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## 3 Alignments and Adjustments

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This section of the service manual explains how to use the RS232 JIG.  
This function is needed for AD board change.

### 3-1 Required Equipment

The following equipment is necessary for adjusting the monitor:

- Computer with Windows 95, Windows 98, Windows NT, Windows 2000, or Windows XP.
- MTI-2031 DDC MANAGER JIG

### 3-2 Automatic Color Adjustment

To Analog video, In 16gray or any pattern using black and white and any mode.(16gray and XGA mode recommend)

1. Push the OSD Menu button to open the OSD
2. Select language English
3. Push enter button during 5 seconds.
4. See the screen flashing

### 3-3 DDC EDID Data Input

1. Input DDC EDID data when replacing AD PCB.
2. Receive/Download the proper DDC file for the model from HQ quality control department.  
Install the below jig (Figure 1) and enter the data.



Figure 1.

## 3-4 VGA EDID table

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	00	FF	FF	FF	FF	FF	FF	00	4C	2D	2B	02	XX	XX	XX	XX
1	XX	XX	01	03	6C	22	1B	78	2A	DC	55	A3	59	48	9E	24
2	11	50	54	BF	EF	80	81	80	71	4F	81	40	01	01	01	01
3	01	01	01	01	01	01	30	2A	00	98	51	00	2A	40	30	70
4	13	00	52	0E	11	00	00	1E	00	00	00	FD	00	38	4B	1E
5	51	0E	00	0A	20	20	20	20	20	20	00	00	00	FC	00	53
6	79	6E	63	4D	61	73	74	65	72	0A	20	20	00	00	00	FF
7	00	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	0A	20	20	00	CS

Details:

Byte(Hex)	Field Name and Comments	Description	EDID
00-07(8 byte)	Head Information		00,FF,FF,FF,FF,FF,FF,00
08--09	ID Manufacturer Name	SAM	4C,2D
0A--0B	Product ID Code	022B	2B,02
0C--0F	Last 5 Digits of Serial Number	Used Notes1	XX,XX,XX,XX
10	Week of Manufacture	Notes2	XX
11	Year of Manufacture	Notes3	XX
12	EDID Version Number	1	01
13	EDID Revision Number	3	03
14	Video Input Definition	Analog Signal 0.700,0.000(0.700Vpp) Separate Sync Composite Sync	6C
15	Max Horizontal Image Size (cm)	34	22
16	Max Vertical Image Size (cm)	27	1B
17	Display Gamma	2.2	78
18	Power Management and Supported Feature(s)	Active Off Display Type = R/G/B Color Preferred Timing Mode	2A
19-22 (10 byte)	Chroma Info	Red X - 0.640, Red Y - 0.349, Green X - 0.284, Green Y - 0.617, Blue Y - 0.067, Blue X - 0.142, White X - 0.313, White Y - 0.329	DC,55,A3,59, 48,9E, 24,11, 50,54
23	Established Timing I	720x400@70Hz 720x400@88Hz(no) 640x480@60Hz 640x480@67Hz 640x480@72Hz 640x480@75Hz 800x600@56Hz 800x600@60Hz	BF

