

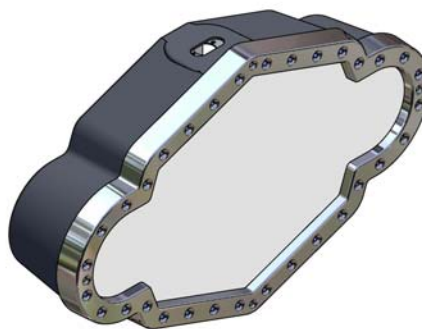
UniTopper

Product Manual

Version 0.4 – draft release / Nov. 2007



Ellipse



Ringo



Mini Ellipse



Shield

Revision History

Revision	Date	Comment	By
0.1	3 Oct 2005	Initial Release	R.T.
0.2	25 Oct 2005	Number modifications	E.S.
0.3	21 Mrt 2006	Update Mini Elipse + New parts	E.S.
0.4	09 Nov 2007	More drawings	E.S.

This manual is intended only to assist the reader in the use of this product and therefore Suzo International shall not be held liable for any loss or damage whatsoever arising from the use of any information or particulars in, or any omission from this manual or any incorrect use of the product.

Design and specifications are subject to change without notice.

Wijzigingen in ontwerp en technische gegevens voorbehouden, zonder kennisgeving.

La conception et les spécifications sont modifiables sans préavis.

El diseño y especificaciones están sujetos a cambios sin previo aviso.

WARNING!

Failure to observe the interface requirements specified in this technical manual may result in damage to the electronics.

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1. Introduction

The Suzo-Happ group has now introduced some new topper designs. These units can be put on top of gaming machines as a people attraction device or to promote certain gaming machines.

2. Safety Note

To meet the requirements for EN 60950 the equipment must be installed according to the following requirements: The equipment must be protected by a 2A fuse.
The equipment must be supplied from a SELV limited power source.
The equipment must be installed in an enclosure but positioned so that it is external to any fire enclosure area within the main enclosure.

3. General Description

3.1 Description

The topper ring consists of 32 individually controlled white leds, grouped in four banks of 8 leds.

3.2 Display Patterns

The standard software version displays the following sequence of patterns:

Only after power up (V1.2 and up):

Software version: Upper left 8 bits: Major version, Upper right 8 bits: Minor version

Continuous repeating pattern sequence:

1. Pause
2. Snake
3. Pause
4. Train
5. Pause
6. Stars
7. Pause
8. Mill

3.3 Intensity control

The intensity can be controlled by the small push button on the board (Software V1.2 and up). Pressing the button once shows the current intensity level on the upper left 8 leds. Pressing it again increases the intensity level one step. After the highest intensity level, the level rolls over to the minimum intensity level.
Default value is maximum intensity.

3.4 User software

The user may alternatively write his own software for displaying his own patterns.

Parallel to the intensity control button is placed a 2-pin connector (JP1), that can be used for user specific (user software controlled) purposes.

3.5 Topper Model options

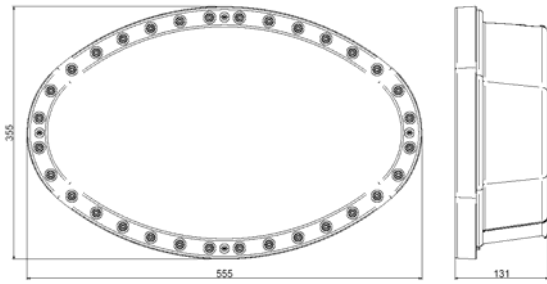


Figure 1: Ellipse Compact model

Order numbers Ellipse Compact models

Chrome: 104-05890 (default model)
Black Chrome: 104-00070 (optional adaption kit)
Gold: 104-0070-4 (optional adaption kit)

