GENERAL SPECIFICATION GUIDE LINES

These specifications serve as a basic guide for the NEW MEXICO NARROW GAUGE MODULAR CLUB.

MODULE CLUB CONSTRUCTION REQUIREMENTS: You are to follow all required dimensions, materials, and electrical standards listed in the specifications. In the event that recommended materials are not used and a problem occurs, you are required to make corrections before your module is used in a show.

“Remember that you are building a “Show Quality Module”.

MODULE OVERALL SPECIFICATIONS

| GAUGE: | HOn3 |
| ERA | Preference is the 1930’s – 1940’s however all eras are acceptable. |
| LENGTH: | 4 ft. nominal, 2 ft. minimum, any length over 2 feet will work. |
| WIDTH: | 18” or 24” (does not include thickness of sky board). |
| LEGS: | 2” x 2”, length 41-3/4” |
| | For details see “NMNGMC Modular Leg and Hardware and Assembly V1” |
| BASE: | Use 1/2” plywood for module tops for structural integrity. |
| | The fascia board is to be constructed of 1 x 4” pine. (Actual size 3/4 x 3 1/2”). |
| | Total height of base is 4” (3 1/2’ fascia plus 1/2” plywood). |
| | HO scale cork roadbed must be used to support all mainline track. (Front and return track). |
| | Yard and siding roadbed is optional. |
| SKY BOARD: | • Height: 21” overall.  
  • Width: should run the full length of module.  
  • Use 1/2” plywood for structural integrity. |
| --- | --- |
| PROFILE BOARD: | • The profile boards (narrow ends) determine the track base to floor height distance of 48”.  
  • Use 1/2” plywood for structural integrity.  
  • For detail see: “Profile Board Drawing”. |
| ACRYLIC: | • Acrylic will be used for protection of scenery, structures, and to prevent rolling stock from falling to the floor in the event of a derailment.  
  • Acrylic is to be clear color, 3/16” thick, x 14 inches high; placed even with the bottom of the fascia board. (10” of exposed protection).  
  • The width must be 1/2” narrower than the length of the module and placed 1/4” from the ends of the module.  
  • The edges should be sanded smooth and all corners rounded to prevent injury. |
| TRACK: | • Micro Engineering Co. HOn3, Code 70 Flextrack for mainline and return track. |
| MAINLINE TRACK: | • Curved mainline track is okay.  
  • Minimum radius 20” on all curved track.  
  • The last 1” of the mainline track ends must be straight (to make a smooth transition from module to module).  
  • Track ends must be located 6” on center from the front edge of the module. |
| RETURN TRACK: | • The return track is placed on a shelf behind the sky board as a separate removable section of the module.  
  • The return track shelf is attached with two 2” C-clamps to the rear face of the sky board through two 2” diameter holes. The 2” diameter hole centerline is located 5” up from the bottom and 10” in from the edge of the sky board.  
  • The shelf is removable for storage and transportation purposes.  
  • The return track shelf length is 1/2” shorter than the length of your module. (1/4” gap on each end).  
  • The distance centerline to centerline between the mainline and return track is 20-1/2 inch. (26-1/2” from the front edge of the module).  
  • For details see: “Return Track Assembly Drawing” |
| TRACK SETBACK: | • The mainline track setback is 3” from the ends of the module, cut square as possible.  
• The return track setback is 2-3/4” from the end of the shelf.  
• A 6” section of track is used to connect modules together. |
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<td>TURNOUTS:</td>
<td>• Used on the mainline will be a minimum #6, code 70.</td>
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| BALLAST:     | • Color optional, size fine (scale size 1” to 3”).  
• Use N scale ballast                                           |
| ELECTRICAL:  | • Separate feeder lines (2 required) will run under the module base and the return shelf to supply track power.  
• The feeder line ends should extend 12” below the module and the return shelf on both ends to allow for ease in connecting to adjacent modules. Suggested length of cable is the length of your module plus 2-ft.  
• Use **Cinch Jones plugs** to connect electrical power to the adjacent modules.  
• The **wide pin** is connected to the **outside rails** for both the mainline and return track, (look at it as the outside rails of an oval).  
• **Male connector** to the **right side of the module for mainline track and left side for the return track** (when looking at the module from the front).  
• **Please observe polarity for the plugs power.** |
| POWER SUPPLY:| • All modules must have some form of 110-volt wiring to provide power to components on the modules and to allow for the transfer of power to adjacent modules.  
• This is achieved by using a “UL” approved outlet strip with 8 ft. minimum power cord.  
• The outlet strip is to be installed as close to the **left side** as possible on the inside face of the sky board below the base. **Male plug to the right side.** |
| MODULE INSPECTION: | • A new module must be inspected for electrical and mechanical operation prior to participation in a show.  
• At the first show it must be operated without any ballast or scenery, unless approved during a test operating session.  
• The show coordinator has control over the module inspections, requirements, and show entries. |
PAINT SPECIFICATIONS:

- Legs, frame and back of sky board are painted: Glidden Exterior Latex Semi-Gloss Northwest Green (70gy 08/075)
- Sky board front is painted: Behr Flat China Blue (Rah-49).

OVERHEAD LIGHTING:

- 2 lights minimum requirement (for 4 ft. module).
- Larger modules may need 3 or more lights.
- Lights are placed 1 foot from each end and at 2 feet intervals.
- For details see: “NMNGMC Module Light V1”.

