

Manual Round Video Topper

Model: 104-20X0310XX

Manual

Version 1.7/September 2010



SUZO HAPP®

GAMING, AMUSEMENT AND INDUSTRIAL COMPONENTS

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1. Introduction

Congratulations with the purchase of your round video topper. The topper houses a LCD monitor. The LCD is a color active matrix thin-film-transistor (TFT) liquid crystal (LCD) to provide superior display performance.

2. Safety

1. This round video topper is only be suitable for use in an interior environment where there are no particular requirements for resistance to dust or moisture (IP20).
2. It is not allowed to connect appliances to the round video topper which does not comply to SELV or Class II qualification.
3. To reduce the risk of electric shock, follow all safety notices and never open the round video topper case.
4. To unplug the video round from the power outlet before cleaning.
5. The video round topper is equipped with a 3-wire, power cord. The power cord plug will only fit into a grounded outlet. Do not attempt to fit the plug into an outlet that has not been configured for this purpose. Do not use a damaged power cord.
6. The slots located on the backside of the video round topper case are for ventilation. Do not block or insert anything inside the ventilation slots.
7. It is important that your video round topper remains dry. Do not pour liquid into or onto the video round topper. If the video round topper becomes wet do not attempt to repair it yourself.
8. . Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air. To clean the monitor, use a cloth lightly damped with a mild detergent.
9. If the liquid crystal materials leaks from the panel, it should be kept away from the eyes or mouth. In case of contact with hands, legs or clothes, it must be washed away thoroughly with soap.
10. For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible
11. **Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.**

3. Video round topper connections

1. Connect the power cord to the Video round topper.
2. Connect the video cable to the machine. Tighten by turning the two thumb screws clockwise to ensure proper grounding.
3. Press the power button on the rear to turn the monitor power on.

4. Components

Color LED: This LED shows the state of controller.

Green is the "normal state".

Off is the "Off mode". (Can't find Sync. signals)

Amber is the DPMS mode (*Display Power Management Signaling*).

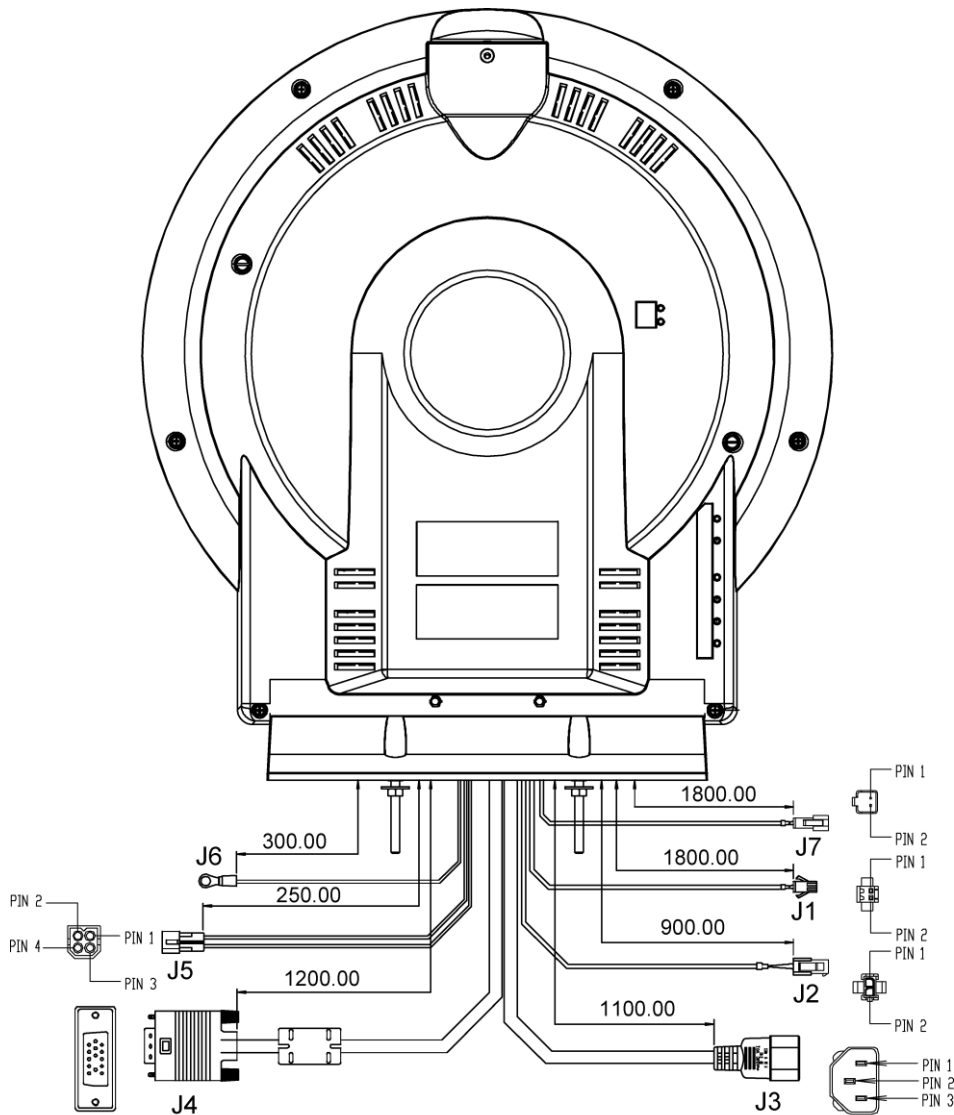
PC Settings: The PC needs to be set to an appropriate graphics mode that has the same resolution with the LCD panel to have clear screen image. And the vertical refresh rate should be set to one of 56~75Hz, non interlaced signal.

LCD display System Settings: The OSD (On Screen Display) provides certain functions to have clear image and others. This board supports 4 buttons OSD operation as a standard. The control functions defined on OSD operation are as below.

Pc Graphics Output: Signal quality is very important, if there is noise or instability in the PC graphics output this may result in visible noise on the display. Refer to the graphic modes table in specification section for supported modes. Non-interlaced & interlaced video input is acceptable.

5. Connections

5.1. Connecting the topper



Connector	Function	Pin Number				Connector Type	
		1	2	3	4	Topper	Machine
J1	Synchronization	Ground	TXD/RXD				
	Wire Color	Black	White				
J2	ccTalk	Ground	TXD/RXD				
	Wire Color	Black	White				
J3	Power In	Live	Earth	Neutral			
J4	TFT LCDVGA						
J5	Tower Light	Common	Lamp – 2nd from bottom	Lamp - bottom	Lamp – 3rd from bottom		
	Wire Color	Black	Yellow	White	Blue		
J6	Ground Wire	Earth Strap					
J7	Synchronization	Ground	TXD/RXD				
	Wire Color	Black	White				

6. Synchronize toppers

You may synchronize color and flashing pattern for round video toppers connected in series as below: Connect round video toppers with synchronize cable (J1 and J7) together. Conduct settings to change color and /or flashing pattern through any one of the toppers connected in series. If Toppers are connected in series, the first powered up topper will dominate the color and pattern for whole series until it is changed.

