

KAGA EUROPE ELECTRONICS B.V

SPECIFICATIONS

PRODUCT CODE : 29PFX

Signature of receipt

Routing


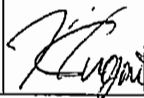
Publication SANWA Electronics Co.,Ltd.

- 1. PRODUCT : 29"PF CRT DISPLAY
- 2. REF.No. : K-110
- 3. VALIDITY : 2005,DEC,19 ~ 2007,DEC,18
- 4. No.OF COPIES: 1 (A copy for company returning is included)
- 5. REVISION :These specifications abolish
Number issuance date

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Monitor factory

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* In case of no change in the contents.
the validity shall be prolonged
for further two years.

Sales	approved	Preparation
		K. Kobayashi

1,Electrical Performance

1-1 Power supply

- (1) Input voltage & Frequency 90-240V AC, 50/60 Hz
- (2) Inrush current 150A peak following(AC240V)
70A peak following(AC100V)
(maximum input voltage in the range)
- (3) Power consumption 130±20W, shipment setting, full white signal input
(maximum adjust CONTRAST VR)
- (4) Input connector Made by AMP 3pin U-P connectors(Housing :176293-1)
(Pin arrangement be the another sheet reference)

1-2 Degauss circuit department

- (1) Degauss action Automatic degauss
When the monitor power supply is input the degauss circuit acts automatically.(Please inquire it separately when manual operation degauss hopes.)
- (2) Switching of degauss connector
In the case that it is acted this monitor with "AC220V" change the degauss coil switching plug and please use.
(The another sheet reference)

1-4 Input signal specification

- (1) Picture signal
 - (A) Input method Analogue RGB
 - (B) Polarity Positive
- (2) Synchronous signal
 - (A) Input method H/V composite, or, H/V separate sink
 - (B) polarity Positive
- (3) Input specification
 - (A) Input connector ①
D-sub 15P connector Connector style No.: the article such as the KEC15-S or phase made of JST the another sheet reference (the pin arrangement)
Input level: 0.7 Vp-p
Input impedance: 75Ω
 - (B) Input connector ②
8pin connector Connector style No.: AMP made of 176296-1 the another sheet reference (the pin arrangement)
Input level: 1~5 Vp-p
Input Impidance: Ω

Please do not input "the 8pin connector" and "the D-sub 15pin connector" simultaneously.

- (C) scanning method No-inter-less, or, inter-less

1-5 Correspondence frequency

- | | | |
|----------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------|
| (1) Action frequency | Horizontal | Mode1:15.75KHz±300 Hz
Mode2:24.83KHz±300 Hz
Mode3:31.50KHz±300 Hz |
| | Vertical | 55~70 Hz |
| (2) Pulse width | Horizontal | Mode1:the 6.0μ s following
Mode2:the 6.0μ s following
Mode3:the 5.0μ s following |
| | Vertical | the 1.0ms following |
| (3)Jitter | | To be invisible 50cm away from the surface of CRT. |
| (4) Scanning | | To be scanned in the full size by adjusting with the Control board(controlled by user) while screened with the specified frequency. |

1-6 Adjustment functions

- (1) OSD-MENU Adjustment of geometry should be made following procedure.
I do adjustment by OSD(On Screen Display)
- *Horizontal size (H.SIZE)
 - *Vertical size (V.SIZE)
 - *Horizontal Position (H.POSITION)
 - *Vertical Position (V.POSITION)
 - *Pincushion Amplitude Correction (PINCUTION)
 - *Trapezoid Correction (TRAPEZOID)
 - *Parallelogram Correction (PARALLEROGRAM)
 - *Top Pincushion Amplitude Correction (TOP CONER)
 - *Bottom Pincushion Amplitude Correction (BOTTOM CORNER)
 - *Degauss (DEGAUSS)
 - *RECALL (RECALL)
- (※)PCB-VR shall be able to be drawn out of monitor Unit for about 800mm
- (2) PCB-MAIN
- *Focus (FOCUS)
 - *Screen (SCREEN)

2, Display performance

2-1 Measurement condition

The following specification value shall be filled with the condition after power ON 30 minutes. The image mode in here makes the following.
I do measurement at surroundings temperature 20°C~30°C.

Input signal Mode1 : 15.75 KHz Mode2 : 24.83 KHz Mode3 : 31.50 KHz

2-2 Establishment condition

Adjustment condition makes shipment condition as the pipe face west direction of direction, on a monitor positive stand, anode button, in the case that it is not designated especially.

2-3 Linearity

Horizontal: $\pm 10\%$ within

Vertical : $\pm 8\%$ within

Setup value shall be base on cross-hatch signal calcularted as below.

$H = (\text{Maximum value or Minimum value}) - (\text{Mean value}) \div (\text{Mean value}) \times 100$

$V = (\text{Maximum value or Minimum value}) - (\text{Mean value}) \div (\text{Mean value}) \times 100$

2-4 Distortion

(1) Horizontal/Vertical keystone distortion 3.0% within

(2) Barrel/Pin-cushion Distortion 3.0% within

(3) Inclination ± 4 mm within

Test method: JIS-C6101.

2-5 ITC characteristics

(1) Color purity

After it caused degauss with inside degauss watching it in all the direction on the occasion of, the picture signal display it is the case without an obstruction on an impression.

It shall do inside degauss every each direction however.

(2) Convergence

The aberration of the center position of RGB line by standard cross-hatch signal.

60% of diameter circle inside of.

CRT vertical length : 1.4 mm within

Eliminate CRT vertical major axis circle inside

(the above) : 1.8 mm within

Eliminate CRT screen inside (the above)

: 2.2 mm within

(3) tendency direction

A monitor positive stand, anode button on direction of it is usually tendency direction.

2-6 Adjustment at the time

(1) Display size/position

Separately, it depends on the meeting.

(2) White balance

x: 0.275 ± 0.03

y: 0.285 ± 0.03

Brightness shall be measured at the center of white window setting Bright and Contrast adjustable.

(5) Focus

I watch the eye and be being adjusted supremely with.

(6) Brightness

Input video signal 0.7Vp-p

screen center white window pattern

(about 180×100 mm grid)

with 60 ± 10 ft-L

2-7 CRT performance

- | | |
|----------------------------------------------|---------------------------------------------------|
| (1) Model name | 29 inches the flat style : A68AKY13X(CHUNGHWA) |
| (2) Trio pitch size | side : 0.84 mm (at center) |
| (3) Transmission rate | about 52.0% |
| (4) Resolution | 644 dots×483 lines
(Max screen size÷Dot pitch) |
| (5) Frequency | Max video clock frequency: 25 MHz Typ.(-3dc) |
| (6) Wound bad point standard of the CPT face | |

Making the standard of the CPT maker of page entry the wound bad point standard as it is after about, the wound bad point standard of the CPT in the monitor finished goods I use it.