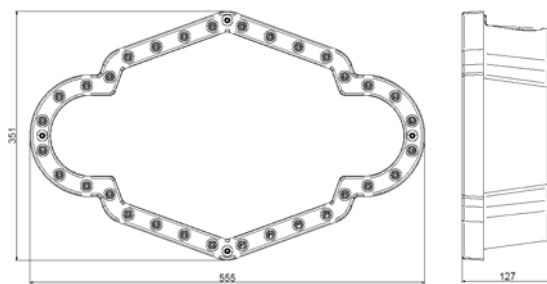


Figure 2: Ringo Compact model

Order numbers Ringo Compact models

Chrome: 104-03890 (default model)
Black Chrome: 104-0071 (optional adaption kit)
Gold: 104-0071-4 (optional adaption kit)

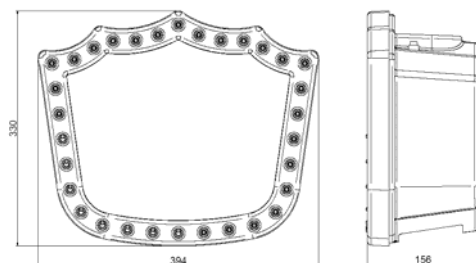


Figure 3: Shield model

Order numbers Shield models

Chrome: 104-04890 (default model)
Black Chrome: 104-0072 (optional adaption kit)
Gold: 104-0072-4 (optional adaption kit)

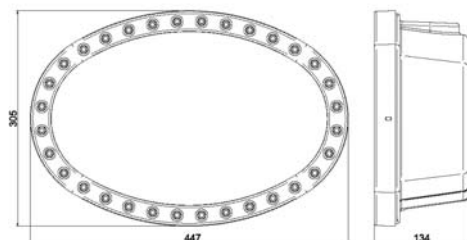


Figure 4: Ellipse Mini model

Order numbers Ellipse Mini models

Chrome: 104-06890 (default model)
Black Chrome: 104-0073 (optional adaption kit)
Gold: 104-0073-4 (optional adaption kit)

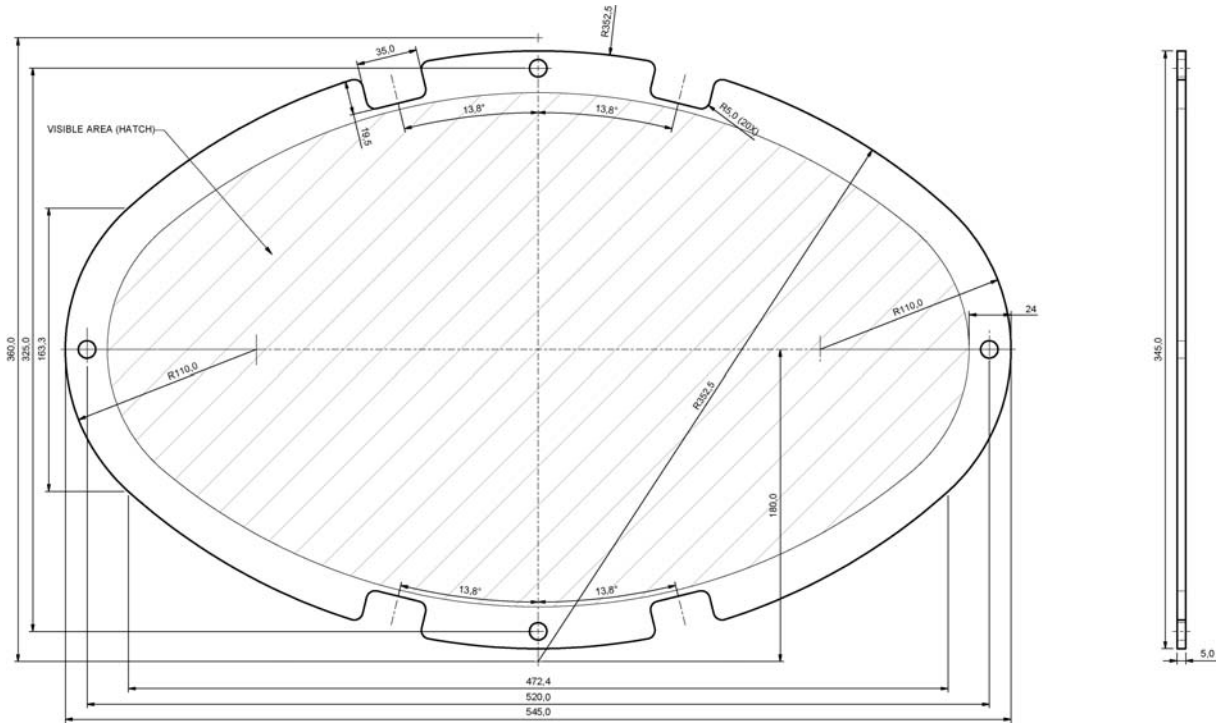


Figure 5: Frontplate Elipse Compact (104-0101)

