



MÄRKLIN



Track Layouts Gauge HO

for M-Tracks 5100/5200

0351

TO ALL MÄRKLIN ENTHUSIASTS:

These track layouts for the MÄRKLIN HO Gauge model railway give a very complete idea of the way our various productions can be used. The plans have been worked out in detail, so that the railway systems can be made up without difficulty — it is our hope, moreover, that they will encourage our many friends to make out their own plans.

So that the plans may be clearer, the cables from points and signals are only briefly indicated, the numbers shown being taken to similar numbers on the control panels.

The Lists of Parts in every case contain everything required for building up the track plans shown.

Planning and building up the overhead contact wire system is made considerably easier by the contact mast 7010 shown on the plans and by the List of Parts giving what is required for the overhead wire system.

The model railway enthusiast who draws inspiration from this booklet of ours for laying out his own system can use our range of MÄRKLIN Parts, e. g., single points, curved points and double-slip points to make for his own railway an exact replica of any kind of station on a full-sized line.

So we trust this Book of Track Layouts may prove to be a good guide and counsellor to all devotees of the MÄRKLIN Model Railway.

GEBR. MÄRKLIN & CIE. ^{GM}_{BH} 732 GÖPPINGEN/GERMANY

The illustrations on pages 1 and 4 of the cover are sections of MÄRKLIN Layouts 18 and 9.

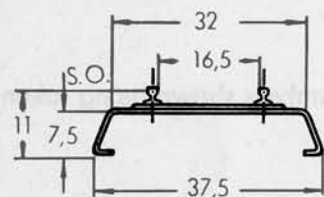
Y 05 72 ju Printed in Western Germany · Imprimé en Allemagne

SYMBOLS FOR THE TRACK, POINTS, SIGNALS etc.

MÄRKLIN

All dimensions of track sections and accessories important for constructing a MÄRKLIN model railway system are given in inches (millimetres) in the following diagrams, the drawings being made to a scale of 1 to 5 for clearness.

DIAGRAMS OF TRACK SECTIONS



Catalogue No. Description

Dimensions of MÄRKLIN track sections



5106 Straight Track
Full length = 7"



5107 Straight Track
Half length = 3½"



5129 Straight Track
Make up section = 2¾"



5108 Straight Track
¼ length = 1¾"

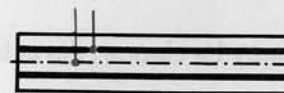


5109 Straight Track
⅜ length = 1⅝"



Catalogue No. Description

5110 Straight Track
⅜ length = 1⅝"



5111 Straight Feeder Track
Full length = 7"



5103 Curve Feeder Track
Full length = 30°

STANDARD RADIUS CURVE



5100 Curve Track
Full length = 30°
12 track sections make a complete circle

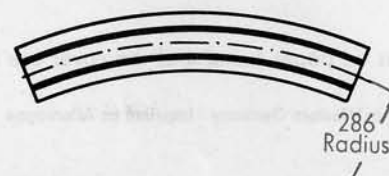


5101 Curve Track
Half length = 15°



5102 Curve Track
¼ length = 7° 30'

SMALL RADIUS CURVE



5120 Curve Track
Full length = 45°
8 track sections make a complete circle

DIAGRAMS OF TRACK SECTIONS

MÄRKLIN



Catalogue No. Description

LARGE CONCENTRIC CIRCLE

5200 Curve Track
Full length = 30°
12 track sections make
a complete circle



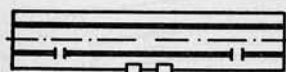
5206 Curve Track
Length = 24° 17'
For use with 5202



5201 Curve Track
Half length = 15°



5205 Curve Track
Length = 5° 43'
Combined with 5206 makes
5200 curve section



5105 Straight Contact Track
Full length = 7"



5104 Curve Contact Track
Full length = 30°



5146 Contact Track Straight
Half length = 3 1/2"

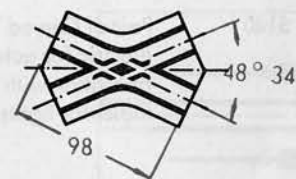


5147 Contact Track Curve
Half length = 15°

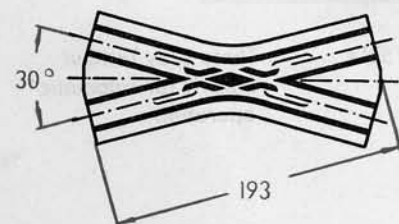


Catalogue No. Description

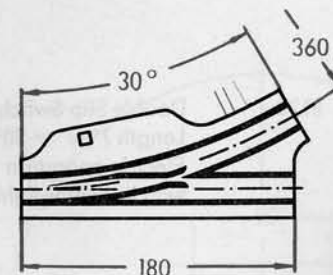
5213 Curve Contact Track
Half length = 15°



5211 Crossing
Length 3 7/8",
frog angle 48° 34'

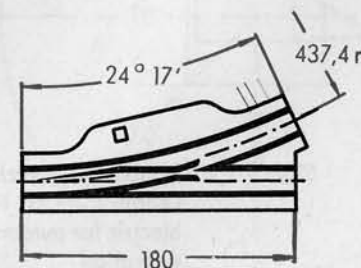


5114 Crossing
Length = 7 1/2",
frog angle 30°



5121 Pair of Turnouts
For hand operation
or

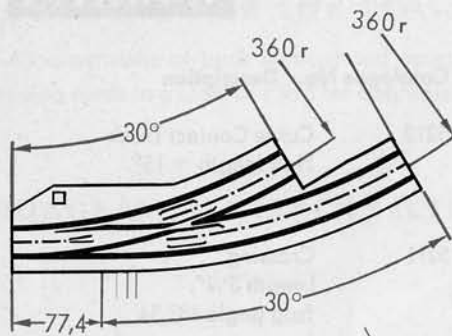
5117 Pair of Turnouts
with electric solenoids
for automatic operation



5202 Pair of Turnouts
with electric solenoids
for automatic operation

DIAGRAMS OF TRACK SECTIONS

MARKLIN



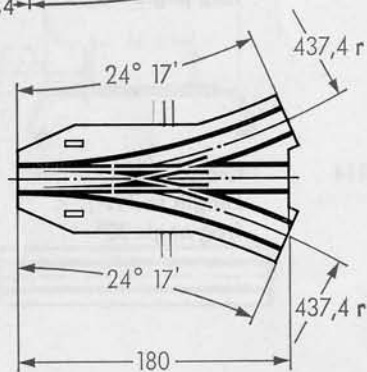
Catalogue No. Description

5140 Pair of Curved Turnouts
electric for automatic
operation with working
indicator lights



Catalogue No. Description

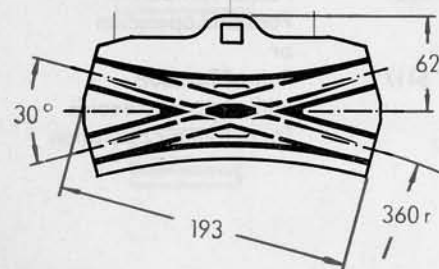
5208 Straight Track
Length $\frac{5}{16}$ "
for slip switch 5207



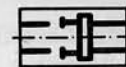
5214 Three Way Turnout
electric for automatic
operation



5210 Straight Track
Length $\frac{5}{8}$ "

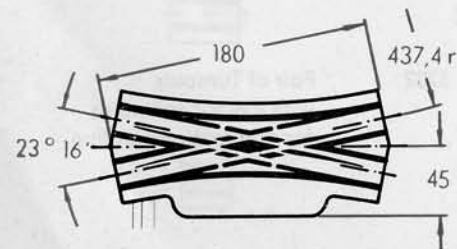


5128 Double Slip Switch
Length $7\frac{9}{16}$ " = 30°
Electric operation
with indicator lights

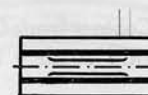


7190 Track end Bumper

7191 Track end Bumper
with light
Length $2\frac{3}{4}$ "



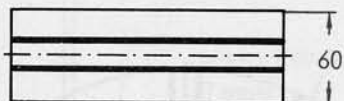
5207 Double Slip Switch
Length 7" = 23° 16'
electric for automatic
operation



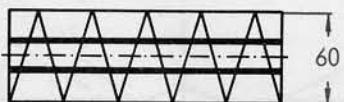
5112 Uncoupler Track
Half Section = $3\frac{1}{2}$ "

DIAGRAMS OF ACCESSORIES

MARKLIN



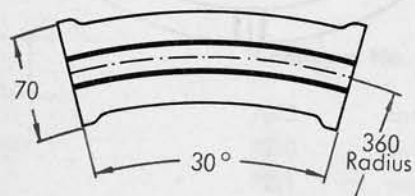
Catalogue No. Description
7161 Plate Girder Bridge
Full length = 7"



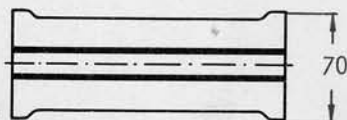
7162 Truss Bridge
Full length = 7"



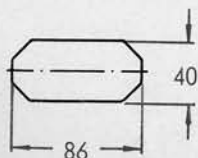
7163 Arch Bridge
Double length = 14"



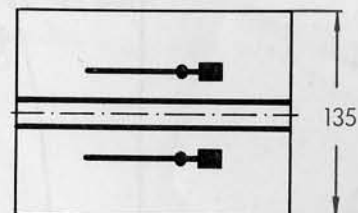
7167 Curved Approach Ramp
Full length = 30°



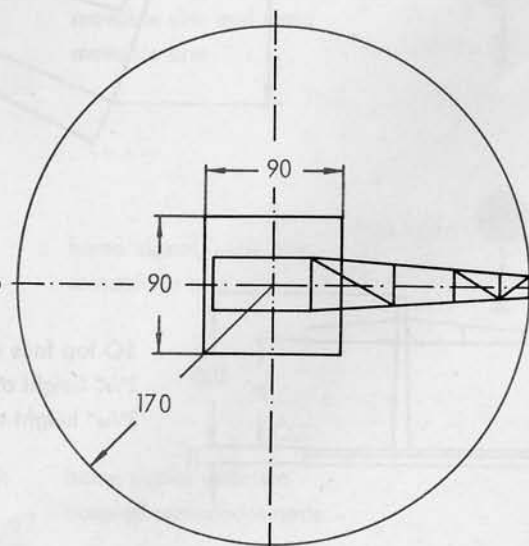
7168 Straight Approach Ramp
Full length = 7"



7066 Base Plate



Catalogue No. Description
7390 Grade Crossing Gates
manually operated
Full length = 7"
7192 Electric operated Grade
Crossing Gates
Double length = 14"

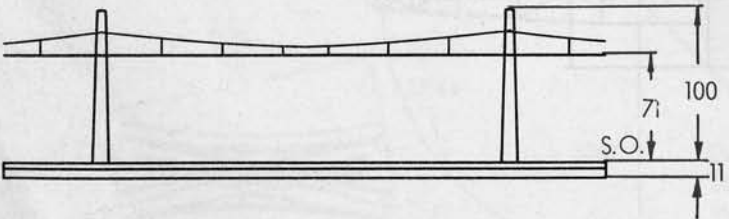
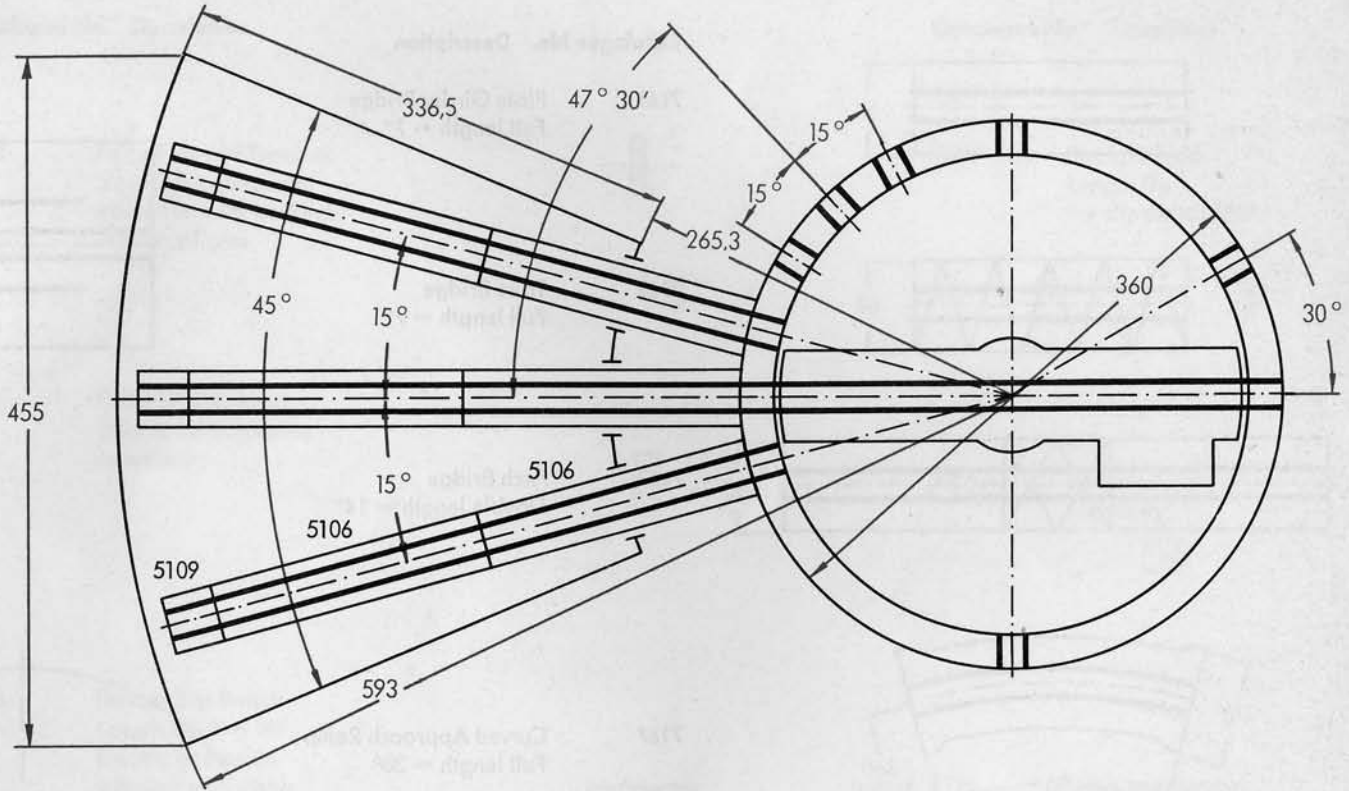


7051 remotely-controlled
slewing crane

DIAGRAMS OF ACCESSORIES

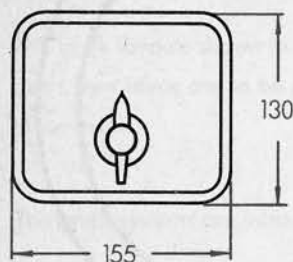
MARKLIN

Catalogue No.	Description
7028	Locomotive shed, 5 1/3" high (135 mm)
7186	turntable

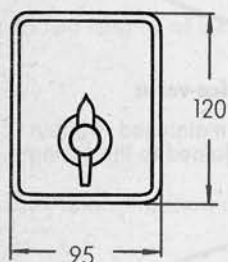


SO top face of rail
 2 4/5" height of overhead contact wire from top face of rail
 3 9/10" height to top of mast from top face of rail

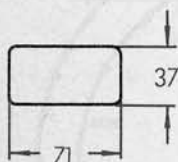
DIAGRAMS OF ACCESSORIES



railway transformer,
30 watts
and lighting transformer,
50 watts

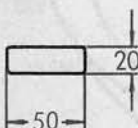


transformer,
16 watts

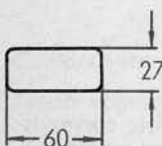


Catalogue No. Description

7072 control panel
7210 switchboard
7211 switchboard



7209 distribution board



7045 universal remote-control
switch

Catalogue No. Description



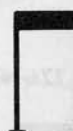
7036 distant signal, with
movable disc.



7037 distant signal with extra
movable arm



7038 distant signal, with
movable disc and extra
movable arm



7039 home signal, with one
semaphore arm



7040 home signal with two
coupled semaphore arms

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Catalogue No. Description



7041 home signal with two
independent semaphore
arms



7042 track block signal



7187 colour-light distant signal



7188 colour-light home signal

ADVANTAGES OF THE MÄRKLIN 5140 CURVED POINTS

- Longer sidings with the same size track layout.
- 3" spacing (77,4 mm) between parallel tracks.
- Points can be built into curved tracks without difficulty.
- Curved points fit harmoniously into any track plan.

1. Longer trains than before can be stationed between the points on layouts of the same size when using MÄRKLIN curved points.
2. With a pair of MÄRKLIN curved points traffic can cross over directly on a curve from the inner to the outer line, or vice-versa, the 3" (77,4 mm) spacing still being kept between concentric curves.
3. The track length does not need making up when MÄRKLIN curved points are laid, provided the 3" (77,4 mm) spacing is maintained between concentric curves, consequently track make-up sections are unnecessary.
4. MÄRKLIN curved points are provided with scale-model lanterns to light up.

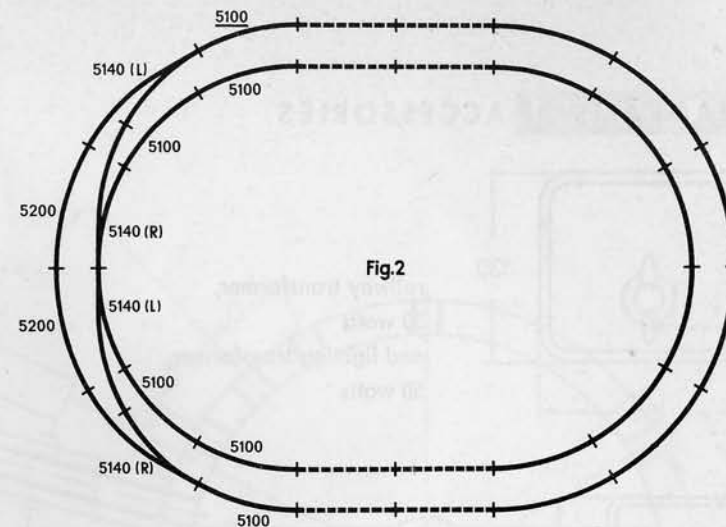
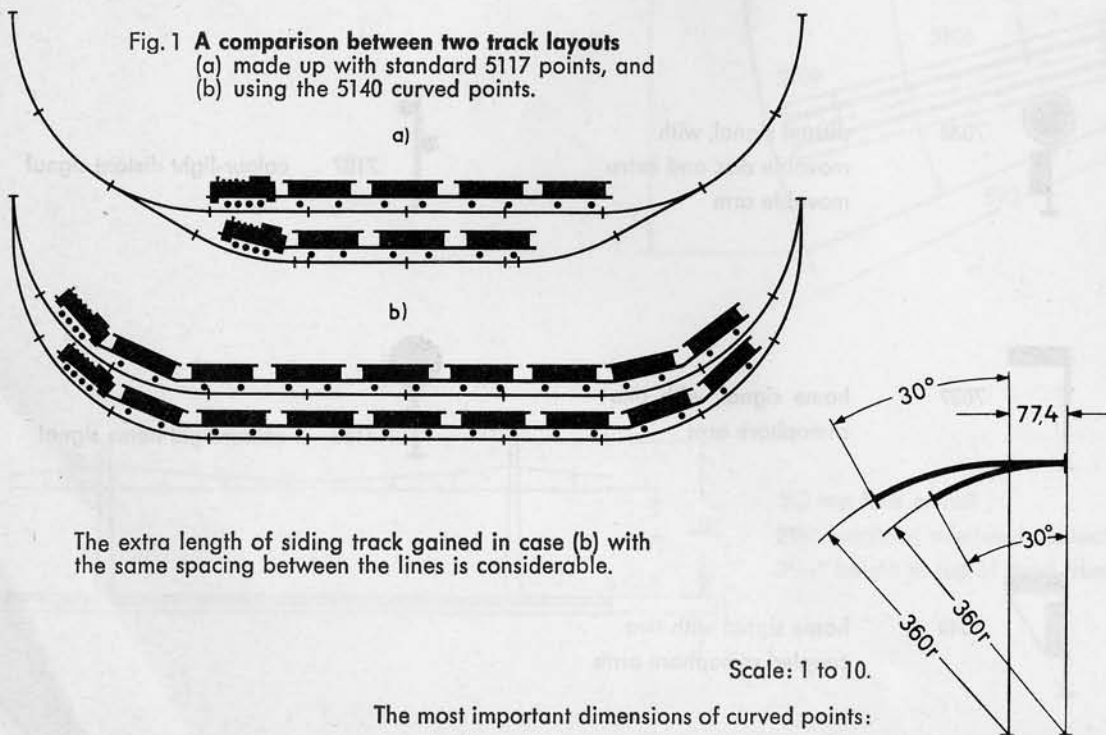


Fig. 2 Crossing over from the outer to the inner track, and vice-versa

The 3" (77,4 mm) spacing between concentric curves is maintained without needing any track make-up sections. A 5100 track section is joined to the facing end of the curved points laid in the outer curves.

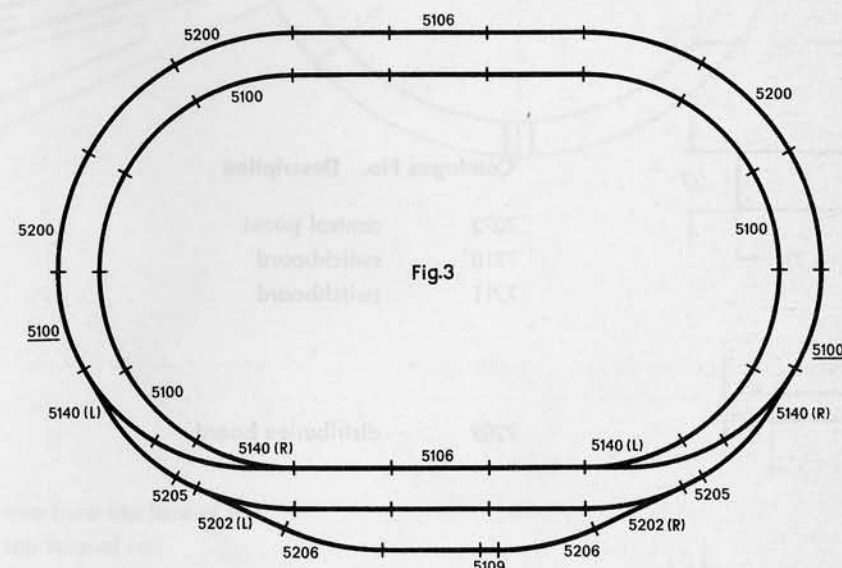


Fig. 3 Curved points laid at the ends of a straight section

In this case as well the 3" (77,4 mm) spacing between concentric curves is maintained, and the diagram also shows how harmoniously curved points can be fitted into the layout of the track.

SOME EXPLANATORY NOTES ON THE TRACK LAYOUTS

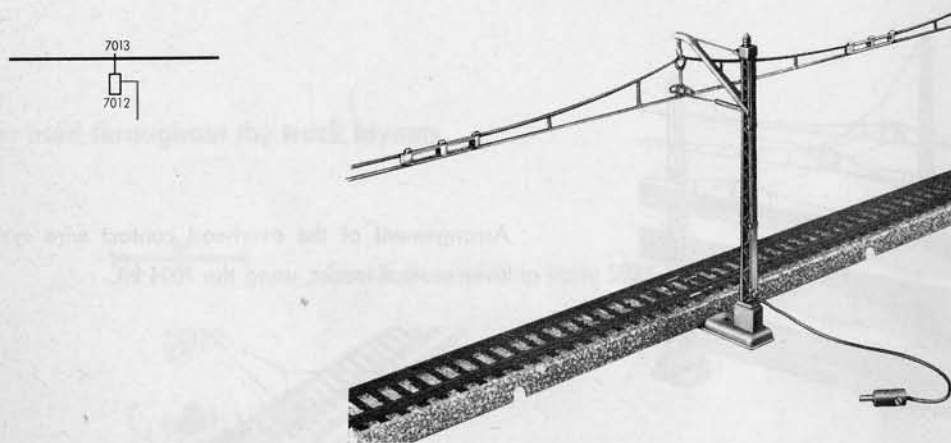
MARKLIN

The track layouts shown in this booklet will be found to satisfy most desires and requirements because of the great care and attention to detail devoted to their preparation. If, however, one's own ideas are to be realised, it is also to be borne in mind that all alterations in the track layouts shown will result in the Lists of Parts for them also foregoing their claim to completeness.

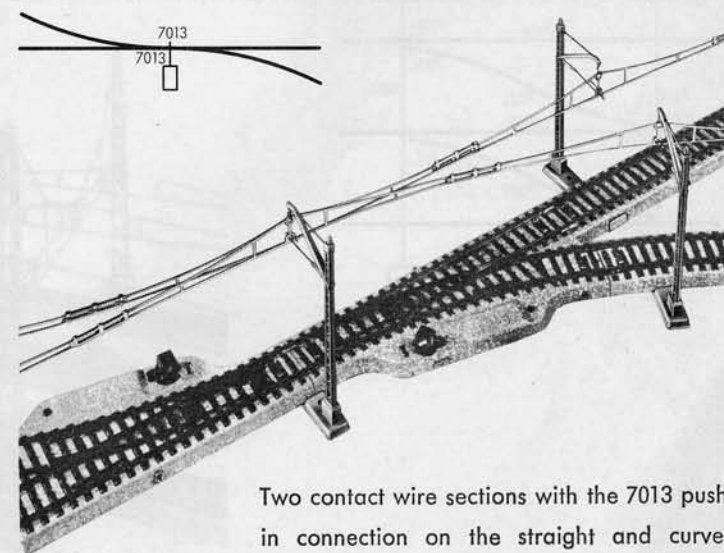
The small systems are intended for branch line working, and so the trains to run over them must not have too great a length.

The signals and their isolated track sections can be altered as required, the lengths of isolated sections depending on the train speeds – for sidings, for example, an isolated section of one to two lengths of track will be sufficient.

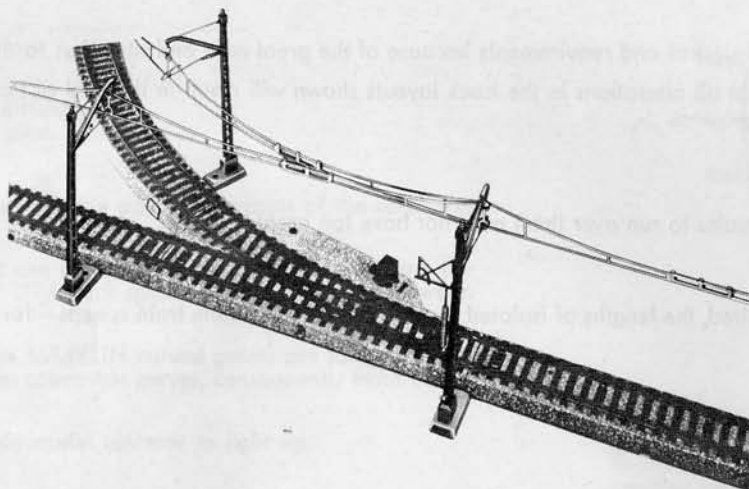
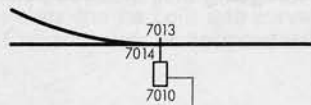
The following examples are intended to make erection of the overhead contact wire system easier.



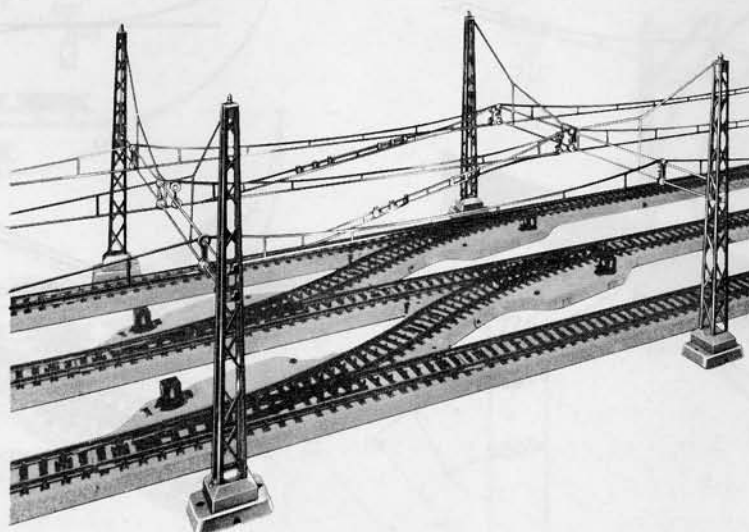
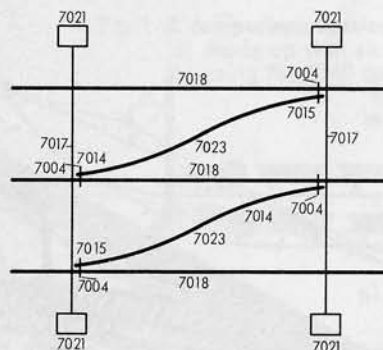
Contact wire section with the 7013 push-in connection and a feeder catenary support 7012 for signals.



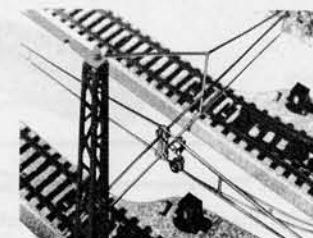
Two contact wire sections with the 7013 push-in connection on the straight and curved sections.

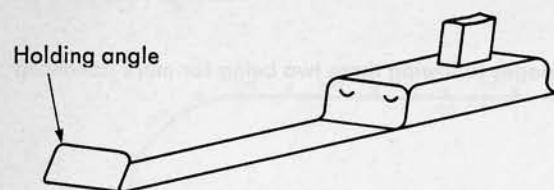


Contact wire section with the 7013 push-in connection and hollow contact wire section 7014 joining at a feeder catenary support. The figure arrangement gives the position of the contact wire sections; 7013 is on the outside and 7014 towards the catenary support.



Arrangement of the overhead contact wire system over several tracks, using the 7004 kit.





In many cases catenary supports with a cut-off holding angle or clip are required; that means that the angle or clip end of the fixing plate has to be cut off or straightened out.

Should the slip-in connections for the overhead contact wire sections not exactly register because of the spacing, and so make the stability of the contact wire doubtful, connection can be made by the 7004 fixing kit. The place for the screwed joint must be chosen so as to ensure a thorough hold for the join.

Photographs of railway layouts

The coloured illustrations of model railway system shown in this booklet are examples of the way a landscape setting can be built up for them. Our booklet "The MÄRKLIN HO Gauge Model Railway and its full-sized prototype" will be found very helpful in this connection.

Alterations to the layouts for utilising the space available to better advantage should be laid down beforehand in a draft plan of the system, using the MÄRKLIN templates for drawing it.