7. Operation

7.1. RGB flashing patterns

There are 2 buttons on the rear of the round video topper, for the setting of the RGB leds

Color button: You may select flashing color set out of seven pre-defined combinations as below: Press "COLOR" button on the main control board once - Topper will switch to next and stay on this color set until COLOUR button is activated again. Last color setting will be stored to memory when power off.

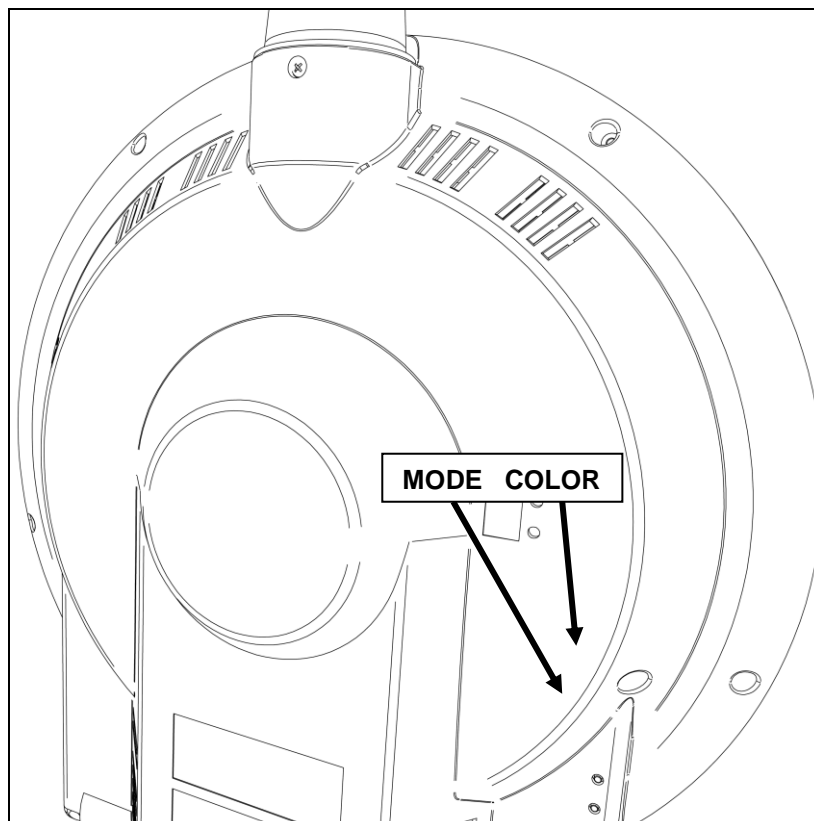
The seven color sets are defined as follow:

1. Red - Blue - White (Default setting)
2. Green - White - Red
3. White - Yellow - Red
4. Yellow - White - Blue
5. Blue - Purple - White
6. Green - Blue - Yellow
7. Green - Red - Blue

Mode button: You may select flashing patterns as below:

Cycling through 13 pre-programmed flashing patterns (Default setting)

Press MODE button once - Topper will switch to next flashing pattern and stay on this pattern until MODE button is activated again. Press and hold MODE button for 3 seconds - Topper will resume to default setting and cycle through the pre-programmed patterns. Last flashing mode will be stored to memory when power off.

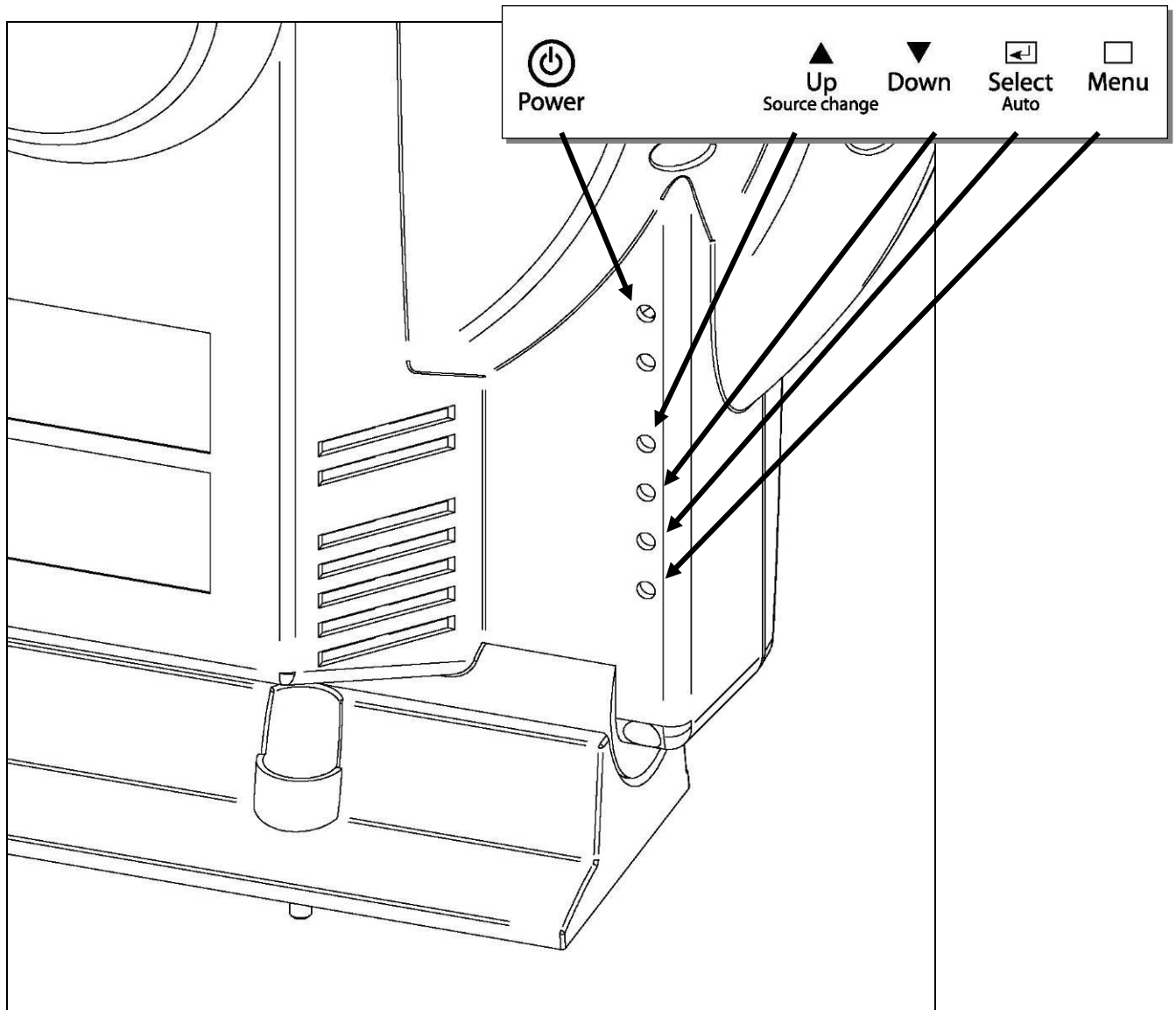


7.2. Monitor

Power on: Switch on the monitor by using the on/off switch on the OSD control buttons.