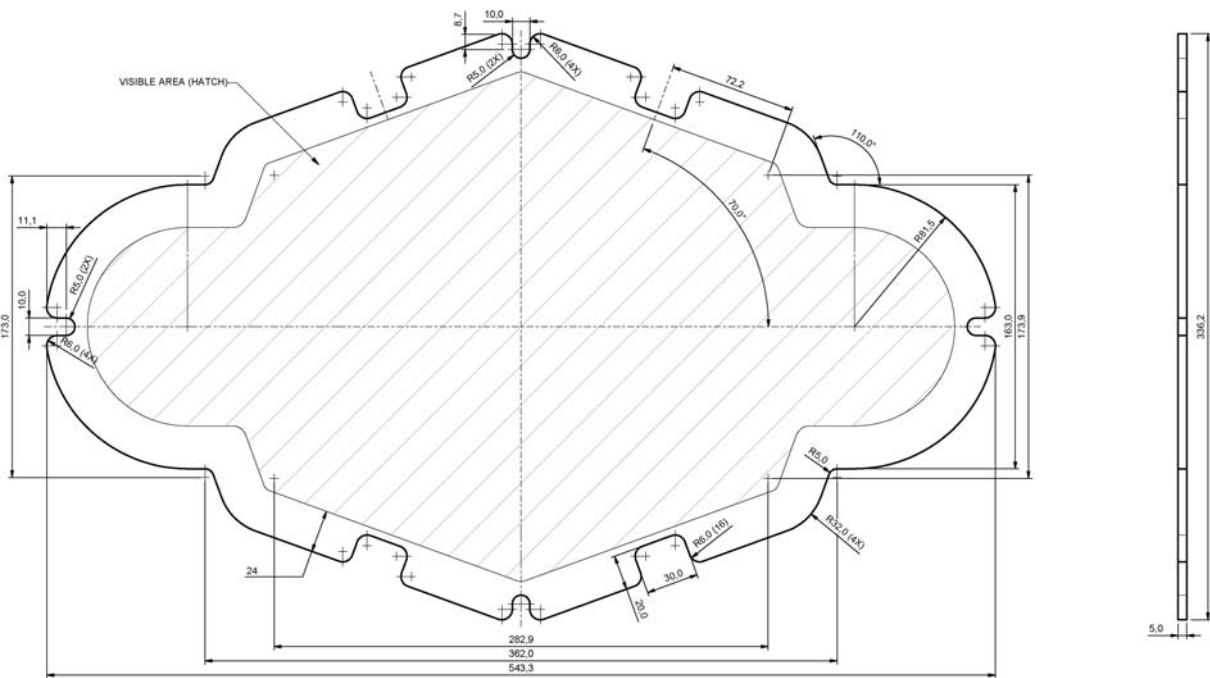


Figure 6: Frontplate Ringo Compact (104-0101)