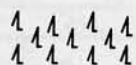
Signs used throughout the track layouts



circuit disconnecting point 5022



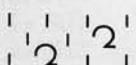
bush



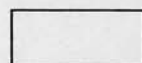
pine forest



private premises



meadow with trees



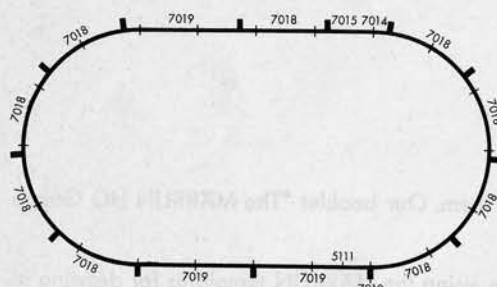
railway building

TRACK LAYOUTS TO START WITH

MÄRKLIN

These eight layouts are intended as pointers for those MÄRKLIN enthusiasts who want to build the simpler kind of model railway, the pages following these two being for more advanced model railwaymen, and to serve as an introduction to building model railway system with MÄRKLIN track sections

LAYOUT B1



150 x 79 cm

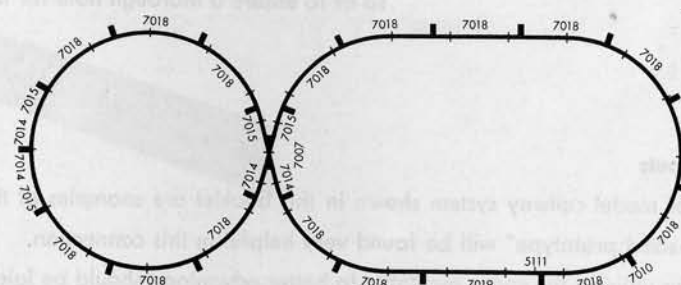
Track sections:

12 - 5100
7 - 5106
1 - 5111

Overhead contact wire:

12 - 7009 1 - 7015
1 - 7010 9 - 7018
1 - 7014 3 - 7019

LAYOUT B3



210 x 81 cm

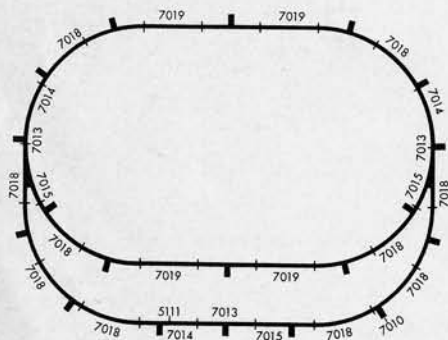
Track sections:

20 - 5100 5 - 5106
4 - 5101 1 - 5111
1 - 5114

Overhead contact wire:

20 - 7009 4 - 7015
1 - 7010 16 - 7018
4 - 7014 1 - 7019
1 - 7277

LAYOUT B2



135 x 100 cm

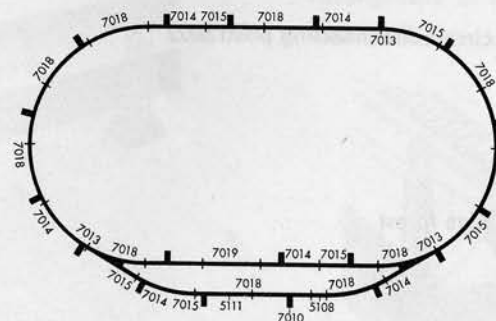
Track sections:

16 - 5100 1 - 5111
8 - 5106 1 - 5117
or 5121

Overhead contact wire:

18 - 7009 3 - 7014
1 - 7010 3 - 7015
3 - 7013 10 - 7018
4 - 7019

LAYOUT B4



150 x 90 cm

Track sections:

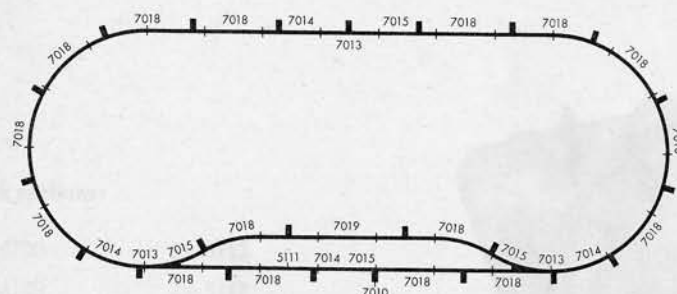
12 - 5100 1 - 5111
9 - 5106 1 - 5117
1 - 5108 or 5121

Overhead contact wire:

18 - 7009 6 - 7014
1 - 7010 6 - 7015
3 - 7013 10 - 7018
1 - 7019

LAYOUT B5

207 x 81 cm



Track sections:

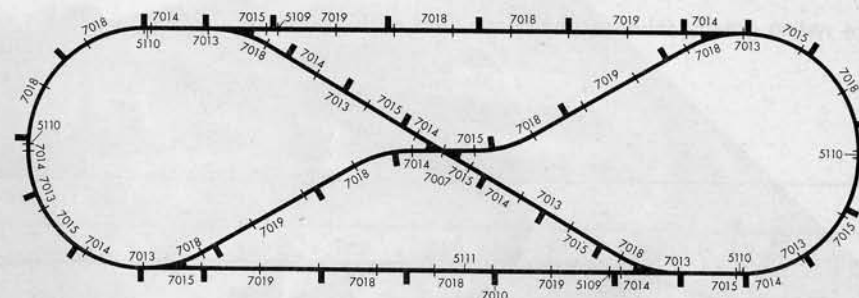
14-5100 1-5111
14-5106 1-5117 or 5121

Overhead contact wire:

22-7009 4-7014
1-7010 4-7015
3-7013 16-7018
 1-7019

LAYOUT B7

267 x 84 cm



Track sections:

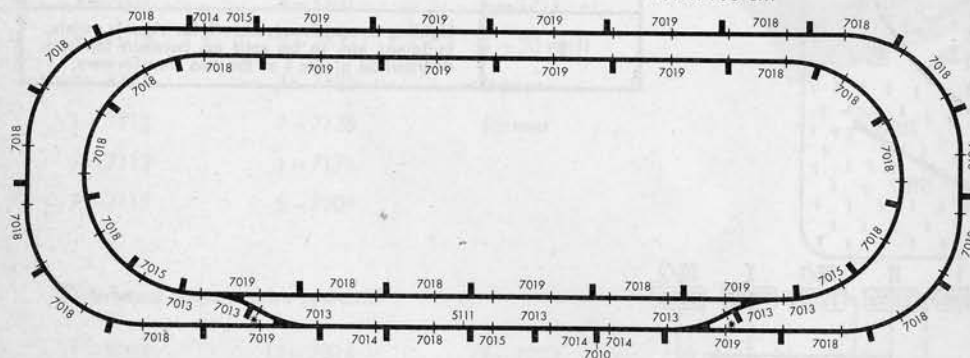
14-5100	1-5111
27-5106	1-5114
2-5109	2-5117
4-5110	or 5121

Overhead contact wire:

35-7009	10-7015
1-7010	14-7018
8-7013	6-7019
10-7014	1-7277

LAYOUT B6

297 x 100 cm



Track sections:

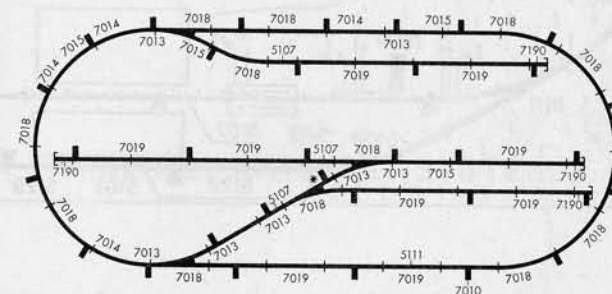
24-5100
41-5106
1-5111
2-5117 or 5121

Overhead contact wire:

	4-7014
46-7009	4-7015
1-7010	25-7018
7-7013	13-7019

LAYOUT B8

185 x 81 cm



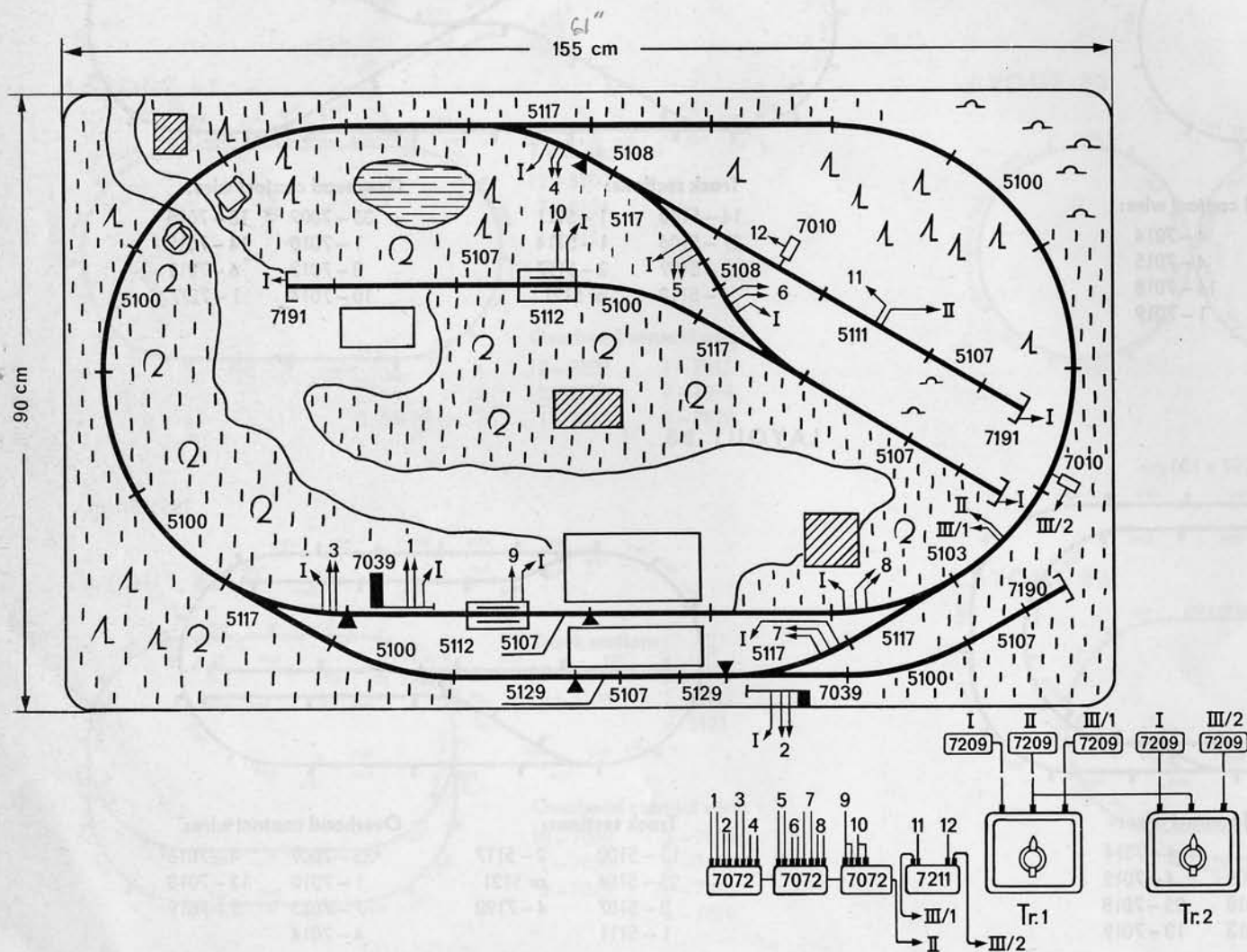
Track sections:

13-5100 2-5117
25-5106 or 5121
3-5107 4-7190
1-5111

Overhead contact wire:

32-7009 4-7015
1-7010 13-7018
7-7013 9-7019
4-7014

The plan provides a single-track oval line with a passing track and sidings. Sidings inside the oval can be cut in and out by a 7211 switchboard. The provision of an overhead contact wire system greatly enhances the possibilities of this set as a plaything.



Explanation of signs: (See page 11 also)

5111 (5103) III/1 II	Feeder track section
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
Tr. 1 Tr. 2	Transformer for centre stud contact line and lighting Transformer for overhead contact wire and lighting
7010 III/2	Feeder catenary support 7010
I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the two distribution plates I of the two transformers.

MÄRKLIN

Track sections:

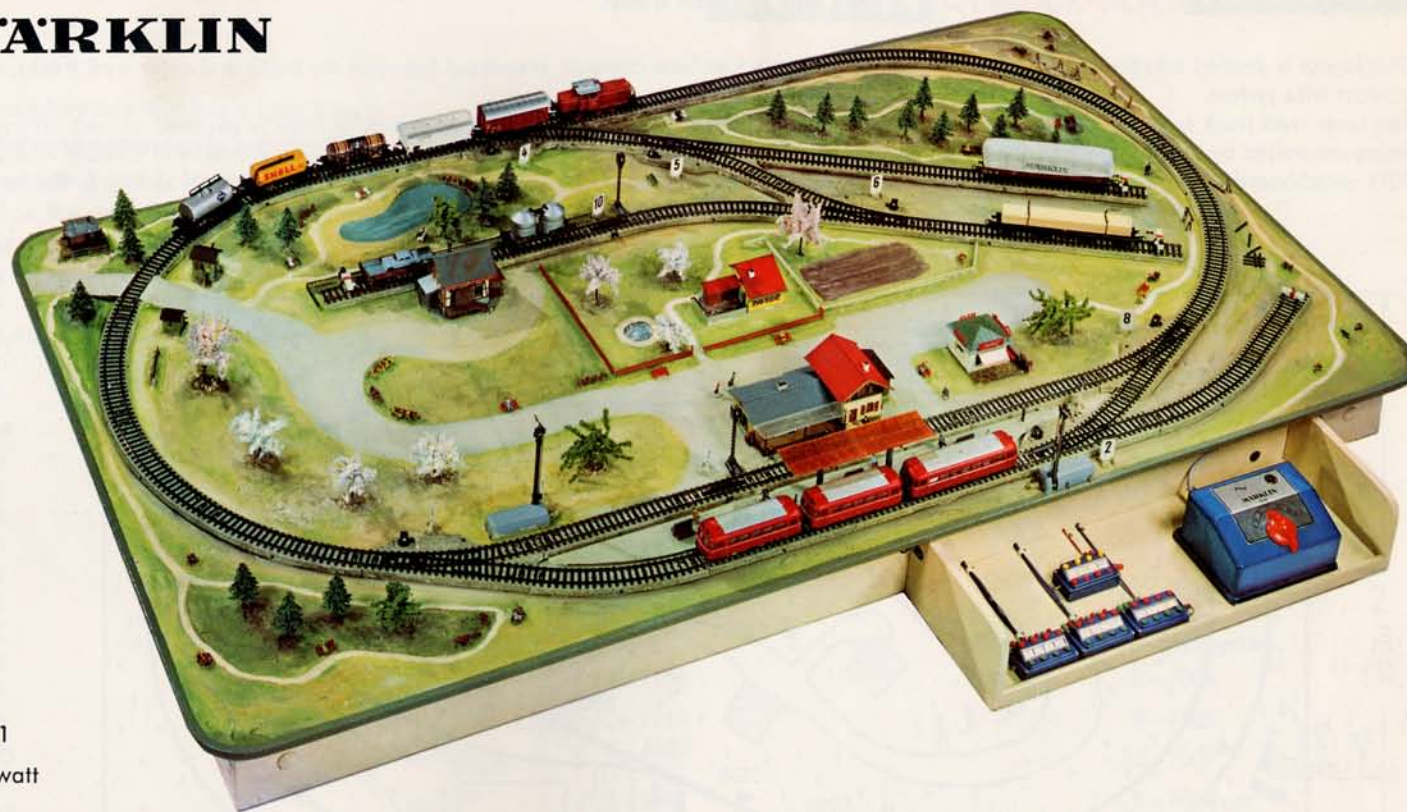
12-5100	2-5113
1-5103	2-5117
10-5106	2-5117 (R)
6-5107	2-5129
2-5108	1-7190
1-5111	3-7191
2-5112	

Accessories:

2-7039	4-7131	1-7211
3-7072	3-7132	1-30 watt
2-7111	7-7133	trans-
1-7112	7-7135	former
7-7113	1-7195	
7-7115	5-7209	

Overhead contact wire system:

1-7004	12-7014	14-7023	10 metres blue cable
2-7005	13-7015	1-30 watt	10 metres brown cable
24-7009	7-7018	trans-	10 metres yellow cable
2-7010	2-7019	former	10 metres red cable
4-7013	1-7022		



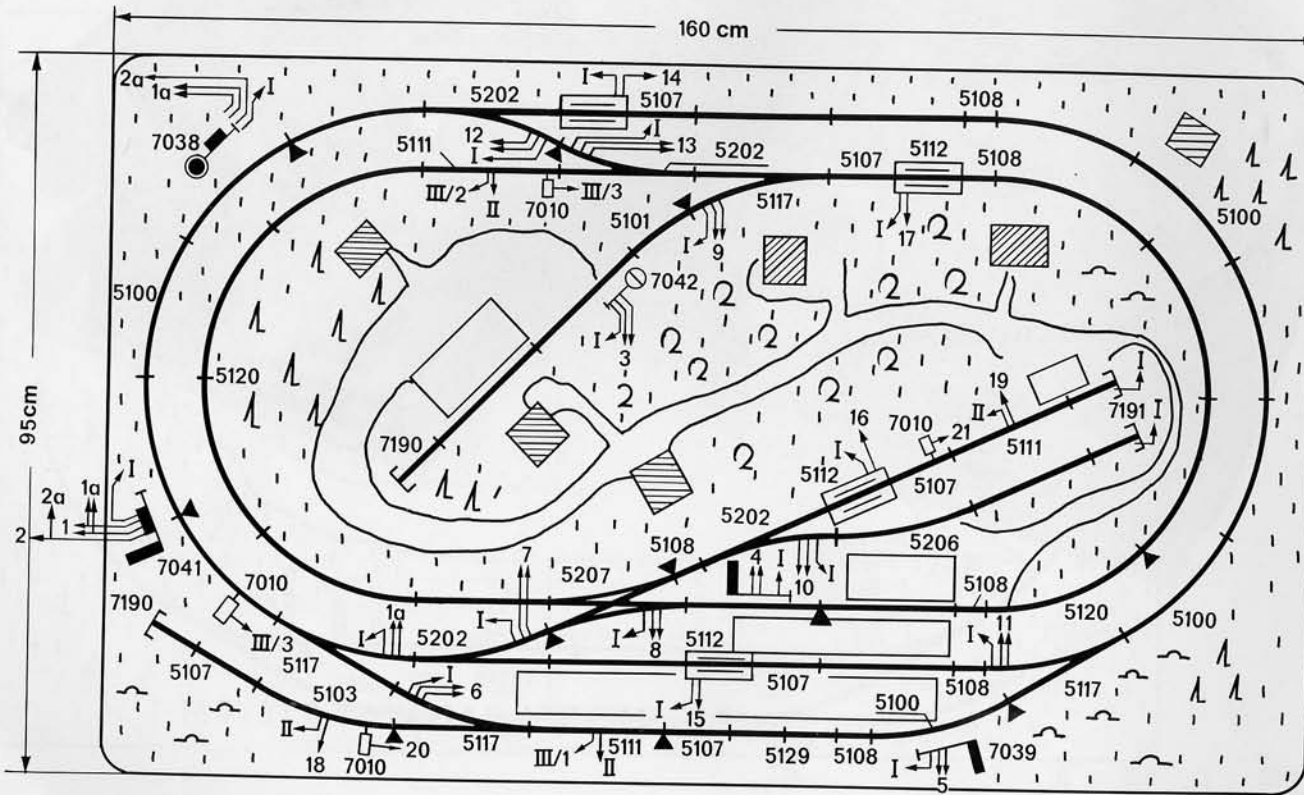
MODEL RAILWAY SYSTEM 1

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TRACK PLAN 2 for two to three trains

This layout is divided into three current circuits – two for the stud surface contacts, separated between the inner and outer oval tracks, with the third circuit for the whole of the overhead contact wire system.

The inner oval track is made up with the 5120 curved track sections to save space. The upper industrial track is switched on and off by the track block signal 7042, the other three sidings being controlled by the 7211 switchboard. A thing to remember is that the surface contact system as well as the overhead contact wire system for these three sidings are connected to the 7211 switchboard. Distant signal 7038 and home signal 7041 are coupled to points 1a so that they tally with the points setting in the "off" position.



Track sections:

11 - 5100	6 - 5108	8 - 5120
1 - 5101	3 - 5111	2 - 5129
1 - 5103	4 - 5112	1 - 5202
10 - 5106	1 - 5113	2 - 5202 (R)
6 - 5107	2 - 5117	1 - 5206
		1 - 5207

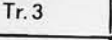
Accessories:

4 - 7000	3 - 7131	7 - 7209
1 - 7038	5 - 7132	1 - 7211
2 - 7039	5 - 7133	2 - 30 watt
1 - 7041	8 - 7135	trans-
1 - 7042	2 - 7190	formers
4 - 7072	2 - 7191	
3 - 7111	10 metres blue cable	
3 - 7112	10 metres brown cable	
5 - 7113	10 metres yellow cable	
8 - 7115	10 metres red cable	

Overhead contact wire system:

4-7005	18-7015	1-7277
32-7009	10-7018	1-30 watt
4-7010	3-7019	trans-
5-7013	2-7022	former
25-7014	20-7023	

Explanation of signs: (See page 11 also)

	Feeder track section
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
Tr. 1 + 2 Tr. 3	Transformer for centre stud contact line and lighting Transformer for overhead contact wire and lighting
I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the three distribution plates (I) of the three transformers.
7010 	Feeder catenary support 7010

This layout is intended to represent a branch or secondary line that has a long loop or passing track in addition to the single-track section that can be operated in both directions. The exit from the station is controlled by the two signals 6 and 7. So that the isolated section in front of these signals can also be used in the opposite direction, one 7045 universal remote-control switch is required for each, the switches being operated by the control track section 5146 or 5147.

The surface contact system and the overhead contact wire system each form a circuit, so that two railway transformers are required.

Track sections:

6-5100
3-5101
1-5103
14-5106
2-5107
4-5108
1-5109
4-5111
3-5112
3-5113
1-5117 (L)
4-5120
1-5146
1-5147
9-5200

2-5202
2-5202 (L)
1-5206
1-5207

Accessories:

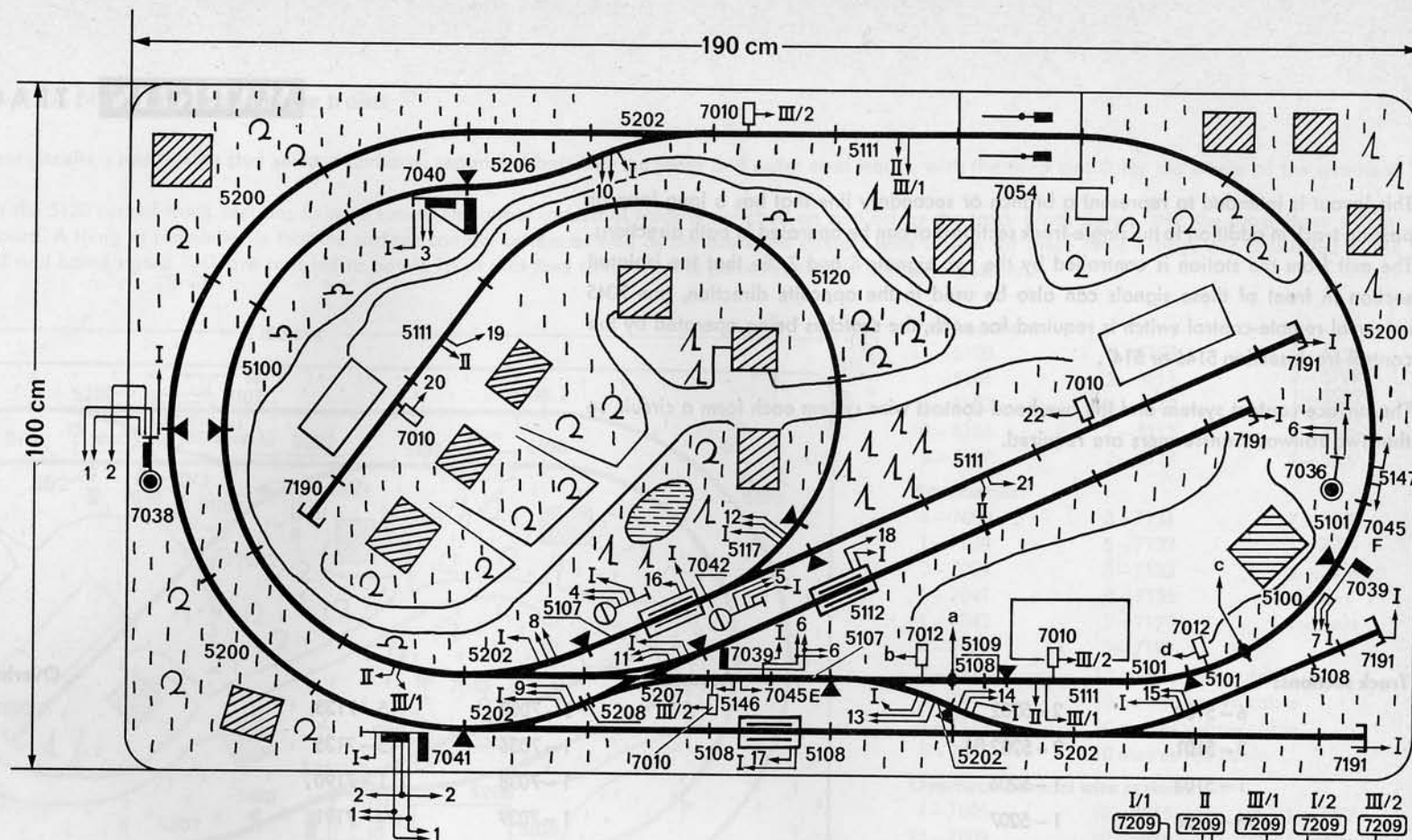
5-7000
1-7036
1-7038
1-7039
1-7040
1-7041
2-7042
2-7045
5-7072
5-7111
4-7112
12-7113
12-7115
7-7131
4-7132
15-7133
15-7135
1-7190
4-7191
2-7195
5-7209
1-7211
1-7390
1-30 watt
trans-
former
20 metres blue cable
10 metres brown cable
10 metres yellow cable
10 metres red cable

Overhead contact wire system:

2-7004
5-7005
33-7009
5-7010
3-7013
17-7014
22-7015
14-7018
1-7019
3-7022
21-7023
1-7277
1-30 watt
trans-
former

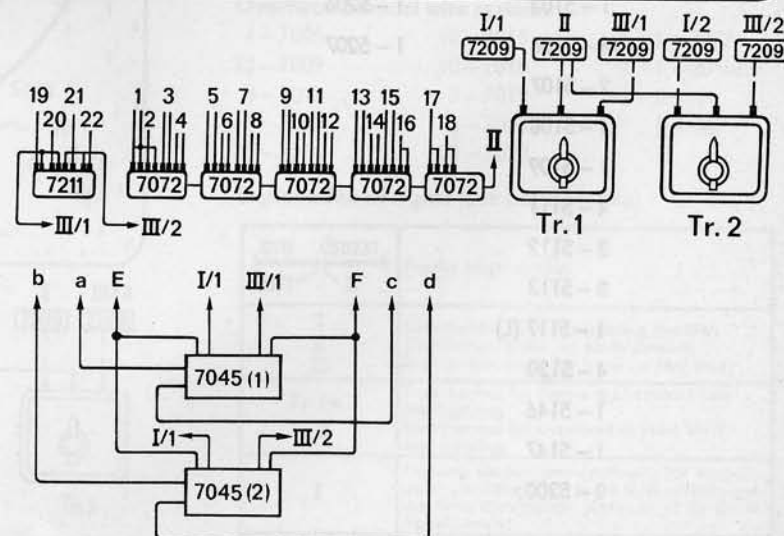
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TRACK PLAN 3 4x2



Explanation of signs: (See page 11 also)

	Feeder track section		Feeder catenary support 7010
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)		Control track section: 5146, 5147, 5213 In running direction: 7045 E Opposite direction: Out of action
Tr. 1 Tr. 2	Transformer for centre stud contact line and lighting Transformer for overhead contact wire and lighting	I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the two transformers.





MÄRKLIN MODEL RAILWAY SYSTEM 3

Track plan No. 4 is for a single-track line with some sidings, the tracks inside the oval being safeguarded by signals. Traction current for the outside siding a can be switched on and off from switchboard 7211. With this circuit, shunting can be carried out on the inner tracks and a locomotive laid up on the outside siding with the current cut off.

Track sections:

2 - 5100	1 - 5120
1 - 5101	13 - 5200
1 - 5103	3 - 5202
20 - 5106	1 - 5205
4 - 5107	2 - 5206
1 - 5110	1 - 5210
2 - 5111	
2 - 5112	
2 - 5113	
2 - 5117 (R)	

Accessories:

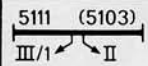
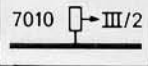
4 - 7000	9 - 7133
1 - 7039	10 - 7135
2 - 7040	4 - 7190
2 - 7042	2 - 7191
4 - 7072	1 - 7195
4 - 7111	5 - 7209
6 - 7112	1 - 7211
9 - 7113	1 - 30 watt
10 - 7115	trans-
6 - 7131	former
6 - 7132	

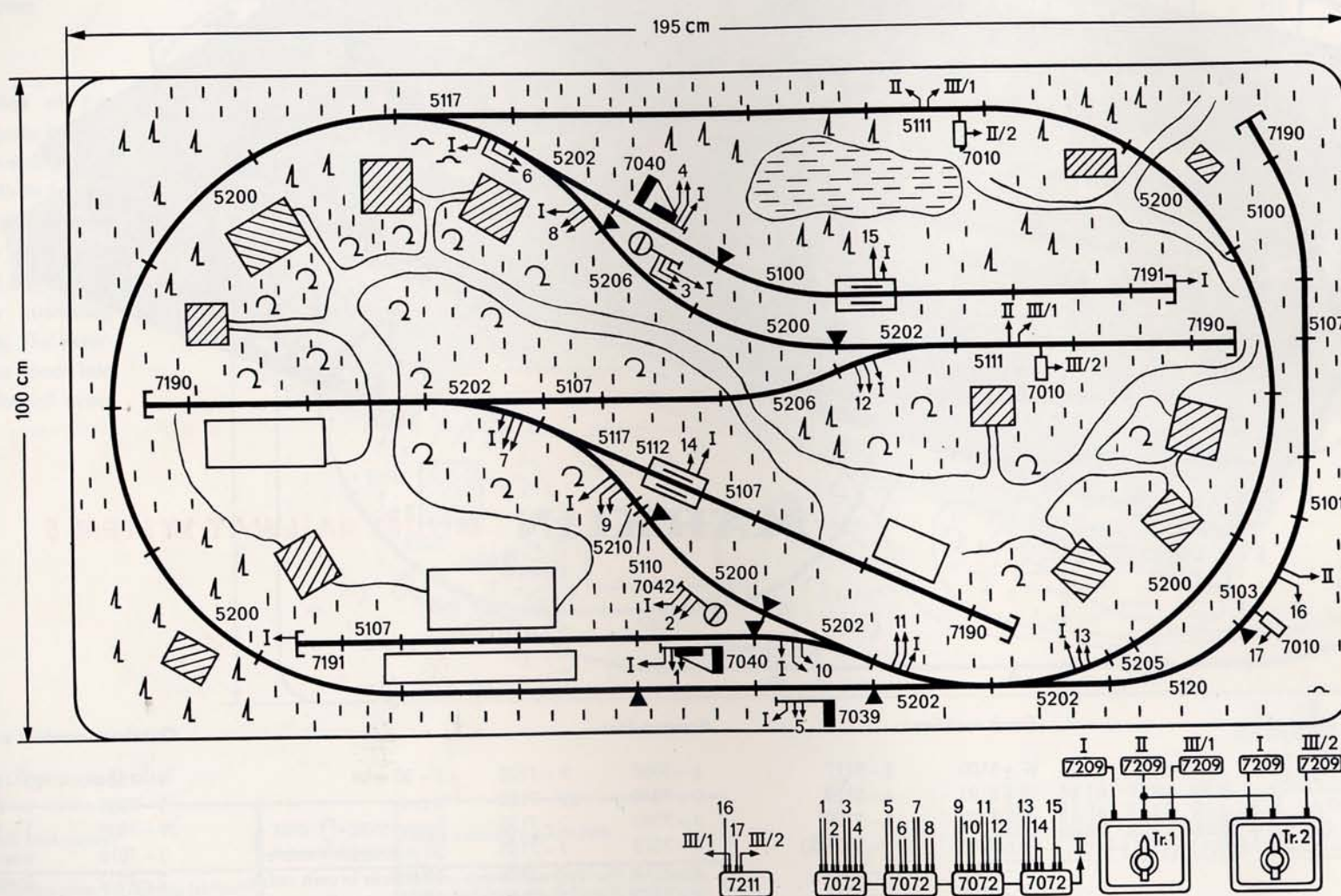
20 metres blue cable
10 metres brown cable
10 metres yellow cable
10 metres red cable

Overhead contact wire system:

4 - 7005	11 - 7023
38 - 7007	1 - 30 watt
3 - 7010	trans-
1 - 7012	former
8 - 7013	
22 - 7014	
21 - 7015	
8 - 7018	
5 - 7019	
1 - 7022	

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Tr. 1 Transformer for centre stud contact line and lighting Tr. 2 Transformer for overhead contact wire and lighting
	Feeder catenary support 7010
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the two transformers.





MÄRKLIN MODEL RAILWAY SYSTEM 5

Track sections:

17 - 5100	3 - 5117
2 - 5102	4 - 5120
3 - 5103	1 - 5129
15 - 5106	1 - 5202 (L)
9 - 5107	1 - 5206
3 - 5108	1 - 5211
2 - 5109	
1 - 5110	
2 - 5112	
2 - 5113	

Accessories:

6 - 7000	9 - 7123
2 - 7040	22 - 7125
2 - 7042	2 - 7132
4 - 7072	4 - 7135
6 - 7111	2 - 7188
3 - 7112	3 - 7191
9 - 7113	2 - 7195
22 - 7115	5 - 7209
5 - 7121	
8 - 7122	

1 - 30 watt
trans-
former
50 metres blue cable
10 metres brown cable
10 metres yellow cable
20 metres red cable

Overhead contact wire system:

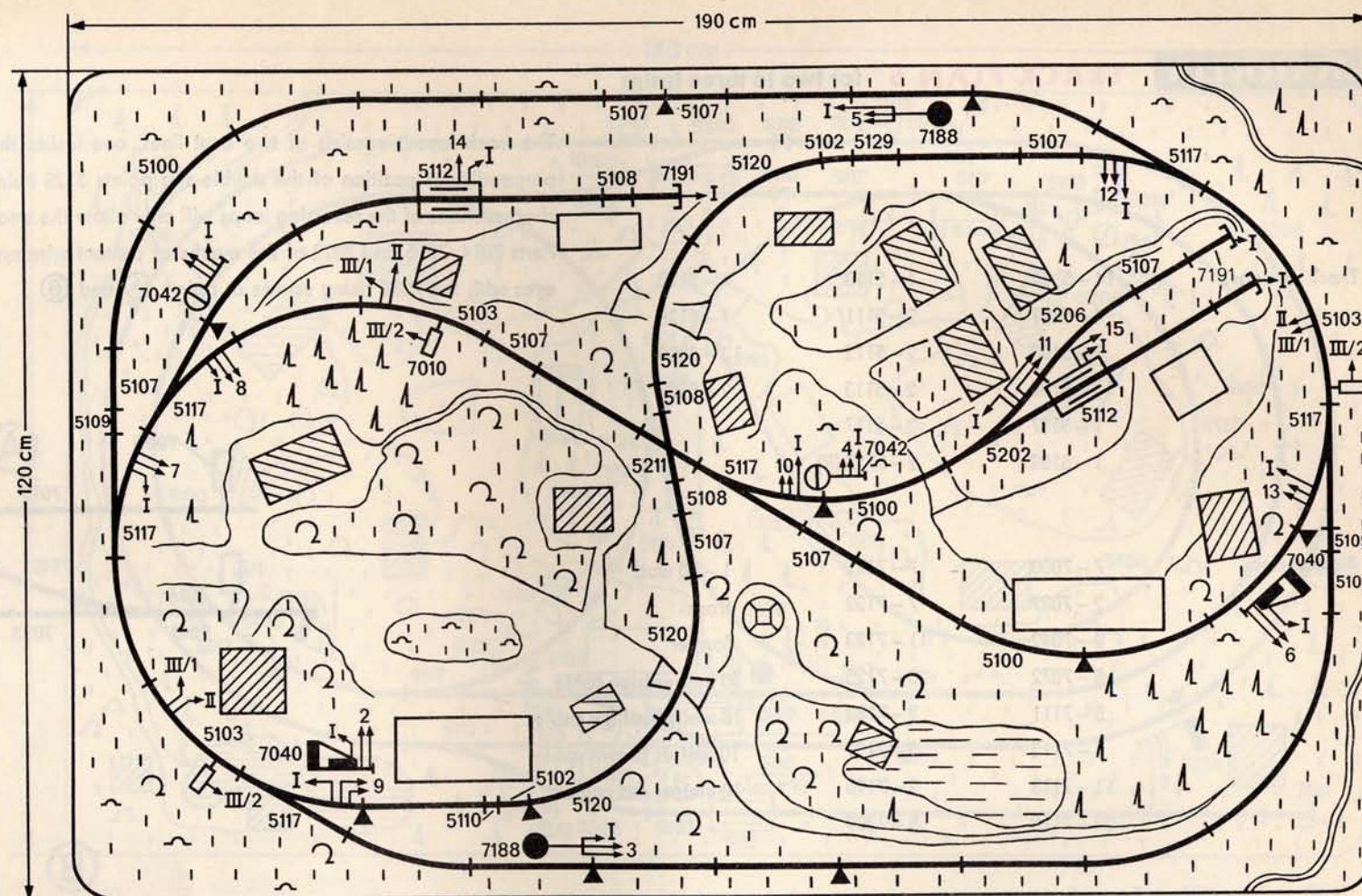
1 - 7004	22 - 7023
5 - 7005	1 - 7277
29 - 7009	1 - 30 watt
3 - 7010	trans-
2 - 7012	former
8 - 7013	
14 - 7014	
15 - 7015	
13 - 7018	
2 - 7019	

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TRACK PLAN 5 4x8

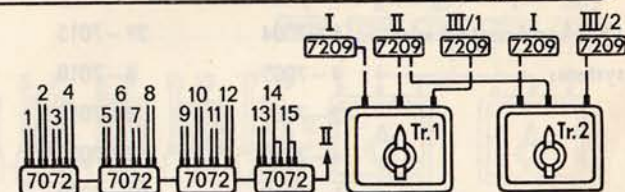
for one to two trains

The special attraction of this layout is the small space it takes despite its double reversing loop. The 5211 crossing with its favourable crossing angle of 48 degrees 34 minutes makes this track system possible, and the integral signals allow very interesting traffic by two trains. The reversing loops divide the space into industrial and residential areas (see photograph).