SHOW HARDWARE:

- 4 ea. 2” “C” clamps per first module
- 2 ea. additional “C” clamps for each additional module.
- Plus any additional “C” clamps for rear shelf attachment.

CURTAIN/SKIRT: (CLUB SUPPLIED)

- A Velcro hook and loop strip is used to hang a curtain/skirt along the module face during shows.
- The Velcro strip, HOOK SIDE, is glued and stapled to the underside/bottom of the fascia board, along the full length of the module.

ROLLING STOCK:

- KADEE # 714, HOn3 couplers is used for operational compatibility.

MATERIALS AND RESOURCES

Materials and resources was created for added convenience however it does not limit where you may find your materials. It is only a suggestion. Be careful when selecting plywood. It may be necessary to shop different store for quality of wood.

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<tr>
<th>MATERIALS</th>
<th>RESOURCE</th>
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| Electrical: 2 each - TRW/Cinch two prong connectors.  
  - Conn Jones TYP 2CT MA 10A 730 Male plug P302CCT  
  - Conn Jones TYP 2CT FE 10A 730 Female socket S302CCT | Electronic Parts Co.  
2620 Rhode Island St. NE  
Albuquerque, NM 87107  
(Near Menaul and Rhode Island, north on Rhode Island eastside of street.)  
8AM to 5PM, Mon. to Fri.  
Local: 505-293-6161  
http://www.ep-co.com/index.htm |
### Electrical:
- 18/2 SPT-1 wire, Carol #02301 (zip cord/lamp wire)
- 110 Volt AC wiring, power strip, UL approved.

### Home Depot or any home improvement store
http://www.homedepot.com/

### Building Materials:
- 1/2” plywood,
- 1 x 4” pine,
- 2 x 2” for legs,
- 1 x 3” for leg braces,
- Dry wall screws,
- Nails,
- Elmer's Carpenter Wood Glue
- 4 ea. 2” “C” clamps per first module
- 2 ea. additional “C” clamps for each additional module.
- Plus any additional “C” clamps for rear shelf attachment.
- 1 – UL approved power strip with 8 ft. cord
- 2 ea. – EB 8x10 Shelf Bracket, SKU 30699152520 (18” rear shelf bracket, not used on 24” module)

### Home Depot or any home improvement store
http://www.homedepot.com/

### Module Lights:
- 2 each - Hampton Bay, R20 Black Step Cylinder Track Lighting Store SKU # 680-247
- 1 package - EcoSmart 60W Equivalent Daylight Spiral Double Life CFL Bulb (4 Pack) Store SKU #1000019045
- 2 each - 1/4” Support rod, Round Rod 1/4 X 36, zinc plated. Store SKU #671479
- 1 package – 1/16 in. Black Polyolefin Heat Shrink. Store SKU #152670
- 1 each – Gardner Bender 1/2 inch Flex Tubing Black. Store SKU #140048
- 2 each – Westinghouse 8 ft. SPT-1 Brown Cord Set. Store SKU #406667
- 1 can – Krylon or Rust-Oleum gloss white

### Home Depot
http://www.homedepot.com/

Light Fixture is On-Line order only
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<th>Paint:</th>
<th>Home Depot</th>
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<td>• Behr Flat China Blue (Rah-49)</td>
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<th>Leg Hardware:</th>
<th>Lowes</th>
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<tr>
<td>• 4 each – Hillman Group 2.5 in. Zinc Plated Carriage Bolt. Item # <strong>63334</strong></td>
<td><a href="https://www.lowes.com">https://www.lowes.com</a></td>
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<td>• 4 each – Hillman Group 1/4 - in. Black Phosphate Standard (SAE) U Spring Nut. Item # <strong>139396</strong></td>
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<td>• 4 each – Hillman Group Replacement Knobs, Item # <strong>423502</strong></td>
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<td>• 4 each – Stanley National Hardware 1.5 in. Metallic Corner Brace. <strong>Lowes</strong> Item # <strong>66938</strong></td>
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<tr>
<td>• 4 each – Hillman Group 1/4 in.- 20 x 3/4 in. Stainless Steel Carriage Bolt. Item # <strong>396450</strong></td>
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<tr>
<th>Acrylic Sheet</th>
<th>Port Plastics</th>
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<tr>
<td></td>
<td>2019 Candelaria Rd. NE Albuquerque, NM 97107 505-884-0507</td>
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<th>Velcro</th>
<th>Home Depot</th>
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18 inch profile board

Location of lifting handle for both 18” and 24” modules
24 inch profile board

Module front
Underside with nailer board

Leg holder without leg
Assembled leg holder detail

Leg Retainer
1/2 Inch Plywood
3.5" X 4.5"

Leg Holder
2 X 2 X 3.5"

24 inch module rear shelf detail

Track Centerline
20 1/2" from Track Centerline
On front of module

Back Shelf Bracket
1 x 2
Length as required
1/2" shorter than Sky Board

Track Bed

Back Shelf Molding
1/4 x 1 1/2" Molding
Or clear plastic

Hole in Skyboard for clamp that holds
Back Shelf in place

Back Shelf
1 x 4
Length as required
1/2" shorter than Sky Board
18 or 24 inch rear shelf clamp hole placement

24 inch rear shelf

Track Height 8"

5"

10"

Hole Center 10" from End
5" from bottom

2" Clamp Hole

Slots for light cords
18 inch rear shelf with dimensions