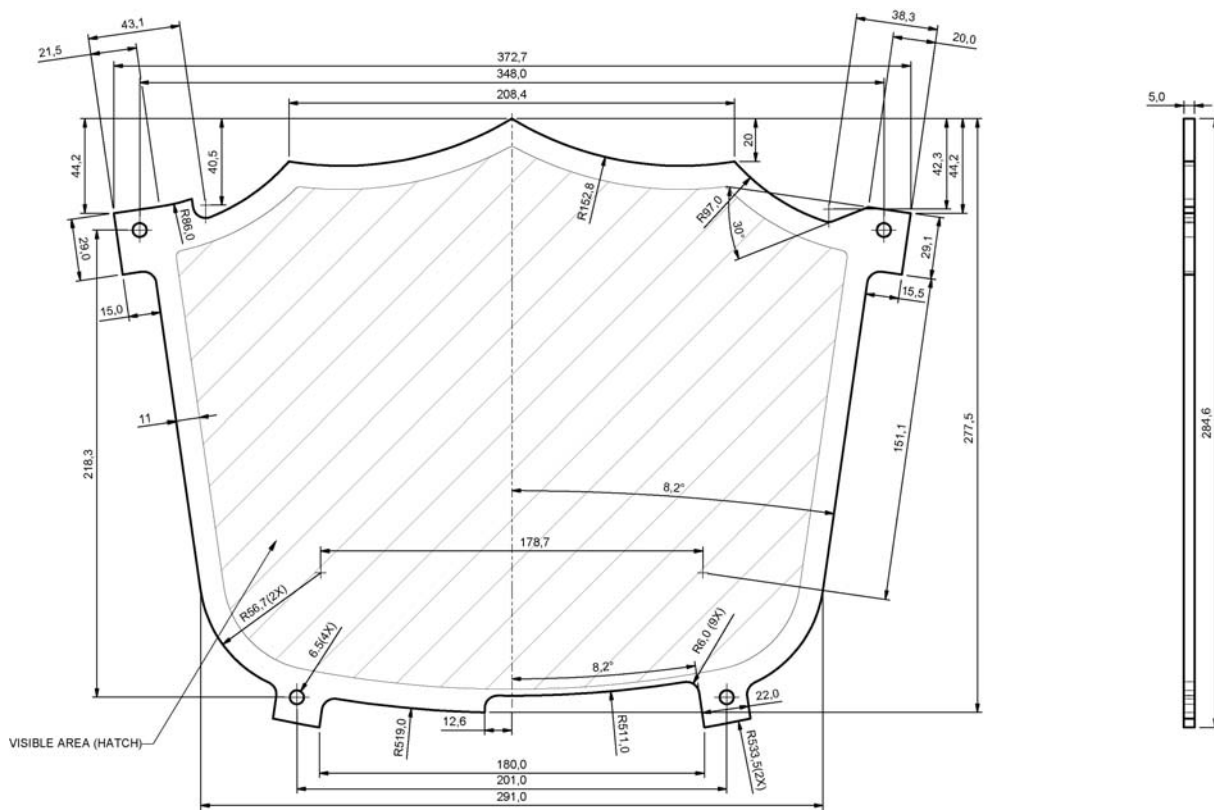


Figure 7: Frontplate Shield (104-0301)