Byte(Hex)	Field Name and Comments	Description	EDID
24	Established Timing II	800x600@72Hz 800x600@75Hz 832x624@75Hz 1024x768@87Hz (no) 1024x768@60Hz 1024x768@70Hz 1024x768@75Hz 1280x1024@75Hz	EF
25	Manufacturers Reserved Timings	Support	80
26-35 (16 byte)	Standard Timing Identification	1280x1024@60Hz81,8071,4F 1152x864@75Hz 1280x960@60Hz Not Used Not Used Not Used Not Used Not Used	81,80 81,40 01,01 01,01 01,01 01,01 01,01
36--47 (18 byte)	Detailed Timing / Descriptor Block 1	1280X1024@60HZ Pixel Clock:108.00MHZ	30,2A,00,98, 51,00,2A,40, 30,70,13,00, 52,0E,11,00, 00,1E
48-59 (18 byte)	Detailed Timing / Descriptor Block 2	Monitor Range Limits: Min Vertical Freq - 56 Hz Max Vertical Freq - 75 Hz Min Horiz. Freq - 30 KHz Max Horiz. Freq - 81 KHz Pixel Clock - 140 MHz  Secondary GTF - Not Supported	38  4B  1E  51  0E  00
5A-6B (18 byte)	Detailed Timing / Descriptor Block 3	Monitor Name: SyncMaster	53,79,6E,63, 4D,61,73,74, 65,72
6C-7D (18 byte)	Detailed Timing / Descriptor Block 4	Serial Number: Notes4	XX,XX--- XX,XX
7E	Extension flag		00
7F	Checksum		CS

Remark:

Notes1: Get SerialNumber(10----14Digit) from BarCode and transfer it to HEX

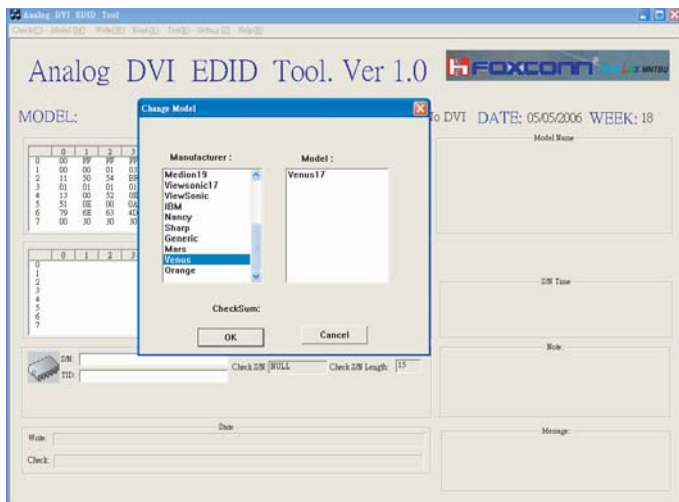
Notes2: Week(1---53),

Notes3: Year , HEX(Year-1990) ,

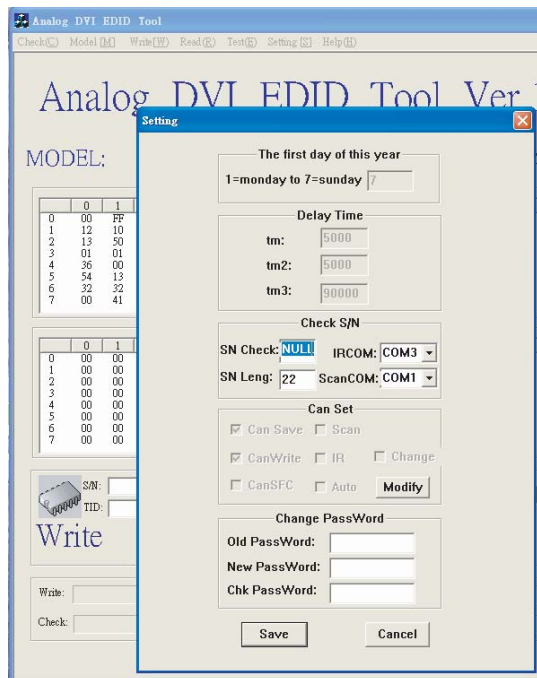
Notes4: Get Barcode(5----14Digit), and save as ASCII