Explanation of signs: (See page 11 also)

5111 (5103) III/1 II	Feeder track section	7010 III/2	Feeder catenary support 7010
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)	I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the two transformers.
Tr. 1 Tr. 2	Transformer for centre stud contact line and lighting Transformer for overhead contact wire and lighting		



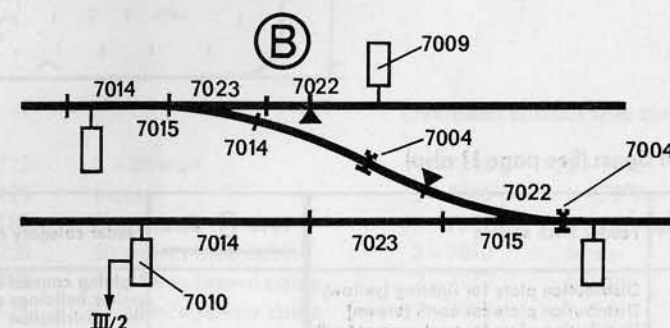
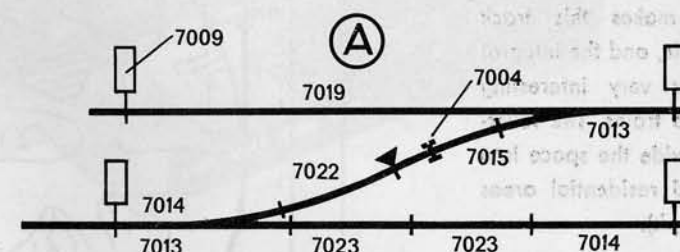
The track layout consists of two oval lines, one inside the other, with double reversing loops, the perpendicular position of the double slip points 5128 being the decisive factor in this instance. The short sections of the reversing loops will only allow the smaller trains to stop on them.

Parts 7014, 7015 and 7022 of the overhead contact wire system are to be connected together by their eyes with the 7004 fixing screws at points (A) and (B).

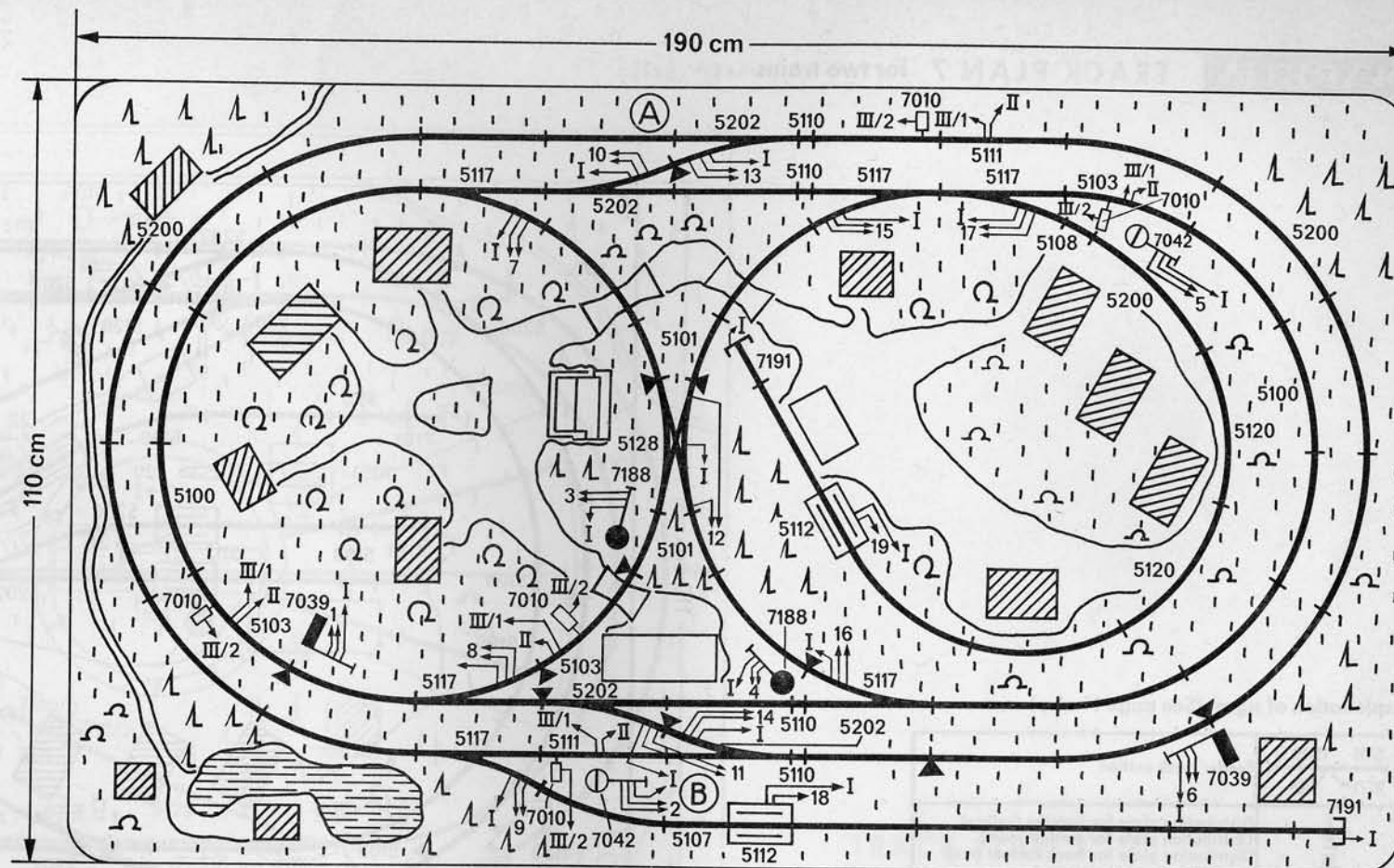
Track sections:	14-5100	4-5110	4-5120
	4-5101	2-5111	1-5128
	3-5103	2-5112	13-5200
	12-5106	2-5113	2-5202
	1-5107	2-5117	
	1-5108	2-5117 (R)	

Accessories:	7-7000	7-7121	1-30 watt
	2-7039	7-7122	trans-
	2-7042	11-7123	former
	5-7072	20-7125	50 metres blue cable
	5-7111	2-7188	10 metres yellow cable
	5-7112	2-7191	10 metres brown cable
	11-7113	2-7195	10 metres red cable
	20-7115	5-7209	

Overhead contact wire system:	1-7004	29-7015	1-30 watt
	4-7005	8-7018	trans-
	42-7009	3-7019	former
	4-7010	4-7022	
	1-7012	27-7023	
	9-7013	1-7277	
	32-7014		

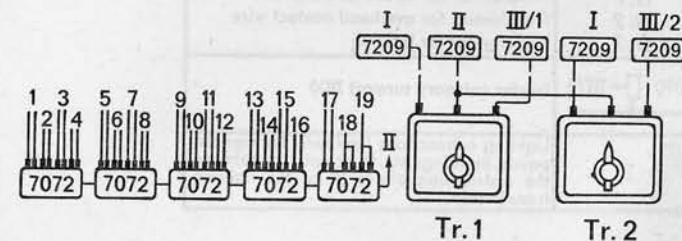


TRACK PLAN 6



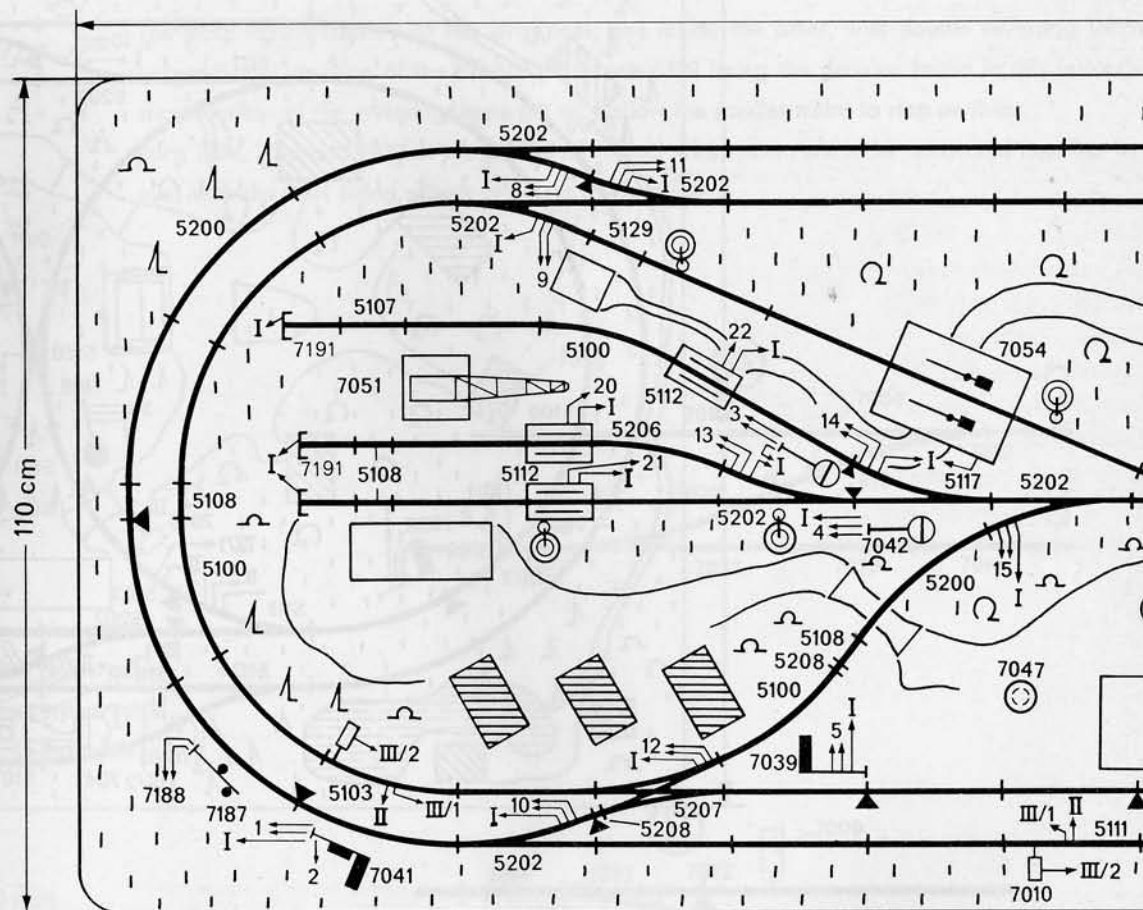
Explanation of signs: (See page 11 also)

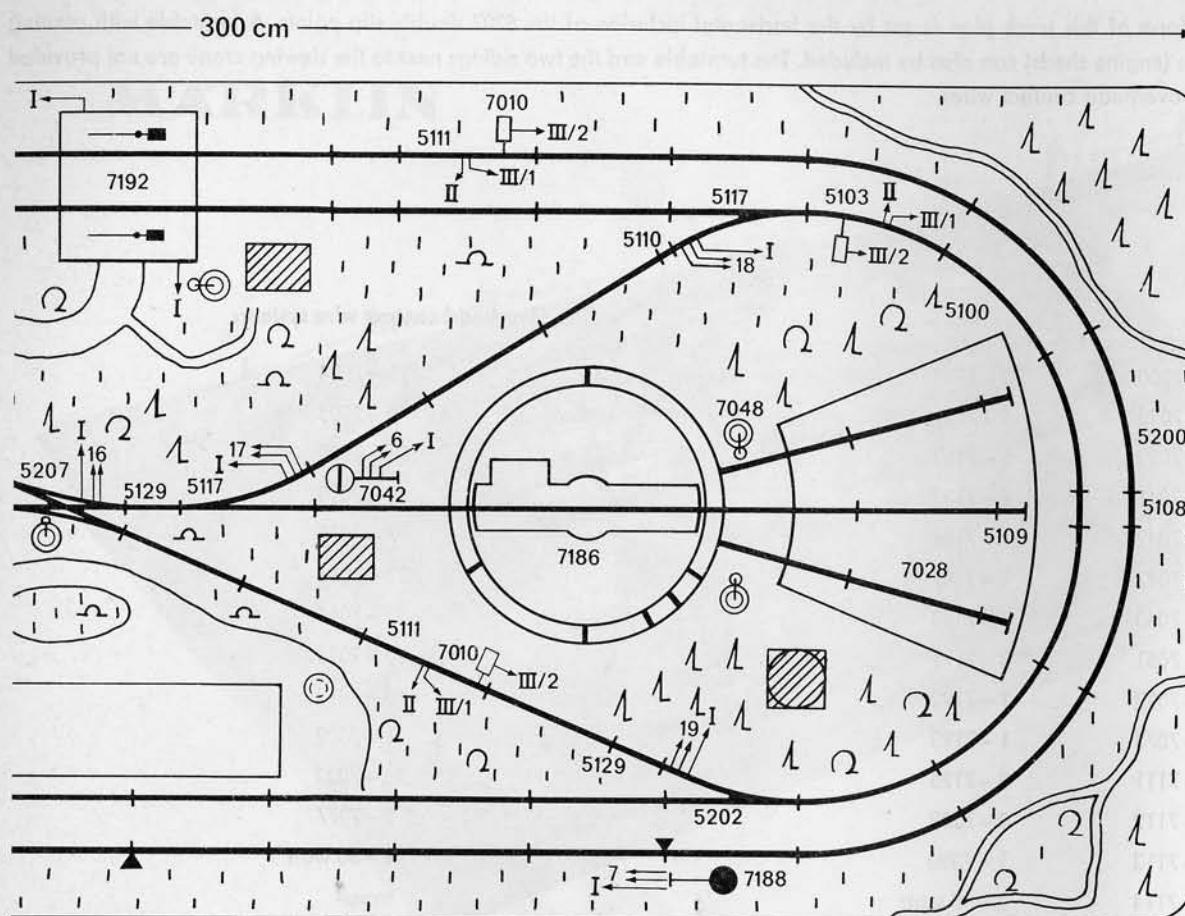
	Feeder track section		Feeder catenary support 7010
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)	I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the two transformers.
Tr. 1 Tr. 2	Transformer for centre stud contact line and lighting Transformer for overhead contact wire and lighting	(A) + (B)	Circuit separation in the overhead contact wire system by 7022. Connection with 7014 and 7015 respectively to be made at the eyes by two screws from 7004.



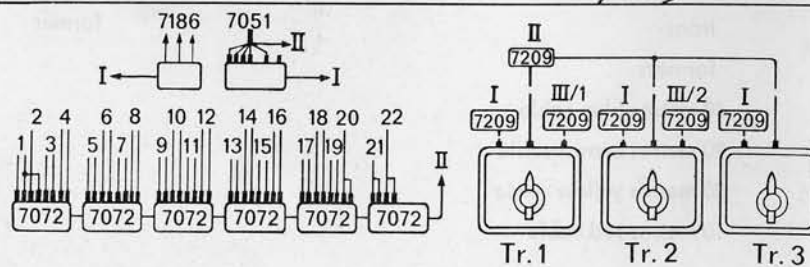
Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Tr. 1 Transformer for centre stud contacts Tr. 2 Transformer for overhead contact wire Tr. 3 Transformer for lighting
	Feeder catenary support 7010
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the lighting transformer.





TRACK PLAN 7



MARKLIN TRACK PLAN 7 for two trains

The form of this track plan is set by the horizontal inclusion of the 5207 double slip points. A turntable with running sheds (engine sheds) can also be included. The turntable and the two sidings next to the slewing crane are not provided with overhead contact wires.

Track sections:

12 – 5100
2 – 5103
46 – 5106
1 – 5107
7 – 5108
3 – 5109
1 – 5110
3 – 5111
3 – 5112
3 – 5113
4 – 5115
1 – 5117
1 – 5117 (L)
3 – 5129
13 – 5200
2 – 5202
3 – 5202 (R)
2 – 5207

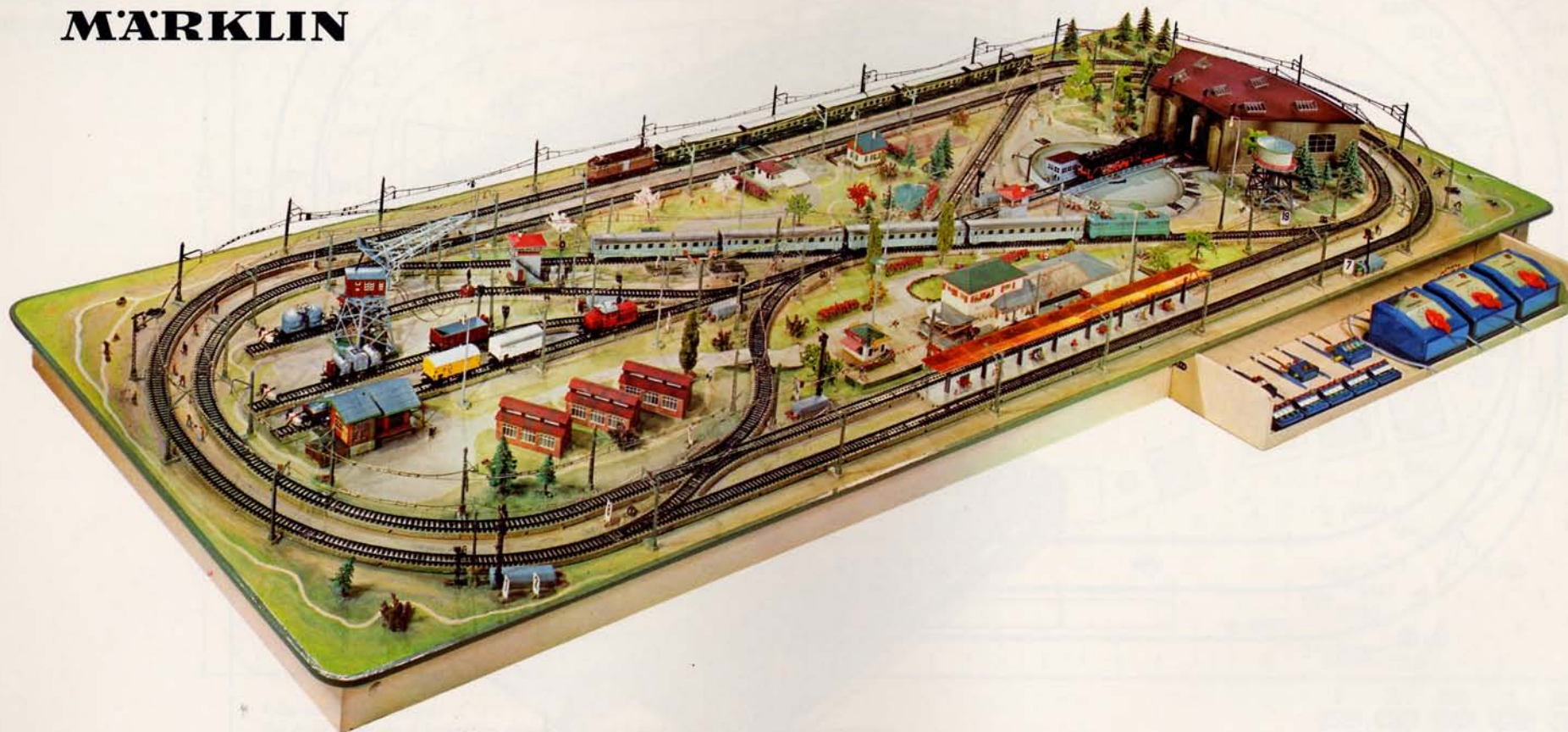
Accessories:

10 – 7000
1 – 7028
1 – 7039
1 – 7041
3 – 7042
2 – 7047
8 – 7048
1 – 7051
6 – 7072
14 – 7073
10 – 7111
20 – 7112
25 – 7113
1 – 7114
50 – 7115
10 – 7121
20 – 7122
25 – 7123
1 – 7124
30 – 7125
5 – 7131
5 – 7132
5 – 7133
1 – 7186
1 – 7187
1 – 7188
3 – 7191
1 – 7192
1 – 7193
2 – 7195
9 – 7209
1 – 7390
2 – 30 watt
trans-
formers
60 metres blue cable
20 metres brown cable
20 metres yellow cable
10 metres red cable

Overhead contact wire system:

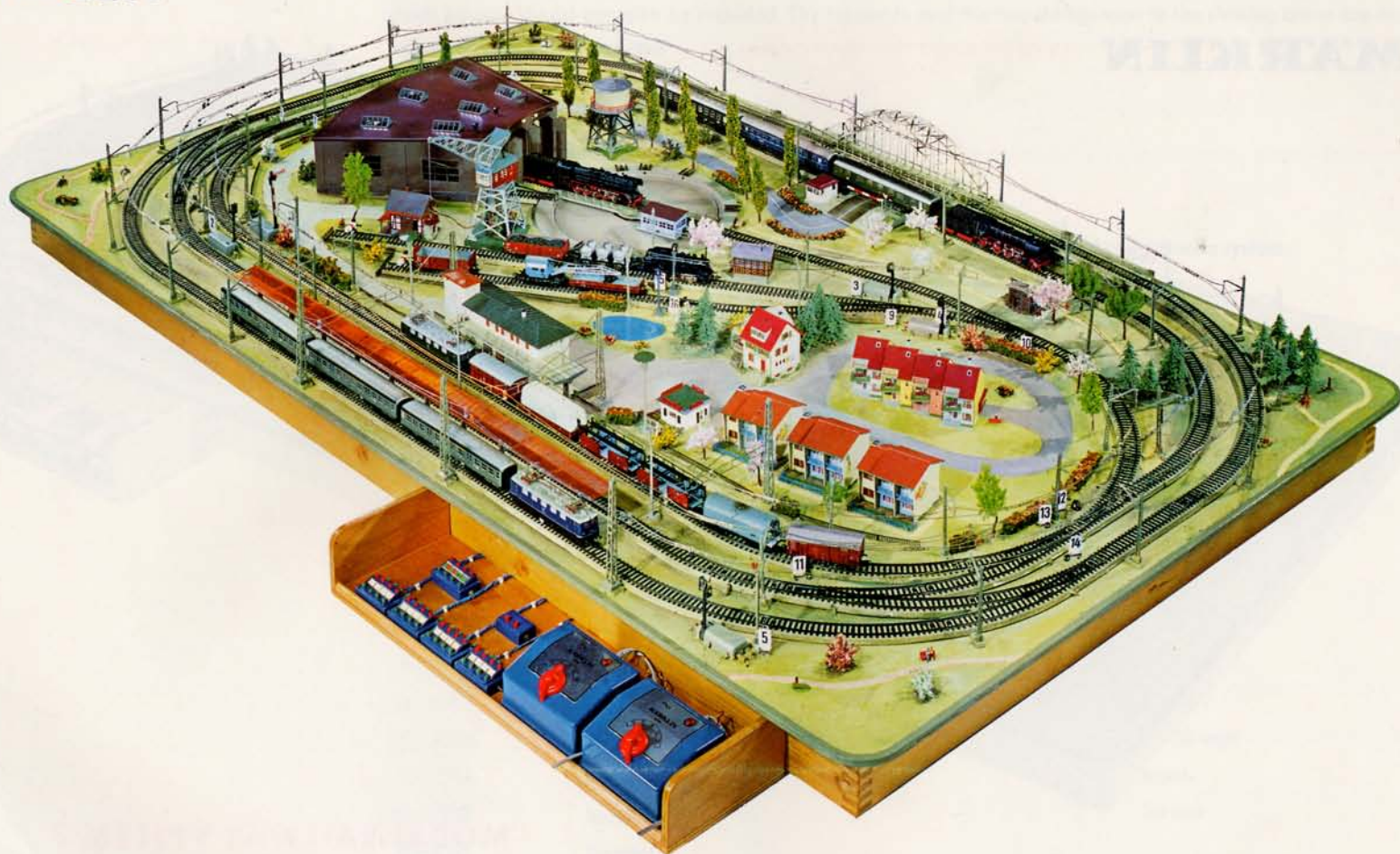
1 – 7004
5 – 7005
54 – 7009
5 – 7010
7 – 7013
27 – 7014
27 – 7015
23 – 7018
13 – 7019
1 – 7022
36 – 7023
2 – 7277
1 – 30 watt
trans-
former

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MODEL RAILWAY SYSTEM 7

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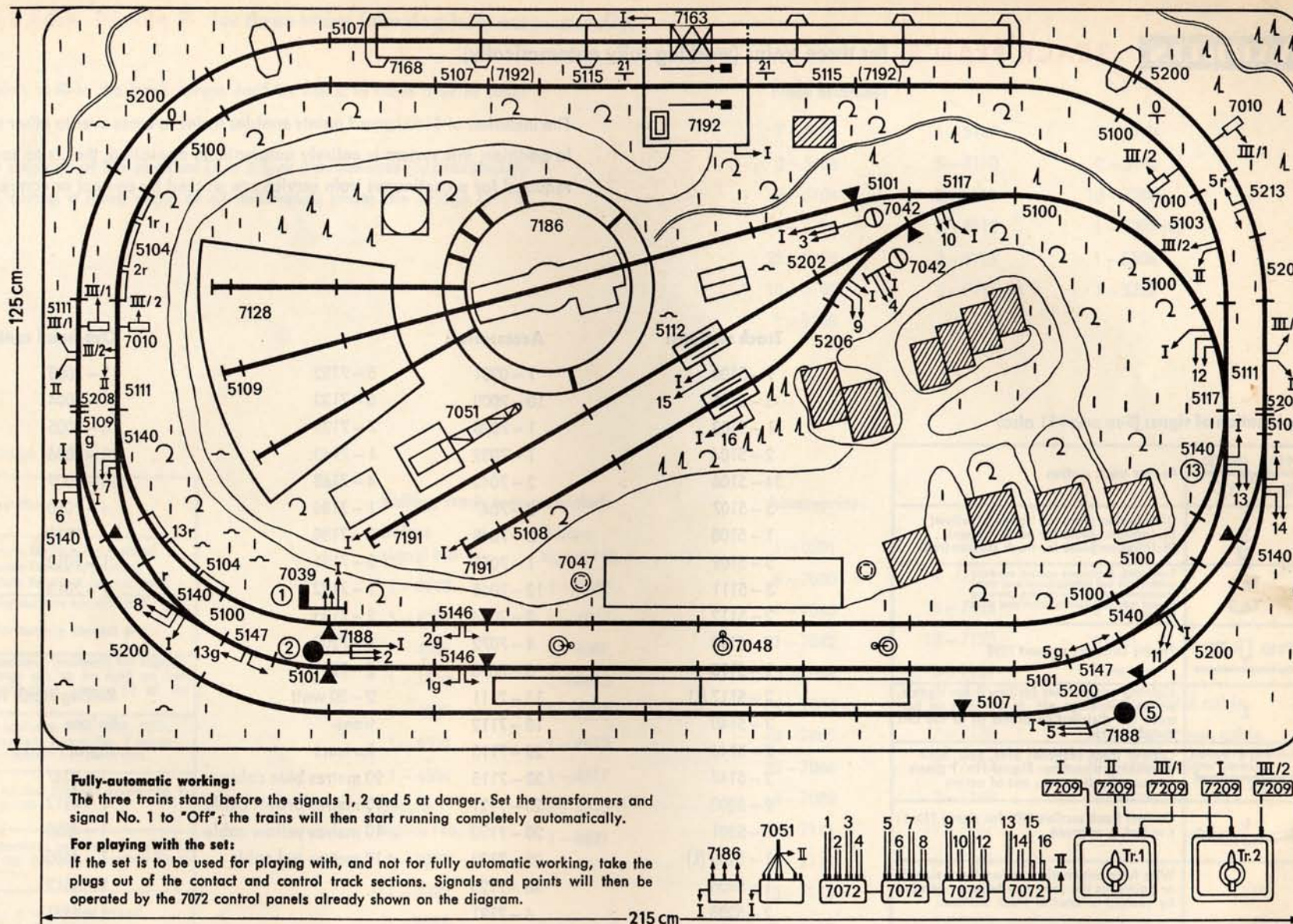
MODEL RAILWAY SYSTEM 8
(working fully automatically)

MARKLIN

TRACK PLAN 8

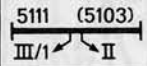
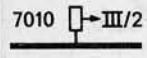
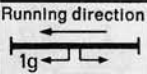
(working fully automatically)

4x6



The inclusion of 5140 curved points enables trains to cross over to other tracks outside the station. In addition, this system is entirely automatic in operation, that is to say, the signals and points required for a continuous train service are worked by contact or control track sections.

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
Tr. 1 Tr. 2	Transformer for surface contact, overhead contact wire and lighting (outer oval track) Transformer for surface contact, overhead contact wire and lighting (inner oval track and sidings)
	Feeder catenary support 7010
I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the two transformers.
	Control track sections: 5146, 5147, 5213 in running direction: Signal No. 1 green in opposite direction: out of action
	Contact track section 5104 for signal No. 1: r = red, g = green
①	With fully-automatic working these signals or points, as the case may be, are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
$\frac{21}{+}$	Track bed height in millimetres

Track sections:

9-5100
3-5101
1-5103
2-5104
34-5106
3-5107
1-5108
5-5109
3-5111
2-5112
2-5113
2-5115
2-5117 (L)
3-5140
2-5146
2-5147
9-5200
1-5201
1-5202 (L)
1-5206
2-5208
1-5213

Accessories:

1-0201
10-7000
1-7028
1-7039
2-7042
2-7047
3-7048
1-7051
12-7065
8-7066
4-7072
3-7073
13-7111
18-7112
20-7113
38-7115
25-7121
20-7122
25-7123
48-7125
6-7131
5-7132
5-7133
7-7135
1-7163
4-7168
1-7186
2-7188
2-7191
1-7192
2-7195
6-7209
2-7211
2-30 watt
trans-
formers
90 metres blue cable
10 metres brown cable
10 metres yellow cable
10 metres red cable

Overhead contact wire system:

1-7003
11-7004
3-7005
10-7006
33-7009
4-7010
4-7011
1-7012
7-7013
30-7014
28-7015
3-7017
11-7018
9-7019
6-7021
3-7022
23-7023

Rolling stock recommended:

Before signal No. 1:	Before signal No. 2:
1-3037	1-3097
1-4517	1-4022
1-4550	1-4026
1-4605	1-4029
1-4612	
1-4621	
	Before signal No. 5:
	1-3034
	3-4083

MARKLIN TRACK PLAN 9 for three trains (working fully automatically)

The inclusion of curved points 5140 in the track curves enables trains to cross over to other tracks outside the station.

The permanent way has an upgrade of $3\frac{1}{3}$ per cent (1 in 30), or 6 millimetres (approximately $\frac{1}{4}$ ") in each track section, giving a head room of 63 millimetres under the bridge ($2\frac{1}{2}$ ").