3. STRUCTURE

- | | |
|---------------------|--------------------------------------|
| 3-1 Outline | As shown in page 「29PFX OUTLINE」 |
| 3-2 Weight | 42 Kg (packing at the time of 47 Kg) |
| 3-3 packing figures | Another sheet reference |

4. RELIABILITY, SAFETY

- | | | |
|------------------------------|------------------------------------------------------------|------------------------|
| 4-1 Safety standard | ①S-mark | Acquisition completion |
| | ②UL60950-1 | Acquisition completion |
| | ③CSA60950-1-3 | Acquisition completion |
| | ④EN60950:2000 | Acquisition completion |
| 4-2 Radiated emission | ①EN55022:1998(EMI) | Acquisition completion |
| | ②EN55024(EMS) | Acquisition completion |
| | ③EN61000-3-2 | Acquisition completion |
| | ④EN61000-3-3 | Acquisition completion |
| | ⑤FCC Part15 Subpart B, Class A | Acquisition completion |
| 4-3 X-radiation | DHHS 「21 CFR 1002.10 and 1002.12」 | |
| 4-4 AC Line noise resistance | No disturbance in synchronization by the noise of 500Vp-p. | |

5. GENERAL CONDITION

- | | |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5-1 Ambient temperature | Operating: 0°C~40°C
If the monitor is installed in a machine unit, the unit must be designed so that the internal temperature is kept under 40°C.
Storage: -10°C~60°C |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

5-2 Ambient humidity

Operating: 70% or less (No dew)

Storating: 80% or less (No dew)

5-3 use condition

This monitor puts the TV condition where makes the upper side and are the CRT anode button specification. Besides, I would appreciate communication in the advance, in the case that put pipe face upward condition face length and be used in condition.

Also, please contact in the advance even in the case that it is used this monitor in a southern hemisphere and equator neighborhood with exportation etc., because CRT (the cathode-ray tube) that it is using for this monitor hypothesizes and be being adjusted the use in the northern hemisphere magnetic field.

5-4 Vibrations

After being imposed vibrations as below by the tool supplied by SANWA, the monitor must not show any trouble in operation and structures.

Frequency : 5~100~5 Hz (to be changed in 10minutes of cycle)

Acceleration : 1G

Test time : 1 hour for each direction

The acceleration inside the above test condition is changed to 0.5G to, the vibration that hypothesized CRT pipe face upward (the Facetop) use and do a test to CRT pipe axis direction (the monitor around direction) with, the same condition and the case without abnormality to ane action and also appearance structure besides.

6. OTHERS

I decide the top of both discussion about etc.,

In the case that the problem resulted about an entry absent item,

In the case that doubt happened to the specifications mentioned items.

7. CONNECTIONS OF INPUT SIGNALS

Power supply department

3 pin U-P connectors made by AMP(Housing :176293-1)
(Foundation side:B3P-VH(JST))

connector Pin No	Input signal	Performance
1	Power input	To input regular power to A-1
2	N C	-
3	Power input	To input regular power to A-1

Signal department

①8 pin U-P connectors made by AMP(Housing :176296-1)
(Foundation side:S6B-PH-K-S(JST))

connector Pin No	Input signal	Performance
1	Red video signal	Positive 0~3.5Vp-p Input impedance 330 Ω
2	Green video signal	Positive 0~3.5Vp-p Input impedance 330 Ω
3	Blue video signal	Positive 0~3.5Vp-p Input impedance 330 Ω
4	Composite sync signal (Separate Horizontal)	Negative composite sync 1~5Vp-p Pulse width 3~7 μS
5	G N D	G N D
6	N C	-
7	N C	-
8	(Separate Vertical)	Negative separate sync 1~5Vp-p Pulse width 190~500 μS

②D-SUB 15 pins mini

(Foundation side:S15B-PH-K-S(JST))

Pin No	Input signal	Performance
1	Red video signal	Positive 0.7Vp-p Input impedance 75 Ω
2	Green video signal	(Ditto)
3	Blue video signal	(Ditto)
4	Earthing	Earthing
5	(Open)	(Open)
6	Red earthing	Earthing
7	Green earthing	Earthing
8	Blue earthing	Earthing
9	(Open)	(Open)
10	Earthing	Earthing
11	(Open)	(Open)
12	(Open)	(Open)
13	Horizontal sync signal	Negative composite sync 1Vp-p~5Vp-p Negative separate sync 3~5Vp-p
14	Vertical sync signal	Negative separate sync 3~5Vp-p
15	(Open)	(Open)

* If Composite sync signal is input to No13 pin, No14 pin must be open.

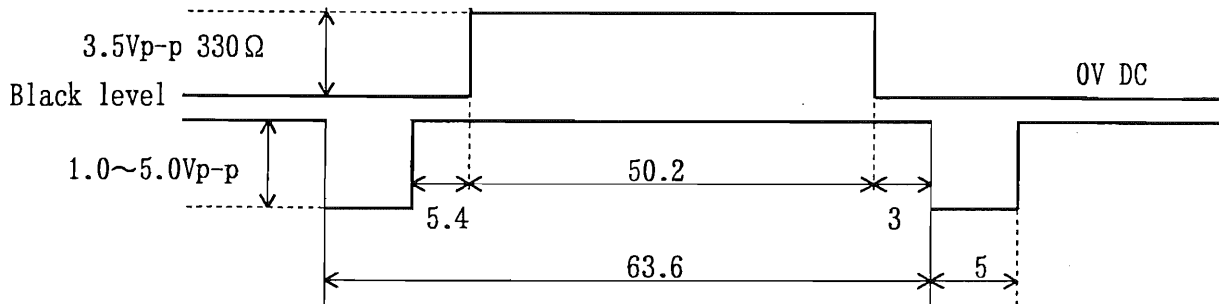
* Please do not input signal input in the AMP U-P connector and D-sub connector simultaneously.

6. RECOMMENDED TIMING CHART EXAMPLE

At the 15.72KHz

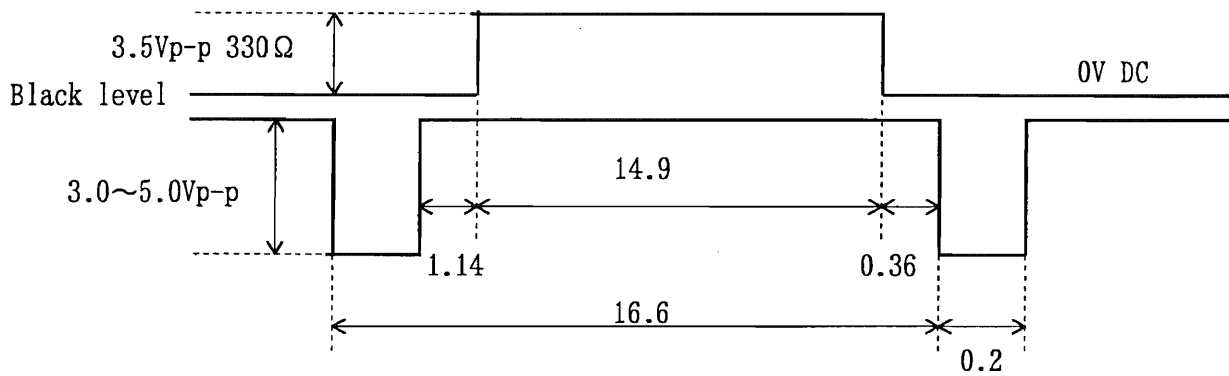
Horizontal time chart
Picture component

(Unit: μ sec)