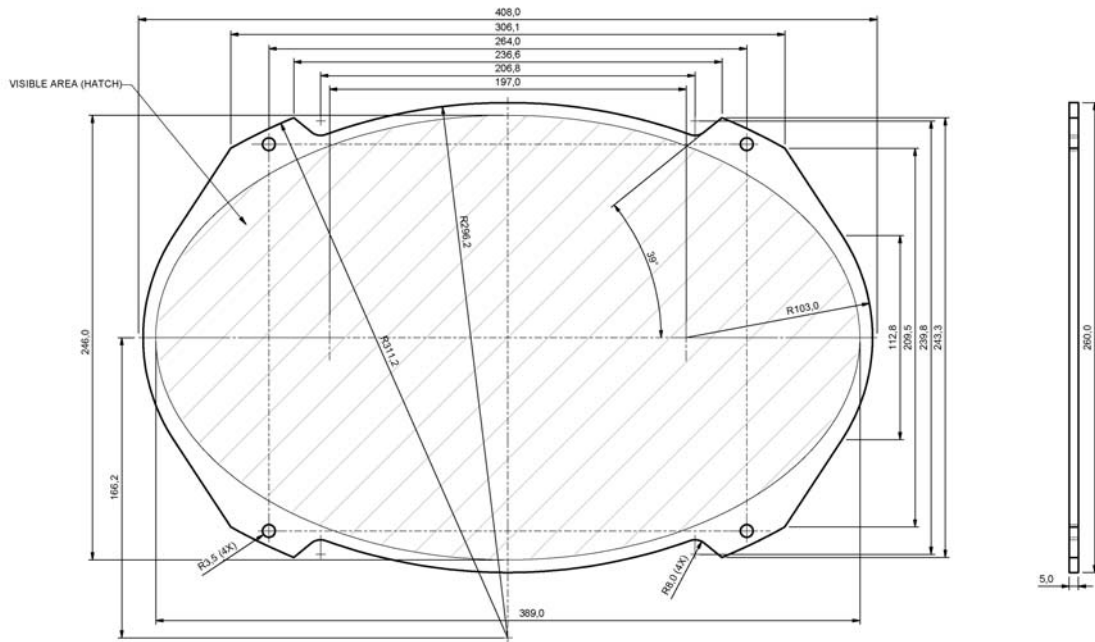


Figure 8: Frontplate Mini Topper (104-0601)

3.6 Topper Base options



Figure 9: Base Topper 15 degrees slanting (104-0010-2)



Figure 10: Base Topper BCT Rio (104-0014-2)



Figure 11: Base Topper R260 curved (104-0015-1)



Figure 12: Base Topper flat mounting (104-0020-1)

3.7 Topper Base dimensions

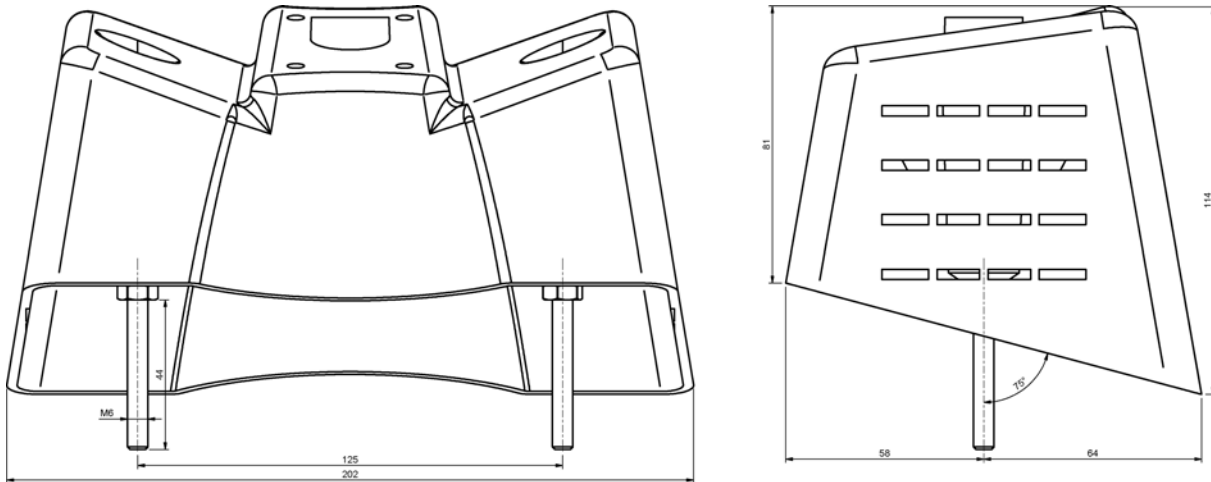


Figure 13: Base Topper 15 Degrees slanting (104-0010-2)

