New Zealand märklin Club's Modular Group

Introduction

The concept of a Modular Layout for the Marklin clubs in New Zealand was born out of a desire to produce a sectional Marklin layout that could be displayed, and shared, at sites around New Zealand.



The conscious intention was to produce as few "rules or specifications" as possible. Rather we have set out some guidelines and suggestions to ensure compatibility, and have left as much as possible to the individual's abilities, tastes, budget etc.... There are three master module jigs held by Marklin clubs in Christchurch Wellington & Auckland. For your nearest jig please contact the Marklin club in your area.

Constuction

The main requirement that we obviously need is compatibility of track position and electrical connectivity between modules that people choose to produce.

The modules are based on a size of 1200 long by 600 wide, with a nominal roadbed height of 1000 above floor level. <u>Please refer to the attached drawing for further</u> <u>dimensions.</u> Larger modules of 2400 can, and have been produced. The exact size of the module is unimportant, so long as it is either a multiple of 1200, or you have two modules of the same length that can be placed on opposite sides of a circular layout in order to maintain symmetry.



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The pictures shown are of a 2400mm long module, however the method of construction for the 1200mm long modules is the same.

Similarly, the width, whilst based on 600, is by no means restricted to this size. If anyone wanted to produce a wider module to enable greater depth of scenery, this would be more than acceptable.

Any set of modules that are normally con-joined, can have any track spacing or configuration desired, provided that they come back to the standard location at the end of that

scene.



The track work is based on a double track mainline placed nominally 100mm to centre of the front track, from the front of a 600 deep module.

The ends of the track are brought flush to the ends of the modules, and all rail joiners and electrical connectors are removed.

To ensure correct alignment of the track work relative to the module attaching bolts, it is recommended that your club's master module be used as a jig, i.e. bolt the master module to the end of your module, and then connect your track to it.

If this procedure is followed <u>at both ends of a module</u>, we should be able to bolt any two modules from any part of the country together, and have good alignment.

Wiring configuration

The wiring is based around a seven-pin trailer plug, and for convenience the matching trailer cable.

When viewing from the (public) front of the modules, the female plug is then on the right hand end of the module, and the male on the left.

Each plug should have a cable tail of approximately 300mm.

At any point underneath the module, the wires from each plug can be terminated with a "chocolate block" strip connector, at an advantageous point, for connection to track and any accessories used.

Colour coding for the wiring is as follows:

- 1, Yellow, Accessory power.(16V AC)
- 2, Black, Accessory Ground/Return
- 3, White, Accessory Feed
- 4, Green, Outer Track power.
- 5, Blue, Outer Track earth.
- 6, Red, Inner Track power.
- 7, Brown, Inner Track earth.

Conections within the trailer connectors should be carried out as per the numbering on the connector packet.

SENSING(FEEDBACK)

That modules be classed as either passive or active (as far as operation is concerned).

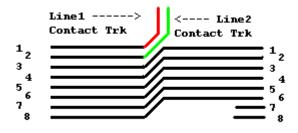
Passive - minimum physical construction and alignment with 7 wire power connection bus as above

Active

- Same as Passive **PLUS**

- 2 signals (one on each main line)

- matching dead section before each signals (right hand running)
- contact track after each signal (right hand running)
- k83 (or equivalent)
- RJ45 through cabling with in (left) and out (right) connector see picture



See this implemented in either of 2 ways. A socket at each end of the active module or a single faceplate in the centre with 2 sockets labelled in and out.

Personally I am a fan of the PDL600 face-plates and would opt for a 3 hole face-plate (PDL 683VH) with 2xRJ45(PDL 619MD) inserts.

The idea behind the above configuration is that the s88s would be on the "central control panel" and each group of 8 (2 per s88) would be a wired to a RJ45socket which would connect to the "designated" 1st active module

Jumpers would daisy chain up to 3 additional active module - skipping passive ones in between - and there fore dynamically connecting the s88 ports

It is also worth noting, that a 1200mm long module may be a little short for containing a typical length train. If however there were two con-joined modules, each with a single signal at opposite ends, these would provide sufficient space for most people's trains.

This system enables a continuous run with a single train, and rear end collision protection from one train catching up to another during multi train operation.. The maximum number of trains on each of the two mainlines that can be operated, is a function of how many module blocks are in use, minus one.

Catenary

The catenary is designed to be functional, and the inner and outer wires are to be connected electrically parallel to their respective tracks.

The first mast on each module should be placed 71mm back from the edge (half the distance of a 70142 wire section), and sections of wire provided to enable connection to the next module.

Should that distance not be convenient on a module, a mast can be placed at a different distance, provided appropriate connecting wires can be provided.

Scenery

There are no specific requirements for scenery, as it is recognized that each individual's tastes, and area of focus for modeling can vary considerably.

Standard end profiles are not required, as each person's module may represent a considerable contrast in scene to the next. Obviously it would be difficult to have a standard end to allow a Dutch scene to mate up to a Swiss Alps scene.

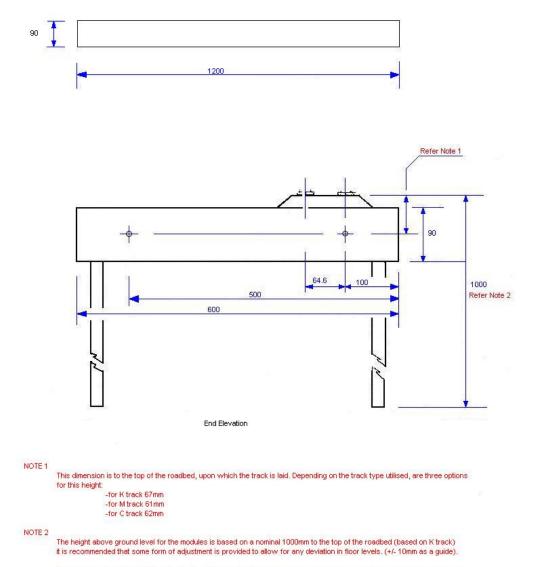
Because of this, it is suggested that the ends of the modules are finished in a flat vertical surface, and painted a grey colour, as this is the colour the human eye is least drawn to, and as such, any minor variances in end profile do not stand out.

It should be noted, that this should in no way prevent groups of people from endeavouring to blend their modules together. In fact, this is encouraged wherever possible. Also, people may wish to build their own modules into a section of their home layout, which would mean that the end profile would be dictated by their own home layout requirements.

Special modules can also be made to allow for the requirements of any individual/group.

An example of this might be a Tee junction to enable connection to a Terminus/staging yard, e.g.:





Please also note that the 1000mm the the top of the roadbed is based on K track, and some adjustment of this dimension may be required if an individual is using C or M track.