Track sections:

7-5100	1-5109	2-5140
3-5103	5-5110	2-5146
2-5104	2-5111	10-5200
2-5105	2-5112	1-5202 (L)
25-5106	2-5113	1-5206
10-5107	3-5117 (R)	1-5210
1-5108		

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transformer for surface contact and lighting Transformer for surface contact and lighting
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the distribution plates (I) of the transformers.
	Control track sections: 5146, 5147, 5213 in running direction: signal No. 3 green in opposite direction: out of action
	Contact track section 5104 for signal No. 1: r = red, g = green
	With fully-automatic working the signals are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres

Rolling stock recommended:

Before signal No. 1:	Before signal No. 4:
1-3003	1-3047
1-4502	1-4517
1-4505	1-4601
1-4508	1-4605
1-4509	1-4610
1-4600	1-4613
1-4604	1-4617
Before signal No. 3:	1-4620
1-3021	1-4621
1-4022	
1-4024	
1-4026	

Accessories:

1-0201	11-7121	5-7209
6-7000	8-7122	1-7390
1-7040	16-7123	2-30 watt
1-7042	18-7125	trans-
3-7048	5-7131	formers
34-7064	3-7133	20 metres blue cable
40-7065	7-7135	10 metres brown cable
32-7066	2-7162	10 metres yellow cable
4-7072	2-7163	10 metres red cable
5-7111	19-7167	
8-7112	6-7168	
13-7113	2-7188	
26-7115	2-7191	
	1-7195	

TRACK PLAN 9

 $4'7'' \times 2'$ 

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MODEL RAILWAY SYSTEM 9

(working fully automatically)

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MODEL RAILWAY SYSTEM 10

(working fully automatically)

TRACK PLAN 10^{4/5x8} (working fully automatically)

Fully-automatic working:

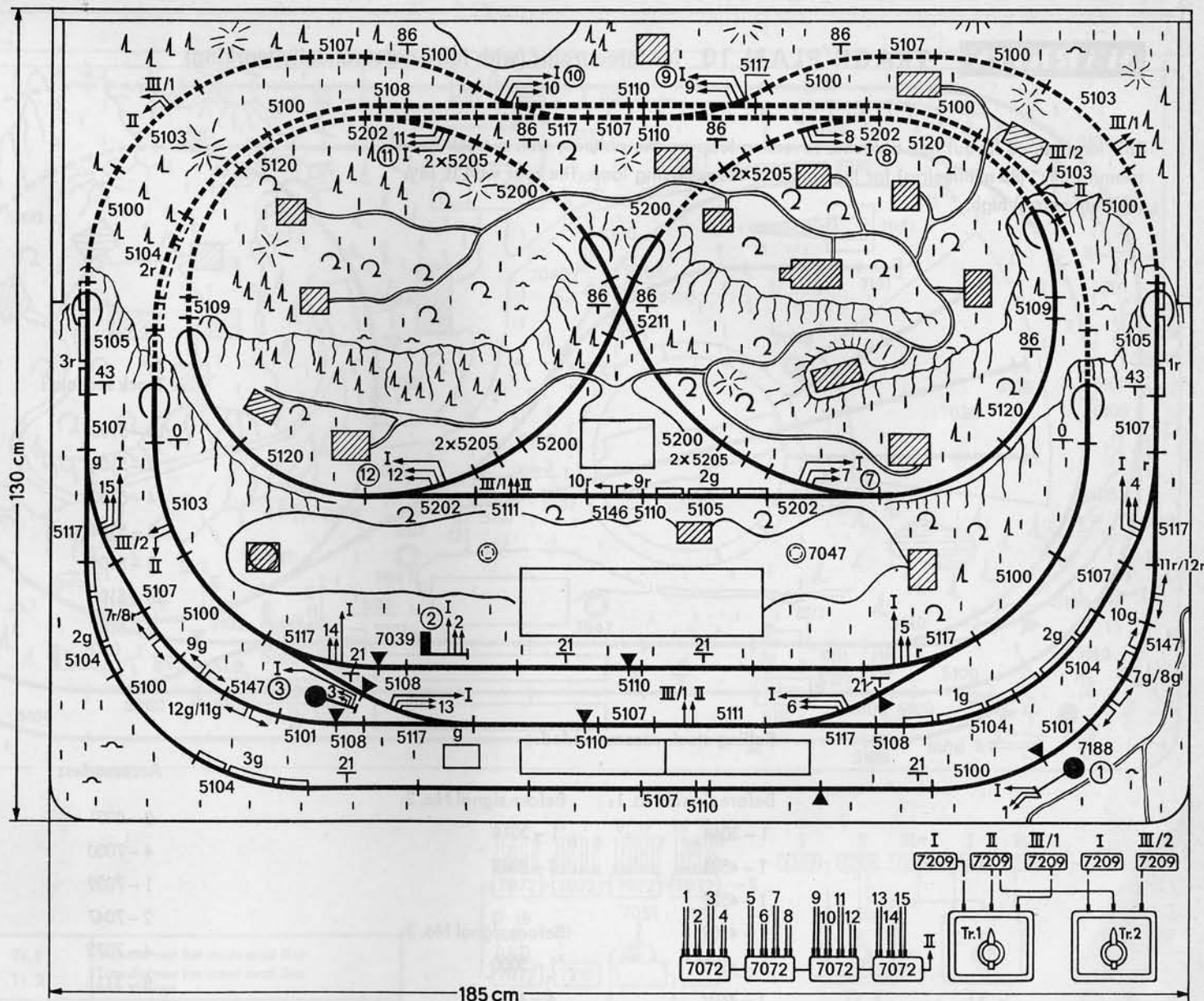
The trains are before signals 1, 2, 3 and 6 against them; set the transformer and signals Nos. 2 and 3 to "off", and the trains will then start running automatically.

Playing with the set:

To change the set over for playing with it, take out the plugs from the contact and control track sections; signals and points will then be operated only by the 7072 control panels already included in the diagram.

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Tr.1 Transformer for outer oval line with plateau Tr.2 Transformer for inner oval line
	Lighting connections (yellow/I) for signals, points, buildings, etc., to be split up between the two distribution plates (I) of the two transformers.
	Control track sections: 5146, 5147, 5213 in running direction: points 7 + 8 straight ahead in opposite direction: out of action
	Contact track section 5104 for signal No.2: g = green, r = red
	With fully automatic working these signals and points are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres



This landscaped layout has a double reversing loop on the plateau, with a track head-room of $3\frac{2}{5}$ " (86 millimetres) for the whole of the reversing loop. The rear wall is $16\frac{1}{2}$ " (42 centimetres) high.

Track sections:

15-5100	4-5108	6-5147
2-5101	2-5109	4-5200
4-5103	6-5110	2-5202
5-5104	2-5111	8-5205
3-5105	4-5117	1-5211
16-5106	8-5120	
9-5107	1-5146	

Rolling stock recommended:

Before signal No. 1:	Before signal No. 2:
1-3064	1-3016
1-4501	2-4018
1-4508	
1-4509	Before signal No. 3:
1-4510	1-3000
1-4607	4-4040
1-4619	

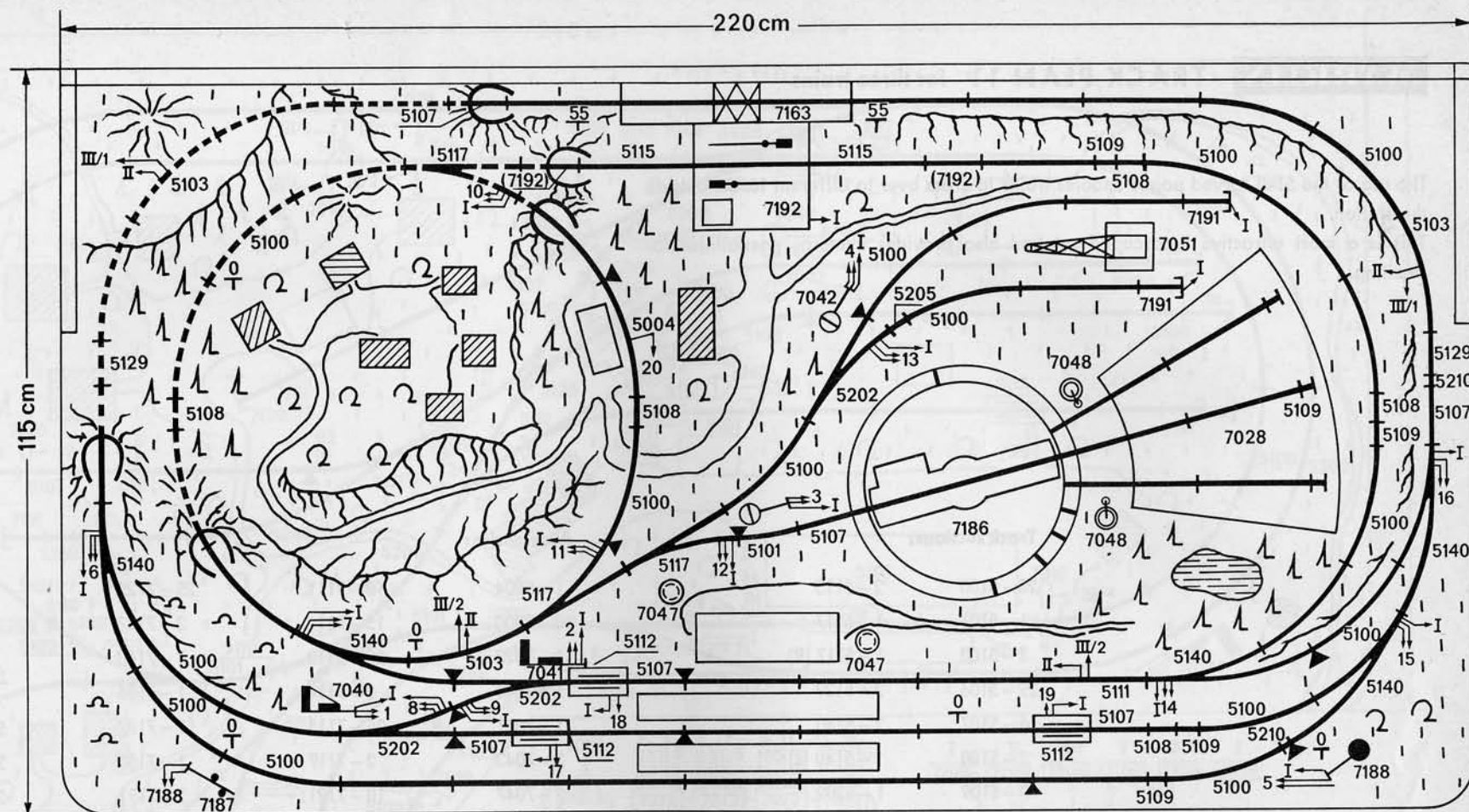
Accessories:

2-0201	4-7122	4-7209
4-7000	13-7123	2-30 watt
1-7039	14-7125	trans-
2-7047	10-7131	formers
4-7072	10-7132	30 metres blue cable
8-7111	19-7133	10 metres brown cable
7-7112	21-7135	10 metres yellow cable
16-7113	2-7188	10 metres red cable
27-7115	1-7195	

MARKLIN

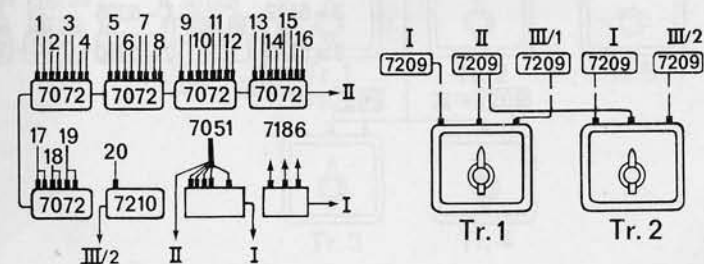
TRACK PLAN 11

4x9



Explanation of signs: (See page 11 also)

5111 (5103) III/1 II	Feeder track section	Tr. 1 Tr. 2	Transformer for outer oval line Transformer for inner oval line with sidings
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)	I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up between the two distribution plates (I) of the two transformers.



MARKLIN**TRACK PLAN 11** for three trains (4x9'1" + 2'4" x 3')

The use of the 5140 curved points enables trains to cross over to different tracks outside the station.

This is a most attractive landscaped set and also provides numerous possibilities for shunting.

Track sections:

28-5100	2-5115
1-5101	1-5117
3-5103	1-5117 (R)
29-5106	2-5129
6-5107	2-5140
5-5108	1-5140 (L)
7-5109	1-5202
1-5111	1-5202 (L)
3-5112	1-5205
3-5113	2-5210

Accessories:

1-5004	10-7111	25-7125	1-7210
10-7000	15-7112	2-7127	2-30 watt
1-7028	20-7113	1-7163	trans-
1-7040	2-7114	1-7186	formers
1-7041	25-7115	1-7187	50 metres blue cable
2-7042	2-7117	1-7188	20 metres brown cable
2-7047	10-7121	2-7191	20 metres yellow cable
2-7048	15-7122	1-7192	20 metres red cable
1-7051	20-7123	2-7195	
5-7072	2-7124	5-7209	

MARKLIN TRACK PLAN 12 for two to three trains

Endless opportunities for playing with this fine set are provided by the two reversing loops and numerous sidings it has.

Explanation of signs: (See page 11 also)

	Feeder track section
I	Distribution plate for lighting (yellow)
II	Distribution plate for earth (brown)
III	Distribution plate for track current (red)
Tr. 1	Transformer for surface contact (outer oval line)
Tr. 2	Transformer for surface contact (inner oval line and siding)
Tr. 3	Transformer for overhead contact wire (outer oval line)
Tr. 4	Transformer for overhead contact wire (inner oval line and siding)
Tr. 5	Transformer for lighting
I	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up on the distribution plate of No. 5 transformer for lighting.
	Feeder catenary support 7010

Track sections:

23 - 5100	7 - 5110	2 - 5201
3 - 5101	5 - 5111	3 - 5202
1 - 5102	6 - 5112	4 - 5205
1 - 5103	4 - 5117	1 - 5206
33 - 5106	1 - 5117 (R)	1 - 5207
7 - 5107	2 - 5128	1 - 5208
8 - 5108	4 - 5129	
5 - 5109	10 - 5200	

Accessories:

6 - 7000	30 - 7115	8 - 7209
1 - 7040	10 - 7122	1 - 7211
1 - 7041	7 - 7131	3 - 30 watt
3 - 7042	9 - 7132	trans-
1 - 7051	25 - 7133	formers
8 - 7072	30 - 7135	30 metres blue cable
7 - 7111	2 - 7190	10 metres brown cable
19 - 7112	7 - 7191	30 metres yellow cable
25 - 7113	2 - 7195	10 metres red cable

Overhead contact wire system:

4 - 7004	40 - 7015	2 - 30 watt
5 - 7005	14 - 7018	trans-
71 - 7009	12 - 7019	formers
6 - 7010	4 - 7022	
12 - 7013	34 - 7023	
41 - 7014	3 - 7277	

This set, with its double reversing loop, is particularly interesting as a landscaped layout while its numerous bridges enable its character as a river and harbour model to be readily recognised.

Fulli automatic working:

The trains stand before signals 2, 6 and 7 that are against them (i.e., at danger). Set the transformer and signal No. 2 to "off", the trains will then start running completely automatically.

For playing with the set:

If the set is to be changed over from fully automatic working so that it can be played with, the plugs must be taken out of the contact and control track sections. Points and signals will then be operated only by the 7072 control panels already shown in the diagram.

Track sections:

17-5100	3-5108	6-5120
2-5101	3-5109	1-5128
1-5102	4-5110	1-5129
2-5103	3-5111	2-5146
2-5104	5-5112	5-5200
3-5105	5-5113	2-5202 (R)
23-5106	4-5117	2-5206
12-5107	2-5117 (L)	1-5210

Rolling stock recommended:

Before signal No. 1:

1-3097
4-4002
1-4003

Before signal No. 6:

1-3065
3-4502
1-4511
1-4604

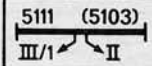
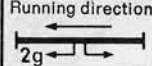
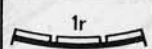
Before signal No. 2:

1-3021
1-4022
1-4026
1-4029

Accessories:

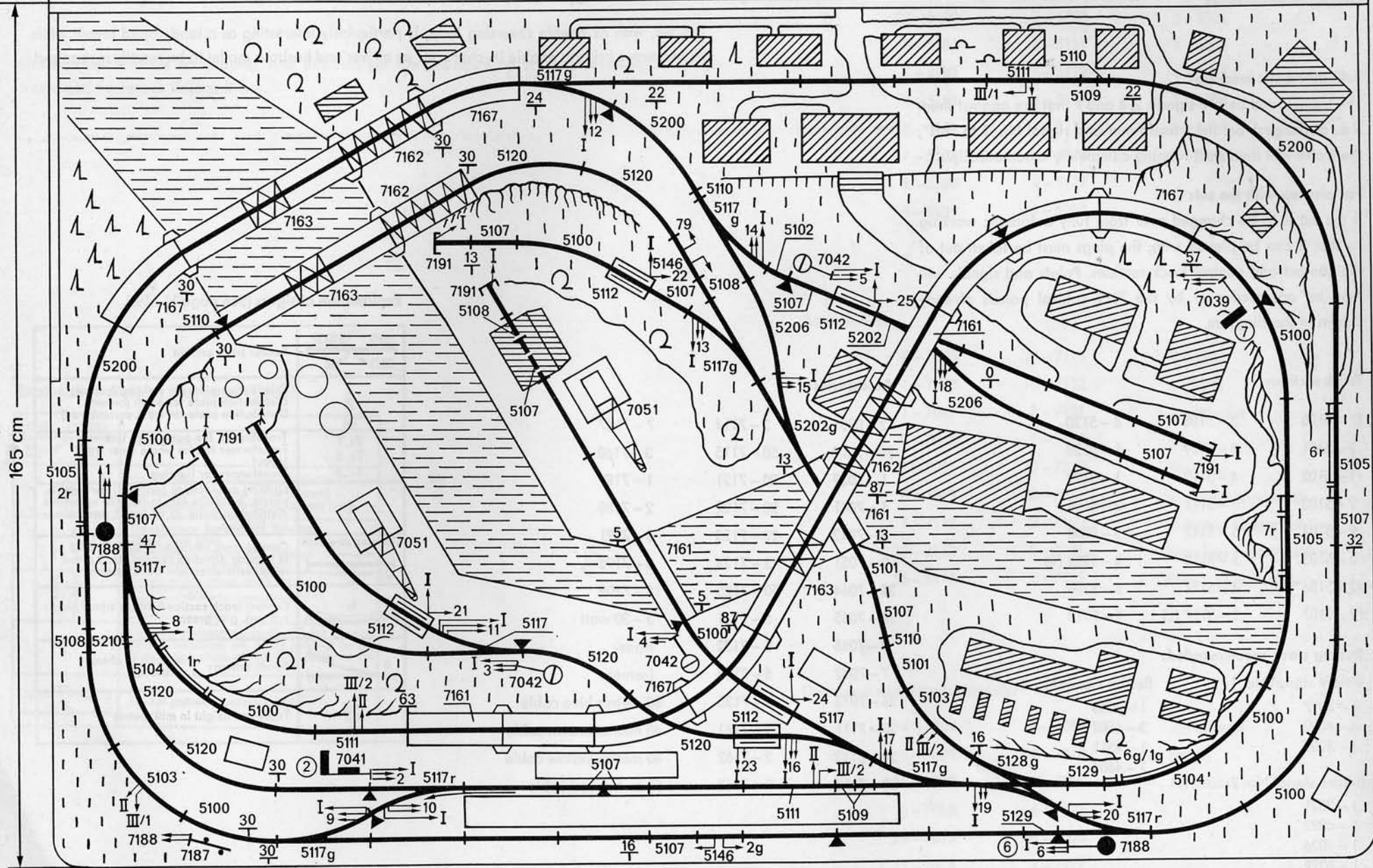
2-0201	2-7114	7-7167
30-7000	50-7115	3-7168
1-7039	20-7121	1-7187
1-7041	20-7122	2-7188
3-7042	20-7123	6-7191
2-7051	2-7124	3-7195
22-7064	50-7125	10-7209
20-7065	5-7131	3-30 watt
9-7066	5-7132	trans-
7-7072	5-7133	formers
26-7073	5-7135	80 metres blue cable
20-7111	2-7161	40 metres brown cable
20-7112	3-7162	40 metres yellow cable
20-7113	3-7163	50 metres red cable

Explanation of signs: (See page 11 also)

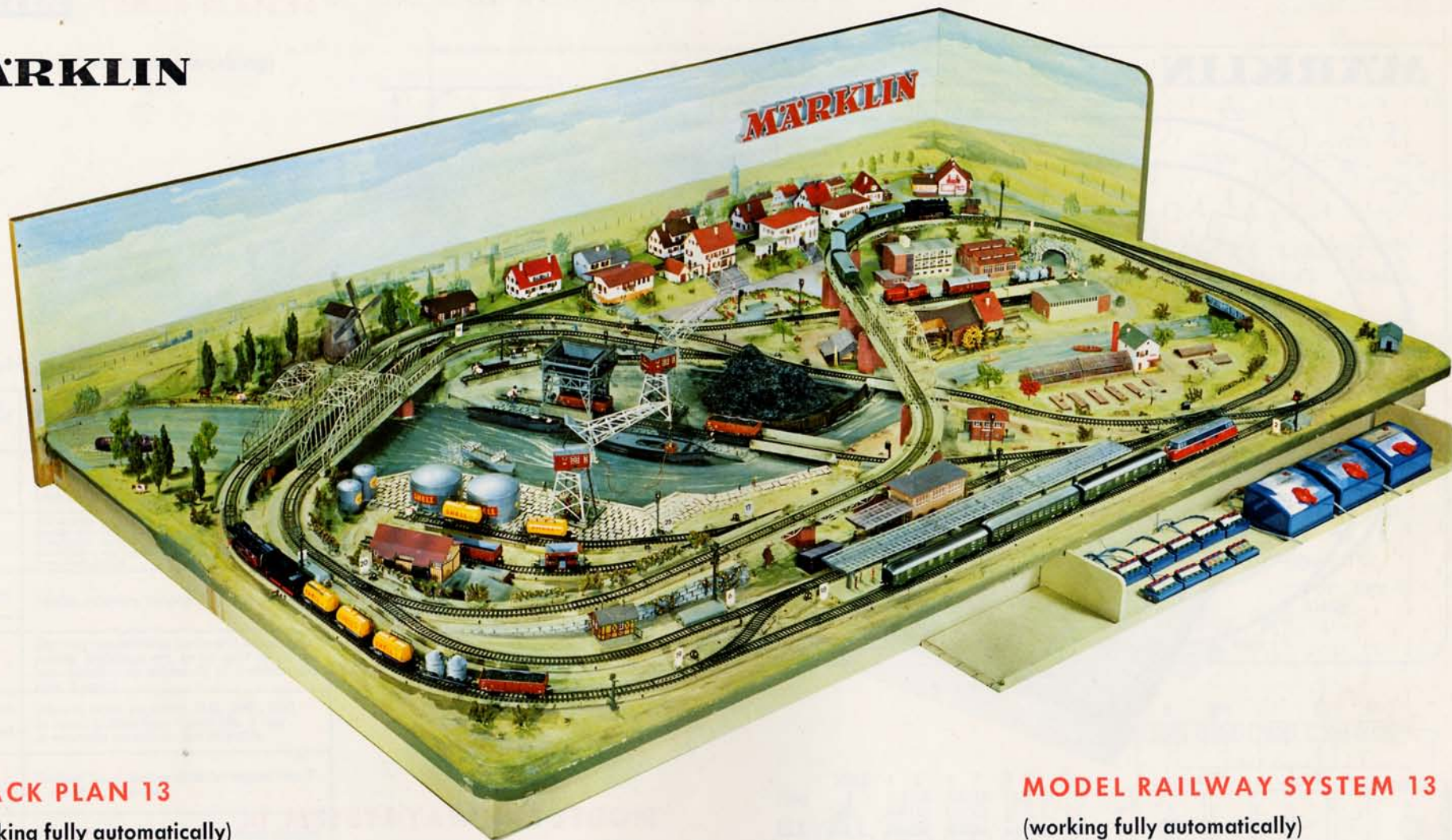
	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transformer for outer oval line Transformer for the whole inner track layout Transformer for lighting
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up on the distribution plate (I) of No. 3 transformer for lighting.
	Control track sections: 5146, 5147, 5213 in running direction: signal No. 2 green in opposite direction: out of action
	Contact track section 5104 for signal No. 1: r = red, g = green
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres

3' 5"

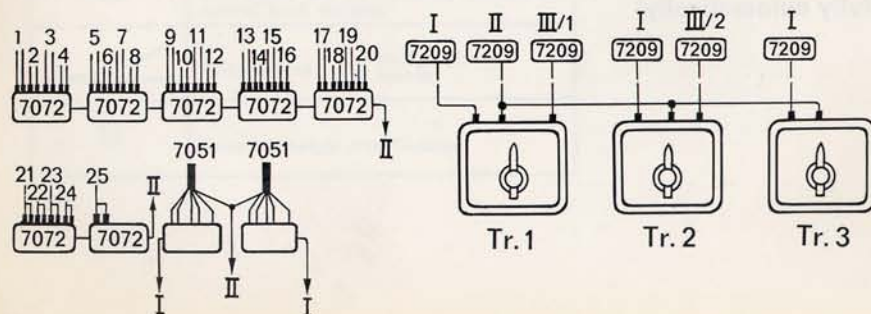
255 cm



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◀ **TRACK PLAN 13**
(working fully automatically)



MODEL RAILWAY SYSTEM 13
(working fully automatically)

MARKLIN



MODEL RAILWAY SYSTEM 14

(working fully automatically)

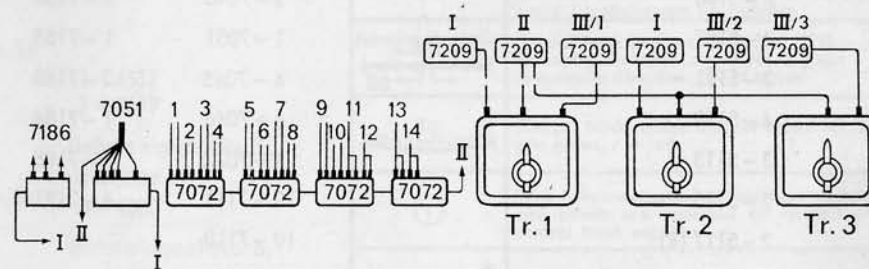
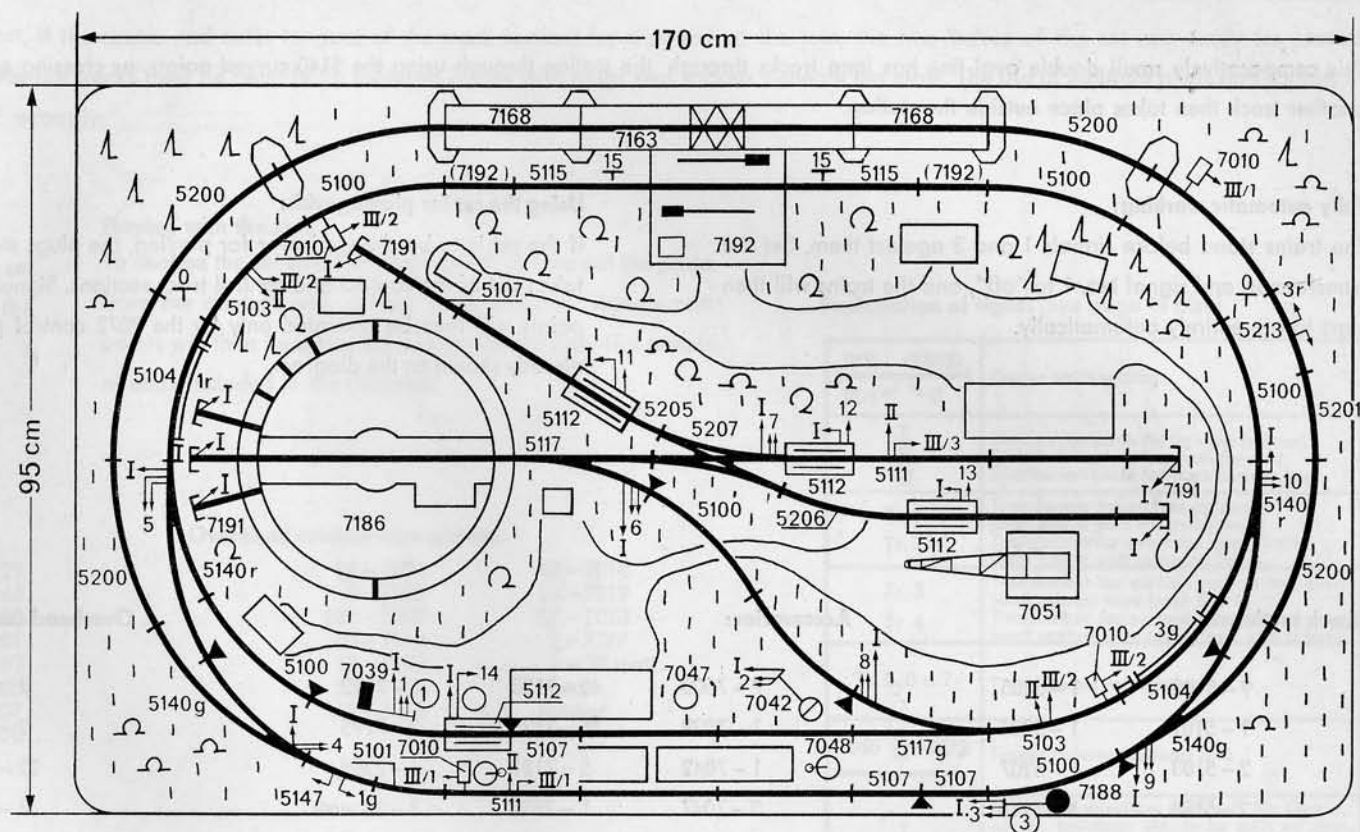
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TRACK PLAN 14

for two trains (fully automatic working)

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transformer for surface contact, overhead contact wire and lighting (outer oval line) Transformer for surface contact, overhead contact wire and lighting (inner oval line) Inner track layout
	Feeder catenary support 7010
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up on the two distribution plates (I) of transformers Nos. 1 and 2.
	Control track sections: 5146, 5147, 5213 in running direction: signal No. 3 red in opposite direction: out of action
	Contact track section 5104 for signal No. 1: r = red, g = green
	With fully automatic working these signals and points are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres



MARKLIN TRACK PLAN 14 for two trains (fully automatic working)

This comparatively small double oval line has long tracks through the station through using the 5140 curved points, as crossing over to another track then takes place outside the station.

Fully automatic working:

The trains stand before signals 1 and 3 against them. Set the transformer, and signal No. 1 to "off", and the trains will then start to run entirely automatically.

Using the set for playing with:

If the set is to be changed over for playing, the plugs must be taken out of the contact and control track sections. Signals and points will then be operated only by the 7072 control panels already shown on the diagram.

Track sections:

9-5100
1-5101
2-5103
2-5104
7-5106
4-5107
2-5111
4-5112
3-5113
2-5115
2-5117 (R)
2-5140
1-5147
7-5200
1-5201

Accessories:

7-7000
1-7039
1-7042
2-7047
2-7048
1-7051
6-7065
6-7066
4-7072
10-7111
10-7112
15-7113
25-7115
10-7121
20-7122

40-7123
35-7125
5-7131
1-7132
3-7135
1-7163
2-7168
1-7186
1-7188
6-7191

1-7192
2-7195
6-7209
3-30 watt
trans-
formers
30 metres blue cable
10 metres brown cable
20 metres yellow cable
20 metres red cable

Overhead contact wire system:

7-7004
2-7005
22-7009
4-7010
2-7011
4-7013
15-7014
14-7015
9-7018
2-7019
2-7022
16-7023
1-7277

Rolling stock recommended:

Before signal No. 1:

1-3031
1-4517
1-4600
1-4613
1-4625
1-4658

Before signal No. 3:

1-3037
3-4002
1-4003

MARKLIN TRACK PLAN 15 for four trains (fully automatic working)

This set can be divided in the middle for easier transport. If the centre and outer tongues of the track sections be removed at the join, the two halves of the set can easily be placed together horizontally. The missing electrical connection for the tracks must be remade by soldered cables with plugs and sockets beneath the table. The use of multiple plugs and sockets is advisable, so as not to connect the numerous cables etc. wrongly.

Fully-automatic working:

The trains are before signals 1, 2, 3 and 6 against them; set the transformer and signals Nos. 2 and 3 to "off", and the trains will then start running automatically.

Playing with the set:

To change the set over for playing with it, take out the plugs from the contact and control track sections; signals and points will then be operated only by the 7072 control panels already included in the diagram.

Track sections:

32 - 5100	12 - 5108	8 - 5129
5 - 5101	8 - 5109	1 - 5146
6 - 5102	4 - 5110	13 - 5200
3 - 5103	7 - 5111	1 - 5201
5 - 5104	4 - 5112	4 - 5202
4 - 5105	4 - 5113	2 - 5205
92 - 5106	1 - 5114	1 - 5207
11 - 5107	3 - 5117	2 - 5210

Overhead contact wire system:

10 - 7004	40 - 7018
8 - 7005	27 - 7019
101 - 7009	57 - 7023
10 - 7010	2 - 7277
12 - 7013	1 - 30 watt
50 - 7014	trans-
55 - 7015	former

Accessories:

20 - 7000	80 - 7115	3 - 7187
1 - 7028	2 - 7117	4 - 7188
1 - 7036	80 - 7121	5 - 7191
1 - 7039	75 - 7122	2 - 7192
3 - 7042	55 - 7123	2 - 7193
5 - 7047	90 - 7125	3 - 7195
5 - 7048	3 - 7127	6 - 30 watt
1 - 7051	14 - 7131	trans-
7 - 7072	4 - 7132	formers
20 - 7073	5 - 7133	80 metres blue cable
45 - 7111	8 - 7135	20 metres brown cable
53 - 7112	1 - 7162	30 metres yellow cable
31 - 7113	1 - 7186	30 metres red cable

Rolling stock recommended:

Before signal No. 1:

1 - 3037	1 - 4517
5 - 4002	1 - 4619
1 - 4003	

Before signal No. 3:

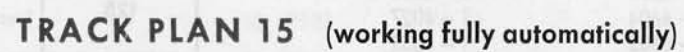
1 - 3034
4 - 4083

Before signal No. 2:

1 - 3031	1 - 3021
1 - 4508	1 - 4024
1 - 4509	1 - 4026
1 - 4510	1 - 4027
1 - 4550	1 - 4032
1 - 4604	
1 - 4605	

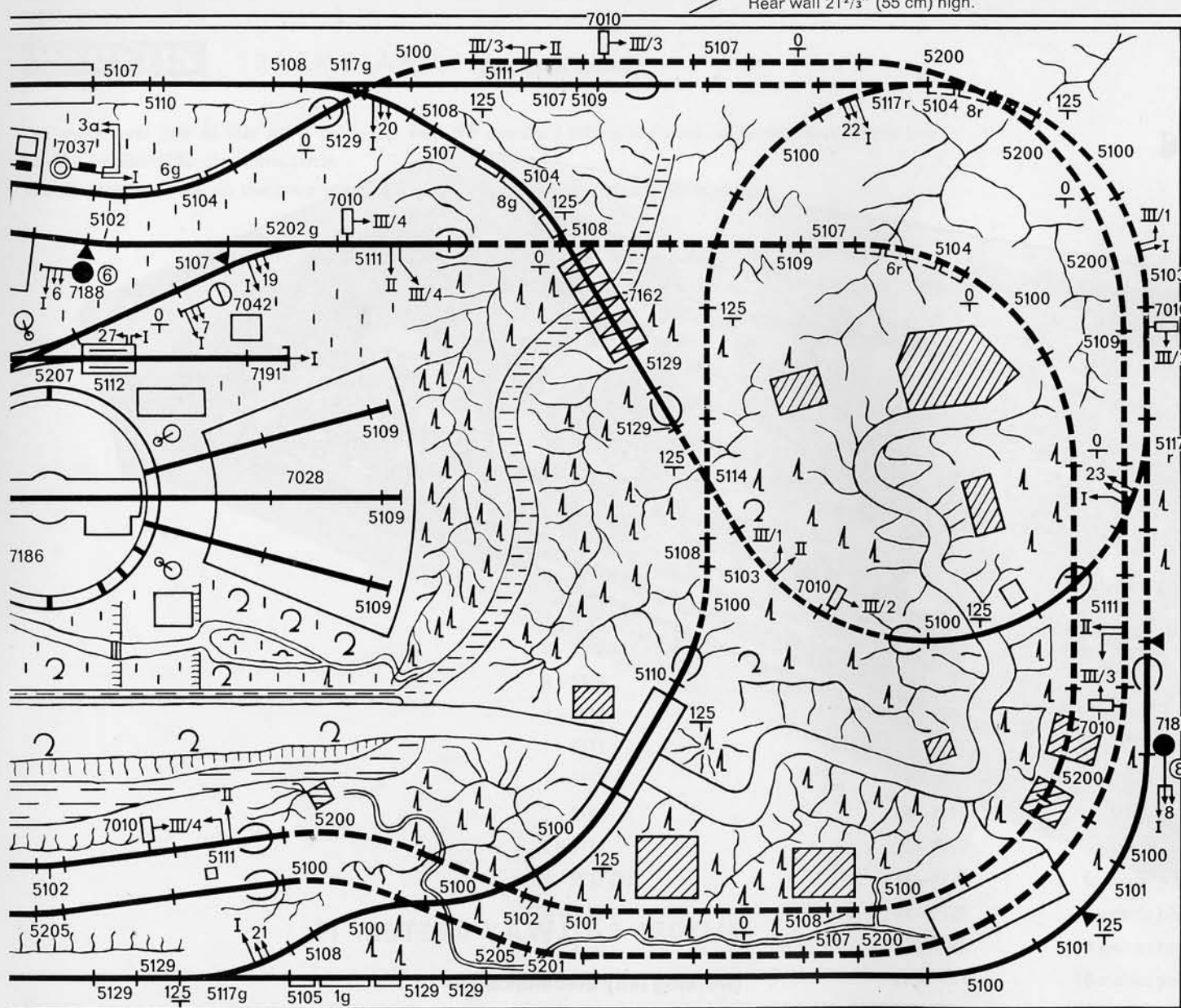
Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transformer for surface contact (oval line a with reversing loop) Transformer for overhead contact wire (oval line a with reversing loop)
	Transformer for surface contact and overhead contact wire (oval line b) Transformer for surface contact and overhead contact wire (oval line c and sidings)
	Transformers for lighting
	Feeder catenary support 7010
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up over the three distribution plates (I) of Nos. 5, 6 and 7 transformers for lighting.
	Running direction Control track sections: 5146, 5147, 5213 in running direction: signal No. 2 green in opposite direction: out of action
	Contact track section 5104 for signal No. 3: g = green, r = red
	With fully automatic working these signals and points are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres

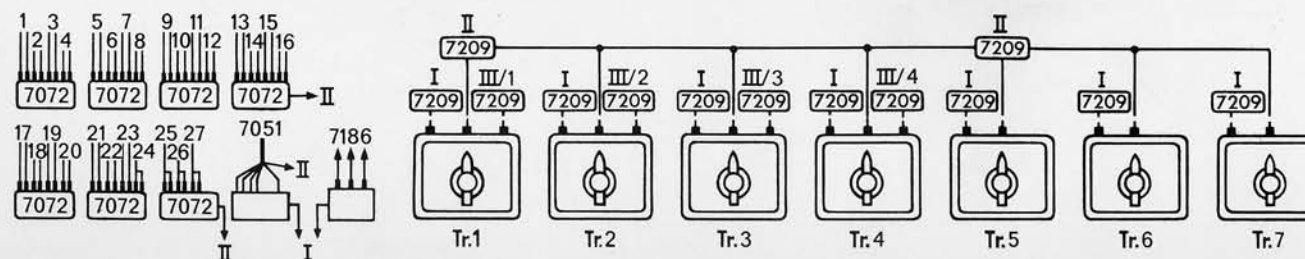


Rear wall 21 $\frac{2}{3}$ " (55 cm) high.