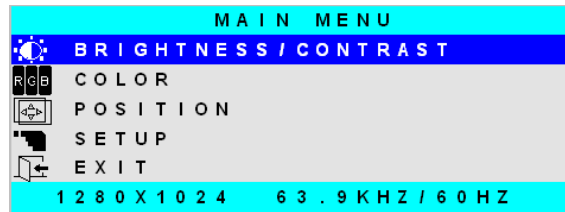
PC Setting: The controller has been designed to take a very wide range of input signals however to optimize the PC's graphic performance we recommend choosing 60Hz vertical refresh rate this will not cause screen flicker.

OSD Control Board: On the rear of the round video topper is the OSD control board (On Screen Display) provides certain functions to have clear image and others. This board supports 4 buttons OSD operation as a standard. The control functions defined on OSD operation are as below



The chosen OSD settings will be stored in memory. The OSD menu can be cleared from the screen from the screen by moving the selection bar to the EXIT MENU icon pressing the SEL button otherwise it will be automatically cleared after a few second of non-use.

8. OSD MENU



Brightness: Increase/decrease panel brightness level, total: 100 steps.

Contrast: Increase/decrease panel Contrast level, total: 100 steps.

H, V Position: Image H, V position control, total: 100 steps.

Clock: Fine tune the number of sampled data.

Phase: Fine tune the position of sampled data (adjust image quality), total: 31 steps.

Color: Color Temperature control, total: 100 steps.

OSD Function: OSD position, OSD Language, OSD off Timer control.

Sel, input sign: Select input signal (analog, composite, S-Video).

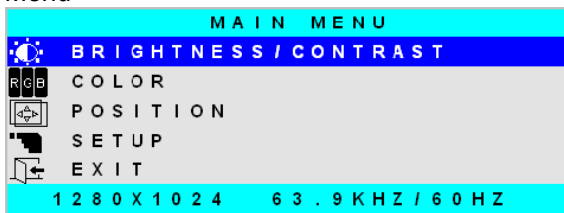
Power Switch Option: Select Power Switch on/off.

DPMS LED: IF When the DPMS select Amber LED color is Amber, otherwise LED is off.

Information: Displays current video mode and frequency.

BRIGHTNESS / CONTRAST Control pinch

Menu

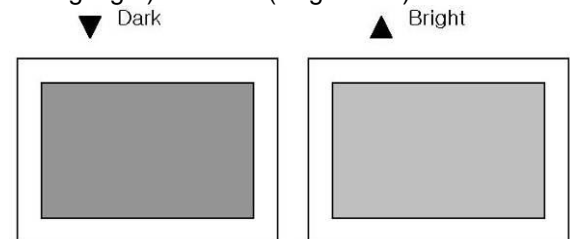


Select



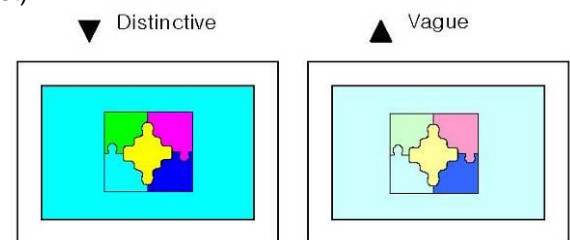
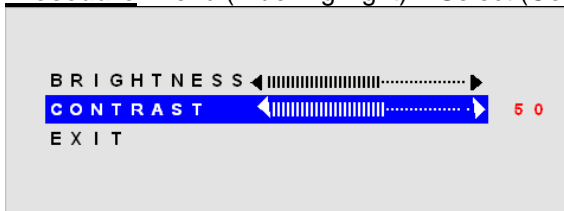
Brightness

Procedure Menu > BRIGHTNESS/CONTRAST (Blue Highlight) > Select (Brightness)



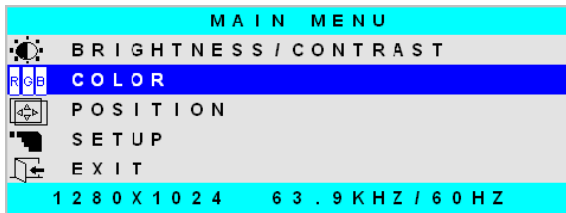
Contrast

Procedure Menu (Blue Highlight) > Select (Contrast)

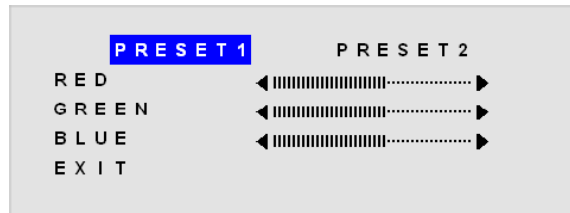


COLOR Control

Menu & Down

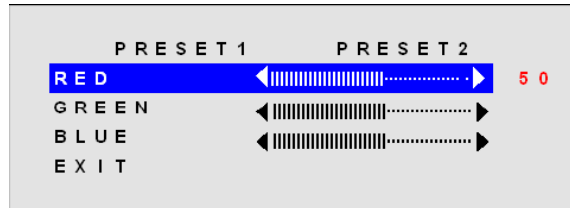
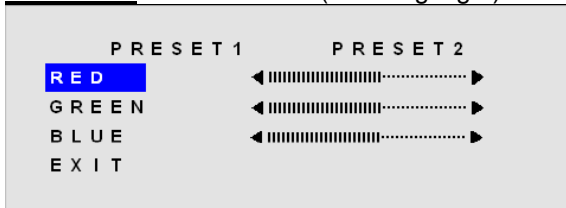


Select



Color (PC Input Mode)

Procedure Menu > Color (Blue Highlight) > Select



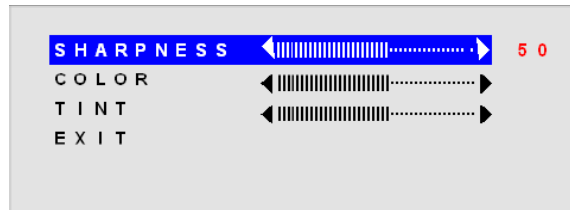
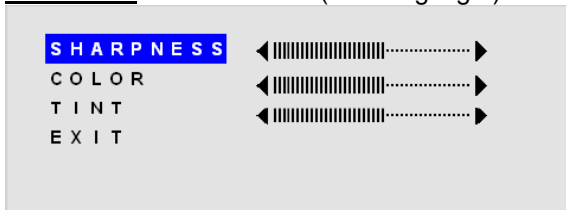
Select (Blue Highlight) > RED Color Control (select return to Left Status)

