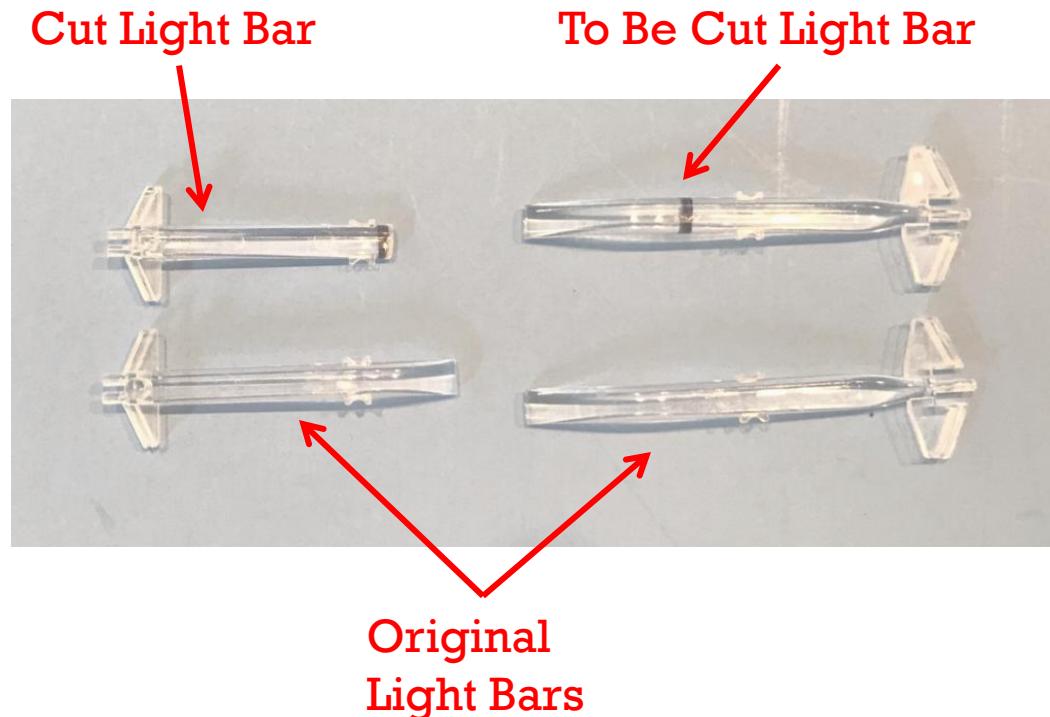
Heat Shrink  
All LED  
Connections



Test Lights – Front & Back

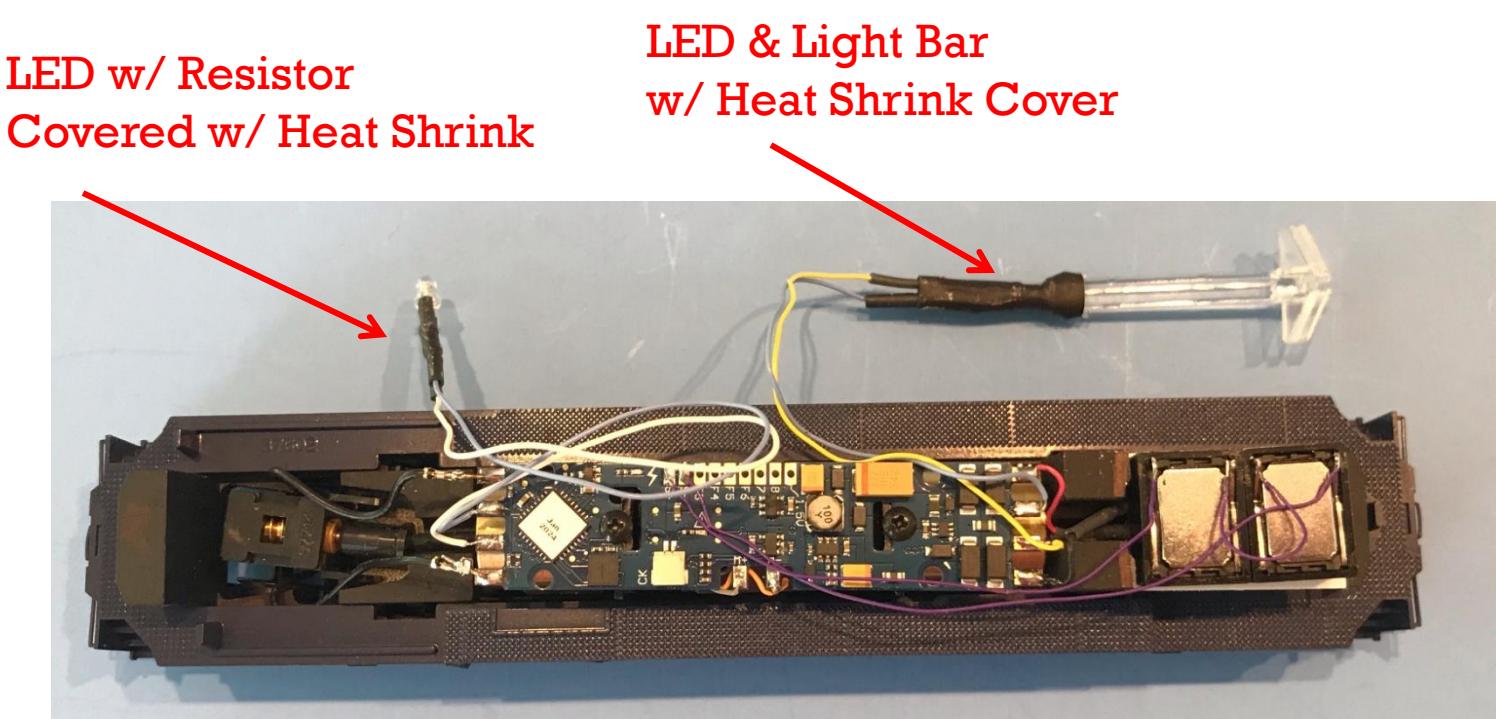
# Step 12 – Reduce Light Bar Lengths

- Shorten Light Bars



# Step 13 – Lights / Number Boards

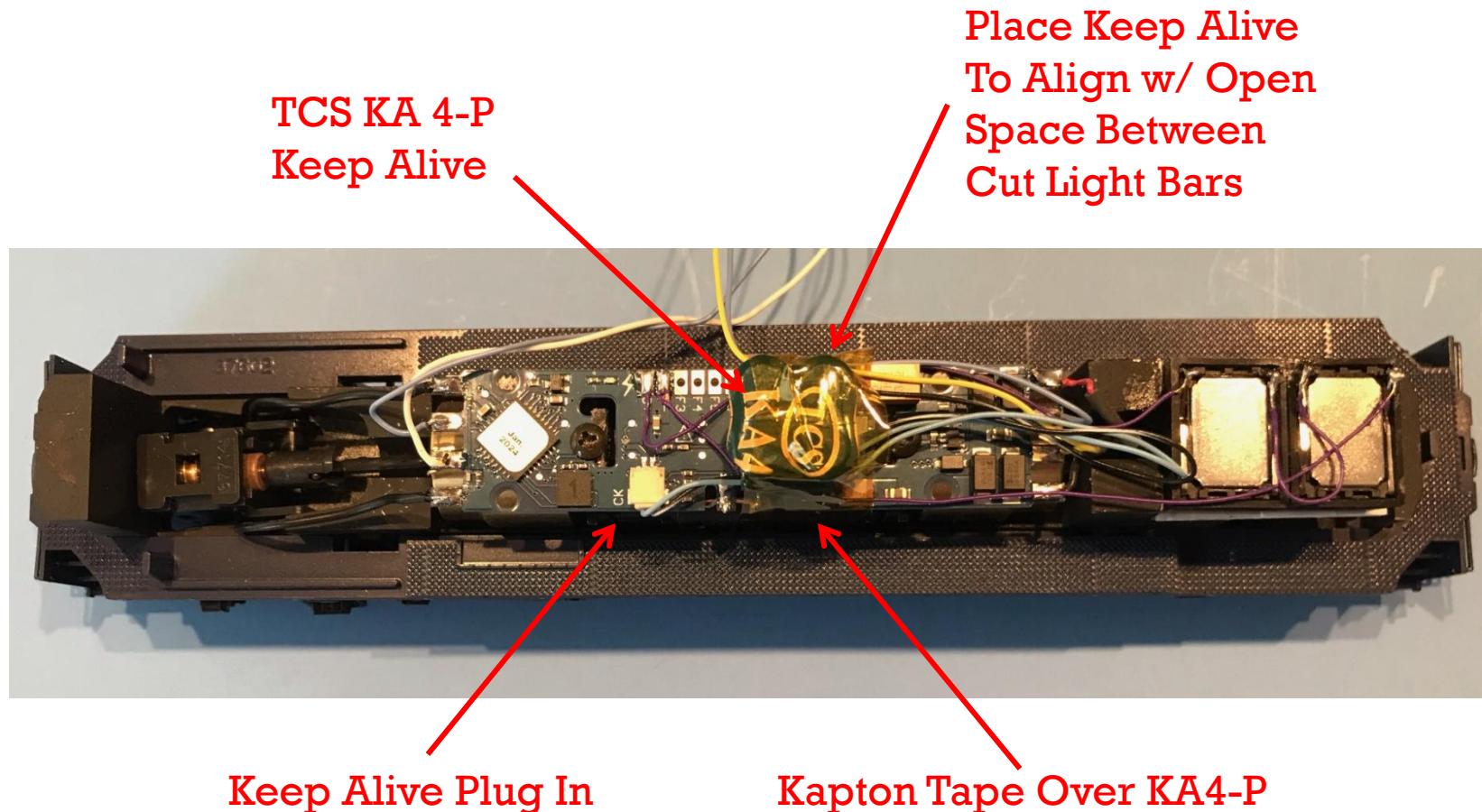
- Connect LED's To Light Bar w/ Heat Shrink



Rear LED's Tied To Number Boards

# Step 14 – Install Keep Alive

- Plug KA4-P in & Secure w/ Kapton Tape



# Step 15 Crew

- Place Crew Figures
  - On Seats in Cab Interior



# Step 16 Reassemble

- Reassemble Shell
  - Place Running Boards on Frame
  - Add Battery Boxes
  - Insert Cab Glass into Cab
  - Insert Number Boards / Lights
    - Front & Rear
  - Insert Crew / Cab Interior
  - Slide Cab onto Shell
  - Snap Shell Onto Frame

# Step 17 Finished Models



Northern Vermont Bicentennials GP-35's 1976 & 1776

# END

DCC Sound Installation  
KATO HO GP-35