Vertical time chart
Picture component

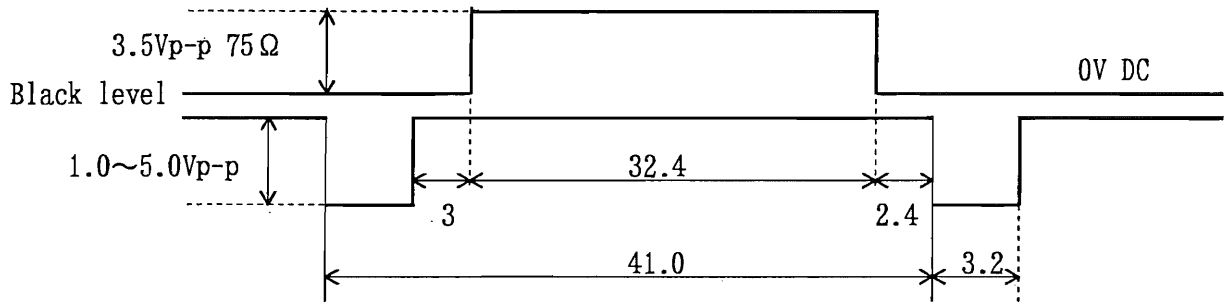
(Unit: m sec)



At the 24.39KHz

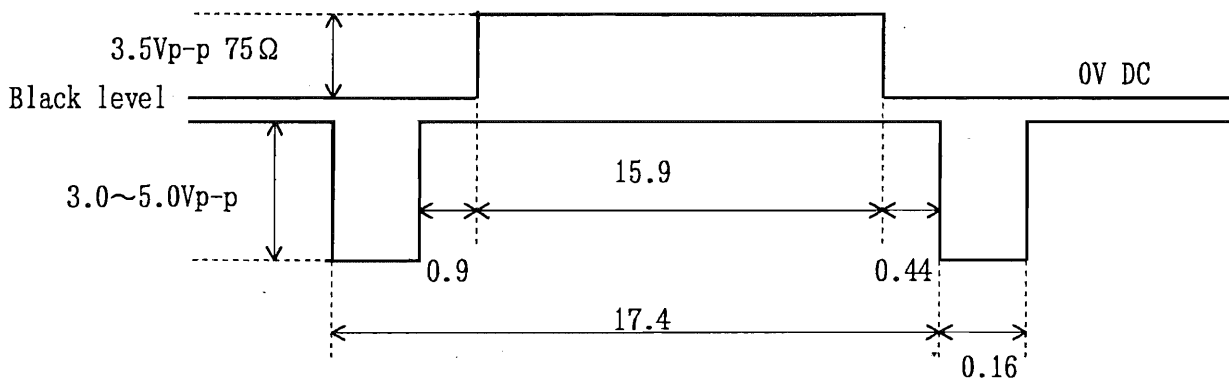
Horizontal time chart
Picture component

(Unit: μ sec)



Vertical time chart
Picture component

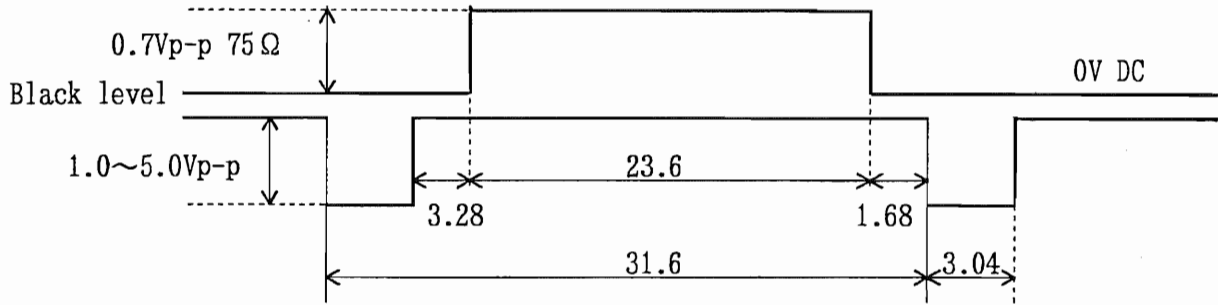
(Unit: m sec)



At the 31.65KHz

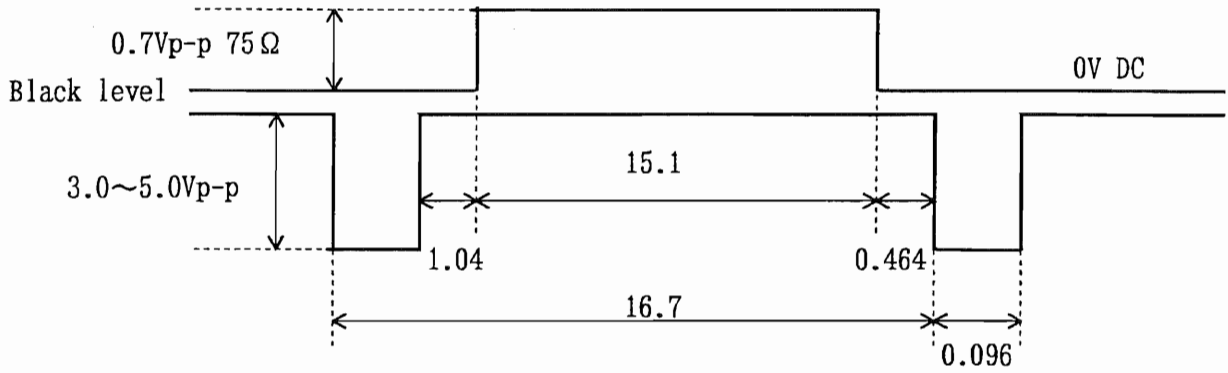
Horizontal time chart
Picture component

(Unit: μsec)



Vertical time chart
Picture component

(Unit: m sec)



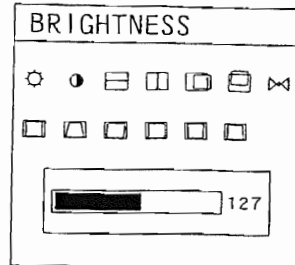
ADJUSTMENT FUNCTION AND ALSO THE OPERATION PROCEDURE

- ①When I push "FUNCTION" the switch the menu is displayed to the screen.
- ②For example, when I want to adjust a vertical position
Menu icon, is combined" to "V POSITION with "UP DOWN"
I push "FUNCTION" a/the switch.

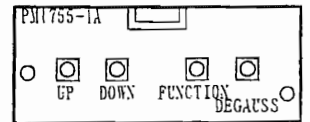
At present menu item
that is selecting it

Menu icon

Adjustment bar
(Progress condition of
adjustment is being shown)



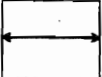




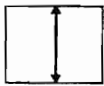





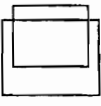



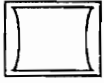
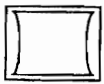
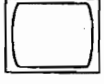
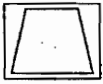






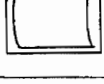

Control board

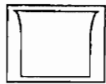
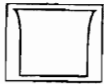
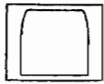
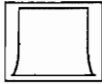
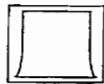



- ③The icon that selected it flickers.
Please adjust it to the screen of liking with "UP DOWN" the button
- ④In the case that the adjustment of the icon that selected it is ended
I push "DEGAUSS" the switch and please return to /the icon selection screen
- ⑤Please do the procedure of ①~④ repeatedly, in the case that I do other
adjustment consecutively.
When I push "DEGAUSS" the switch once again with the icon selection screen,
A OSD(On screen display) fades away.
The adjustment contents are remembered that the OSD fades away.