Select (Blue Highlight) > GREEN Color Control

Select (Blue Highlight) > BLUE Color Control

Color (VIDEO Input Mode)

Procedure Menu > Color (Blue Highlight) > Select



Select (Blue Highlight) > SHARPNESS (select return to Left Status)

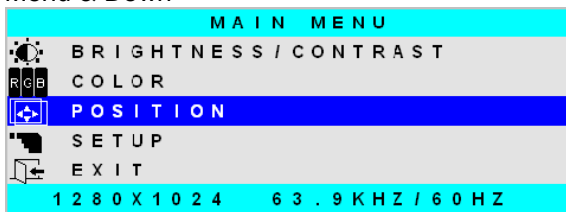
SHARPNESS : Focus of Image

COLOR : Thickness of Color

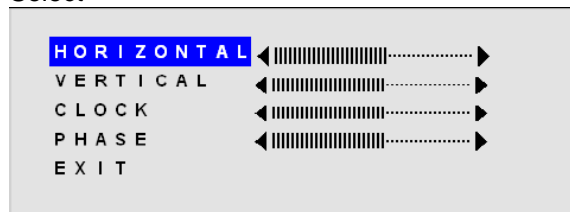
TINT : Tone of Image

POSITION Control

Menu & Down



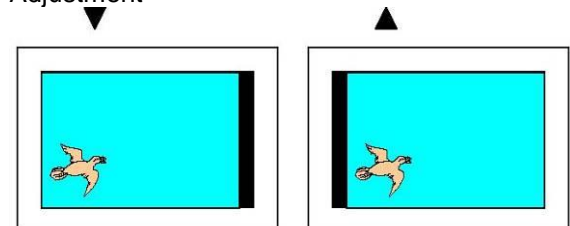
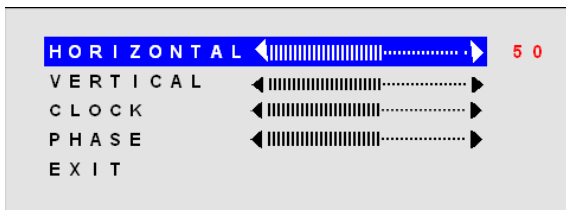
Select



HORIZONTAL Position

Procedure Menu > POSITION > HORIZONTAL > select

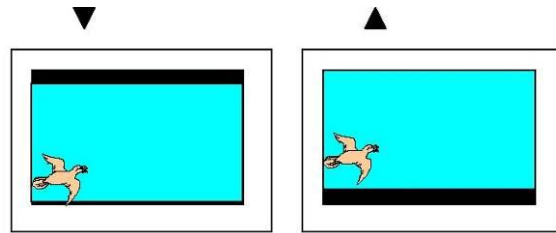
Adjustment



When display image is out of screen, can adjust with this function for getting Optimized Image).

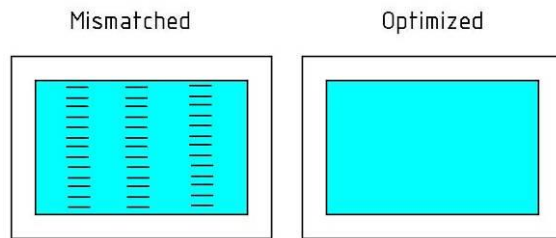
VERTICAL Position

Procedure POSITION > VERTICAL > select
When display image is out of screen, can adjust with this function for getting Optimized Image).



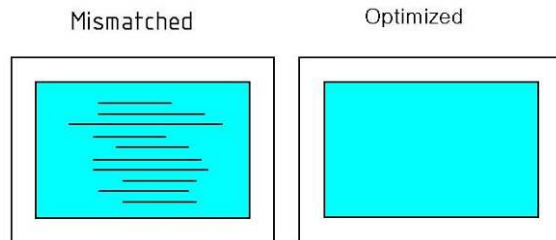
CLOCK

Procedure POSITION > CLCOK > select
When display image is wrinkled, can adjust with this function for getting Optimized Image).



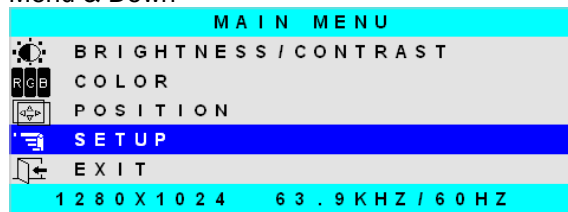
PHASE

Procedure POSITION > Phase select
When display image is vague, can adjust with this function for getting Optimized Image).

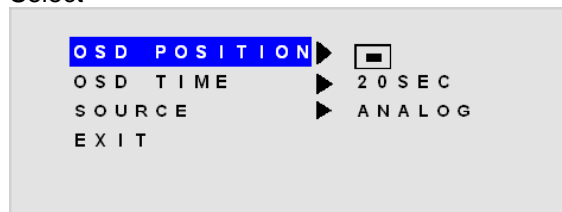


SETUP Control

Menu & Down

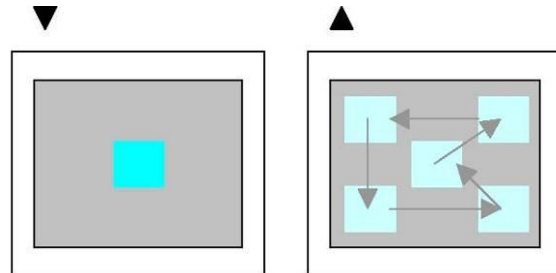
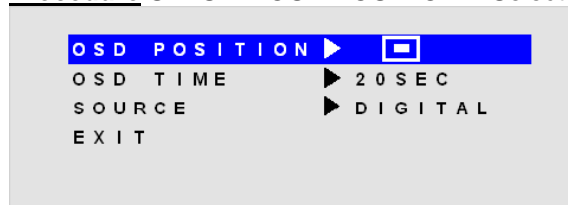


Select



OSD POSITION Function

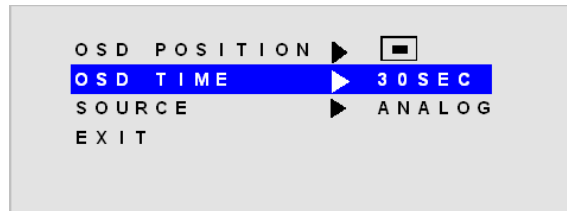
Procedure SETUP > OSD POSITION > Select



OSD POSITION Function

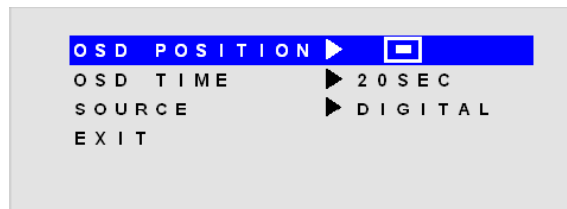
Procedure SETUP > OSD TIME > Select

to 60 Sec



SOURCE Select Function

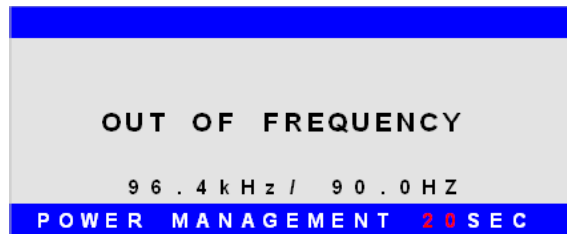
Procedure SETUP > SOUREC > Select
ANALOG -> DIGITAL -> ANALOG
->DIGITAL.....