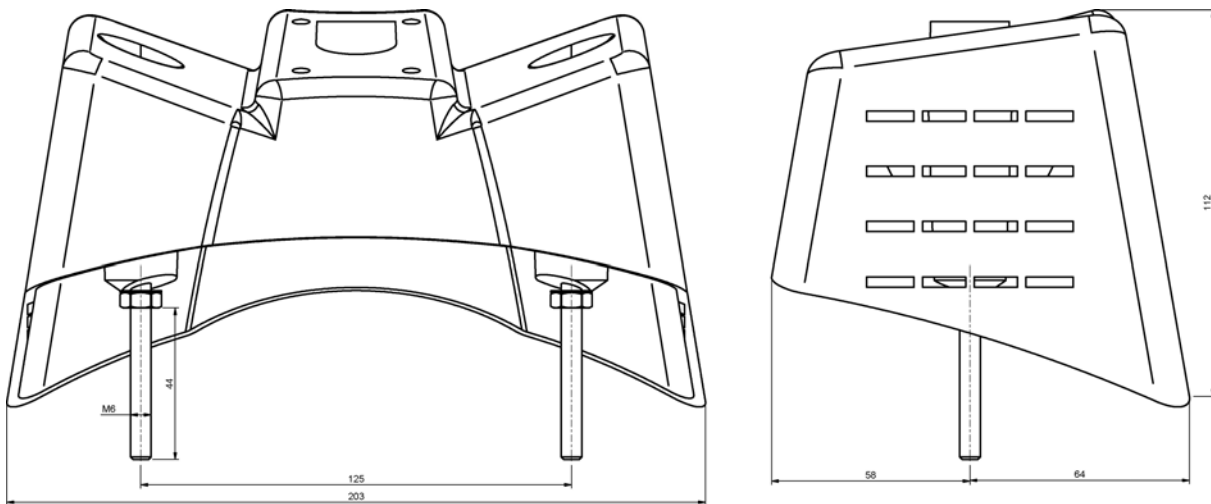


Figure 14: Base Topper R260 curved (104-0014-2)

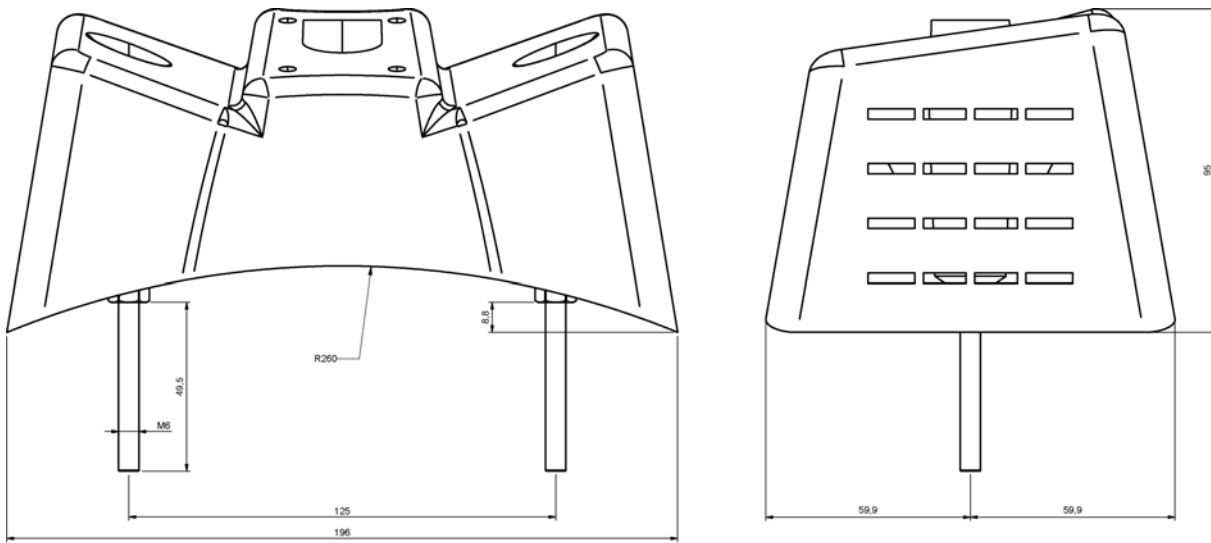


Figure 15: Base Topper R260 curved (104-0015-1)