ADJUSTMENT FUNCTION

 BRIGHTNESS (ブライツネス調整)		Too dark → 「UP」
		Too bright → 「DOWN」
 CONTRAST (コントラスト調整)		Too weak → 「UP」
		Too strong → 「DOWN」
 H SIZE (水平サイズ調整)		Too small → 「UP」
		Too big → 「DOWN」

 V SIZE (垂直サイズ調整)		Too small → 「UP」
		Too big → 「DOWN」
 H POSITION (水平ポジション調整)		It passes the left → 「UP」
		It passes the right → 「DOWN」
 V POSITION (垂直ポジション調整)		It passes under → 「UP」
		It passes the top → 「DOWN」
 RECALL (リセット)	The present factory presetting mode ※When I do this reset operation the data that adjusted it again to the presetting mode of the early period factory is deleted and return to early period factory shipment setting	
 PINCUTION (糸巻き歪み調整)		It is becoming spool form condition → 「UP」
		It is becoming barrel volume form condition → 「DOWN」
 TRAPEZOID (台形歪み調整)		It passes under → 「UP」
		It passes the top → 「DOWN」
 PARALLEROGRAM (平行四辺形歪み調整)		It leans to the Left → 「UP」
		It leans to the right → 「DOWN」
 PINBALANCE (弓形歪み調整)		Bow-shape toward the left → 「UP」
		Bow-shape toward the right → 「DOWN」


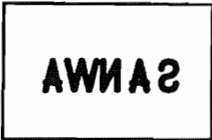
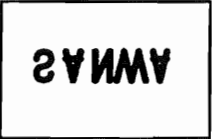
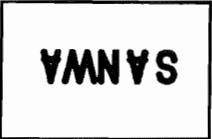
 TOP CORNER (上部糸巻き歪み調整)	 Upper part is becoming condition the reel style → 「UP」
	 Upper part is becoming condition the barrel roll style → 「DOWN」
 BOTOM CORNER (下部糸巻き歪み調整)	 Lower part is becoming condition the reel style → 「UP」
	 Lower part is becoming condition the barrel roll style → 「DOWN」
DEGAUSS (マニュアル消磁)	<p>→ I push "DEGAUSS" the switch. Although it is done degauss automatically when I turn on the power supply when rotate in power on condition after that and also the comfortable place is moved uneven coloring sometimes happens to the screen. please give degauss to such a case. ※I am unable to do continuously degauss. please put the interval in 30 minutes after it did degauss once. A degauss action during the screen a shake, "kachi" sound make largely, be not malfunction.</p>

Deflection yoke polarity switching connector

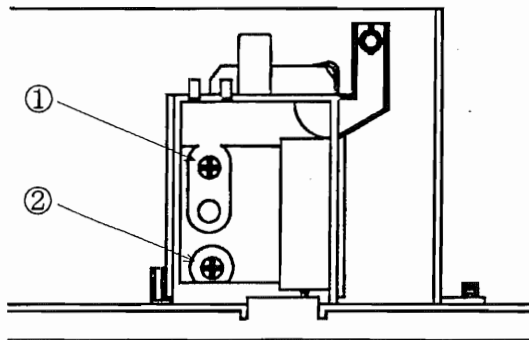
※Each connector of condition usually be
"Board measure figure" a reference

CN401

CN301

	Normal	Reverse
Normal	 Normal picture	 Horizontally reversed picture
Reverse	 Vertically reversed picture	 Horizontally & Vertically reversed picture

Focus · Screen



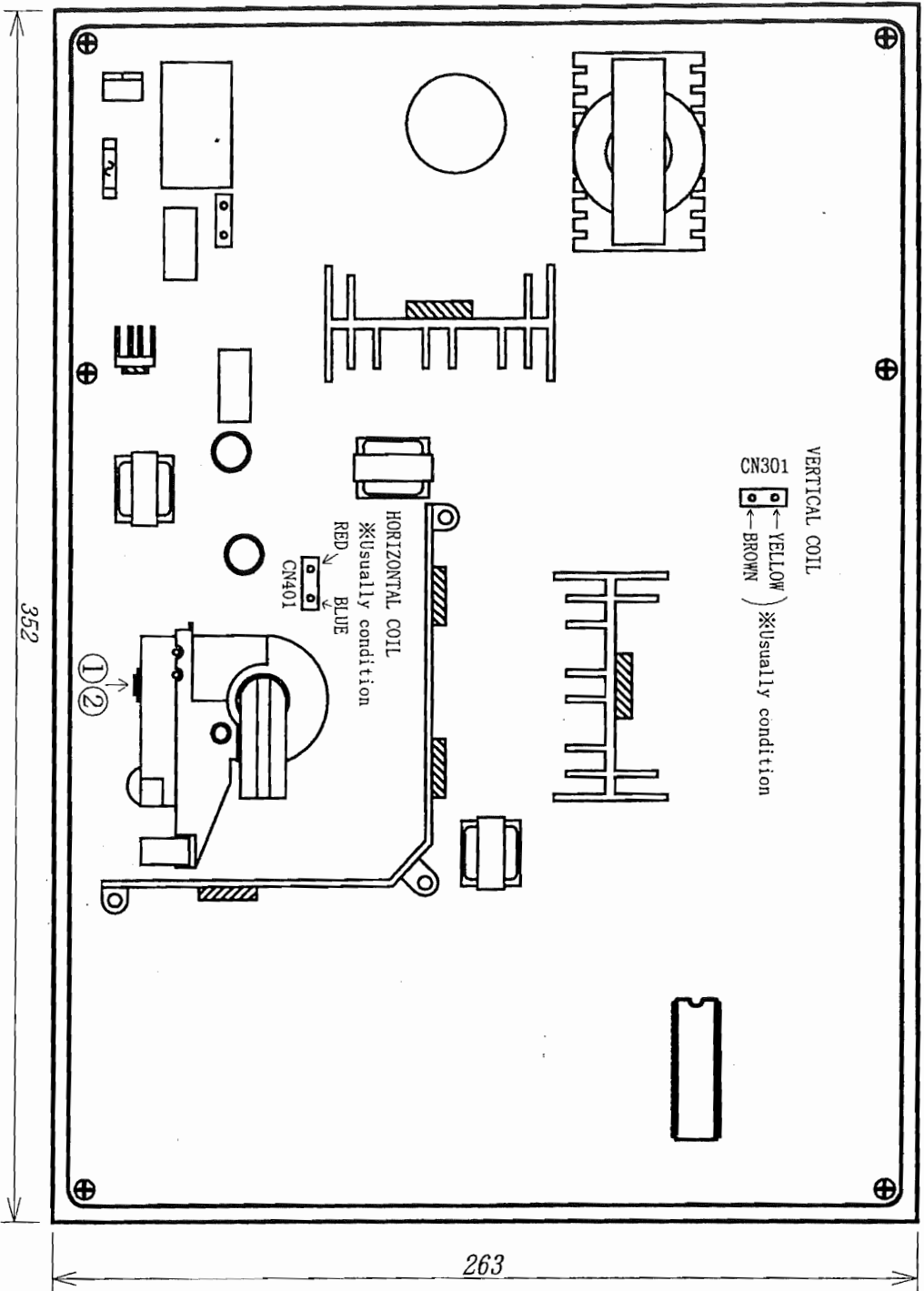
① FOCUS

Focus adjustment
To adjust for best focus

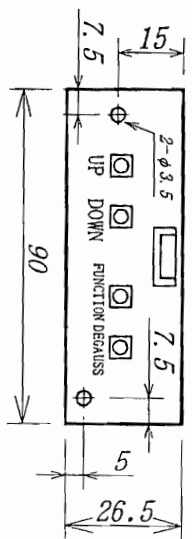
② SCREEN

Screen adjustment
To adjust to the cut-off point
(Right before the back raster disappears)