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TRACK PLAN 15
(working fully automatically)



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MODEL RAILWAY SYSTEM 15

(working fully automatically)

The outer oval line of this set is made up with the standard 5100 circle track while the centre oval line has the smaller 5120 concentric circle.

The diagonale divide up the area very well into an industrial and a residential district.

Track sections:

16-5100
4-5103
16-5106
9-5107
2-5108
3-5109
4-5110
1-5111
2-5112
2-5113
1-5117
3-5117 (R)
8-5120
3-5202
2-5206

Accessories:

8-7000
2-7039
1-7042
2-7047
2-7064
20-7065
12-7066
5-7072
12-7073
10-7111
22-7112
18-7113
14-7121
22-7122
25-7123
32-7125
5-7135

1-7163
5-7167
4-7168
1-7187
1-7188
3-7191
2-7195
7-7209
1-7390
2-30 watt
trans-
formers
40 metres blue cable
10 metres brown cable
10 metres yellow cable
10 metres red cable

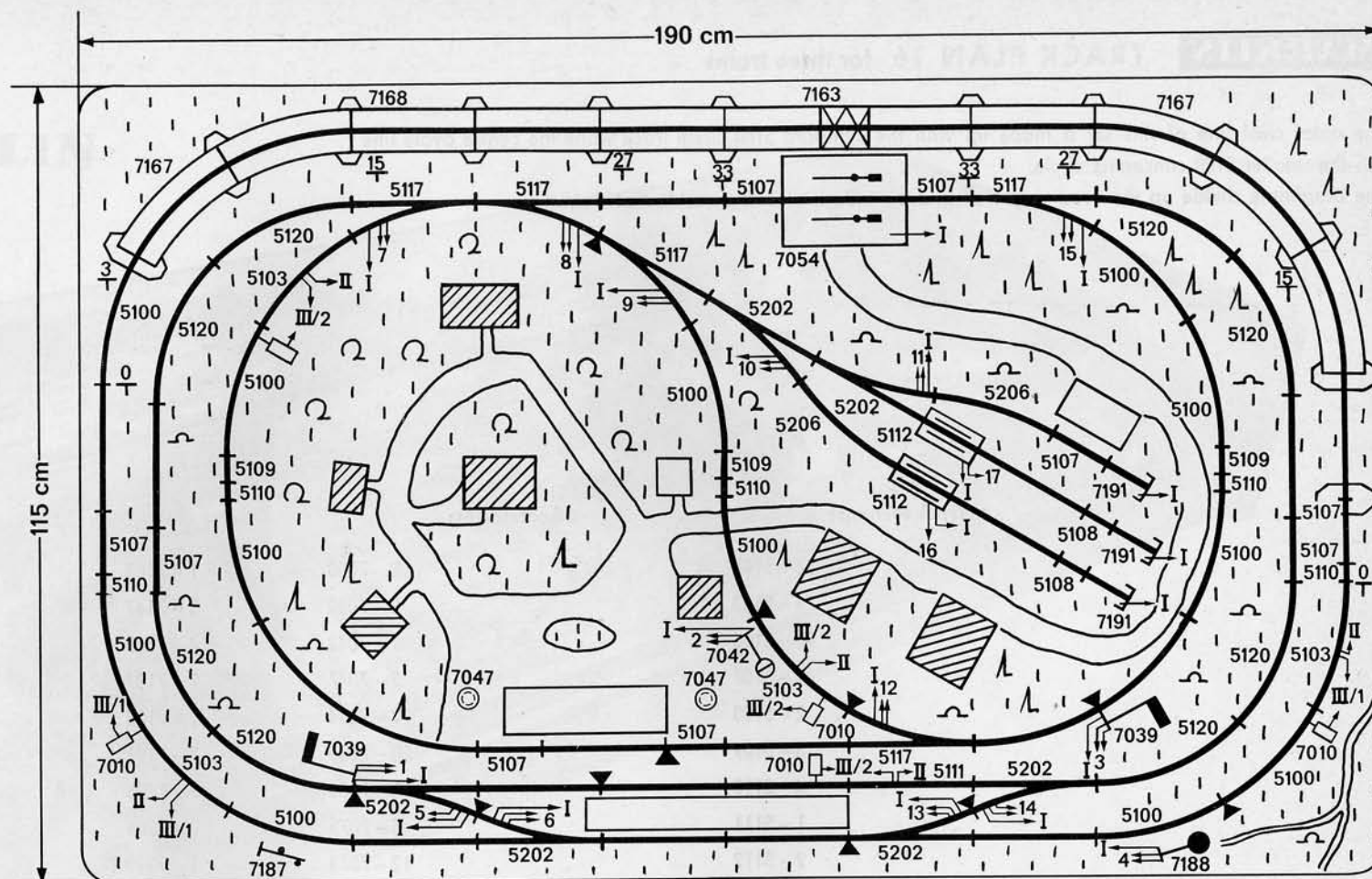
Overhead contact wire system:

3-7003
7-7004
15-7006
31-7009
4-7010
8-7011
3-7012
4-7013
28-7014
28-7015
4-7017
11-7018
10-7019
8-7021
11-7022
26-7023

MARKLIN

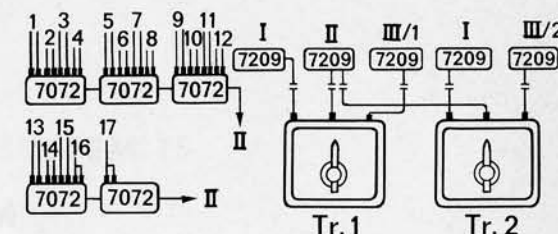
TRACK PLAN 16

for three trains



Explanation of signs: (See page 11 also)

	Feeder track section		Feeder catenary support 7010
	Distribution plate for lighting (yellow)		Distribution plate for earth (brown)
	Distribution plate for track current (red)		Lighting connections (yellow/I) for signals, points, buildings, etc. to be split up over the two distribution plates (I) of the two transformers.
Tr. 1	Transf. for surface contact, overhead cont. wire and lighting (for the outer oval line)		Track bed height in millimetres
Tr. 2	Transf. for surface contact, overhead cont. wire and lighting (inner track layout)		



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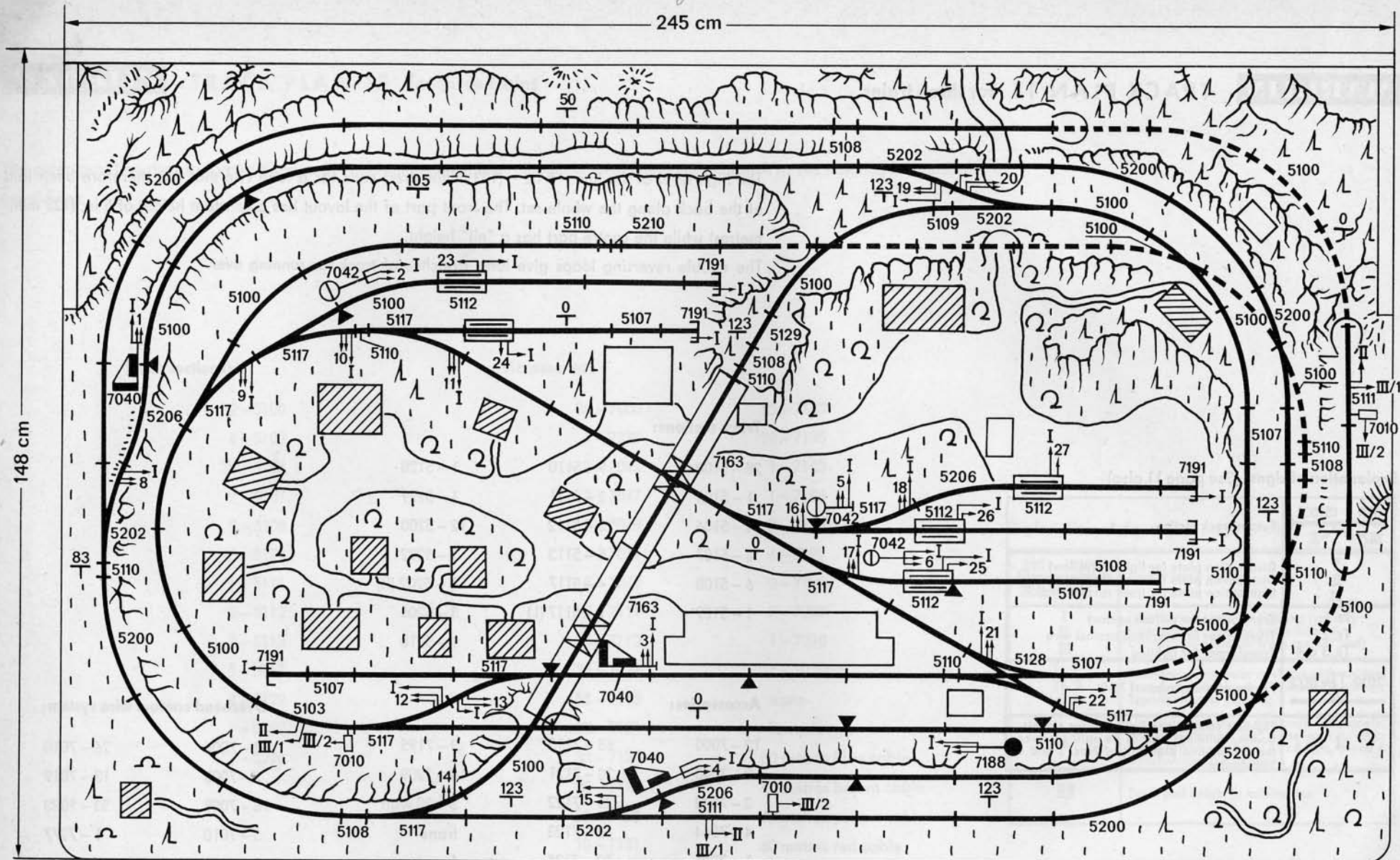


MODEL RAILWAY SYSTEM 16

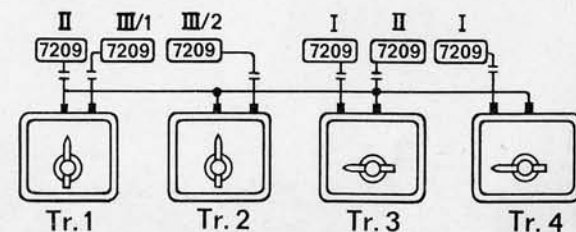
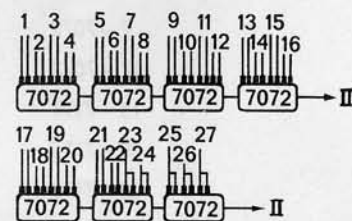
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MODEL RAILWAY SYSTEM 17



TRACK PLAN 17



The high level of the line – 5 in. – (123 millimetres) calls for a long rise that has therefore been laid at the back along the whole set. The front part of the layout has a constant height of 5 in. (123 millimetres) while the centre part has a “nil” height.

The double reversing loops give long stretches of track for running over.

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
Tr. 1 Tr. 2 Tr. 3 u.4	Transformer for surface contact Transformer for overhead contact wire Transformer for lighting
	Feeder catenary support 7010
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up over the distribution plates (I) of Nos. 3 and 4 transformers.

Track sections:

28 – 5100	9 – 5110	1 – 5128
1 – 5103	2 – 5111	1 – 5129
54 – 5106	5 – 5112	12 – 5200
6 – 5107	5 – 5113	2 – 5202
6 – 5108	4 – 5117	1 – 5202 (R)
1 – 5109	1 – 5117 (L)	3 – 5206
		1 – 5210

Accessories:

13 – 7000	65 – 7115	3 – 7195	3 – 7004	26 – 7018
3 – 7040	30 – 7121	10 – 7209	7 – 7005	13 – 7019
3 – 7042	25 – 7122	3 – 30 watt	76 – 7009	53 – 7023
4 – 7064	40 – 7123	trans-	3 – 7010	1 – 7277
1 – 7066	70 – 7125	formers	2 – 7011	1 – 30 watt
7 – 7072	5 – 7131	70 metres blue cable	11 – 7013	trans-
17 – 7073	5 – 7132	30 metres brown cable	33 – 7014	former
15 – 7111	2 – 7163	40 metres yellow cable	36 – 7015	
30 – 7112	1 – 7188	30 metres red cable		
30 – 7113	6 – 7191			

Overhead contact wire system:

MARKLIN TRACK PLAN 18 for three trains

The outer oval line rises to form a plateau 3 $\frac{3}{4}$ " (96 millimetres) high; the inner oval line has the branch to the shunting or marshalling sidings.

Track sections:

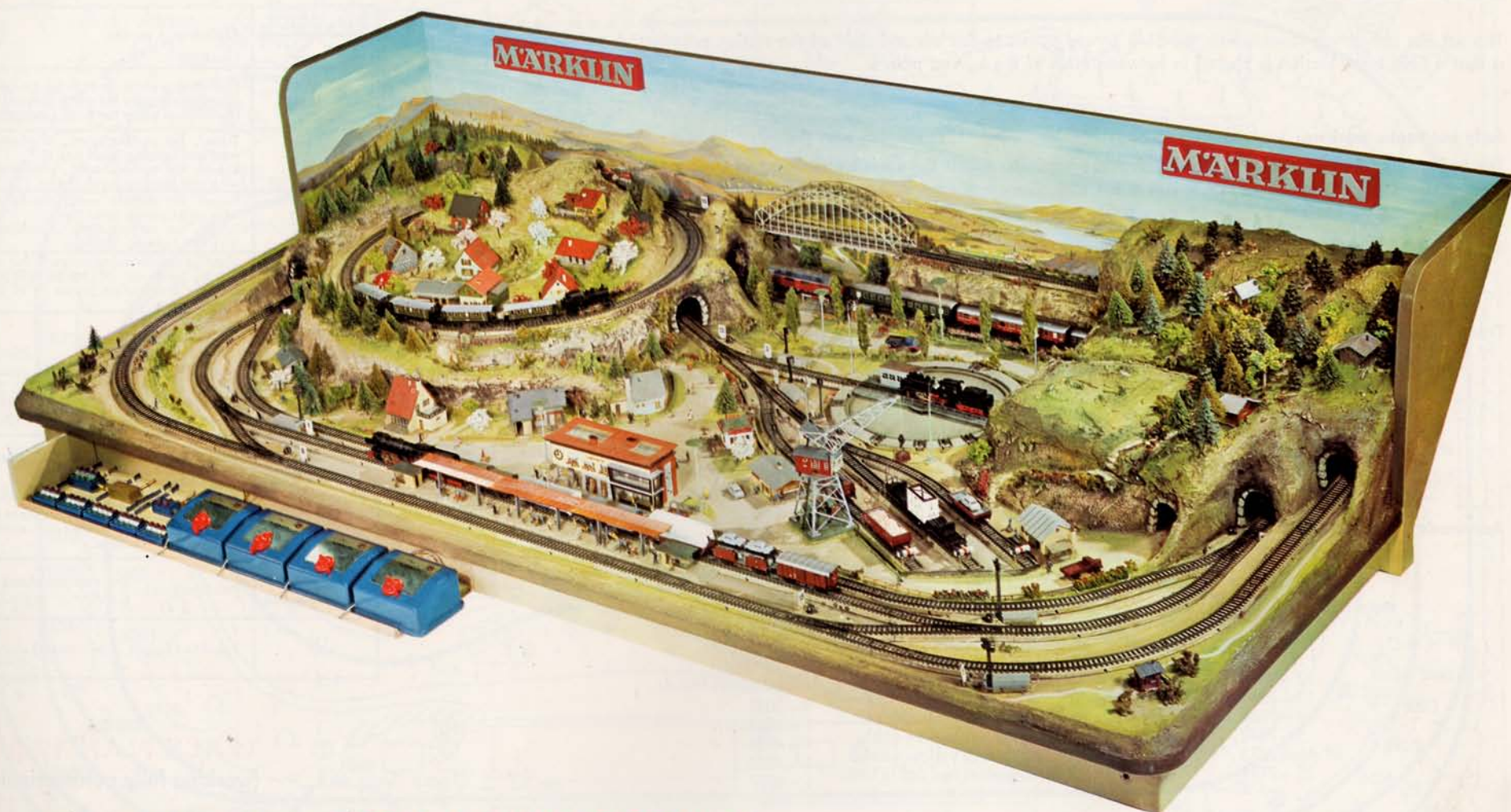
32-5100
4-5103
38-5106
9-5107
9-5108
8-5109
1-5111
2-5112
2-5113
5-5117
4-5129
1-5202
2-5206

Accessories:

30-7000
1-7039
2-7042
2-7047
2-7048
1-7051
5-7072
25-7111
30-7112
35-7113
55-7115
25-7121
30-7122
30-7123
55-7125
10-7131
15-7132
15-7133
20-7135
1-7163
1-7186
2-7188
6-7191
2-7195
7-7209
1-7390
4-30 watt
trans-
formers
80 metres blue cable
40 metres brown cable
40 metres yellow cable
60 metres red cable

Explanation of signs: (See page 11 also)

5111 (5103) III/1 II	Feeder track section
I II III	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
Tr. 1 Tr. 2 Tr. 3 u. 4	Transformer for outer oval line with plateau Transformer for inner oval line with sidings Transformer for lighting
I	Lighting connections (yellow/I) for signals, points, buildings, etc. to be split up over the distribution plates (I) of Nos. 3 and 4 transformers for lighting.
96 +	Track bed height in millimetres



MARKLIN MODEL RAILWAY SYSTEM 18

MARKLIN TRACK PLAN 19 for three trains (with fully automatic working)

This set has interesting layouts with the 5140 curved points to the left and right of the station premises. A noteworthy point is that a 5100 track section is placed in between each of the curved points.

Fully automatic working:

The trains stand before signals 2, 3 and 4 that are against them. Set the transformer and signal No. 4 to "off". The trains will then start to run completely automatically.

For playing with the set:

If the set is to be changed over for playing with, the plugs must be taken out of the contact and control track sections. The signals and points will then be operated only by the 7072 control panels already included in the diagram.

Track sections:

14 - 5100	7 - 5109	2 - 5129
4 - 5101	1 - 5110	3 - 5140
3 - 5102	2 - 5111	4 - 5146
5 - 5103	2 - 5112	8 - 5200
2 - 5104	2 - 5113	2 - 5201
2 - 5105	2 - 5115	1 - 5202 (R)
52 - 5106	1 - 5117	2 - 5206
15 - 5107	1 - 5117 (R)	1 - 5207
2 - 5108	6 - 5120	

Accessories:

15 - 7000	20 - 7112	1 - 7187
1 - 7028	20 - 7113	1 - 7188
1 - 7039	40 - 7115	5 - 7191
2 - 7040	4 - 7117	1 - 7192
1 - 7042	30 - 7121	2 - 7195
2 - 7047	35 - 7122	12 - 7209
5 - 7048	24 - 7123	4 - 30 watt
1 - 7051	50 - 7125	trans-
17 - 7064	4 - 7133	formers
11 - 7065	10 - 7135	
6 - 7066	2 - 7162	70 metres blue cable
5 - 7072	2 - 7163	20 metres brown cable
11 - 7073	2 - 7168	30 metres yellow cable
25 - 7111	1 - 7186	20 metres red cable

Overhead contact wire system:

2 - 7003	32 - 7015
4 - 7004	5 - 7017
5 - 7005	28 - 7018
17 - 7006	14 - 7019
64 - 7009	8 - 7021
6 - 7010	3 - 7022
4 - 7011	40 - 7023
7 - 7013	1 - 7277
41 - 7014	

Rolling stock recommended:

Before signal No. 2:

1 - 3022
1 - 4517
1 - 4604
1 - 4605
1 - 4619
1 - 4621
1 - 4636
1 - 4658

Before signal No. 3:

1 - 3003
5 - 4002
1 - 4003

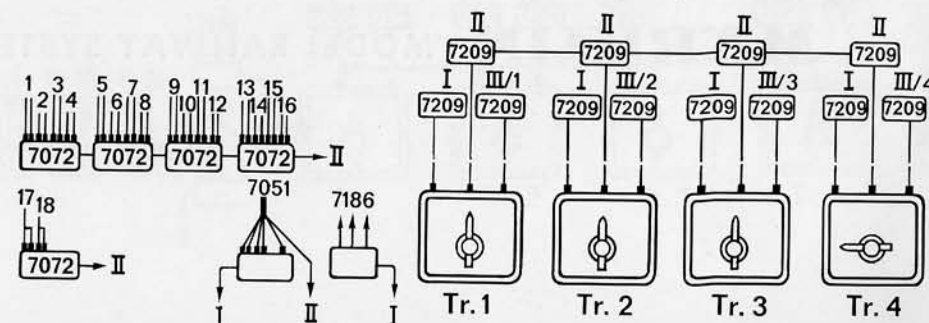
Before signal No. 4:

1 - 3021
1 - 4022
1 - 4024
1 - 4026
1 - 4027

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transf. for surface cont., overhead cont. wire and lighting (oval line a) Transf. for surface cont., overhead cont. wire and lighting (oval line b)
	Transf. for surface cont., overhead cont. wire and lighting (oval line c) Transf. for surface cont., overhead cont. wire and lighting (sidings)
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up over the four distribution plates (I) of the four transformers.
	Feeder catenary support 7010
	Control track sections: 5146, 5147, 5213 in running directions: signal No. 5 red in opposite direction: out of action
	Contact track section 5104 for signal No. 4: g = green, r = red
	With fully automatic working these signals and points are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Track bed height in millimetres

TRACK PLAN 19 (working fully automatically)



MARKLIN TRACK PLAN 20 for four trains (with fully automatic working)

This set contains two reversing loops, one on the plateau and the other running partly through the mountain. This, again, shows how interesting the layout of the line can be by using reversing loops.

Fully automatic working:

The trains stand before signals 1, 4, 5 and 6, all against them; set the transformer and signals 1 and 6 to "off". The trains will then start to run entirely automatically. The trains before signals 1 and 4 and before signals 5 and 6 mutually control one another.

For playing with the set:

If the set is to be changed over for playing with it, the plugs must be taken out of the contact and control track sections. The signals and points will then be operated only by the 7072 control panels already shown in the diagram.

Track sections:

12-5100	6-5110	3-5147
4-5101	4-5111	18-5200
2-5102	2-5112	2-5201
5-5103	2-5113	3-5202
1-5104	3-5117 (L)	1-5202 (R)
2-5105	11-5120	1-5205
49-5106	15-5129	5-5206
13-5107	2-5140	1-5207
1-5108	1-5140 (R)	1-5210
6-5109	7-5146	2-5213

Accessories:

20-7000	65-7115	3-7191
2-7039	35-7121	2-7195
1-7040	40-7122	12-7209
4-7047	25-7123	1-7211
4-7048	70-7125	1-7390
1-7051	5-7131	6-30 watt
6-7072	5-7132	trans-
25-7073	5-7133	formers
30-7111	10-7135	80 metres blue cable
35-7112	2-7163	30 metres brown cable
30-7113	3-7188	30 metres yellow cable
		20 metres red cable

Overhead contact wire system:

7-7003	1-7012	27-7018
5-7004	7-7013	19-7019
2-7005	14-7014	16-7021
64-7009	45-7015	16-7022
10-7010	1-7016	44-7023
2-7011	7-7017	1-7277

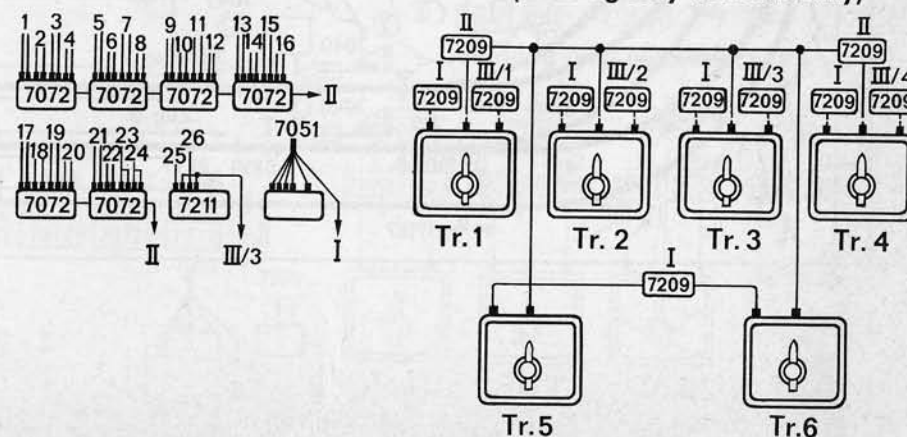
Rolling stock recommended:

Before signal No. 1:	Before signal No. 6:
1-3000	1-3022
5-4040	1-4517
	1-4605
Before signal No. 4:	1-4617
1-3044	1-4619
1-4502	1-4620
1-4505	1-4621
1-4508	1-4658
1-4509	
1-4510	
1-4550	
Before signal No. 5:	
1-3021	
1-4022	
1-4024	
1-4026	
1-4029	

Explanation of signs: (See page 11 also)

	Feeder track section
	Distribution plate for lighting (yellow) Distribution plate for earth (brown) Distribution plate for track current (red)
	Transformer for surface contact and overhead contact wire (outer oval line) Transformer for surface contact and overhead contact wire (centre oval line)
	Transformer for surface contact and overhead contact wire (inner oval line) Transformer for surface contact and overhead contact wire (plateau line) Transformer for lighting
	Lighting connections (yellow/I) for signals, points, buildings etc. to be split up over the distribution plates (I) of Nos. 5 and 6 transformer for lighting.
	Feeder catenary support 7010
	Control track sections: 5146, 5147, 5213 in running direction: signal No. 3 green in opposite direction: out of action
	Contact track section 5104 for signal No. 1: g = green, r = red
	With fully automatic working these signals and points are operated by contact or control track sections.
	Points setting: g = straight ahead r = branch
	Height of track bed in millimetres

TRACK PLAN 20 (working fully automatically)



HINTS ON DRAFTING YOUR OWN TRACK LAYOUTS

MÄRKLIN

Curved track sections

For drafting or drawing up plans for a railway layout, knowing the diameters of circles that can be worked with is important (see fig. 1). The standard 5100 circle has a diameter of $28\frac{1}{3}$ " (720 millimetres) measured from centre to centre of the track, and its accompanying large concentric circle 5200 has a diameter of $34\frac{1}{2}$ " (874,8 millimetres), measured similarly from centre to centre of the track. The spacing between it and the standard circle is 3" (77.4 millimetres), measured between track centres. Both circles are made up of twelve track sections, each covering an angle of 30 degrees.

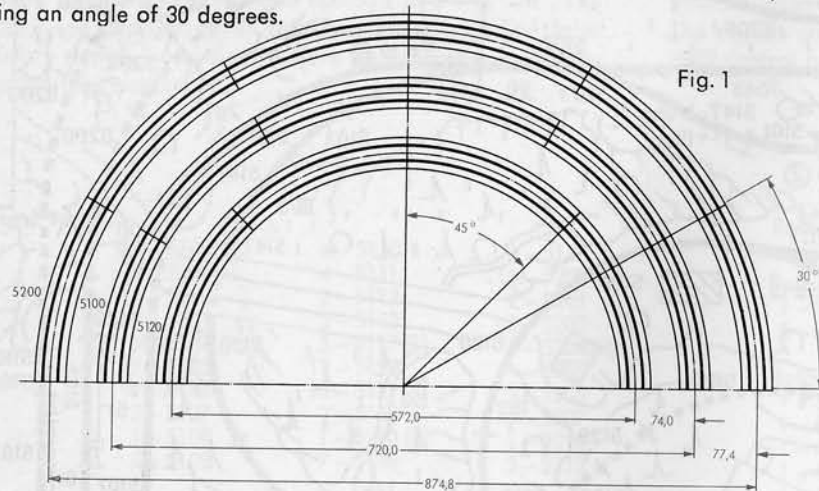


Fig. 1

The small concentric circle is made up of the 5120 track sections and has a diameter of $22\frac{1}{2}$ " (572 millimetres). A full circle requires eight of these 5120 sections, each one representing an angle of 45 degrees. The spacing between it and the standard circle is $2\frac{9}{10}$ " (74 millimetres) measured between track centres.

- One 5200 circle – 12 track sections – approximately $35\frac{9}{10}$ " (91,2 centimetres) outside diameter
- One 5100 circle – 12 track sections – approximately 30" (76,0 centimetres) outside diameter
- One 5120 circle – 8 track sections – approximately 24" (61,0 centimetres) outside diameter

The design of the track plan for a railway system may make joining track sections of different radii together necessary, and there is no difficulty in doing so. There will not be any kinks where different track sections join up, as one radius merges into the other perfectly.

Junctions with single 5117 points on a straight track

If provision has not been made to keep to the 3" concentric spacing between track centres, the 5117 single points are best used, with a points angle of 30 degrees. The concentric layout (track centre spacing $3\frac{4}{5}$ ", or 96.4 millimetres) can be restored by using a full length (1/1) curved 5100 track section, or a second 5117 points (see page 71, fig. 1).

Track connections with single 5202 points with the 3" concentric spacing (77.4 millimetres)

On a straight stretch the 5202 points provide a track connection in the 3" concentric spacing. The special feature of the 5202 points is that their branch line has an included angle of 24 degrees 17 minutes instead of the 30 degrees of the 5117 points, so that the track centre spacing is less (3" instead of $3\frac{4}{5}$ ") because of the smaller angle; to get the branch track parallel to the straight track of the points (the original track) a 5206 track section must be used, as it also has an included angle of 24 degrees 17 minutes (see fig. 2).

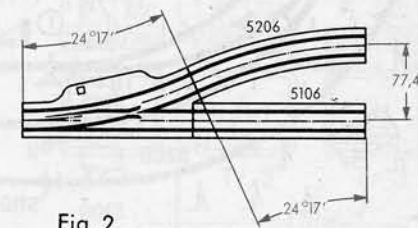
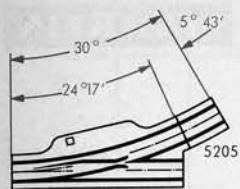


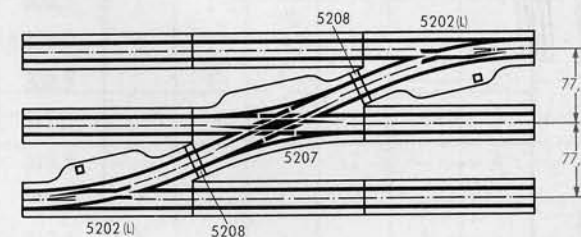
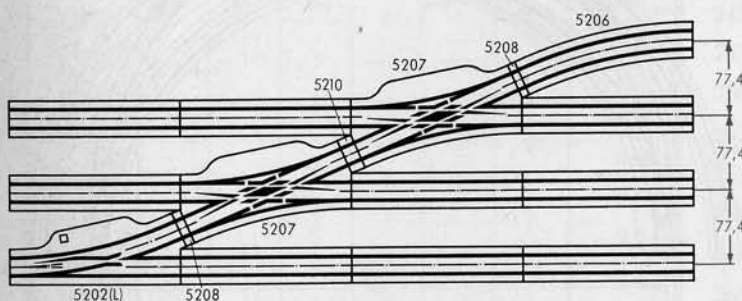
Fig. 2


Fig. 3

The branch track of the points can be increased to an angle of 30 degrees by the 5205 section (see fig. 3), but then there will no longer be the 3" concentric spacing, and it will be increased to $4\frac{3}{16}$ " (117,4 millimetres).