Operation Message

OUT OF FREQUENCY

Input Signal is over the supporting range



POWER SAVER MODE

Input Signal is not present. This message is disappeared after 5 seconds.



SELF DIAGNOSTICS

Input Signal is not present after power on with lower switch. This message is not disappeared before power off or activity of input signal.



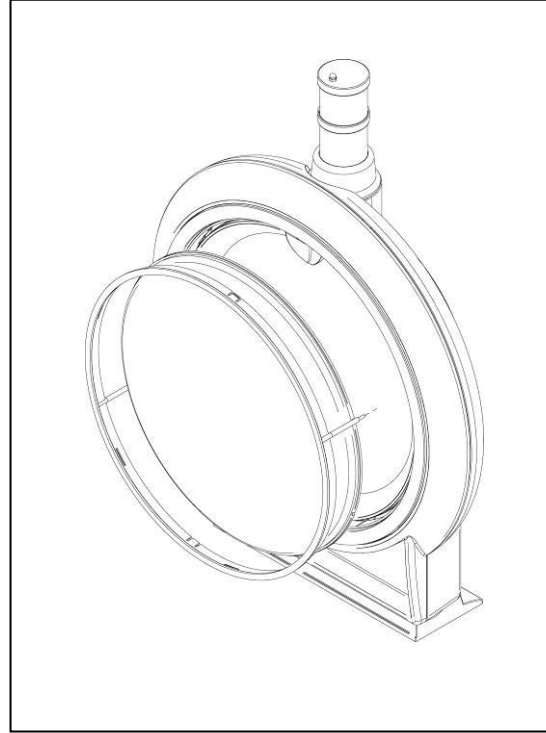
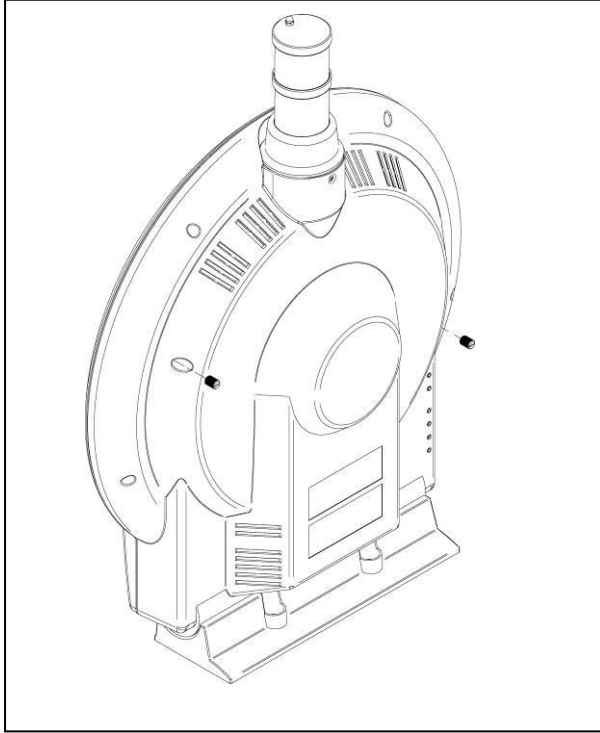
AUTO CONFIGURATION

Execute AUTO Function.



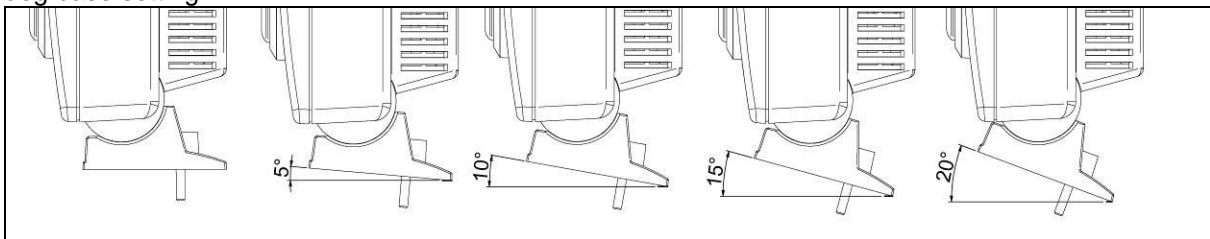
9. Removing the transparent dome.

First remove the two flat head screws on the rear of the video round topper. When the screws are removed Push the screw ends inside the hole to move the dome ring forward. It is now easy to pull the dome from the topper.

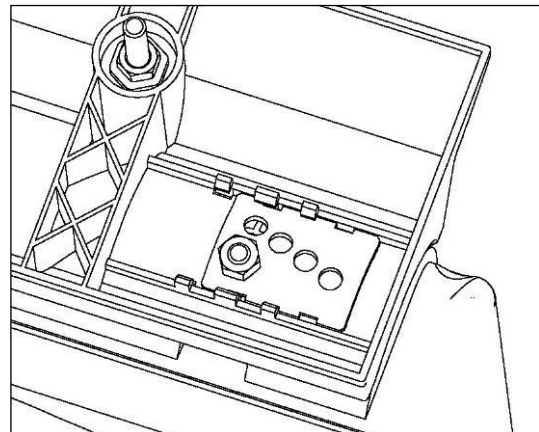


10. Adjusting the base

The base can be adjusted in 5 discrete positions. The video round topper can be mounted in a vertical position and under a 5 deg angle. Further angles are provided to achieve the same result with sloped cabinets. If a cabinet is sloped backwards 10deg you can still create a 5 deg overhang by using the 15 deg base setting.



The base can only be adjusted when the topper is not placed on the machine. There are two sliding metal plates which keep the base in place. If you want to adjust the base you have to unscrew the nut that keep both plates in place. You can now lift the base. When the base is lifted from the screws it becomes possible to move the metal plates. The metal plates have 5 holes. Each hole results in a different base angle. The angles are noted next to the holes. You can see which angles are possible from the picture above.