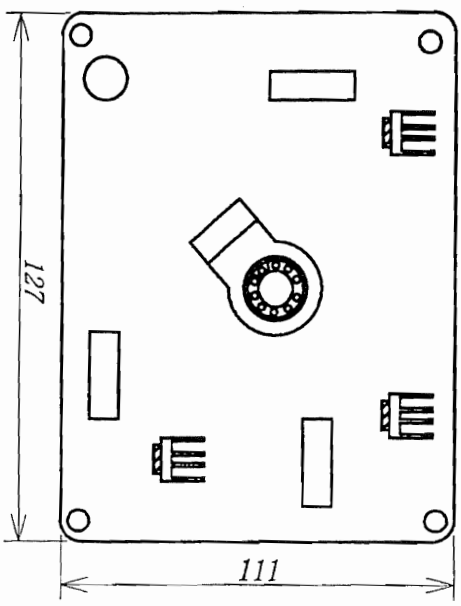
Board measure figure



MAIN BOARD



CONTROL BOARD



CRT BOARD

Attention on use and operation

1. Request

This display monitor is being designed as general electron devices specification. It is not being designed for the usage that is demanded the high reliability that is related to the special usage and also human life of car ship etc. directly. Also, the use environment/use condition that uses this machine requests and understands my best regards because it is not able to take the responsibility of the whole that it makes our company, in the case that the problem occurred unlike general electron devices.

2. Rating

Please use it within the range of the rating without fail, because it is being designed so that I am satisfied reliability, X-ray radiation characteristic and also display performance, when this product used it within the range of the rating.

3. When be it acts stable period

It is 20 minutes later after the power supply input.

Yet, please pay attention because it sometimes differs by the surroundings environment condition.

4. use environment

The monitor set is appliance of be near the high place, highplace occurrence of humidity, the use in the many place etc. of the many places, vibrations of the place, dust of the direct ray that hit please refrain from it as much as possible.

5. the high pressure

Please do not touch unpreparedness because there is the place which the high voltage over 30,000 volts has occurred inside the color monitor and is very dangerous.

In the case that it touches I turn off the power supply of the monitor and draw out the power cord from the outlet and please put time a little.

There is in the case that an electric charge is remaining into ae pipe even after I turned off the power supply, because the cathode-ray tube uses it with usually high voltage.

I remove the anode cap I let go a sufficient electric charge with the ground stick that went through it and please prevent an electric shock the high pressure resistance like $1M \Omega$ that connected one side to the Shashih ground before.

Also, the cathode-ray tube lets go a sufficient electric charge even when it attaches an anode cap, because the electric charge is accumulated to the anode when time passes even a simple substance and please prevent the electric shock.

6. charging/uncharging department

Please do not touch because receive an electric shock when touch charging department and also touch simultaneously and be very dangerous charging department and uncharging department.

Also, charging department and uncharging department please do not short-circuit.

It becomes the cause of malfunction.

7. High temperature department

I handle because it becomes the cause of malfunction, electric shock, fire, when solder waste and wastepaper and moisture enter within the color monitor and please pay attention the top. Please pay attention even in the case that the customer depends fruitlessly.

Please pay attention to contact, because there is the part that the monitor inside becomes a high temperature fairly.

When I contact I may burn.

8. Outside adjustment board

The operation of the outside adjustment foundation observes and please do not give it to that is. Please entrust it to the person who mastered adjustment.

9. Abnormal

Please draw out the slot plug from the outlet besides etc. cut the power switch when it did it although abnormal sound does and also smoke comes out and also, be strange foul-smelling.

It may become the cause of the malfunction that does not think that it is used as it is.

10. static electricity

Sometimes feel feeble electricity that it touches with the hand on the surface of the cathode-ray tube, there is not an influence in the human body, because this is wearing static electricity in the cathode-ray tube surface.

11. Impact

Please do not give the impact on the occasion of carrying. It becomes the cause of malfunction. As for the cathode-ray tube that it is using for this product the inside is the electron pipe made of high vacuous glass.

Please consider it such that the impact and vibration do not increase as much as possible, because I sometimes give danger to the human body when handling is not appropriate. Also, I would appreciate the use of the gloves of the protection glasses and also rather thick as the protection of the damage etc. of the emergency on the occasion of work.

Please pay attention because there is fatal defectiveness the fear that happens transport and when handle and receive a strong impact by the 落 inferiority of when.

12. the inclusion to the package

When it is incorporated the monitor to the package

I avoid the structure that prevents the ventilation of the generation part inside the set remarkably and please do the design to lower the temperature rise of the inside preferably. Please examine the compulsion air cooling by fan etc., wa it depends on case. The use in the condition that exceeded the item of the environment condition exerts the influence in the life time of the monitor.

I suggest the use inside the temperature range with a sufficient margin to the rating. Generally please use the electron part low even if use surroundings temperature are a little even to use the product forever, because part life is in the trend that extends as use temperature drops.

13. Mutual interference

Other, in the case that the monitor fellow and the product, package that differ are put closer to the monitor the screen is shaken/screen noise may occur. In the case that it causes adjacent the monitor and please use other product, package that differ the top of confirmation in actual use condition in the case that it causes adjacent.

14. Ground

As for the monitor frame the part and function insulation that the dangerous voltage is increasing are being performed. In the use of this monitor, the frame in case connects to a safe ground, in the case that the part that is connected electrically with the frame becomes a user passable part and please use.

15. Be related to the metal fittings and the like.

I request the manner that wears the skin gloves and also long sleeves etc. without fail and never handle in the empty hand, to prevent danger, when I handle the monitor, because there is the possibility with the burr etc. that the metal fittings and the like that are using it for this product happen to etc. at the time of metal fittings production.

16. Wear degauss to a product

By transport during and the environment of storage the product wears and may be done. Also, color, screen distortion etc. sometimes occur to the screen, even in the case that the magnet and speaker etc. are put closer. There is the possibility that the degauss ability to wear by Shashih and also strong magnetic field become lack, although it is having the degauss function to the product.

Also, please use it top, of confirmation in actual use condition, because put at the time of the package inclusion and sometimes receive the influence of the belt magnetism of the sheet metal (the rope material thing) the etc. of the surroundings.