Now, to make a third parallel connection with the 3" track spacing the 5207 double-slip points will be required (see fig. 4).

The diagonals of the 5207 double-slip points must be extended either side by the 5208 $\frac{1}{3}$ " (8 millimetres) track section, so as to restore the 3" parallel spacing, and the track layout can then be lengthened further by the 5106 track sections, so that each line of rails is then the same distance apart.


Fig. 4

Fig. 5

Track planning may result in two double-slip points 5207 having to be connected diagonally, but as two 5208 track sections cannot be joined together, section 5210, which is double the length, has been provided, this section, $\frac{2}{3}$ " long, is placed between the two double-slip points 5207, and the 3" parallel spacing is again restored. (See fig. 5)

Track connections or cross-overs with the 5140 curved points in the 3" parallel spacing

The 5140 curved points provide a track connection or cross-over from the standard 5100 circle to the large concentric 5200 circle in the concentric 3" spacing

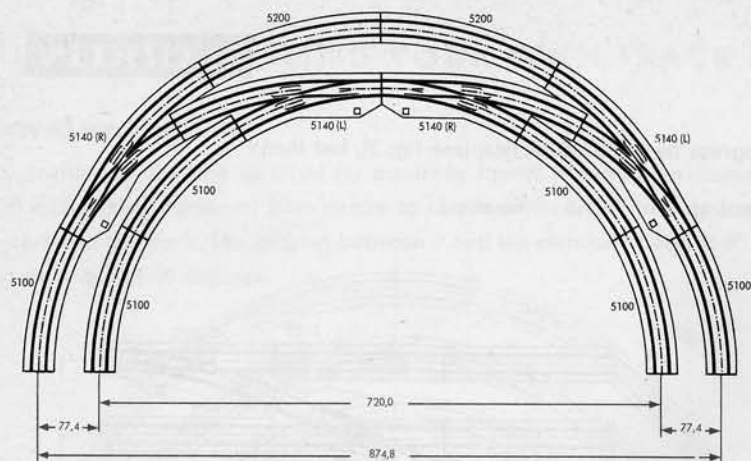


Fig. 6

A point to notice specially here is that a **5100** track section is needed at the peak of the points in the large concentric circle 5200. In this large circle, therefore, two 5200 track sections take the place of one curved points and one **5100** section.

The 5140 curved points cannot be used for a connection or cross-over from the standard 5100 circle to the small 5120 concentric circle.

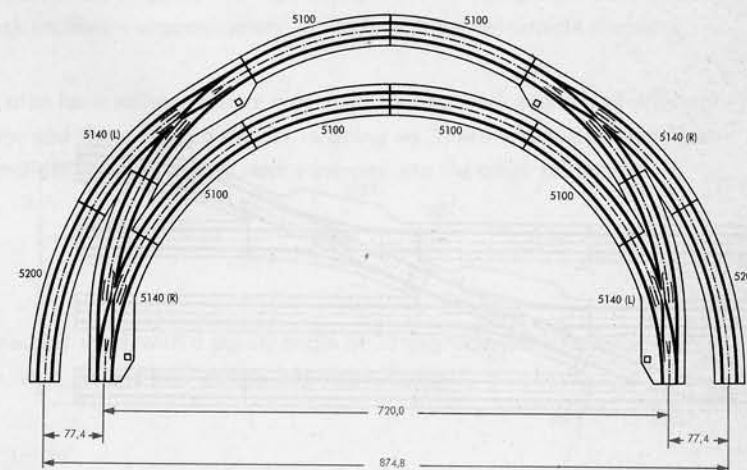


Fig. 7

Combinations with straight track sections

The following Table is to show MÄRKLIN enthusiasts the full extent of possibilities for equalising track lengths by the straight track sections 5106 (full length, 1/1), 5107 (half-length, 1/2), 5108 (quarter-length, 1/4), 5109 (three-sixteenths length, 3/16), 5110 (one-eighth length, 1/8) and 5129 (2³/₄").

The left-hand column in this Table shows the length X found in the actual layout or else on the layout plan, to be made up by track sections. Reading across from this X figure gives the number and type of track sections to be used. The column on the extreme right gives the difference between the individual X lengths.

Length X in mm	Track sections						Difference in mm	Length X in mm	Track sections						Difference in mm	Length X in mm	Track sections						Difference in mm
	5106 1/1	5107 1/2	5108 1/4	5109 3/16	5110 1/8	5129			5106 1/1	5107 1/2	5108 1/4	5109 3/16	5110 1/8	5129			5106 1/1	5107 1/2	5108 1/4	5109 3/16	5110 1/8	5129	
22,5					1			202,5	1				1			292,5	1	1			1		
33,5				1			11,0	205,0		1	1			1	2,5	295,0	1		1			1	2,5
45,0			1				11,5	207,0			1		1	2	2,5	297,5		1	1		1	2	2,5
56,0				1	1		11,0	210,0						3	2,5	300,0		1				3	2,5
67,5			1		1		11,5	213,5	1		1				3,5	302,5					1	4	2,5
70,0						1	2,5	216,0		1		1	1	1	2,5	303,5	1	1		1			1,0
78,5			1	1			8,5	218,5			1	1		2	2,5	306,0	1			1	1	1	2,5
90,0	1						11,5	225,0	1		1				6,5	308,5		1	1	1		2	2,5
92,5					1	1	2,5	227,5		1	1		1	1	2,5	311,0			1	1	1	3	2,5
101,0			1	1	1		8,5	230,0		1				2	2,5	313,5				1		4	2,5
103,5				1		1	2,5	232,5					1	3	2,5	315,0	1	1	1				1,5
112,5	1				1		9,0	236,0	1			1	1		3,5	317,5	1		1		1	1	2,5
115,0		1				1	2,5	238,5		1	1	1		1	2,5	320,0	1					2	2,5
123,5	1			1			8,5	241,0			1	1	1	2	2,5	322,5		1			1	3	2,5
126,0				1	1	1	2,5	243,5				1		3	2,5	325,0			1			4	2,5
135,0	1	1					9,0	247,5	1		1		1		4,0	326,0	1	1		1	1		1,0
137,5		1			1	1	2,5	250,0	1					1	2,5	328,5	1		1	1		1	2,5
140,0						2	2,5	252,5		1			1	2	2,5	333,5		1		1		3	5,0
146,0	1			1	1		6,0	255,0			1			3	2,5	336,0				1	1	4	2,5
148,5			1	1		1	2,5	258,5	1		1	1			3,5	337,5	1	1	1		1		1,5
157,5	1	1			1		9,0	263,5		1		1		2	4,5	340,0	1	1				1	2,5
160,0	1					1	2,5	266,0				1	1	3	2,5	342,5	1				1	2	2,5
162,5					1	2	2,5	270,0	1	1					4,0	345,0		1	1			3	2,5
168,5	1	1	1				6,0	272,5	1				1	1	2,5	347,5			1		1	4	2,5
171,0		1	1	1	1	1	2,5	275,0		1	1			2	2,5	348,5	1	1	1	1			1,0
173,5				1		2	2,5	277,5			1		1	3	2,5	350,0						5	1,5
180,0	1						6,5	280,0						4	2,5	351,0	1		1	1	1	1	1,0
182,5		1			1	1	2,5	281,0	1		1	1	1		1,0	353,5	1			1		2	2,5
185,0		1				2	2,5	283,5	1			1		1	2,5	356,0		1		1	1	3	2,5
193,5	1			1		1	8,5	286,0		1		1	1	2	2,5	358,5			1	1		4	2,5
196,0				1	1	2	2,5	288,5			1	1		3	2,5	360,0	2						1,5
							6,5								4,0								2,5

VARIOUS TRACK SPACINGS WITH ONE AND TWO POINTS

MÄRKLIN

Single points and curved points

The track diagrams 1 to 65 give a general idea of the numerous combinations to be obtained for a single branch with one or two points or switches. The distance or spacing from centre to centre of a track section and the free space between the sections are given in every case, bearing the track width of, roughly, 1½" (37,5 millimetres) in mind (see page 2). The two tracks are brought out to the same length, so that they can be continued with the same number of straight sections with parallel spacing.

The figures from 1 to 42 can be made up with right-hand as well as with left-hand points.

In figures 1 to 28 MÄRKLIN 5117 or 5121 points are used, having an included angle of 30 degrees.

Figures 29 to 42 show the same combinations, but with MÄRKLIN 5202 points that have an included angle of 24 degrees 17 minutes. These MÄRKLIN 5202 points can have the 24 degrees 17 minutes included angle increased to 30 degrees by using track section 5205.

Various track spacings can be made up by using a pair of points, figures 43 to 51 showing this arrangement for MÄRKLIN 5117 and 5121 points. Figures 52 to 55 show the same, using the 5202 points.

Branches with curved points 5140 (figs. 56 to 58).

The track centre spacing is reduced by laying curved points in the quadrant (one-quarter) of a circle (3", 2³/₁₀", 2³/₂₀"). Any smaller track spacing is not advisable, as in such case two trains could no longer pass one another without danger.

Figures 59 to 65 show possibilities for laying a pair of 5140 curved points, fig. 59 being the normal one.

Figs. 60 and 61: In these cases the curved points are moved down by a half or whole track section (½ or 1/1) so as to gain space for laying a 5147 control track section or a 5104 contact section.

Figs. 62 and 63. A half or whole (½ or 1/1) track section is laid between the curved points, so that here also one 5147 control track section or one 5104 contact section can be laid.

The outer circle is made up with 5100 track sections so as to keep the track spacing as small as possible.

Figs. 64 and 65 likewise show how sections 5101 and 5100 respectively can be laid between the curved points, but the outer circle is now made up of the 5200 sections, so that the track spacing is larger. This greater track spacing is, for instance, desirable if the outer circle is on an upgrade or one line is taken into a tunnel entrance.

5100 30°

A branch with one 5117 or 5121 points

Fig. 1

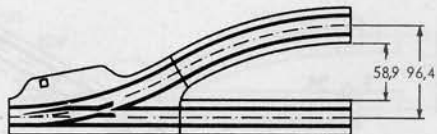


Fig. 2

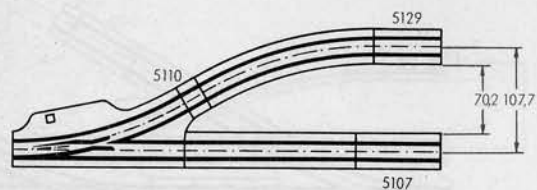


Fig. 3

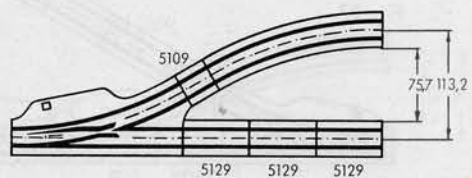


Fig. 4



Fig. 5

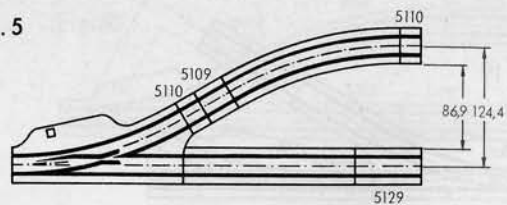


Fig. 6

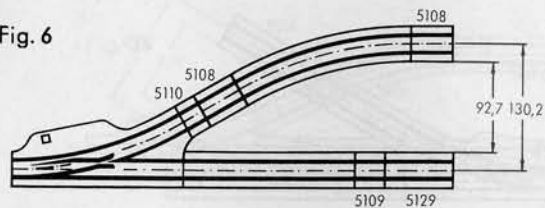


Fig. 7

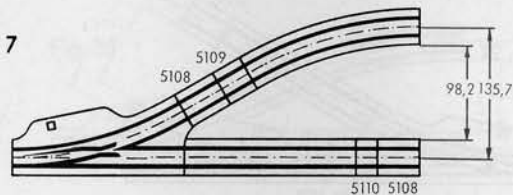


Fig. 8

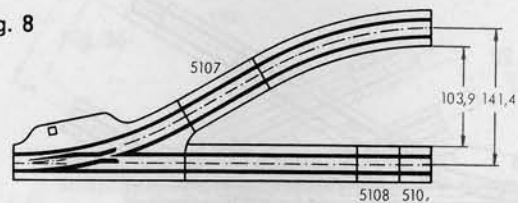


Fig. 9

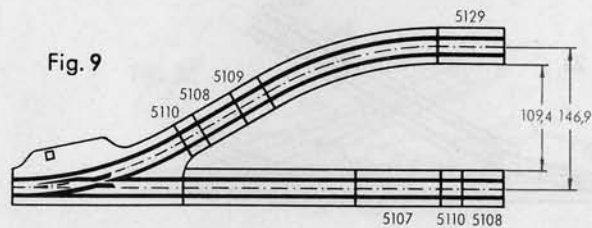


Fig. 10

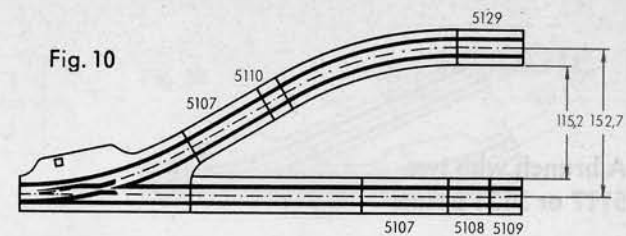


Fig. 11

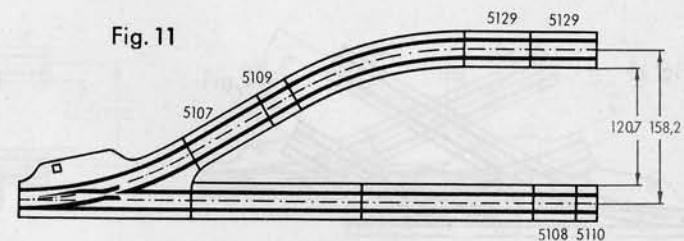


Fig. 12

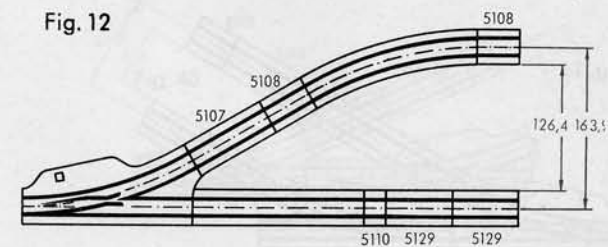


Fig. 13

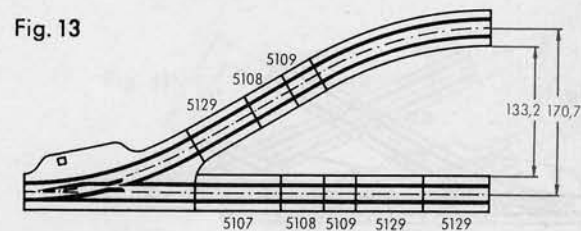
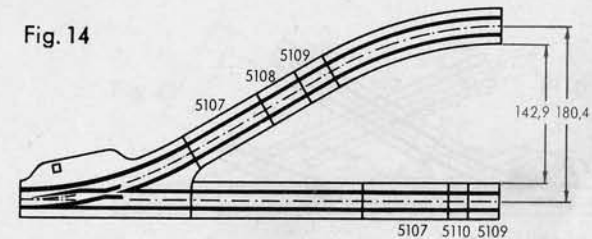


Fig. 14



5100 30°

**A branch with two
5117 or 5121 points**

Fig. 15

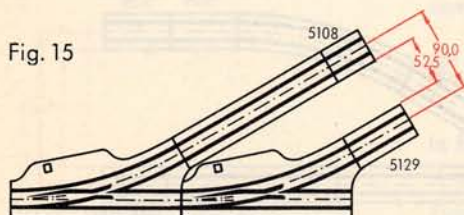


Fig. 16

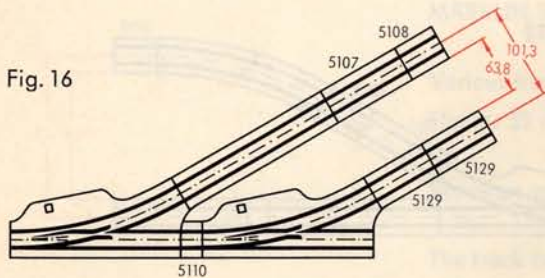


Fig. 17

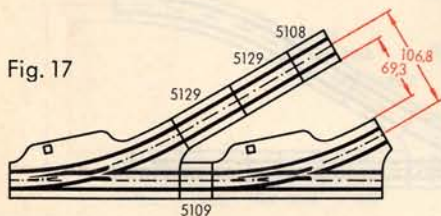


Fig. 18

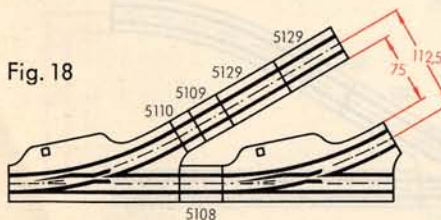


Fig. 19

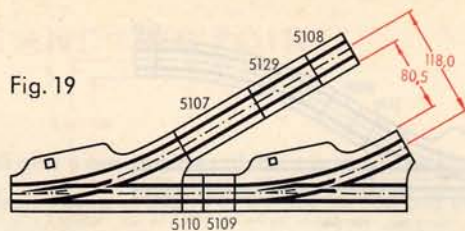


Fig. 20

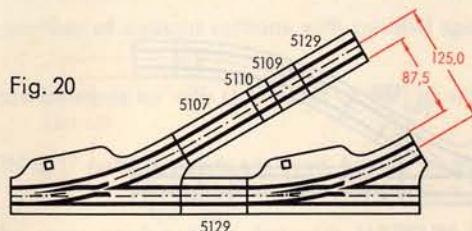


Fig. 21

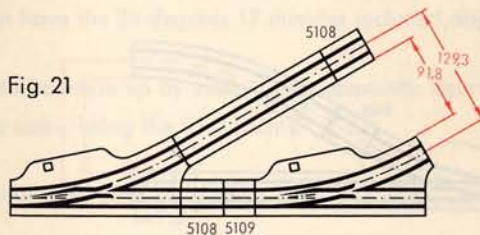


Fig. 22

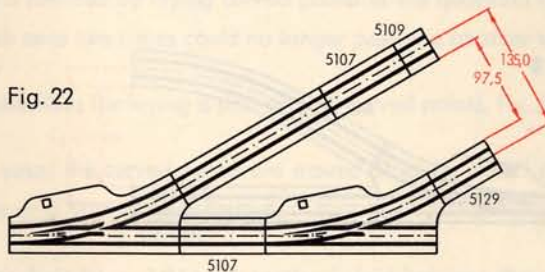


Fig. 23

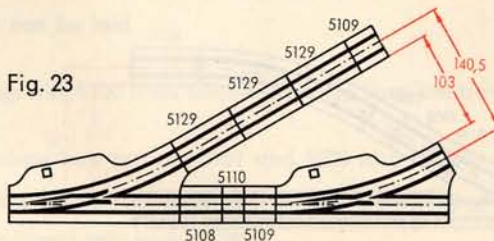


Fig. 24

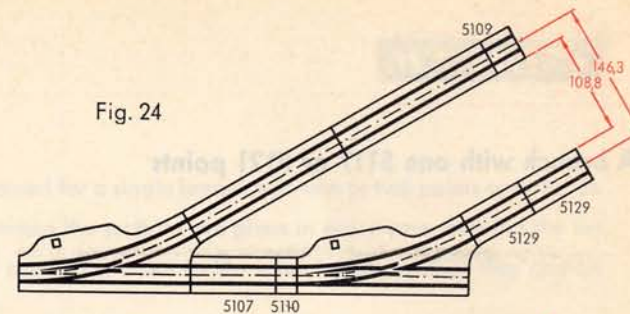


Fig. 25

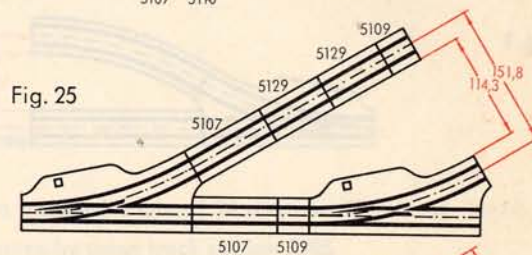


Fig. 26

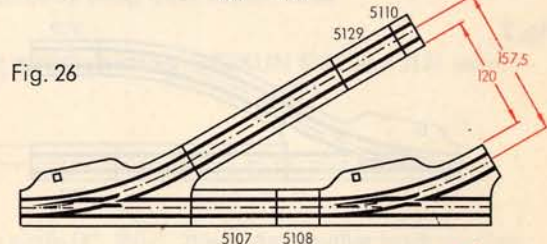


Fig. 27

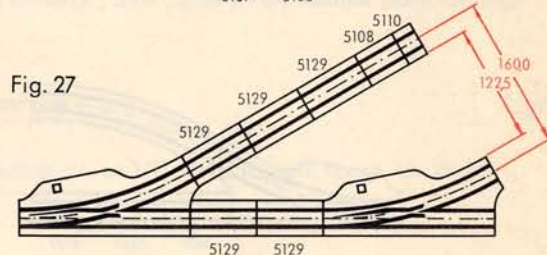
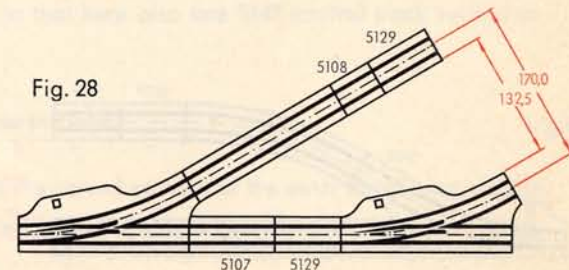


Fig. 28



5200 24° 17'

A branch with one or two 5202 points (figs. 36 to 42)

Fig. 29



Fig. 30

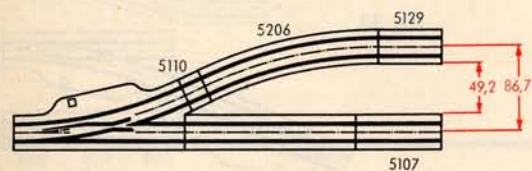


Fig. 31

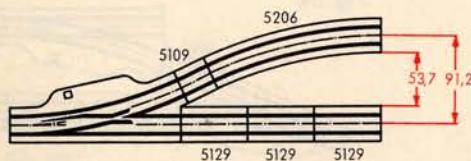


Fig. 32



Fig. 33

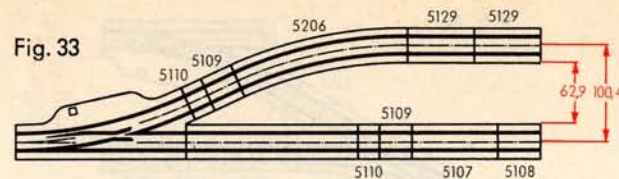


Fig. 34

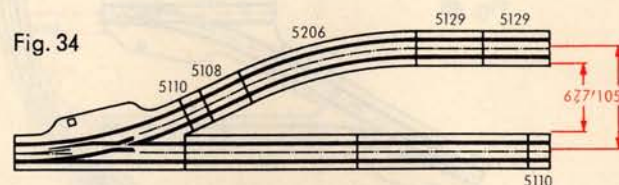


Fig. 35

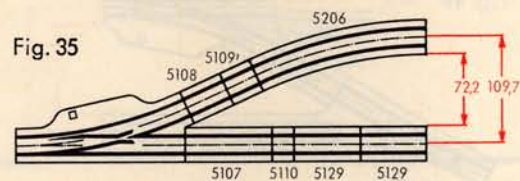


Fig. 36

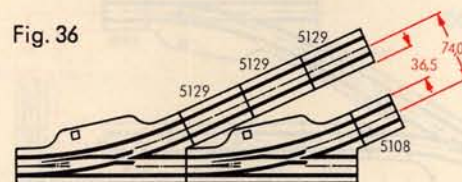


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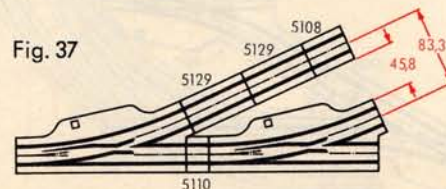


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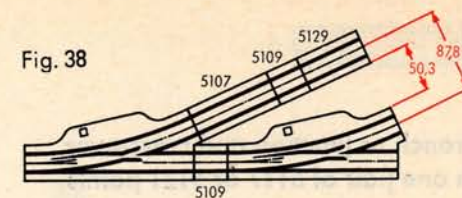


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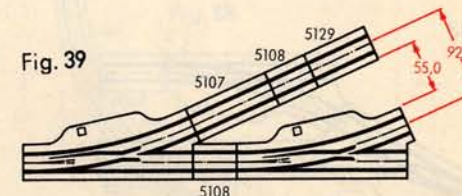


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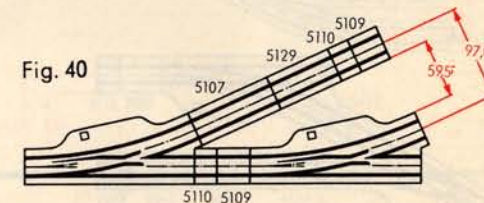


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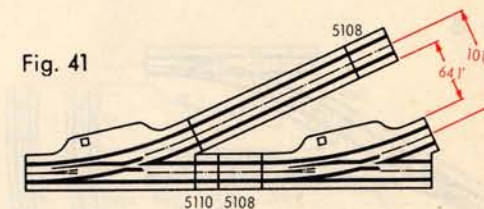
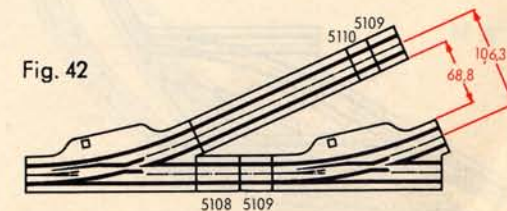


Fig. 42



5100 30°

A branch or junction and cross-over with one pair of 5117 or 5121 points

Fig. 43

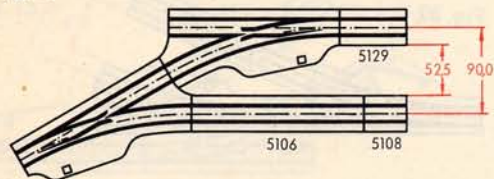


Fig. 44

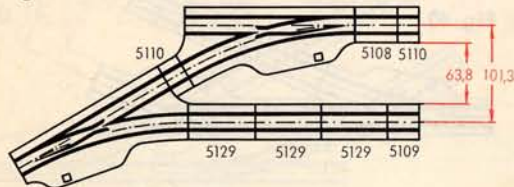


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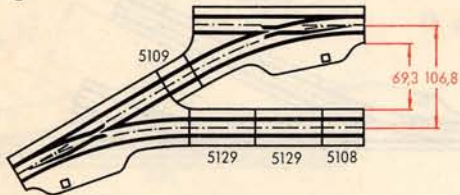


Fig. 46

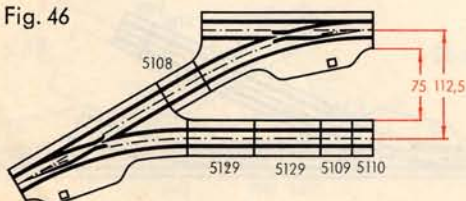


Fig. 47

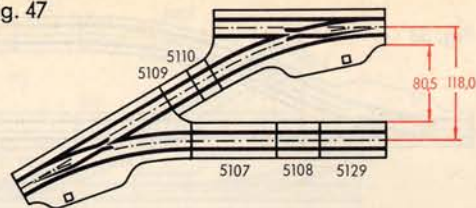


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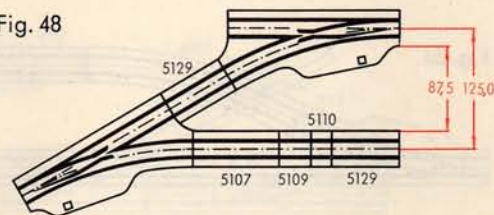


Fig. 49

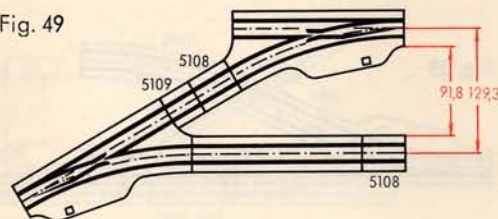


Fig. 50

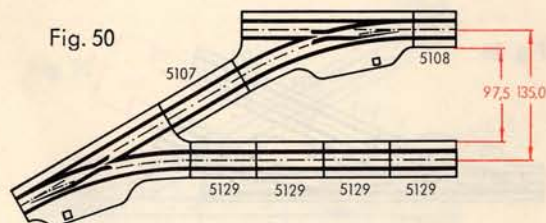
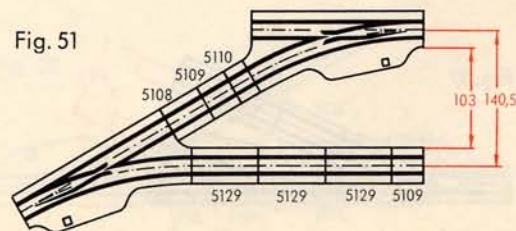


Fig. 51



5200 24° 17'

A branch or junction and cross-over with one pair of 5202 points

Fig. 52

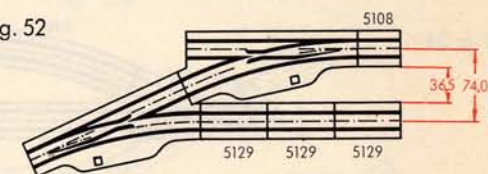


Fig. 53

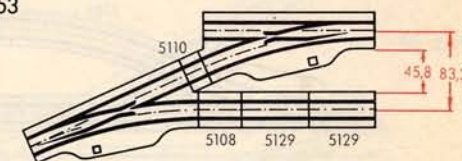


Fig. 54

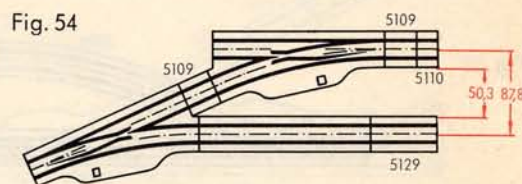
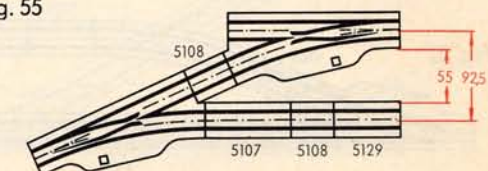
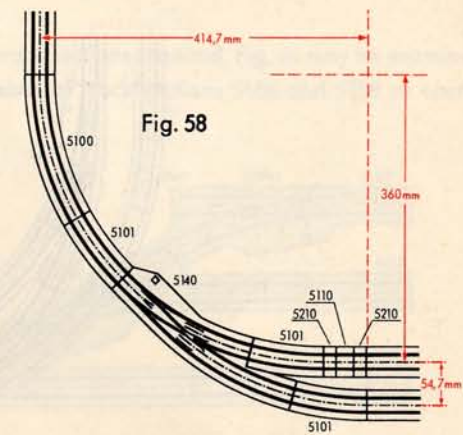
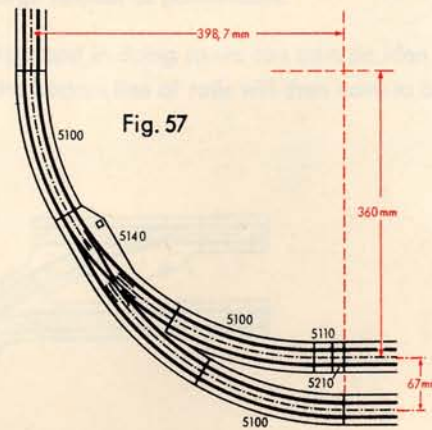
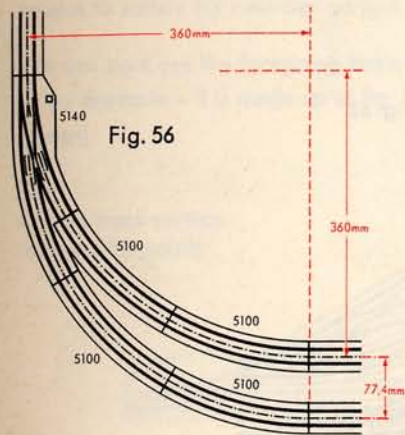


Fig. 55

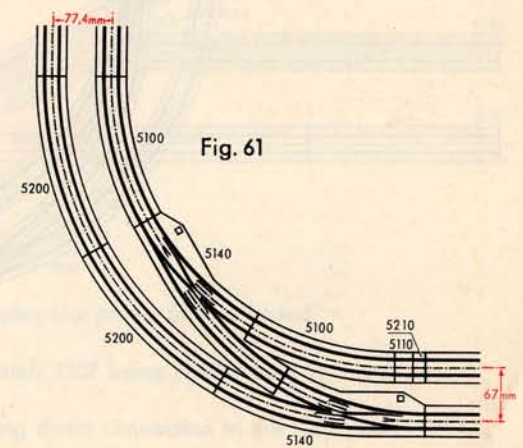
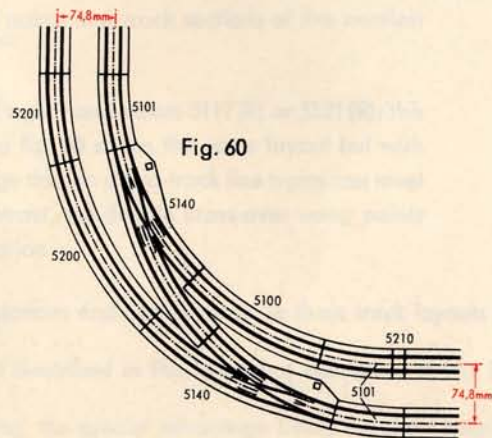
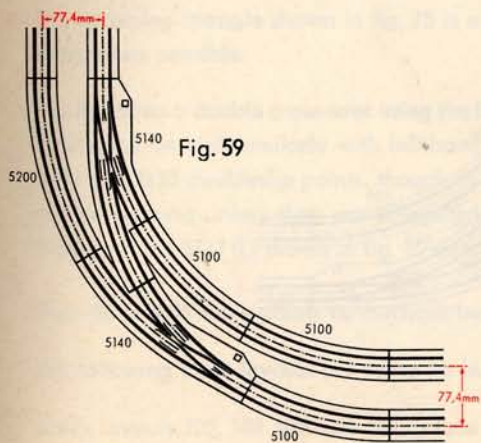


A branch or junction with a 5140 curved points

MÄRKLIN



Possibilities for laying a pair of 5140 curved points in a railway system



Possibilities for laying a pair of 5140 curved points in a railway system

MARKLIN

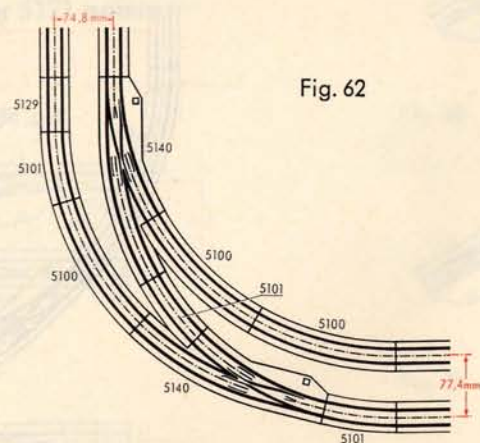


Fig. 62

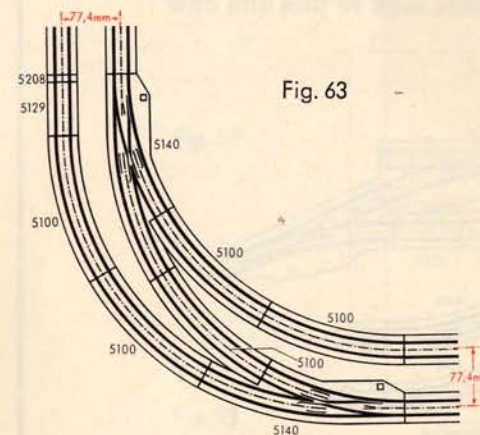


Fig. 63

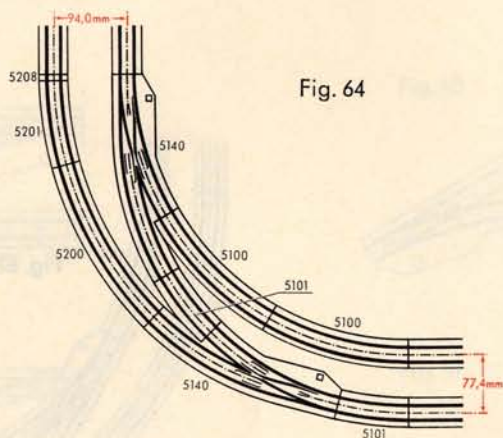


Fig. 64

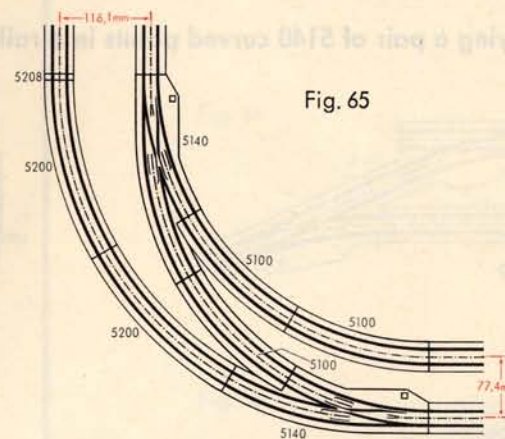


Fig. 65

TRACK LAYOUT COMBINATIONS

MÄRKLIN

(see page 86 for those with the 5140 curved points)

The track layouts in figs. 66 to 117 have been laid with the single 5117 or 5202 points and 5114 or 5128 crossings, and are intended to give the railwayman an incentive to make up his own system to satisfy his own desires and conditions available, from the large number of possibilities.

