

## Alignment Procedure

### 3.1 Preliminary Adjustment

- A. Pre-set all VRs to the center position
- B. Set up unit and keep it warm up at least 30 minutes
- C. Signal mode:

(Table 1)

Mode	Resolution	Fh	Fv	H/V
VGA	640x400	31.47KHz	70Hz	-/+
VGA	640x480	31.47KHz	60Hz	-/-
VGA	640x480	37.86KHz	72Hz	-/-
SVGA	800x600	48.09KHz	72Hz	+/+
8514	1024x768	35.52KHz	87Hz	+/+
UVGA	1024x768	48.37KHz	60Hz	-/-
UVGA	1024x768	56.48KHz	70Hz	-/-
WS	1280x1024	64.32KHz	60Hz	+/+
VESA	800x600	46.87KHz	75Hz	+/+
MAC	832x624	49.71KHz	75Hz	-/-
MAC	1024x768	60.24KHz	75Hz	-/-

### 3.2 B+ Adjustment

- a. Input mode 48KHz (SVGA III 800x600) with cross hatch pattern
- b. Set brightness and contrast keys to maximum position
- c. Adjust VR 601, set the o/p of  $13.5 \pm 0.1V$

### 3.3 High-Voltage Adjustment (48KHz Crosshatch SVGA III)

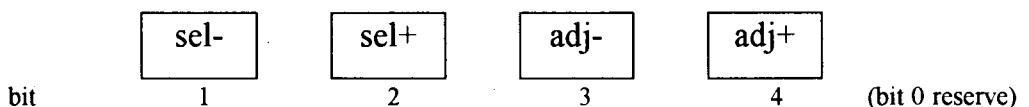
- a. Adjust VR 203 set H.V to  $25 \pm 0.2KV$

### 3.4 Geometry Adjustment

- a. Input full white pattern of 64.317KHz (WS2 1280x1024) mode.
- b. Adjust H-center (VR 302) to let the raster be in the center of both edges.
- c. Input full white pattern of 49.71KHz (Apple 16" 832 x 624) mode.
- d. Adjust H-width to max. Then readjust internal VR202 to let H-size equal to full size.
- e. Input full white pattern of 48KHz (SVGA III 800x600) mode.
- f. Power off, press sel+ & adj- Power on and adjust HxV size equaling to 270x202 mm.
- g. Adjust HxV be equal to 270x202 mm for all factory setting mode (see Table 1).

#### key define

option



factory mode	====>	sel+ & adj-	(power on)
final check mode	====>	sel+ & adj+	(power on)
save	====>	sel+ & adj-	(factory only)
clear factory	====>	sel+ & adj+	(factory only & 3 times)
clear user area	====>	adj- & adj+	(factory only)
recall	====>	sel+ & adj-	(user only)
tilt adjust key	====>	sel+ & adj+	(user only)

#### LED define

		LED							
		1	2	3	4	5	6	7	8
	user area								
	LED ON								
	factory								
	LED OFF								
1	brightness							B drive	
2	contrast							B bias	
3	H size							G bias	
4	H phase							G drive	
5	V size							R bias	
6	V center							R drive	
7	pin							unbalance	
8	Trapezoid							parallel	
7&8	tilt							tilt	

### 3.5 Color Temperature Auto Alignment

#### A. PREPARING ITEMS

- PC
- RS232 BOX
- RS232 CABLE (9P) TO PC
- RS232 BOX TO MONITOR CABLE (3P)
- COLOR ANALYZER (CA100)
- CA100 CABLE TO PC
- ADJUST PROGRAM (refer to attached floppy version 1.1)

#### B. Alignment Procedure

- Adjust the G2 VR such that the max. color of R.G.B color bar on the monitor is in the mark region
- Auto color temperature adjustment  
9300K X= 281 ± 5 Y=311 ± 5
- Adjust VR301 ABL adjustment to let  
Y= 30Ft-L ± 1 Ft-L

### 3.6 Focus Adjustment

- Input SVGAIII with # pattern
- Adjust the focus VRs of T301 FBT until picture is clearest

### 3.7 Convergence Adjustment

- Input video VGA480 with crosshatch pattern.
- Then degauss CRT face.
- Adjust 4-pole and 6-pole of DY, check that the convergence meets the spec.
- If there is impurity between CRT and yoke, add convergence magnet by using magnets.