17. Reconstruction

I remodel this machine and please do not use.

About the product guarantee of case that was remodeled our company can not take the responsibility of the whole.

18. The request of readjustment

The attachment place of the monitor set would appreciate the enforcement of readjustment etc. in this manner case, because the picture distortion, image position difference by the rose luck of the adjustment etc. at the time of factory shipment may be emphasized by the timing minute difference of the input signal, by establishment condition or, influence.

19. The handling of cathode-ray tube bottleneck department

Please pay attention so that it does not touch these appearance parts during handling, because the magnet of the tendency yoke and also cathode-ray tube bottleneck department are adjustment completion supremely when ship it.

20. Cathode-ray tube and monitor foundation

The cathode-ray tube, monitor foundation put it at the time of production and be adjustment completion. Please use the thing between the same serial number without fail.

21. Alternate use of a part

This display monitor is being designed as general electron devices specification. is not being designed for the usage that is demanded the high reliability that is related to the special usage and also human life of car/ship etc. directly. Also, the use environment/use condition that uses this machine requests and understands my best regards because it is not able to take the responsibility of the whole that it makes our company, in the case that a/the problem occurred unlike general electron devices.

[Reign change part use about]

Please acknowledge it, because there is in the case that change compatible performance the top, reign of sufficient confirmation regarding, the use part that I make our company, under the situation that the part Unification/abolition by the part maker standardization, is carried out with a very early cycle and ask to cause use the part for the product on the basis of the following contents.

- (1) I ask to cause the part change carried out on the basis of the judgment of our company, in the case that it corresponds to any of the following items.
I carry out lot control as the change for each lot, on the occasion of a/the change also.
- ① It is in the case that there be an exchangeability with equal performance and there is a sufficient use achievement in our company.
 - ② There be an exchangeability with equal performance and in the case that there are the data that become the guarantee of the sales achievement of the test data and also maker that part maker is able to trust.
- (2) I ask to cause the change carried out, after submit the document in the advance and confirmed, in the case that it corresponds to any of the following items.
- ① It is in the case that it does not enter into the condition of the top clause (1).
 - ② It is in the case that the change of the circuit fixed number occurs on the occasion of the change.
 - ③ It is in the case that there is not an exchangeability when the form etc. does the difference exchange.
 - ④ It is in the case that the application is a necessary part on the attestation of a safe standard.

22. Guarantee

Malfunction in which occurred within 1 year from the our company shipment date I repair gratuitous it about the one that the cause was admitted by our company clearly. (Yet, it makes our company factory bringing.) From the our company shipment date the repair in after, 1 asks to cause with all onerous.

23. One's exemption from an obligation item

Please do not do the use and reconstruction use that exceeded the rating.

The use that exceeded the rating and, in the case that was used and was remodel our company does not take the responsibility of the whole.

Besides, regarding the damage that resulted by the use under an abnormal condition the love or fault, misuse, of the deed, other self, users by the fire, earthquakes, the third parties our company does not take responsibility at all.

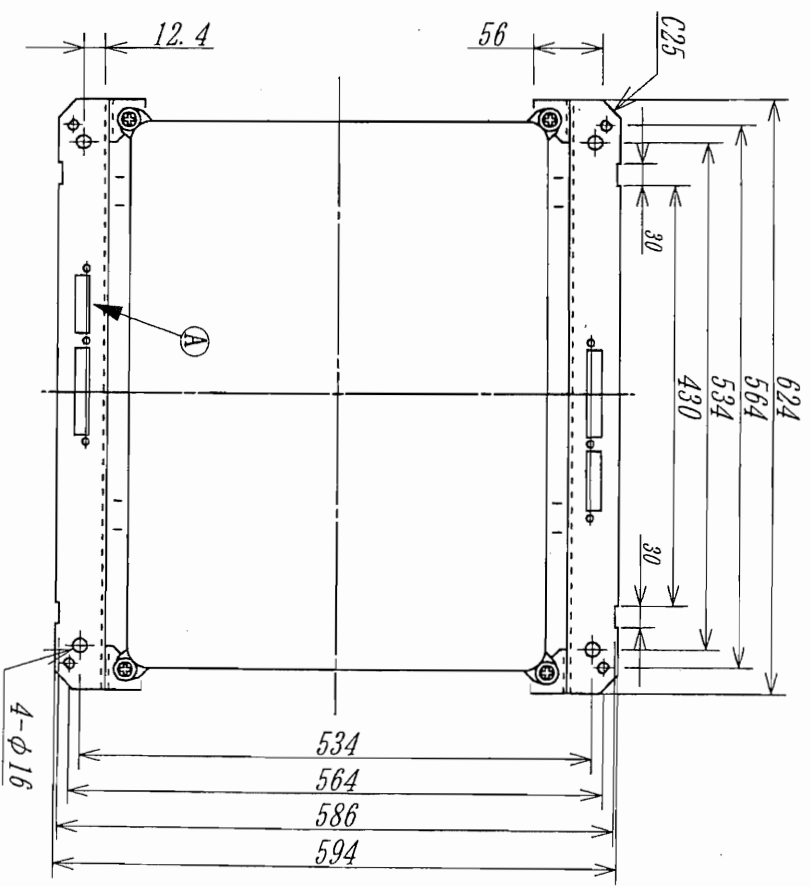
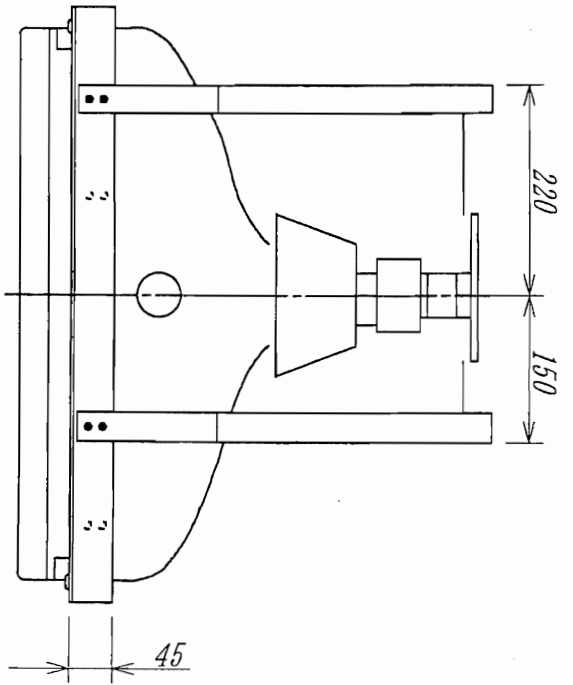
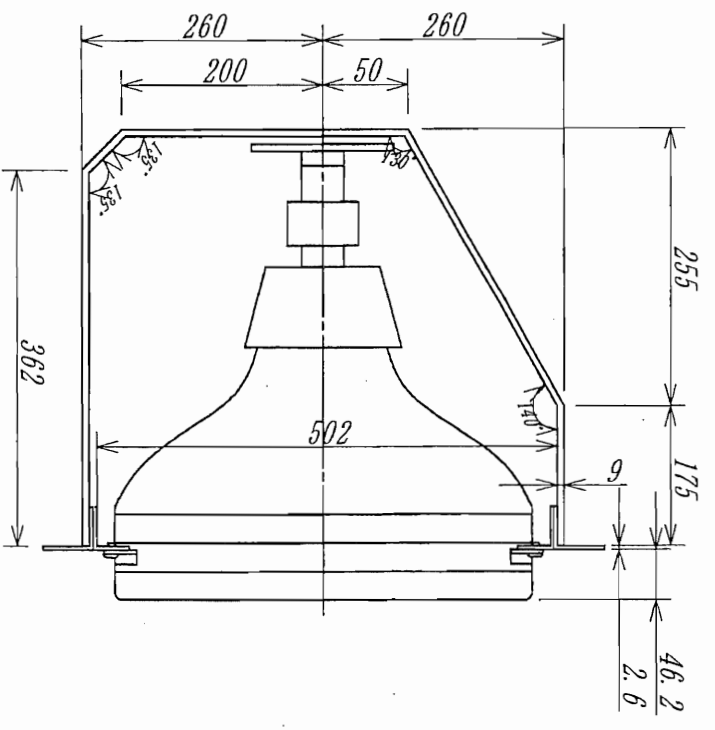
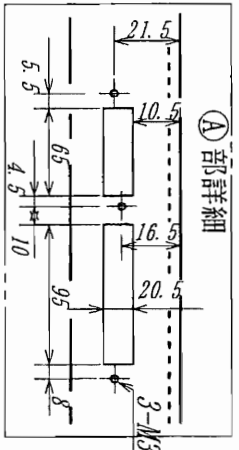
Because it is impossible the use or use of the monitor our company does not take responsibility at all, regarding the damage (the change/disappearance etc. of the discontinuation, memory contents of the loss, businesses of the business profit) of the incident that happen.