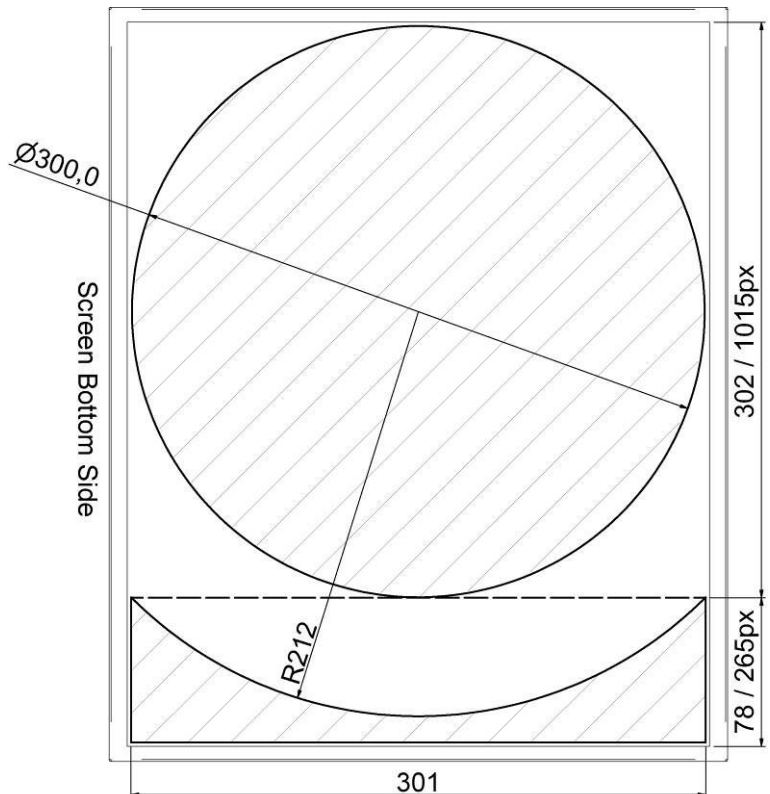


11. Display size

The topper uses a regular 5:4 – 1280x1024px - 19" TFT screen. Only it is mounted on it's side in the topper. The screen is also connected via a regular VGA connector to a computer output. The screen in the topper will function like any other desktop PC TFT screen. For your game content you have to be aware that you need to rotate everything 90 deg.

See picture for an approximation of the viewable area's. The hatched areas show where you will be able to see game content.

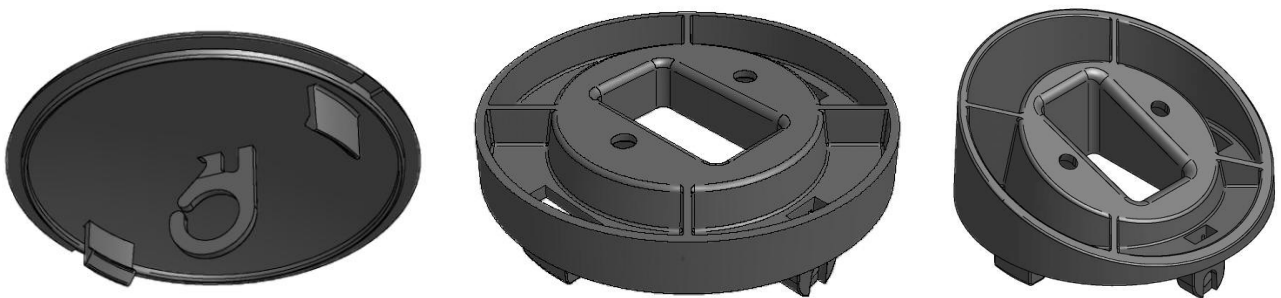
Always check video on a real topper to verify a correct result.



12. Tower light brackets

There are several plugs which fit the tower light hole at the rear of the round topper. From left to right.

1. Lid closes the hole for when no tower light is used. There is a hook for easy retrieval of the tower light cable. Plug can be removed using a flat screw driver.
2. Horizontal mount plug. Mount the tower light on this and then mount the plug in the round topper. No need to open the topper to mount or service the tower light.
3. Slanted plug. For when the round topper is mounted under a slight angle.



13. Light show control

The round topper has a circular LED strip and a pointer. Both LED light emitters can be controlled via a serial interface. The bus used for this is CCTalk, common in many gaming machines. When no CCTalk bus is available a RS232 bus can be used. When a RS232 bus is used however you need extra hardware. The part for this is 107-0250. RS232 to CCTalk interface.

13.1. Software communication

Command Format:

Byte 1	STX (0XEF)	Starting byte
Byte 2	Command	Mode Command – range from 0 ~ 238
Byte 3	Color	Color Command – range from 0 ~ 238
Byte 4	ETX (0XFE)	Ending byte

Commands on Pointer:

Description	Command (byte 2)	Color (byte 3)					
		Red	Green	Blue	Yellow	Purple	White
Solid color mode	0X01	0X01	0X02	0X03	0X04	0X05	0X07
Pulsing color mode	0X02	0X01	0X02	0X03	0X04	0X05	0X07
Turn all LEDs off	0X03						
Free Pointer	0X04						

For example: The command for pulsing green color is [0XEF, 0X02, 0X02, 0XFE]

Commands on Bezel:

Description	Command (byte 2)	Color (byte 3)						
		R/W/B	R/W/G	R/W/Y	B/W/Y	B/W/P	G/Y/B	B/G/R
Pattern 1	0X05	0X01	0X02	0X03	0X04	0X05	0X06	0X07
Pattern 2	0X06							
Pattern 3	0X07							
Pattern 4	0X08							
Pattern 5	0X09							
Pattern 6	0X0A							
Pattern 7	0X0B							
Pattern 8	0X0C							
Pattern 9	0X0D							
Pattern 10	0X0E							
Pattern 11	0X0F							
Pattern 12	0X10							
Pattern 13	0X11							

For example: The command for Pattern 5 with color B/W/Y [0XEF, 0X09, 0X04, 0XFE]

Notes:

R – Red / W – White / B – Blue / G – Green / Y – Yellow / P – Purple

Pattern 1-13 applicable to RGB bezel and pattern 1-7 applicable to STD LED bezel.

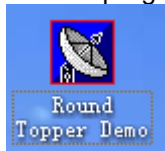
Turn All LEDs On

Description	Command (byte 2)	Color (byte 3)					
		Red	Green	Blue	Yellow	Purple	White
Turn all LEDs on	0X12	0X01	0X02	0X03	0X04	0X05	0X06

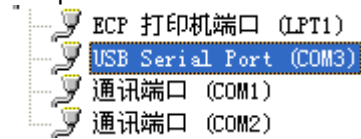
13.2. Instruction for running DEMO Program :