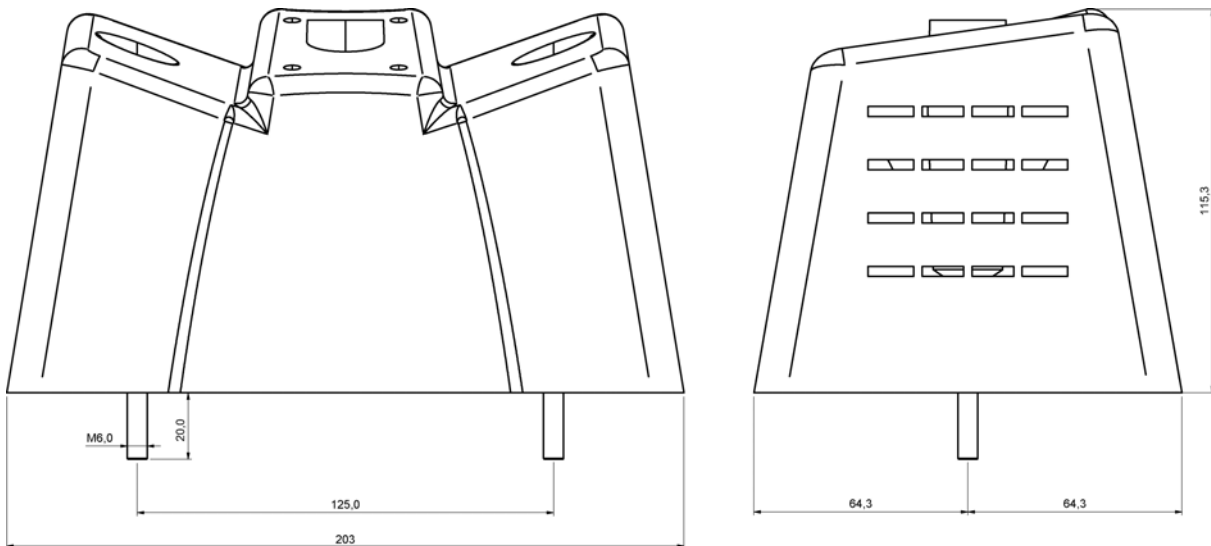


Figure 16: Base Topper flat mounting (104-0020-1)

4. Optional

4.1 Introduction

Optional is it possible to change the PCB's in the toppers to Synchronise PCB's

4.2 Explanation

Standalone running toppers have the disadvantage that the patterns shown do not run at exactly the same speed. In order to make the displayed patterns exactly the same on a number of running toppers, the toppers clocks needs to be synchronised to each other.

This is realised by connecting all toppers to each other (maximum 8).

Standard Ethernet patch cables are selected to do this.

One topper is now chosen to generate the clock for all other attached toppers.

But what pattern should each topper display at the clock signal?

A master unit solves this. The master unit tells each topper which pattern should be displayed on the next clock cycle.

The master unit can be one of the toppers in the network or a separate control unit like a PC.



Figure 17: Optional Synchronise PCB (104-0051)

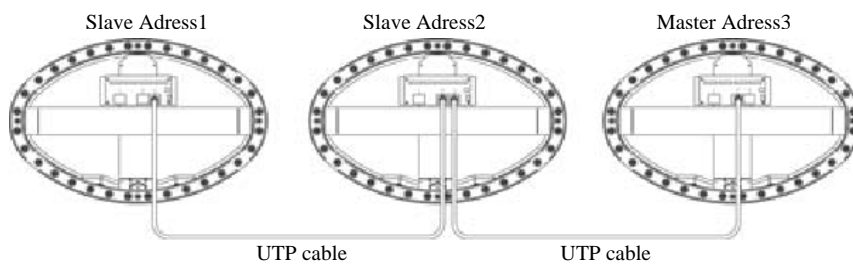


Figure 18: Synchronise topper connection example

5. Installation

Important: Shut-off the power from the host machine until any installation work is completed.

Power supply must be 12VDC, 2Amp.

5.1 Connection

Wire color	Description	Pin	
Orange	Power 12Vdc	1	2 Pole Connector
Black	Power Ground	2	
Black	Common Towerlight	1	4 Pole Connector
Yellow	Lamp 2nd from bottom	2	
White	Lamp bottom	3	
Blue	Lamp 3th from bottom	4	
Tinned Strap	Earth bonding strap		Ring Term. 4mm

Table 1: Connection







Topper connector type	Machine connector type
Molex Male  03-09-2022	Molex Female  03-09-1022
 03-09-2049	 03-09-1049
 02-09-2118	 02-09-1118

Table 2: Connector type

6. Technical specifications

6.1 Electrical ratings

Parameter	Value	Units
Power Supply	12 +/- 10%	Vdc
Current consumption	1.5	A
Image refresh rate	63	Hz
Intensity levels	8	