Regarding the damage that generated from wrong action etc. by the combination with the connection devices our company does not take responsibility at all.

Our company does not take responsibility at all, regarding the damage that resulted without defending the contents that were entered to the delivery specifications.

「20PFX」 (中華映管CPT使用) OUTLINE of MONITOR

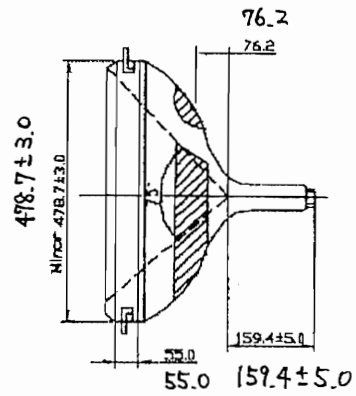
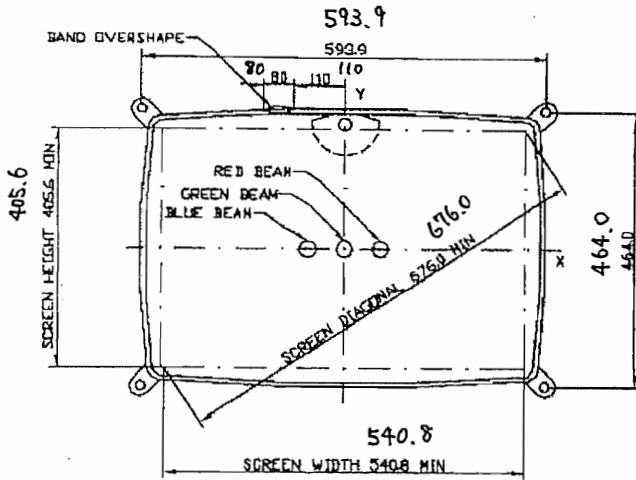
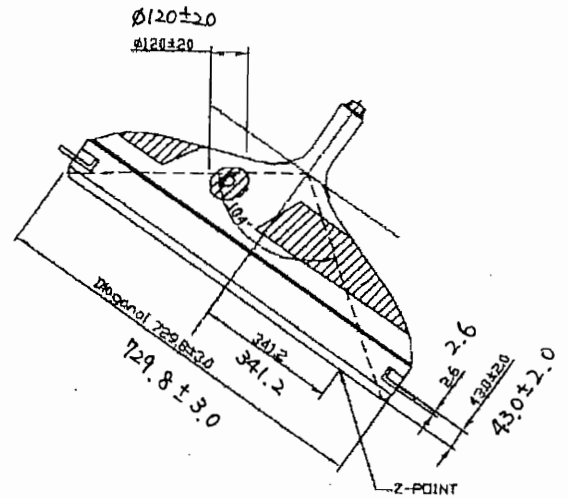
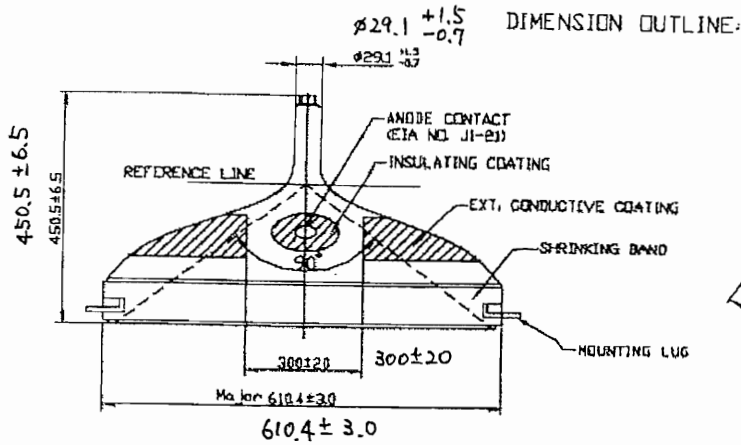
DIMENSIONS : mm
TOLERANCE : ± 2 mm



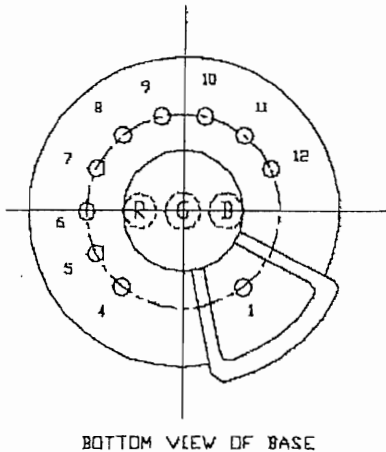
2M. Dimensional Outlines

TYPE NO. A68

Units: mm

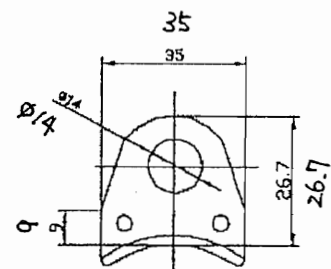


BASE SPECIFICATIONS



INDEX OF TERMINALS

- PIN 1: GRID NO. 3,5
- 4: IC (Internal Connection) (1)
- 5: GRID NO. 1
- 6: CATHODE OF GREEN GUN
- 7: GRID NO. 2
- 8: CATHODE OF RED GUN
- 9: HEATER
- 10: HEATER
- 11: CATHODE OF BLUE GUN
- 12: IC (Internal Connection) (1)

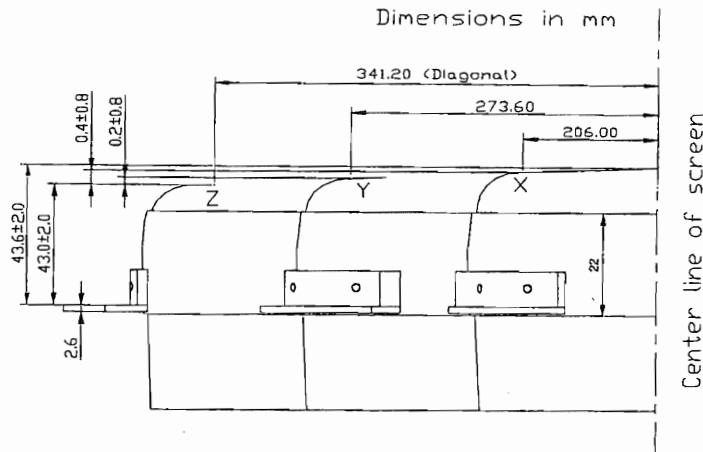


Detail Of Mounting Lug

Note (1) Do not use IC pins as jumper on the socket board.