You can download this demo program on: <http://www.suzo.com/downloads>

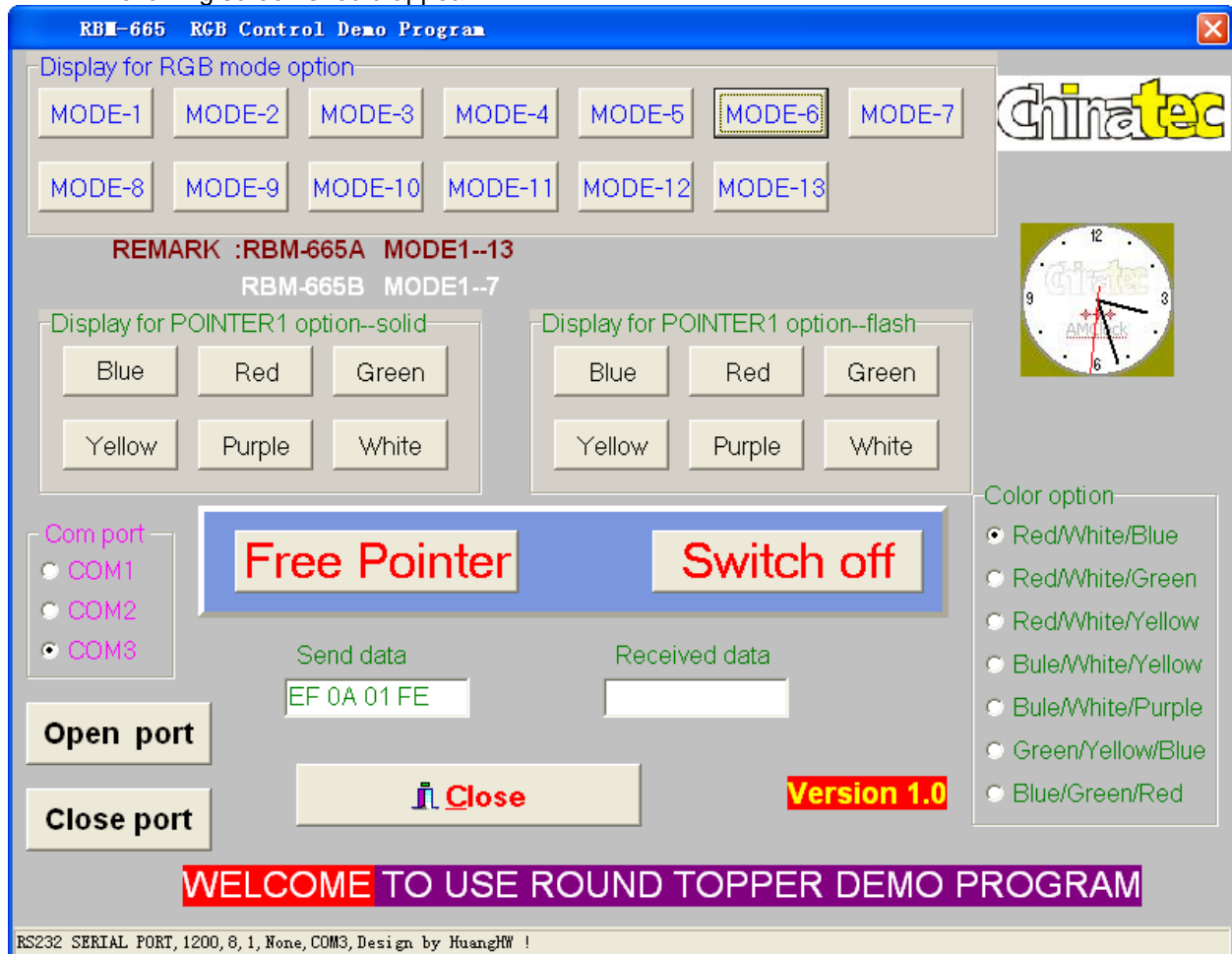
1. Run program: Round Topper Demo



2. Connect the J2 cable to ccTalk interface and connect the RS232 cable to computer.
3. Select and open the COM PORT (e.g. COM3 as below) according to information on control panel



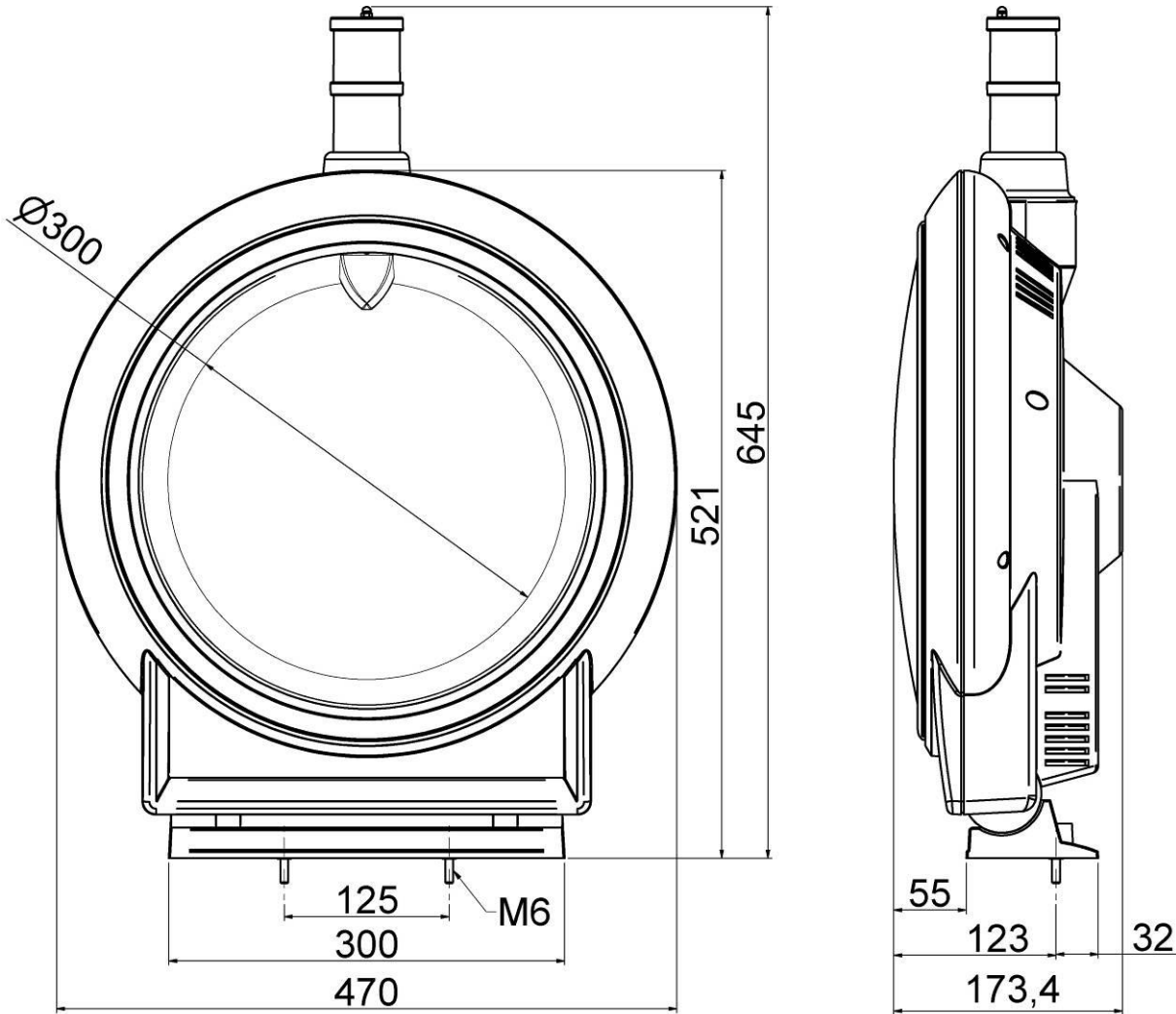
4. Following screen should appear.