Table 3: Technical specifications

6.2 Lamp

The following lamp type is used in the topper unit:



Figure 19: Dulux S/E Lamp 11W/827 (-9902-11)

6.3 Schematic diagram

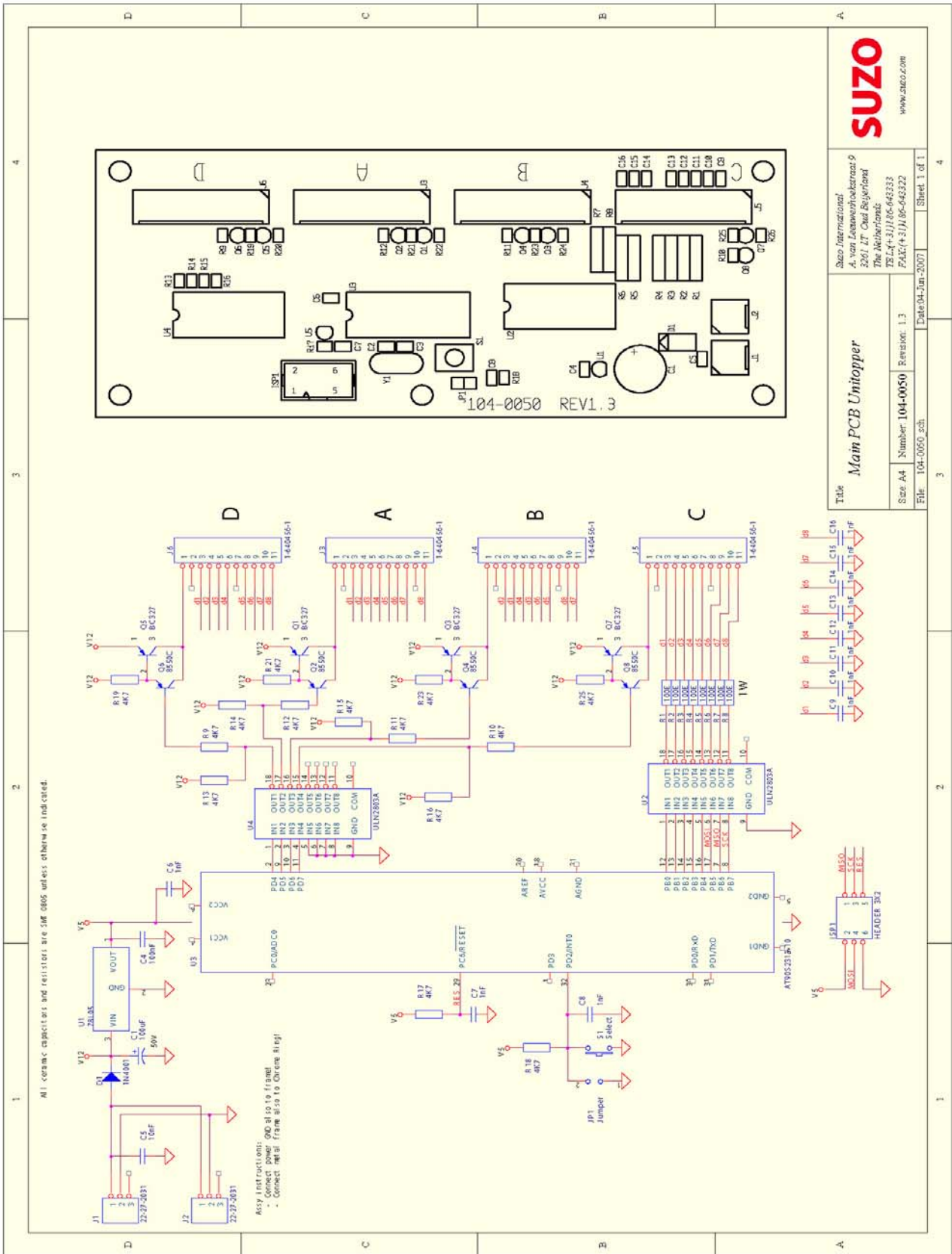


Figure 20: Schematic and Layout