### 3.8 Energy Saving Function

- a. Compliant with VESA proposal
- b. With Normal/Stand-by/Suspend modes
- c. keep on more than  $1 \pm 0.2$  seconds to judge stepping into suspend mode

Table 6 :  
display power management:

Mode	H-Sync	V-Sync	LED Power Consumption		Recover Time
Normal	on	on	Green	100W	0 sec
Stand-by	off	on	Amber	$\leq 15W$	3 sec
Suspend	on	off	Amber	$\leq 15W$	3 sec
Off	off	off	Amber Blinks	$\leq 5W$	8 sec

- d. Input CHROMA-1000 VGA1 with color BAR pattern
- e. Normal mode check:  
Turn on the power switch (1); If the LED power indicator is "Green", then check if "Digital Power Meter" is 100 watts.
- f. Stand-by & suspend mode check:  
Use EXT-control software to make H-Sync-Off & V-Sync-On, or V-Sync-Off & H-Sync-On. If the power LED indicator is "Amber", then check if the "Digital Power Meter" is  $\pm 15$  watts.
- g. Off mode check:  
Quit the EXT-signal (signal cable connected to CHROMA 1000), then check if "Digital Power Meter" is  $\pm 5$  watts.
- h. Free-run mode check:  
Disconnect signal cable. Turn off the power switch (0). Then turn on the power switch (1) and check if the Raster Light output is free running.

### 3.9 DDC Writer Alignment Procedure

#### (1) Overview

The DDC writer tool include : 8255 control card

Barcode reader ( option )

- Files :
- (1) PDI33.EXE
  - (2) PDO33.EXE
  - (3) QA33.EXE
  - (4) DDC.WEK
  - (5) \*\*\*.DDC

#### (2) File introduction

- (a) File name :
- PDI33.EXE ----> Write all EDID data and verify it.
  - PDO33.EXE ----> Write EDID data as following : serial number  
date code  
checksum
  - QA33.EXE ----> Read EDID data only.
  - DDC.WEK ----> Table of date code.
  - \*\*\*.DDC ----> EDID data file.

(b) DDC.WEK format :

```
1995          ----> year
03 07 11 15 20 24  ----> Table of week number from January to June.
29 33 37 42 46 50  ----> Table of week number from July to December.
1996          ----> Next year
XX XX XX XX XX XX
XX XX XX XX XX XX  ----> Next year table
1997
XX XX XX XX XX XX
XX XX XX XX XX XX
:
:
:
```

(c) Data file format :

```
XX XX XX XX XX XX XX XX  --
:                          |
:                          | EDID data ( 128 bytes HEX code)
:                          |
:                          --
XX          -----> Serial number ID
XXXXXXXXX   -----> Manufacture name description
XXXXXXXXX   -----> Product name description
XXXXXXXXX   -----> CRT description
```

**(3) Writer operation procedure**

(a) PDI33.EXE operation :

1. At DOS prompt enter "pdi33".
2. Flow command to enter data file name.
3. Input manufacture date. (API serial number only)
4. Ignore serial number, directly press 'enter' key.  
Otherwise, key in bar code number or use bar code reader to entry.
5. Turn off DDC monitor.
6. Turn on DDC monitor.
7. Press any key to continue.
8. Check result.

(b) PDO33.EXE operation :

1. At DOS prompt enter "pdo33".
2. Flow command to enter data file name.
3. Input manufacture date. (API serial number only)
4. Key in bar code number or use bar code reader to entry.
5. Turn off DDC monitor.
6. Turn on DDC monitor.
7. Press any key to continue.
3. Input manufacture date. (API serial number only)
4. Key in bar code number or use bar code reader to entry.
5. Turn off DDC monitor.
6. Turn on DDC monitor.
7. Press any key to continue.
8. Check result.

### 3.8 Energy Saving Function

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