Control Commands

- **[Display for RGB mode option]** – Different flashing patterns for bezel.
 - Modes 1 to 7 for standard LED (white) version
 - Modes 1 to 13 for RGB version
- **[Color option]** – for RGB bezel only, not applicable for standard LED version.
- **[Display for POINTER1 Option—solid]** – solid color on pointer 1
- **[Display for POINTER1 Option—flash]** – flashing color on pointer 1 at 75ms interval
- **[Free Pointer]**
 - Activate - release pattern control on pointer. Pattern will consider Pointer as part of the bezel.
 - Deactivate – Pointer and Bezel will be considered as two independent parts. Both can be controlled independently.
- **[Switch off]** – Turn off all LEDs on both bezel and pointer.

14. Measurements



15. Electric Specification

Absolute Maximum Ratings

Item	Unit	Min	Typical	Max	Remarks
Operating Temperature	°c	0	-	60	
Storage Temperature	°c	-30	-	80	
Relative Humidity	%		-	90	
Altitude	M	-	-	2000	

Input characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
Power in (100-240Vac)						
	Input	Vac	100	-	240	
	Consumption	A		3.0		
RGB Input						
	Analog RGB	VPP	0	0.7	-	
	Sync	VDC	0	5	5.5	
	H Frequency	KHz	31		80	Depends on Mode
	V Frequency	Hz	55	75	77	Depends on Mode
DVI-D Input (optinal)						
	DATA/CLK	VPP	450	500	900	Differential +/-

RGB input format

Spec Mode	Pixel Freq.	Sync Polar	Freq	Total	Active	Sync Polar	Freq.	Total	Active
	Mhz		Khz	Pixel	Pixel		Hz	Line	Line
640*350@70Hz	25.144	P	31.430	800	640	N	70.000	449	350
640*400@70Hz	28.287	N	31.430	800	640	P	70.000	449	400
720*400@70Hz	28.287	N	31.430	900	720	P	70.000	449	400
640*480@60Hz	28.175	N	31.469	800	640	N	59.940	525	480
640*480@72Hz	31.500	N	37.861	832	640	N	72.809	520	480
640*480@75Hz	31.500	N	37.500	840	640	N	75.000	500	480
800*600@56 Hz	36.000	P	35.156	1024	800	P	56.250	625	600
800*600@60Hz	40.000	P	37.879	1056	800	P	60.317	628	600
800*600@72Hz	50.000	P	48.077	1040	800	P	72.188	666	600
800*600@75Hz	49.500	P	46.875	1056	800	P	75.000	625	600
1024*768@60Hz	65.000	N	48.363	1344	1024	N	60.005	806	768
1024*768@70Hz	75.000	N	56.476	1328	1024	P	70.070	806	768
1024*768@75Hz	78.750	P	60.023	1312	1024	P	75.030	800	768
1280*1024@60Hz	108.000	P	63.981	1688	1280	P	60.020	1066	1024
1280*1024@75Hz	135.000	P	79.976	1688	1280	P	75.035	1066	1024

16.Round Topper - Part Number Generation

104	Topper Series
2	Round Topper
X	Display 0 = 19" Video Screen 1 = Single Disc Unit 2 = Double Disc Unit
X	Bezel Finish 8 = Silver Chrome 9 = Black Chrome
X	Bezel/LED Lighting 0 = RGB with Translucent Bezel 9 = White with Solid Bezel
X	Back Lighting 0 = No Back Lighting 3 = White LED
X	Pointer 0 = Internal Large 1 = Internal Small 2 = External Large 3 = No Pointer
XX	Customer Specific 00 = No Customer Specific 11 = Customer Specify



THE HONG KONG STANDARDS AND TESTING CENTRE LTD.
EC DECLARATION OF CONFORMITY

Reference Number: EMC0905290DOC

Dynamics Chinatex Industries (HK) Ltd.
 809-810 Block A, Hoi Luen Ind. Ctr.,
 55 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong

declare the product

Description: RGB Round Video Topper
 Brand Name: N/A
 Model: 20X0010XX

complies with the requirements of the
EC Council Directive on electromagnetic compatibility 2004/108/EC

Applicable Standard(s) with amendments:

EN55022: 2006 +A1: 2007
 EN55024: 1998 +A1: 2001 +A2: 2003
 EN61000-3-2: 2006
 EN61000-3-3: 1995 +A1: 2001 +A2: 2005

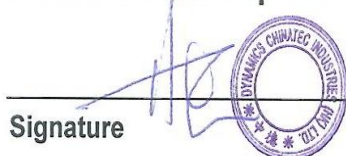

General Remarks:

This declaration is only valid when used in conjunction with the technical file(s) refers to HM163554.

This declaration applies specifically to the sample(s) investigated in the technical report mentioned above and not to the bulk.

The CE markings as shown below can be affixed on the product after preparation of necessary conformity documentation, as stipulated in Articles of the Council Directive 2004/108/EC.

Manufacturer/Importer

Signature  



Test Laboratory


 for  Dr. LEE Kam Chuen
 ElectroMagnetic Compatibility Department
 For and on behalf of
 The Hong Kong Standards and Testing Centre Ltd.
Date of Issue: 2009-05-21

www.hkstc.org



THE HONG KONG STANDARDS AND TESTING CENTRE LTD
EC DECLARATION OF CONFORMITY

Reference Number: LVD0904775

Dynamics Chinattec Industries (HK) Ltd.
 809-810 Block A, Hoi Luen Ind. Ctr.,
 55 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong

declare the product
 Description: RGB Round Video Topper
 Brand Name: **SUZO HAPP**[™]
 Model: 104-209001000

complies with the requirements of the
EC Low Voltage Directive 2006/95/EEC

Applicable Standard(s) with amendments:
 EN60950-1: 2006

General Remarks:

This declaration is only valid when used in conjunction with the technical file(s) refers to HE156315.

This declaration applies specifically to the sample(s) investigated in the technical report mentioned above and not to the bulk.

The CE marking as shown below can be affixed on the product after preparation of necessary conformity documentation, as stipulated in Annex III of the Council Directive 93/68/EEC.

Manufacturer/Importer

Signature



Test Laboratory

CHAN Ka Chun, Vincent

Electrical Safety Department
 For and on behalf of
 The Hong Kong Standards and Testing Centre Ltd



www.stc-group.org

Date of Issue: 2009-08-05