We can now use the foregoing basic figures to develop gridiron sidings, and in doing so we can gain an idea of the number of points and track sections required. Fig. 66 may be examined as an example – it is made up of fig. 1 (blue) and fig. 43 (green), and the bottom line of rails will then have to be built up with the same number of track sections 5106 and 5108 as above (green).

Fig. 1
Curved track section
replaced by points

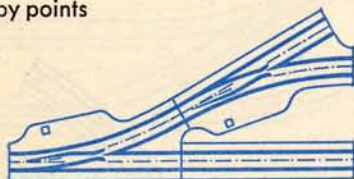


Fig. 43

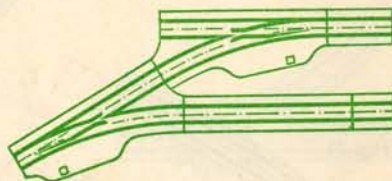
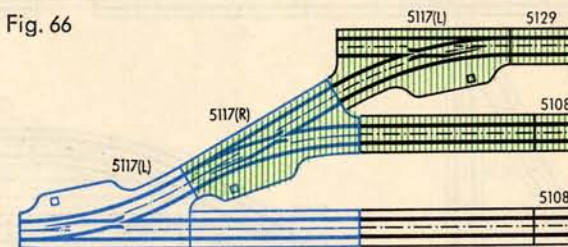


Fig. 66



With a closed gridiron the appropriate points and tracks are needed on the opposite side, and that means that the two 5108 quarter-length (1/4) track sections can be replaced by one 5107 half-length section (1/2), and the gridiron can then be lengthened as desired by laying straight track sections in between.

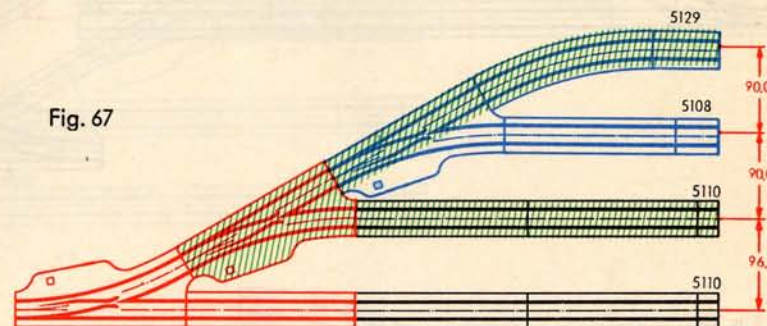
Fig. 67 is another example, consisting of three individual figures, the coloured lines rendering these figures readily recognisable.

The figures up to 72 show similar examples.

The reversing triangle shown in fig. 75 is made up of MÄRKLIN points and track sections of the smallest dimensions possible.

Fig. 79 shows a double cross-over using the 5114 crossing and four right-hand points 5117 (R) or 5121 (R); this figure can be built similarly with left-hand points. The following fig. 80 shows the same layout but with only one 5128 double-slip points, though this has the disadvantage that on a two-track line trains can meet on the crossing unless they are safeguarded by signals. In contrast, the double cross-over using points 5128 and 5117 (L) shown in fig. 82 ensures trouble-free operation.

Fig. 67



Figs. 84 and 85 show points connections usually to be found in stations and goods yards; in these track layouts points 5117 and the double-slip points 5128 are used.

All following track layouts are made up in a similar way to that described in the foregoing examples, points 5202 and double slip points 5207 being chiefly used in these cases.

Track layouts 105, 108 109 and 110 include the small 5211 crossing, the special advantage being the short length and the angle allowing direct connection to the 5202 points.

Figs. 115, 116 and 117 show track combinations with the 5140 curved points. The three tracks coming from the right are continued in one track in fig. 115, in two tracks in fig. 116 and in three tracks in fig. 117.

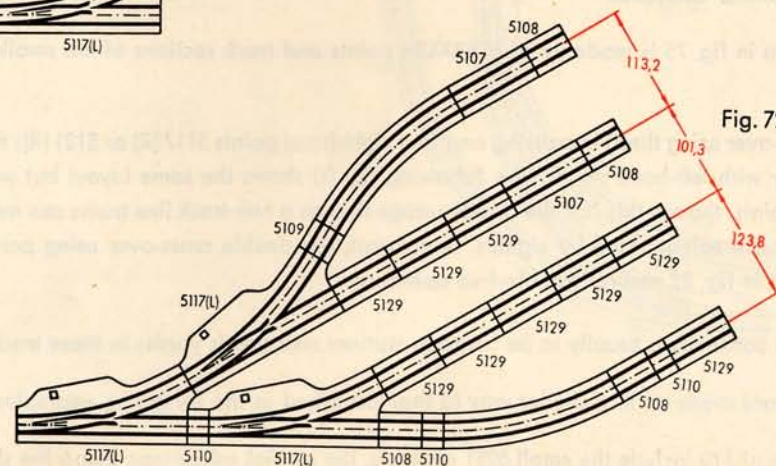
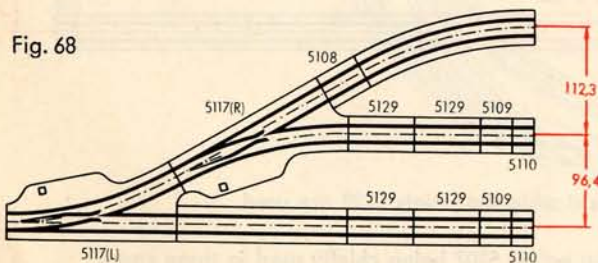
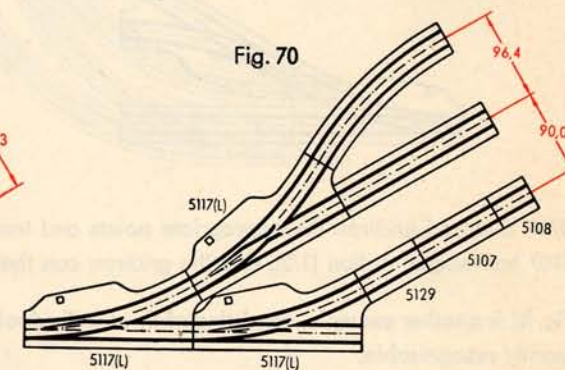
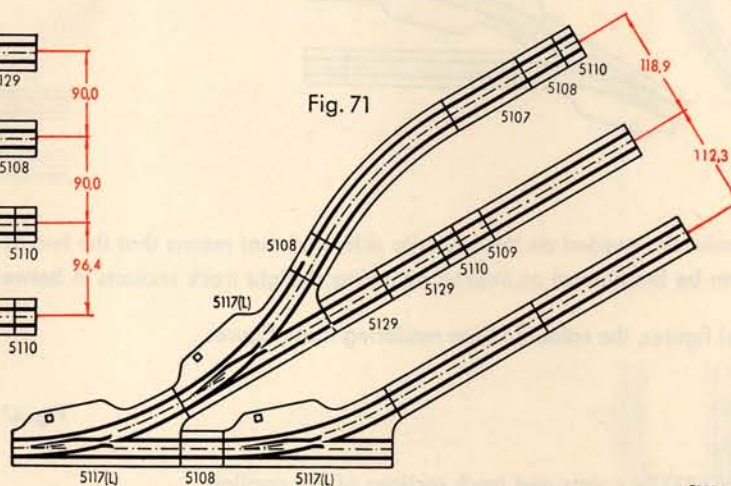
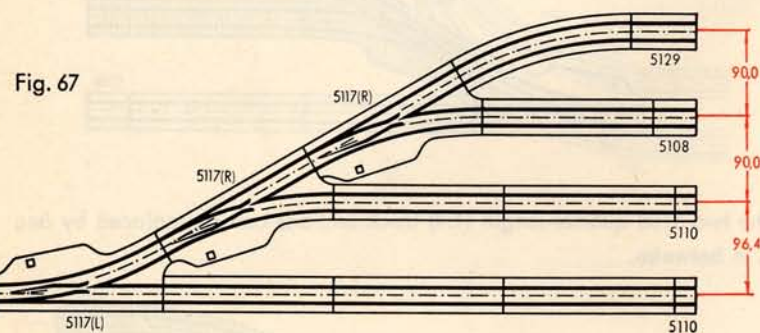
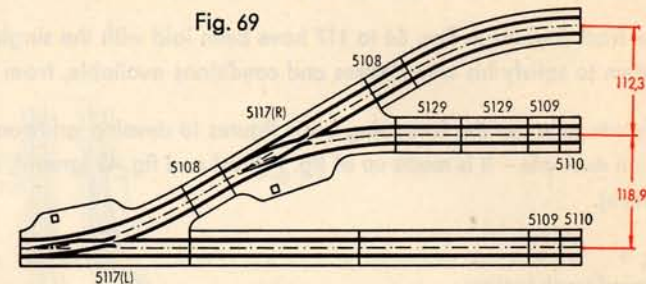
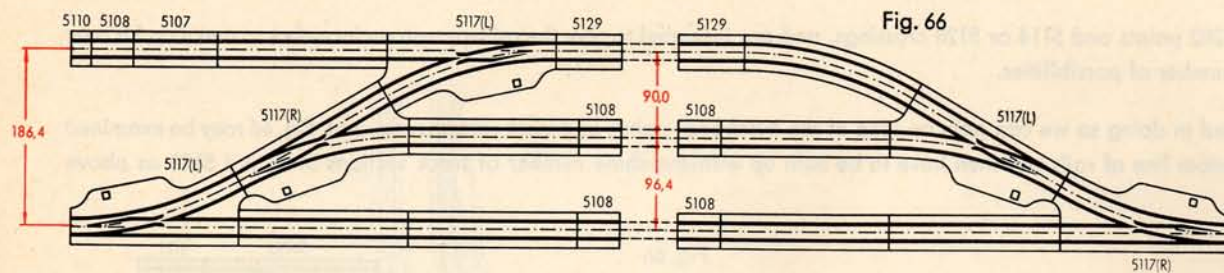


Fig. 73

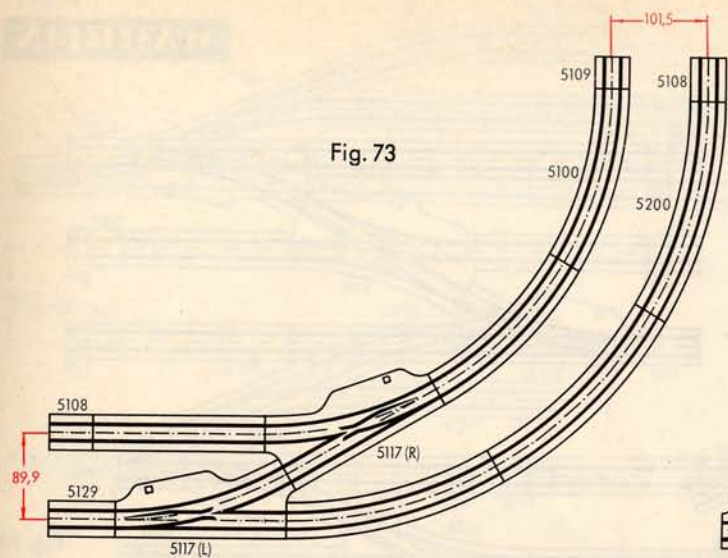


Fig. 75

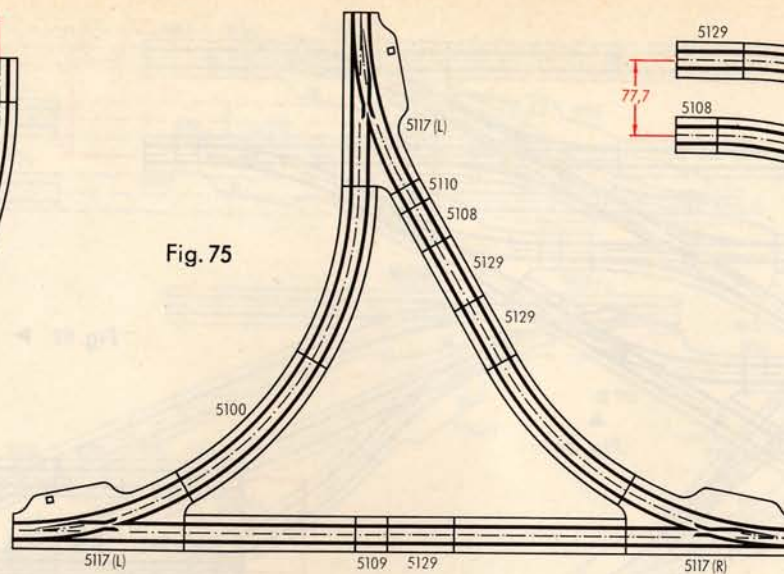


Fig. 74

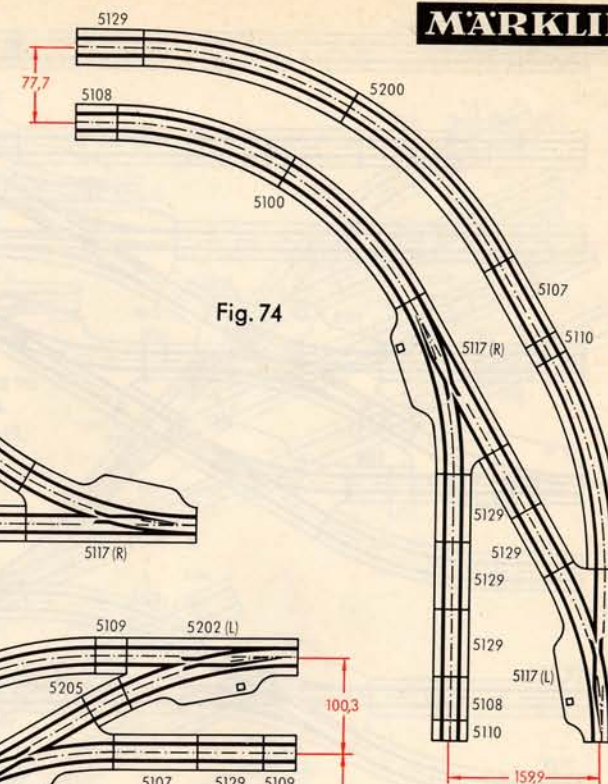


Fig. 76

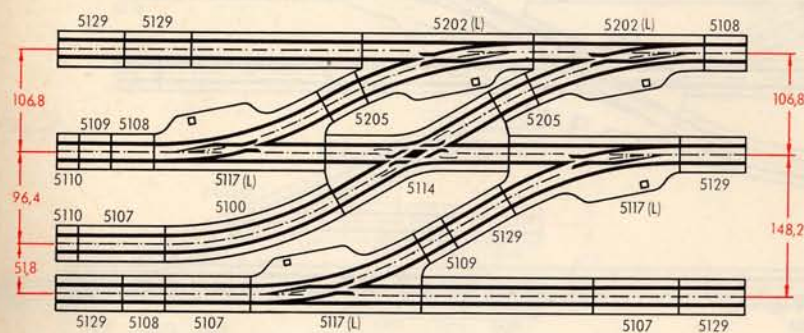


Fig. 77

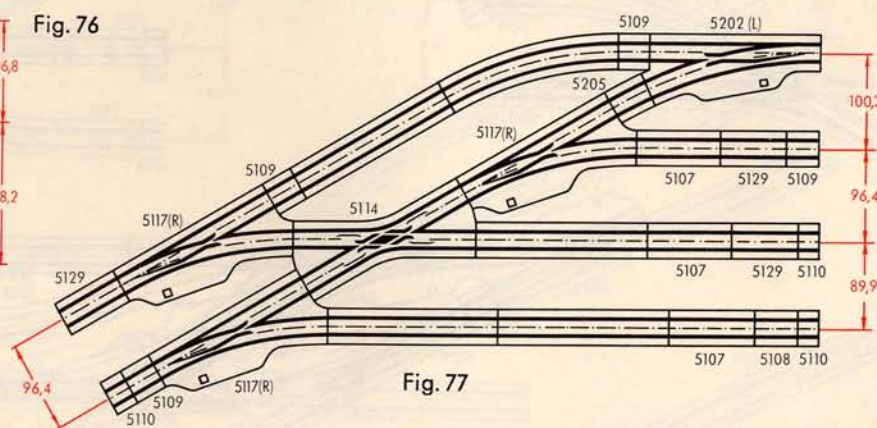


Fig. 78

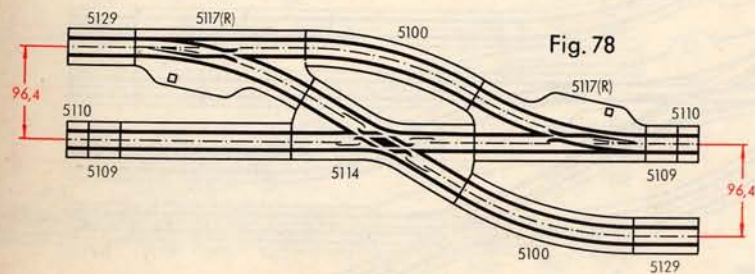
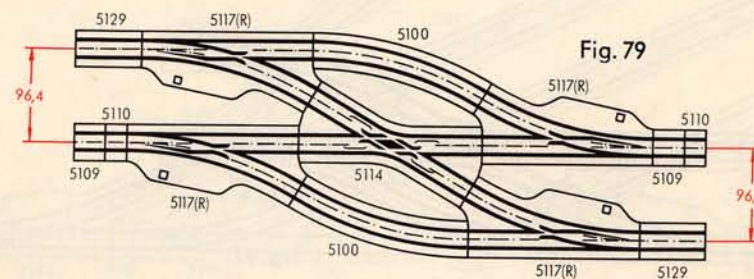


Fig. 79



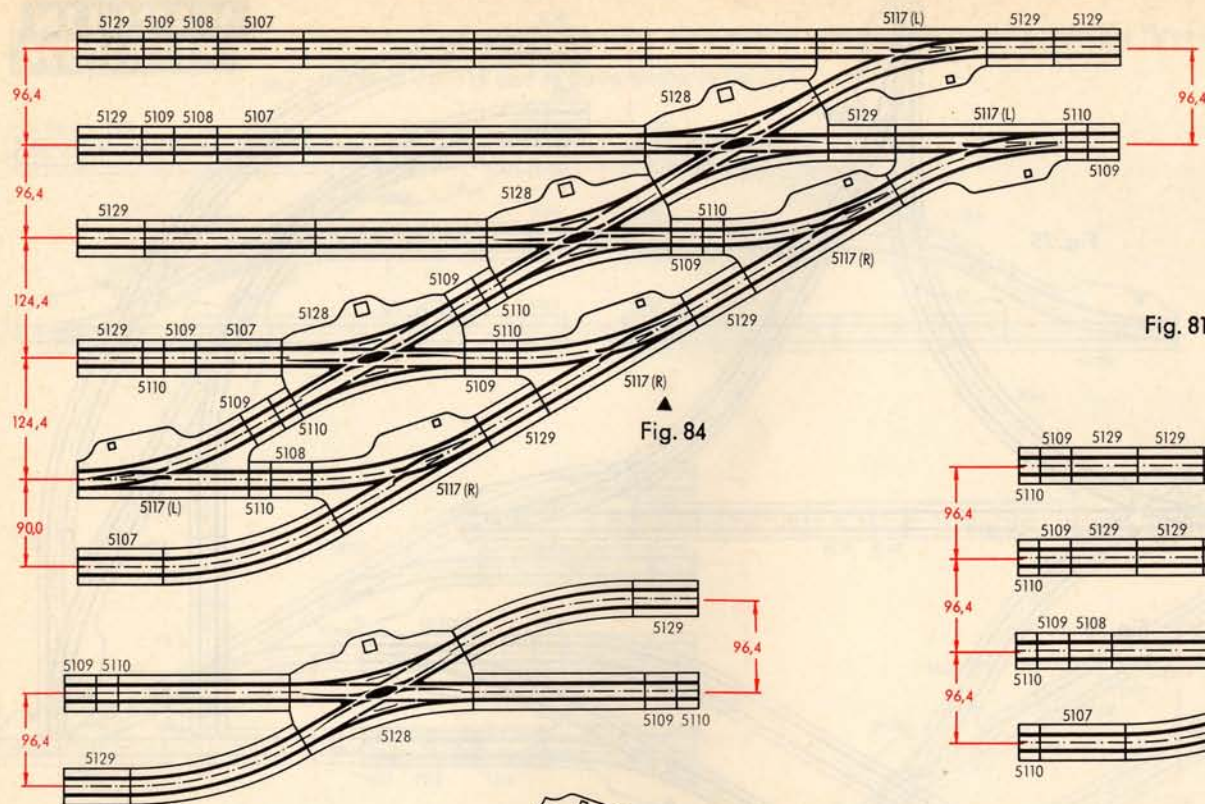


Fig. 80

Fig. 84

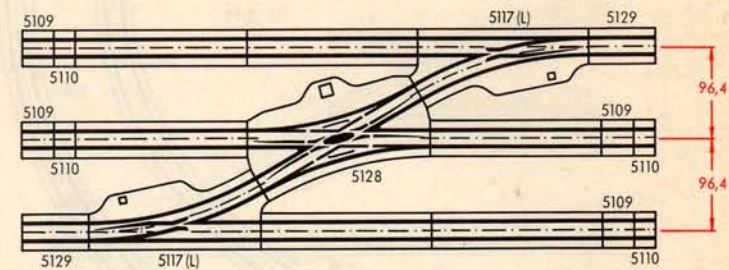


Fig. 81

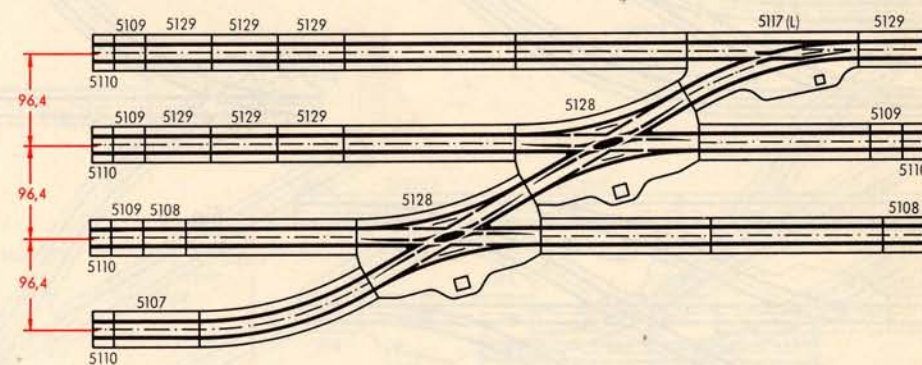


Fig. 83

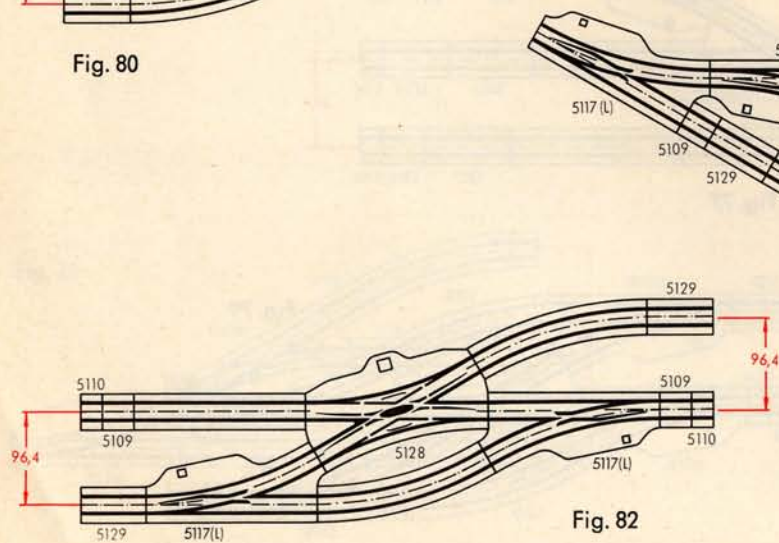


Fig. 82

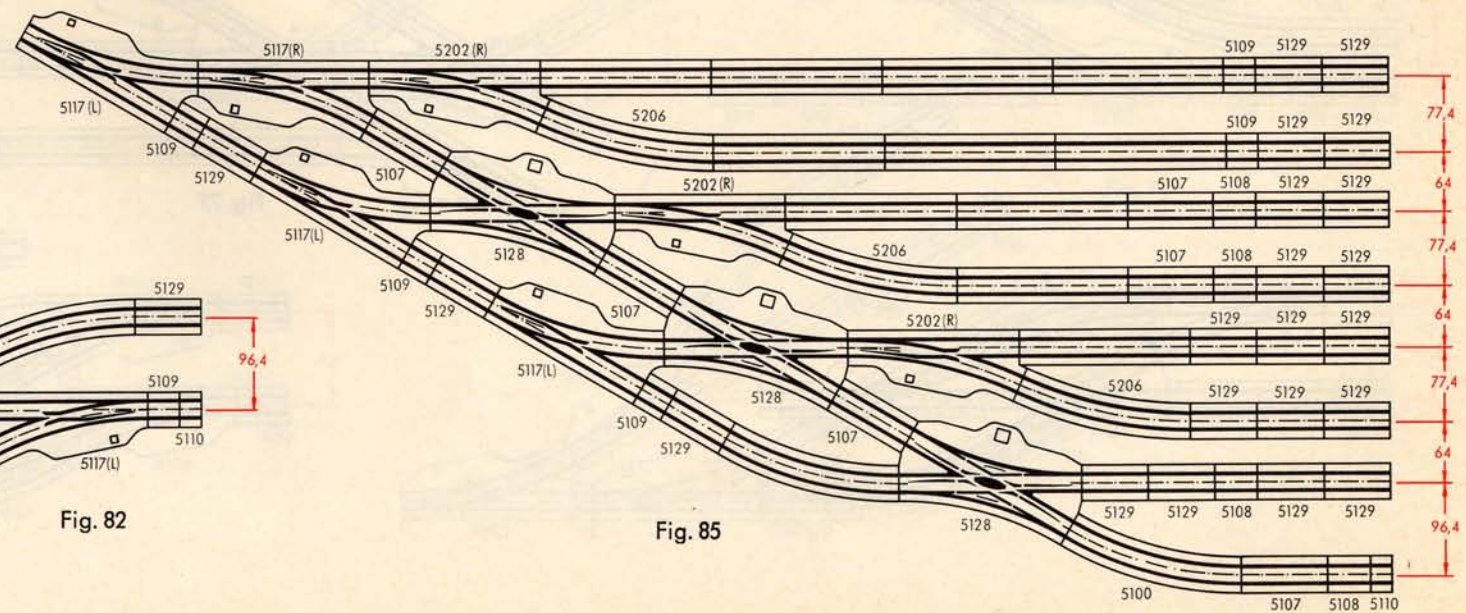


Fig. 85

Fig. 87

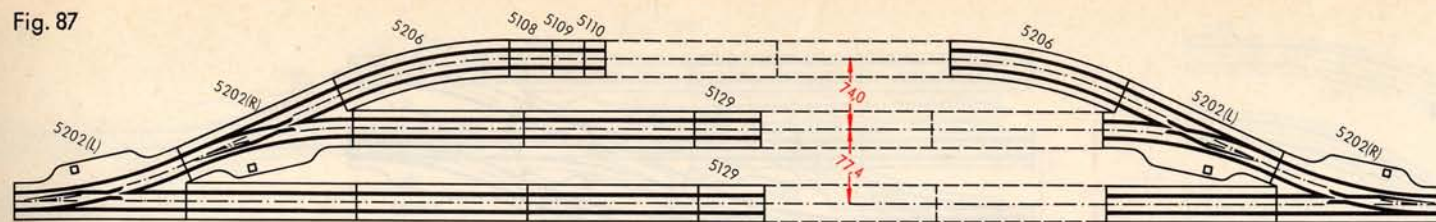


Fig. 86

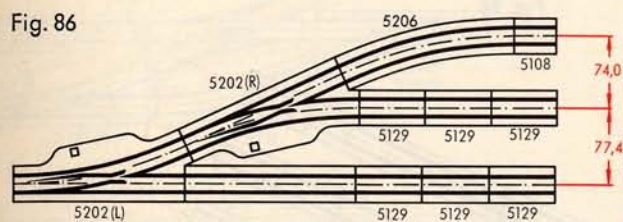


Fig. 88

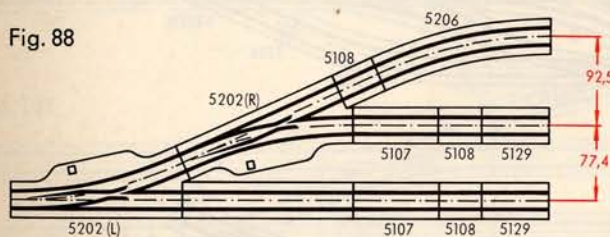


Fig. 89

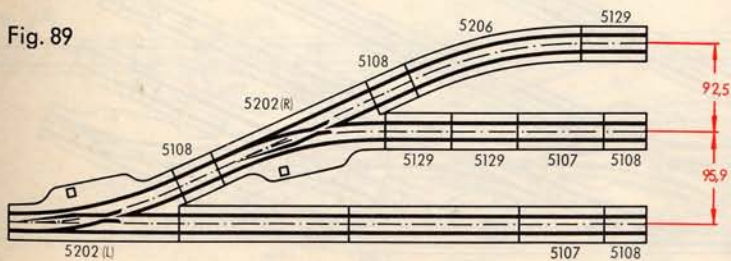


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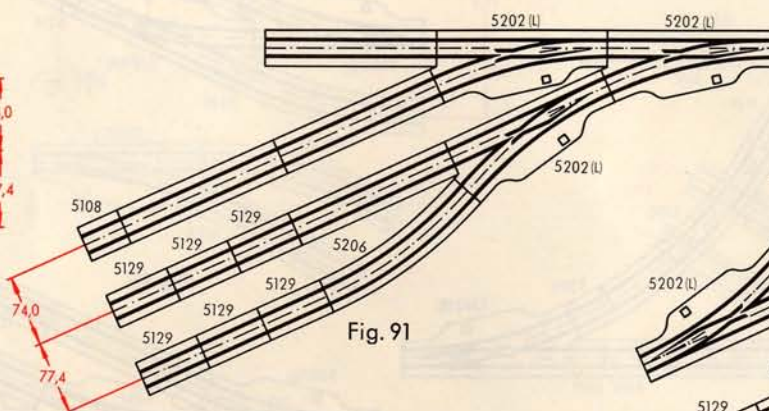