FIG. DIMENSION OUTLINE (2)

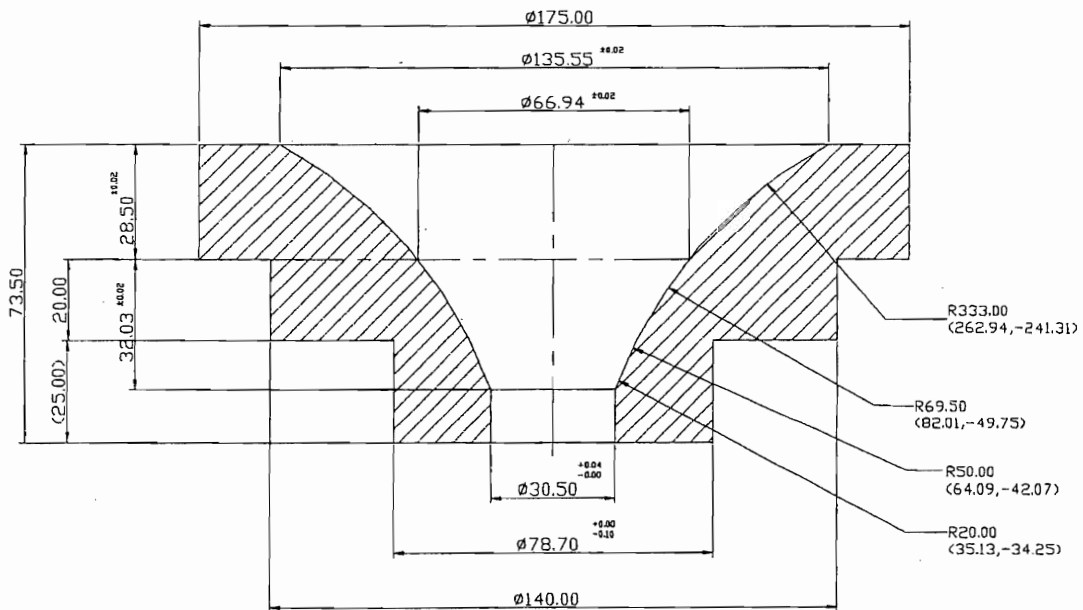
UNIT : mm.



ONE OF THE FOUR LUGS MAY DEVIATE 2.0MM MAX. FROM THE PLANE THROUGH THE THREE LUGS.

THE DEVIATION IS INCORPORATION IN THE 2.0MM TOLERANCE.

FIG.10 REFERENCE LINE GAUGE (EIAJ G-R110CJ30)



4E. Limits of Phosphor Screen Blemishes

4E1. High-contrast blemishes

The following criteria apply to high-contrast blemishes.

Tube Size	Blemish Size (mm) (Equiv. Dia.)	Allowable Number of Blemishes			Allowable Minimum Separation (mm)
		Zone A	Zone B	A & B	
27V	over 0.95	0	0	0	50
	0.76 - 0.95	0	3	3	
	0.46 - 0.75	1	4	4	
	0.26 - 0.45	2	5	5	Zone A:100, Zone B:50
	less than 0.26	No limit	No limit	No limit	

4E2. Medium-contrast blemishes

The following criteria apply to medium-contrast blemishes.

Blemish Size (mm) (Equiv. Dia.)	Allowable Number of Blemishes			Allowable Minimum Separation (mm)
	Zone A	Zone B	A & B	
Over 2.50	0	0	0	50
0.96 - 2.50	0	2	2	
0.76 - 0.95	0	3	3	
0.46 - 0.75	2	6	6	
0.26 - 0.45	4	10	10	
less than 0.26	No limit	No limit	No limit	Zone A:50, Zone B:100

4E3. Low-contrast blemishes

The following limits apply to low-contrast blemishes.

Zone	Cumulative area of all spots not to exceed
Zone A	equivalent diameter.
Zone A and Zone B	Cumulative area of all spots not to exceed 50 mm equivalent diameter.

4F. Limits of Scratches

The following rejection criteria apply for maximum scratch size on the faceplate.

Width (mm)	Length (mm)
less than 0.06	No limit
0.06 - 0.12	50
0.13 - 0.20	30
Over 0.20	None allowed

4) SCREEN AND FACEPLATE BLEMISHES

4A. Test Procedures

Set up the tube and adjust the light output on a blanked raster at the centre of the screen for approximately 108 lm/m² (10 foot-lamberts) of 9300°K + 27 MPCD (or 6550°K + 7 MPCD) colour temperature. The screen should be viewed at a minimum distance of 150 cm. Ambient light level at the tube face should be approximately 1.0 lux.

In the non-operating condition the screen may be viewed under high level, single-source incandescent light of 700 to 1000 lux measured at the faceplate surface.

The size of a round blemish is equal to its diameter. The size of an irregularly shaped blemish is equal to its equivalent diameter, defined as the average of the major and minor axis.

4B. Classification of Screen and Faceplate Blemishes

Blemishes are divided into phosphor screen blemishes and glass bulb blemishes.

4B1. Phosphor screen blemishes

Blemishes are classified depending upon the next table and judged with the standard specified in Clause 4E.

Degree of Contrast	Contents of Blemish	Valuation of Blemish
High-contrast	<ul style="list-style-type: none"> ■ Unlighted phosphor stripe ■ Peeled off green phosphor 	The size and number of blemishes and the quality area
Medium-contrast	<ul style="list-style-type: none"> ■ Peeled off red and blue phosphor ■ Non-uniformly lighted part ■ Smudge ■ and so on... 	Ditto
Low-contrast		

4B2. Glass bulb blemishes

Blemishes are classified as scratches and bulb defects and judges with the standard specified in Clause 4F & 4D.

4C. Quality Area

Tube Size	Zone A	Zone B
	27V	Rectangles area concentric with the centre of screen 245 X 325 mm ²

4D. Limits of Bulb Defects

The following criteria apply to defects of useful screen on panel face.

Elongated Blister	Tube size	
	Zone A	Zone B
Maximum Length (mm) Allowable number of defects	27V	0.26 - 0.60
	Zone A	12.7
	Zone B	19.1
Single Zone	4	8
Total	10	76

PACKING