Fig. 92

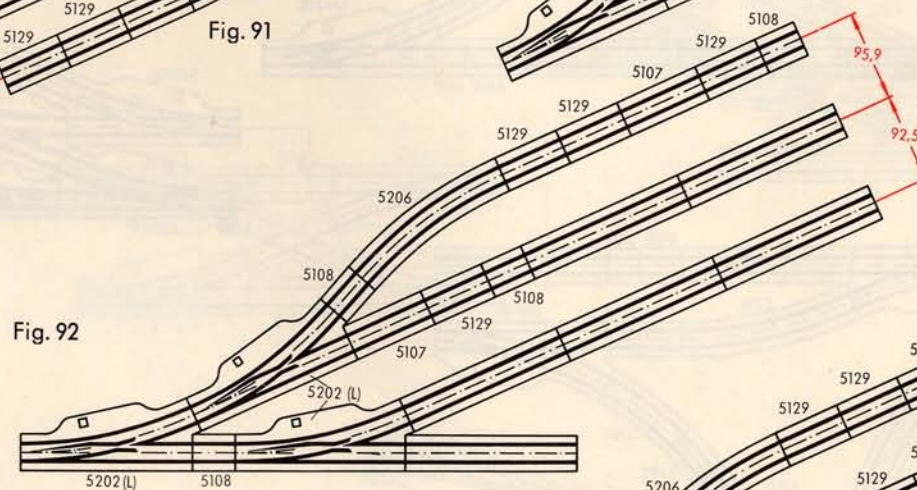
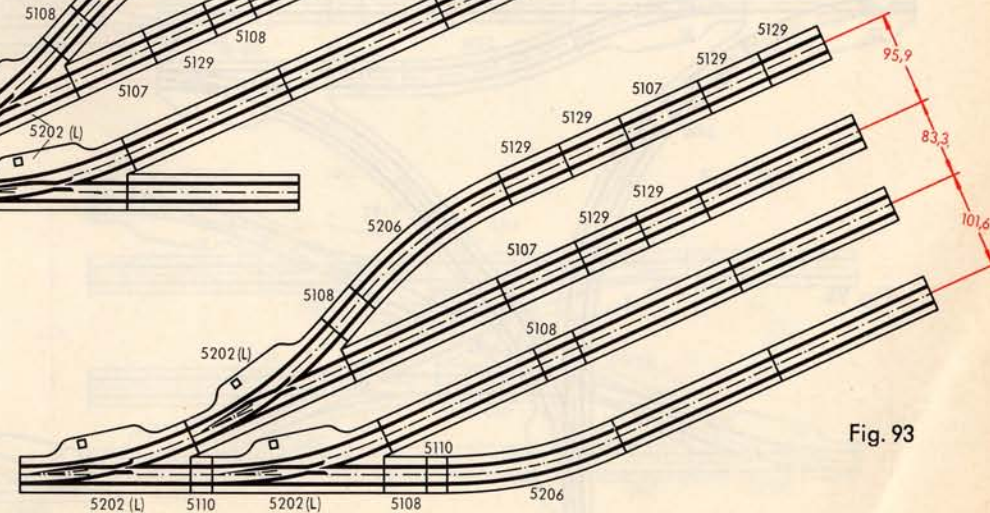


Fig. 93



MARKLIN

Fig. 90

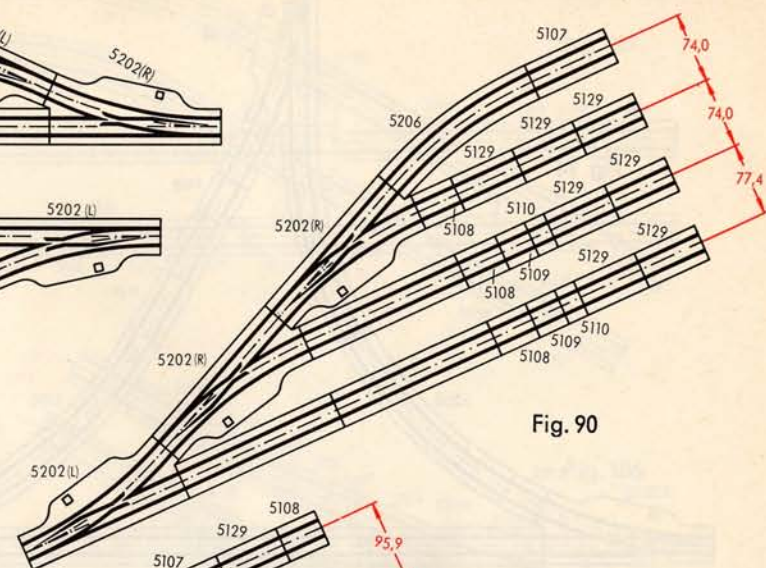


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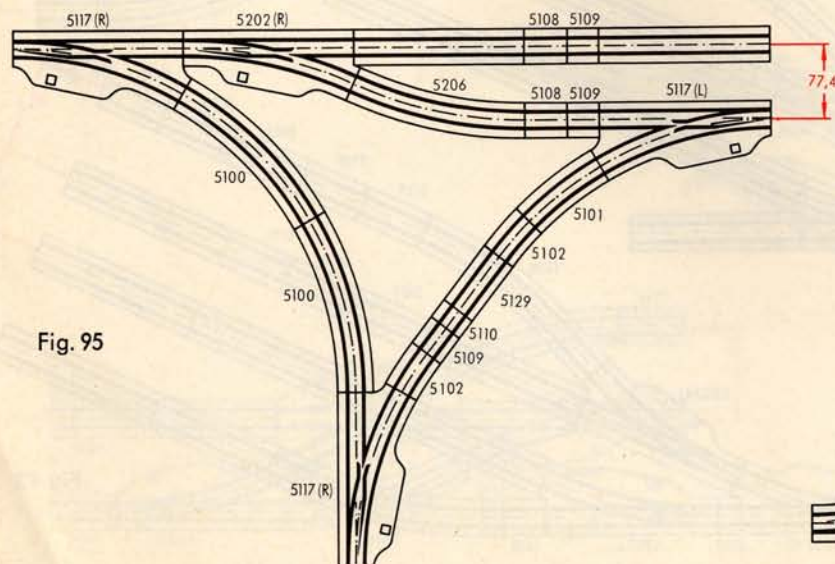
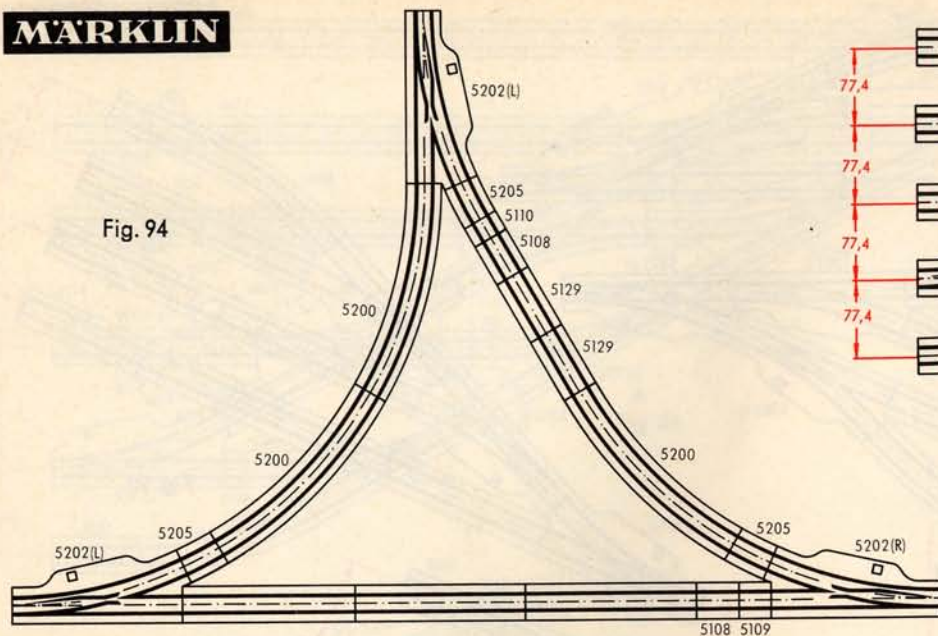


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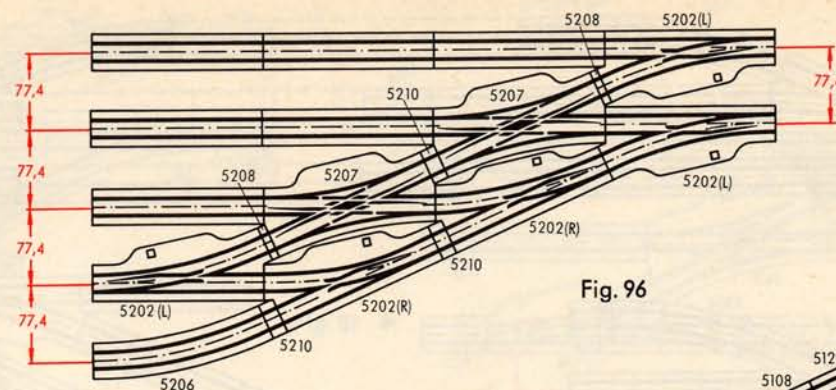


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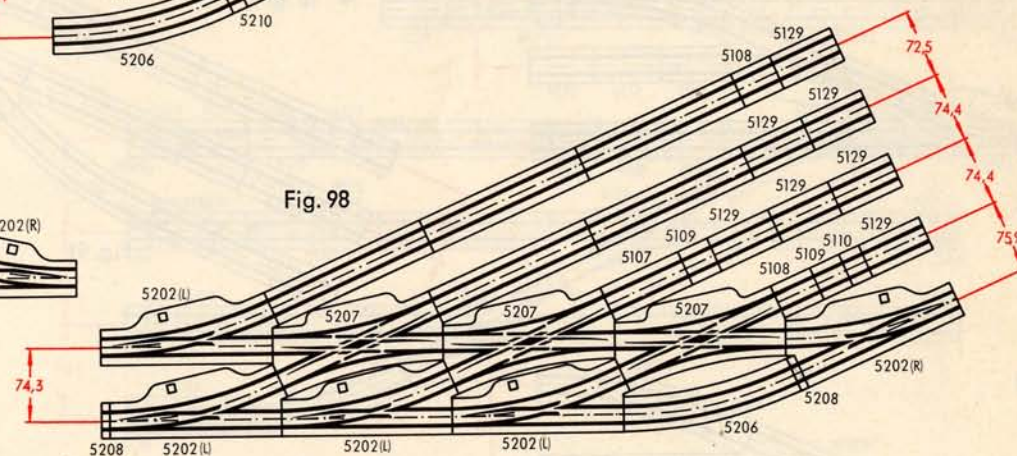


Fig. 98

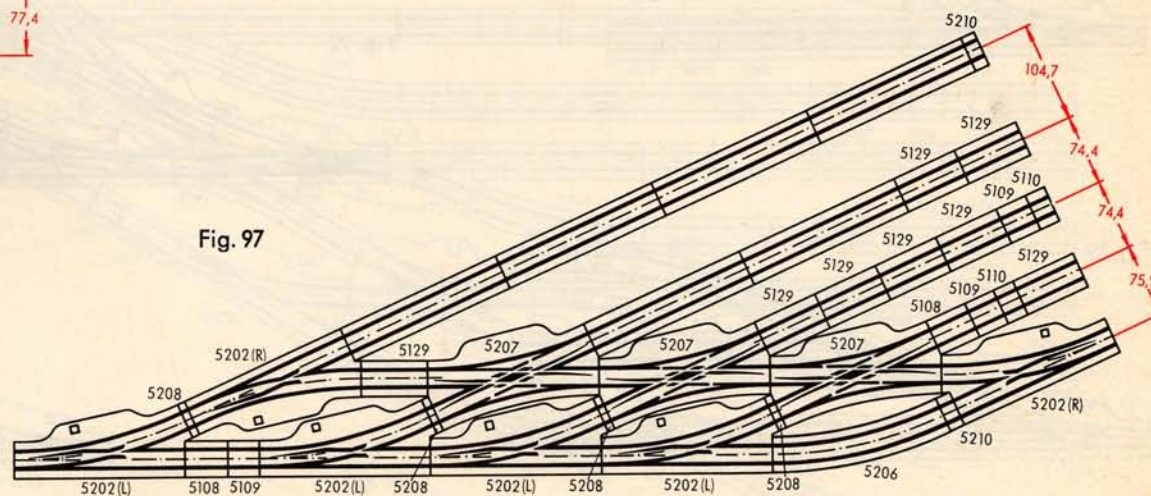


Fig. 97

Fig. 99

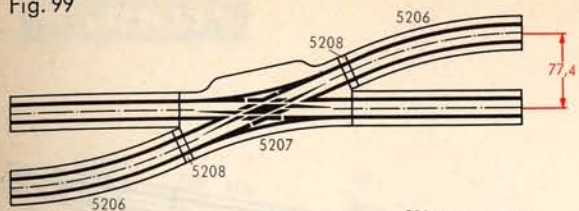


Fig. 100

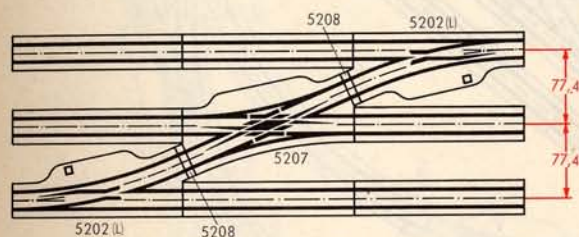
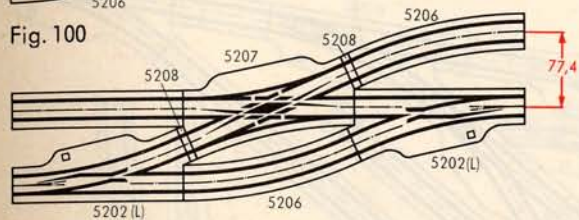


Fig. 103

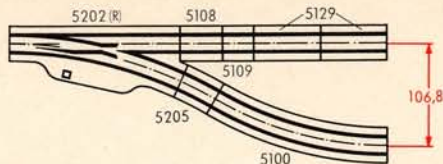


Fig. 104

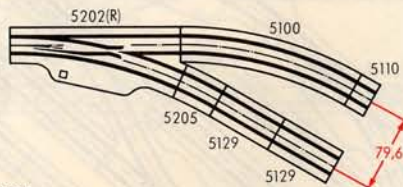


Fig. 105

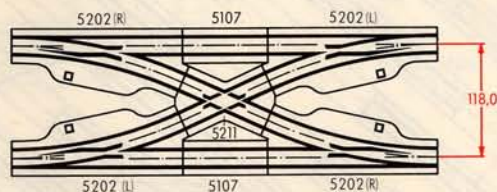


Fig. 102

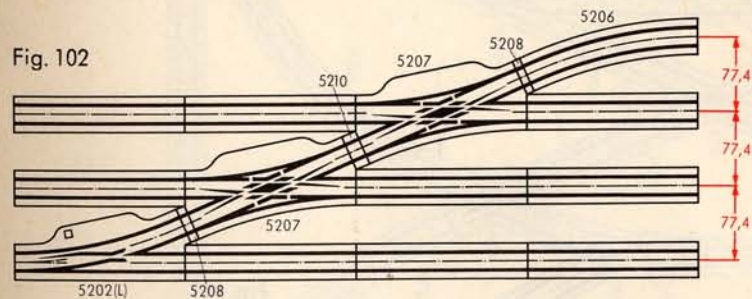
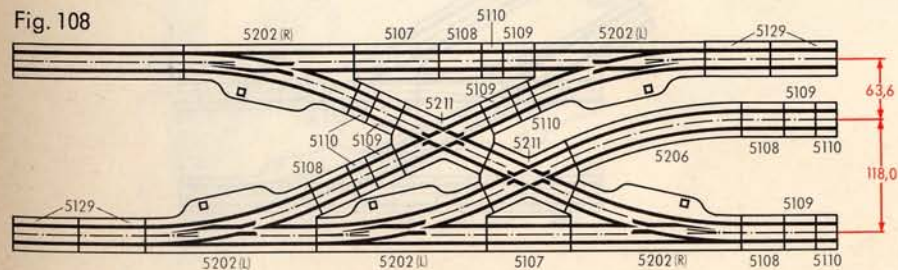


Fig. 108



MARKLIN

Fig. 107

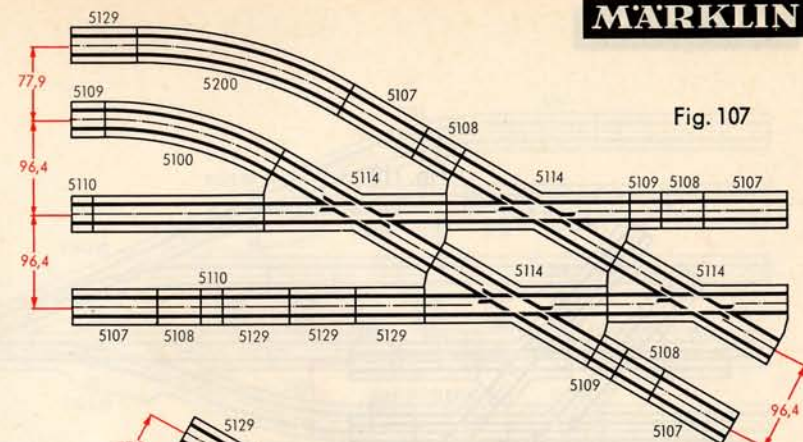


Fig. 106

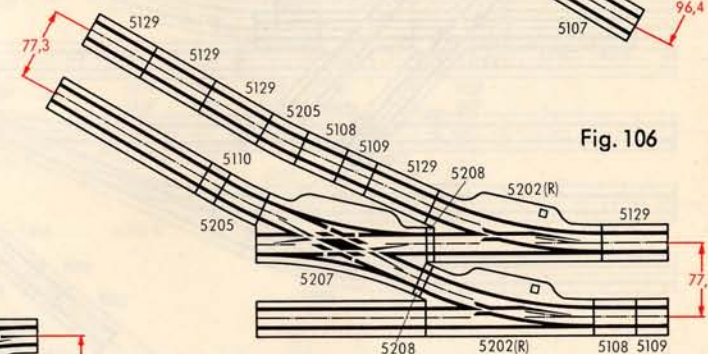


Fig. 109

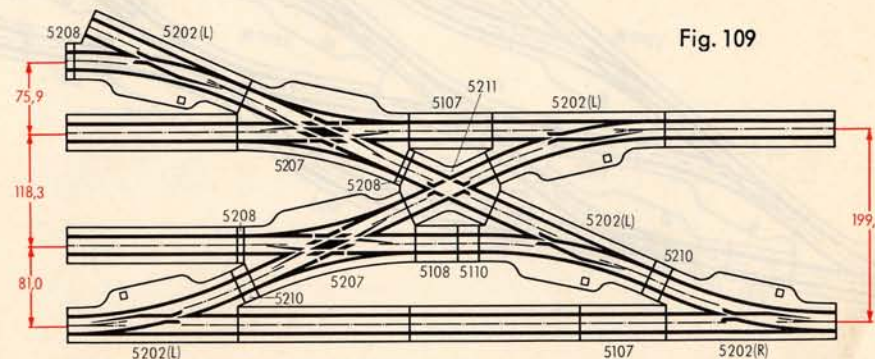


Fig. 110

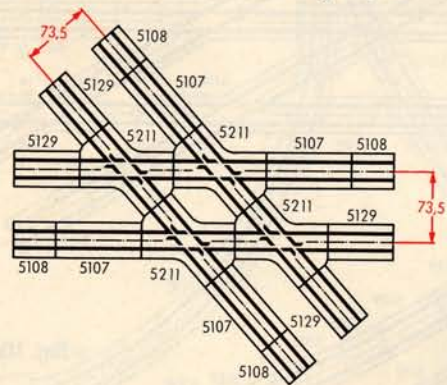


Fig. 112

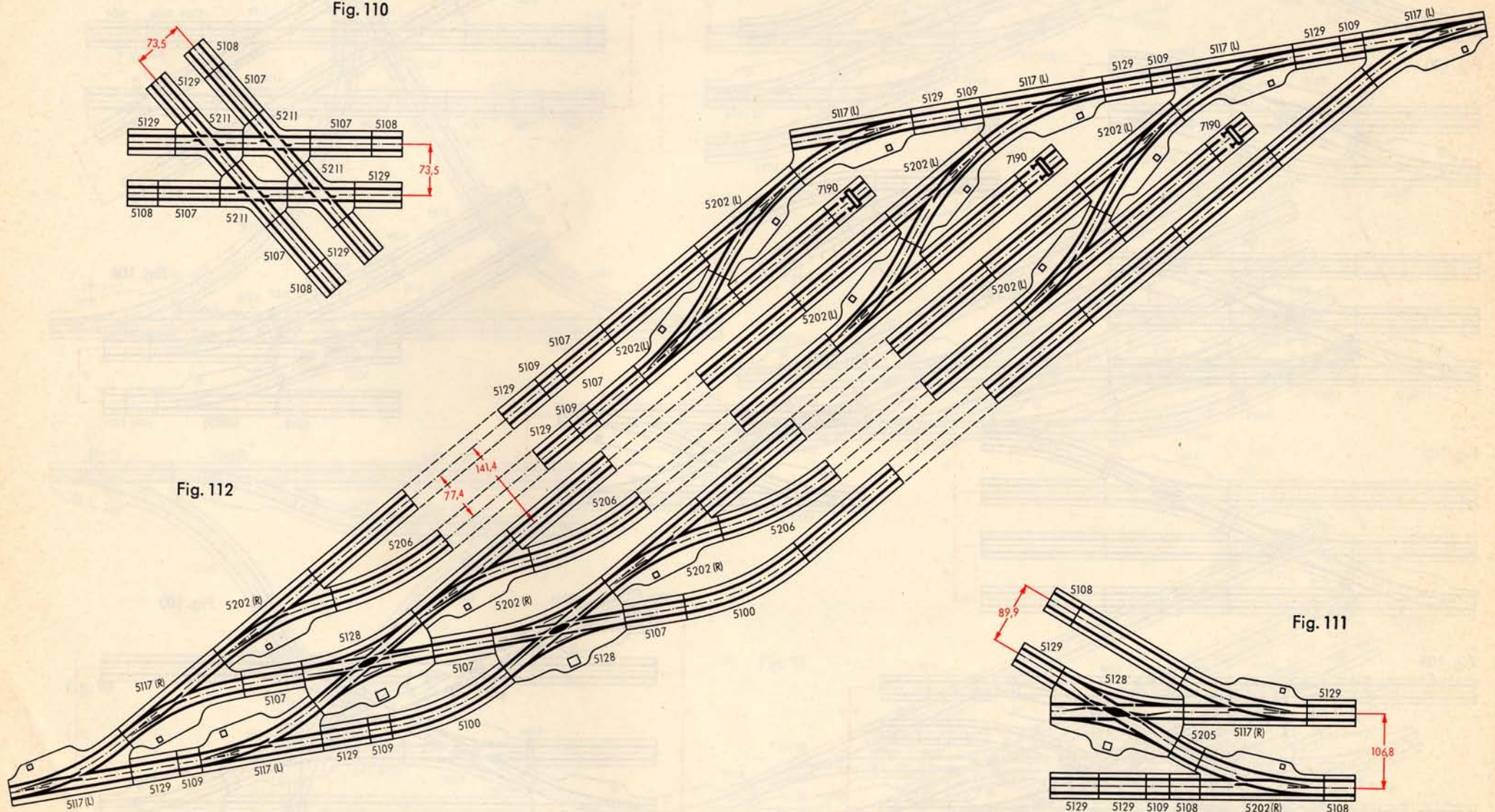
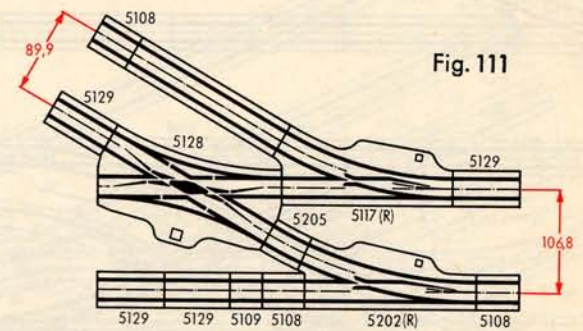


Fig. 111



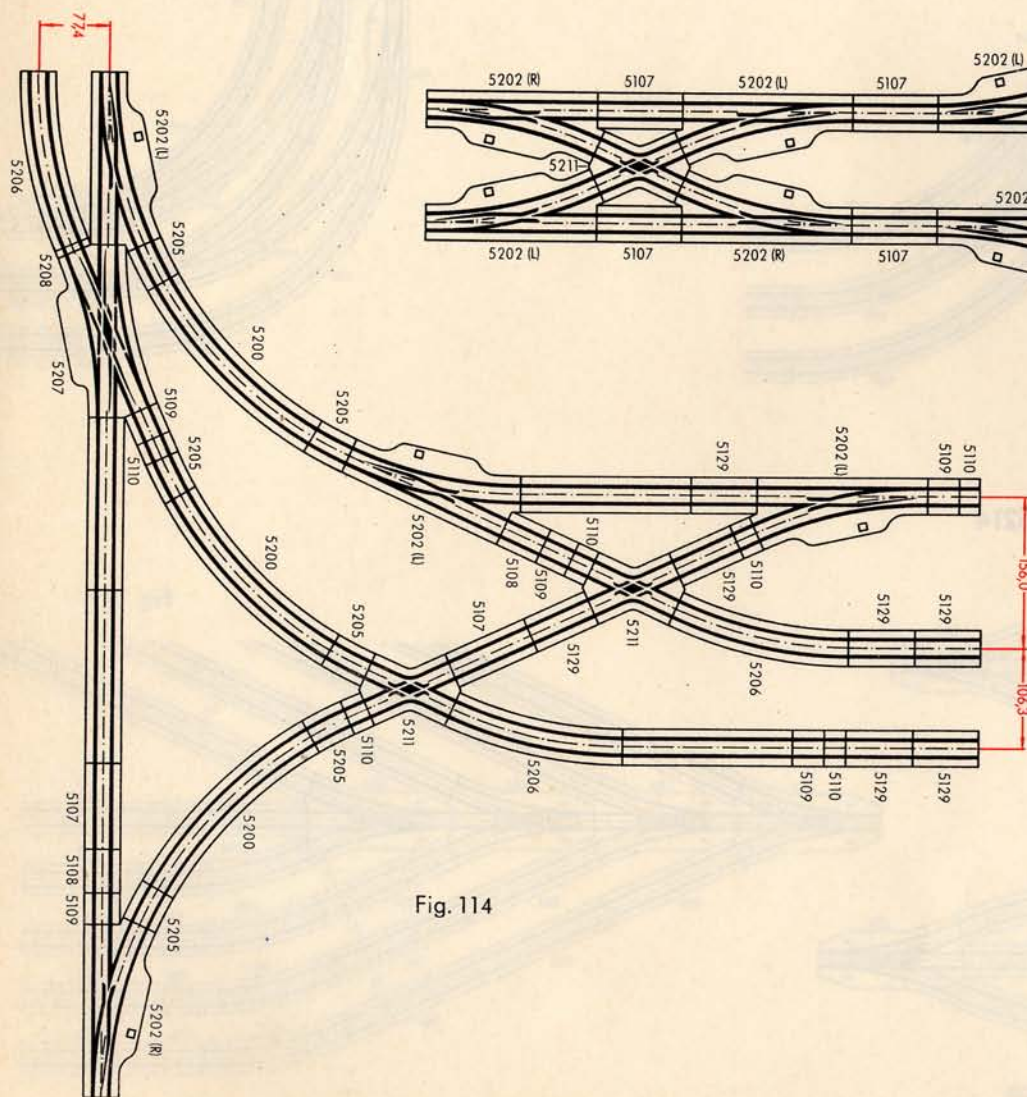


Fig. 114

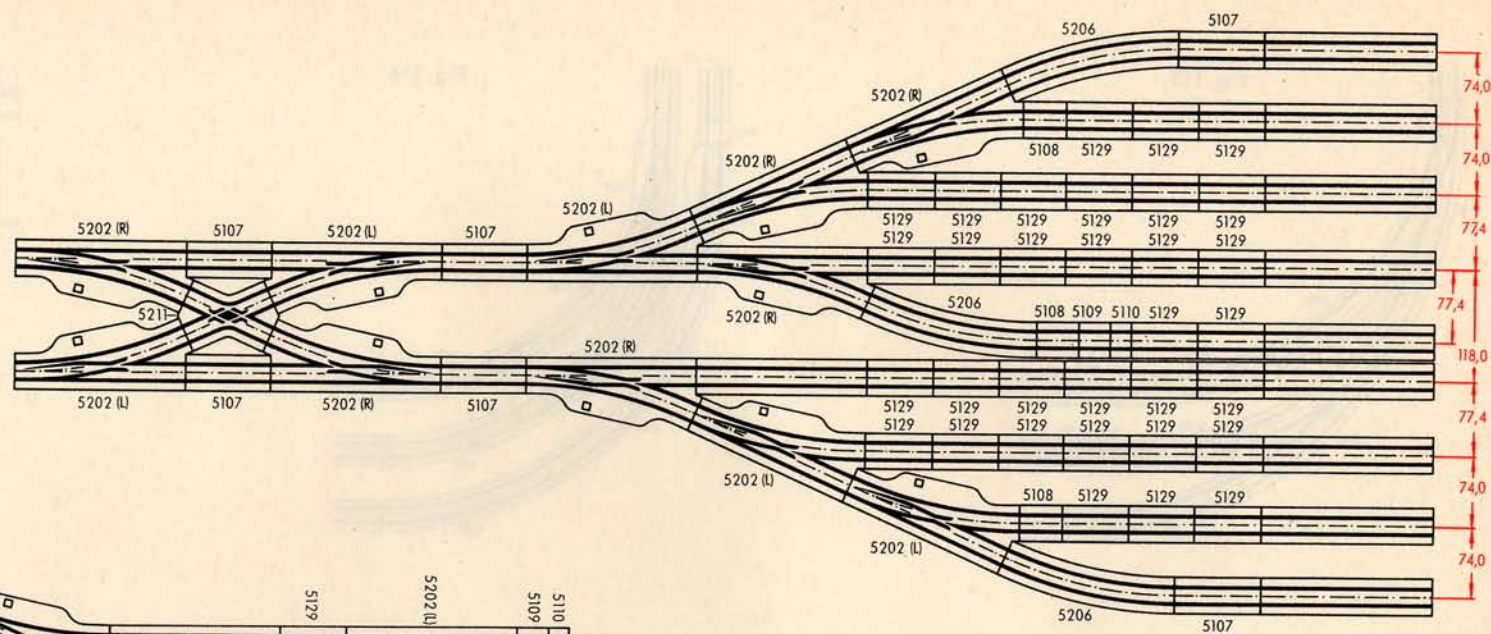


Fig. 113

Track layout combinations with the 5140 curved points

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Fig. 115

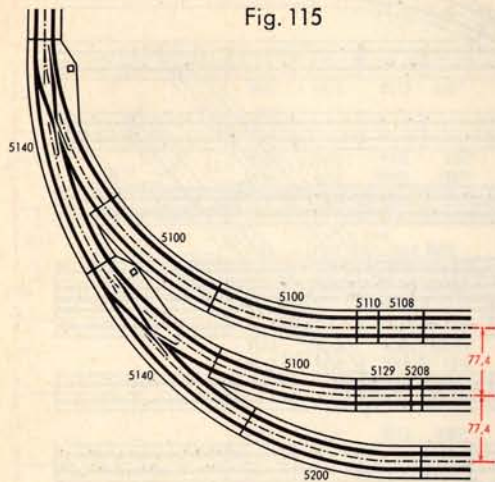


Fig. 116

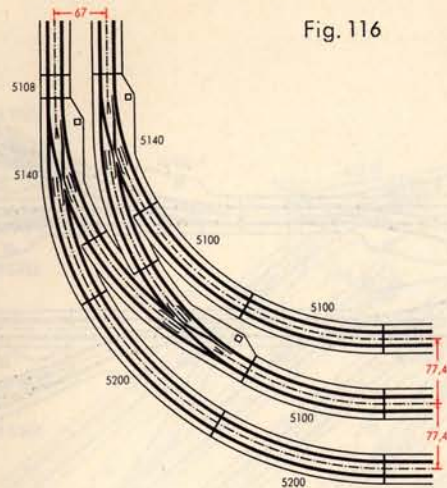
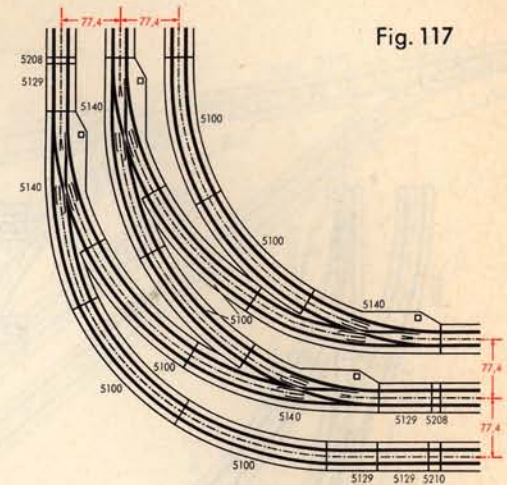


Fig. 117



3 track combinations incorporating the symmetrical three-way switch 5214

Fig. 118



Fig. 119

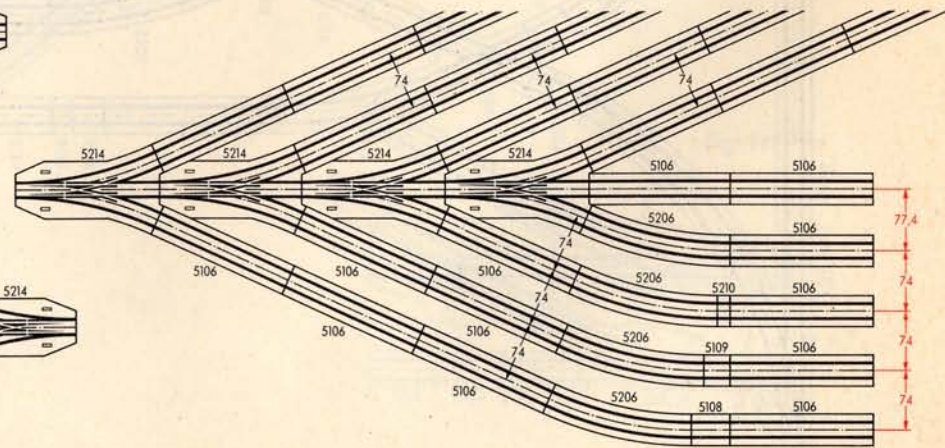


Fig. 120