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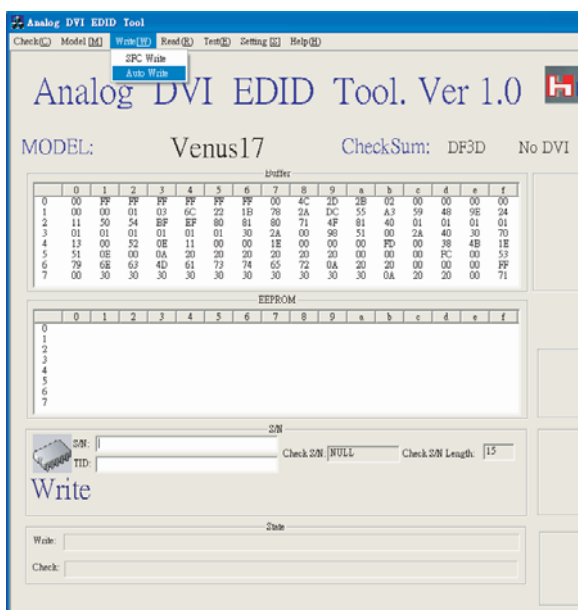
## 3-5 How to execute DDC



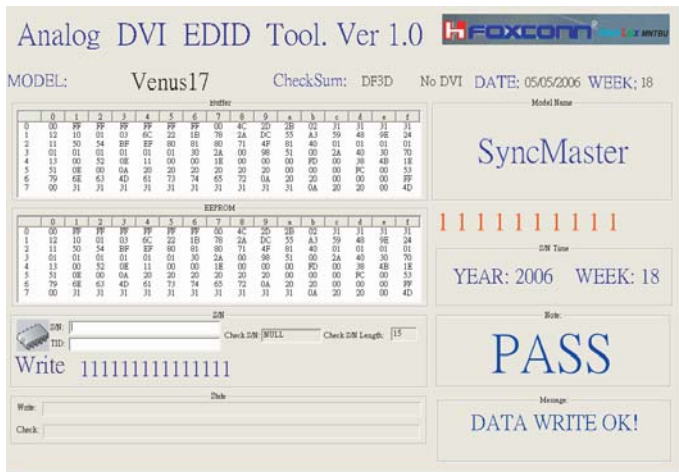
1. Install Analog DVI EDID Tool Program
2. Click the Analog DVI EDID Tool icon.
3. Select mode The password is 1234.  
Select the manufacture is Venus and the model name is Venus 17.



4. Setting  
The password is 1234.  
Select the port1 and the SN Leng is 22.  
Save the change.

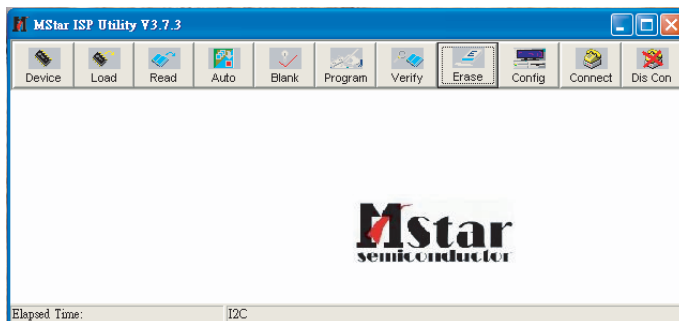


5. Select Write-Auto Write  
The SN number is a 22 random numbers.



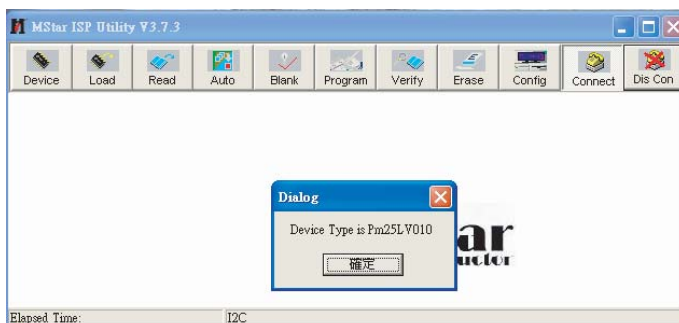
6. Write DDC ok.

### 3-5 How to execute MCU Code

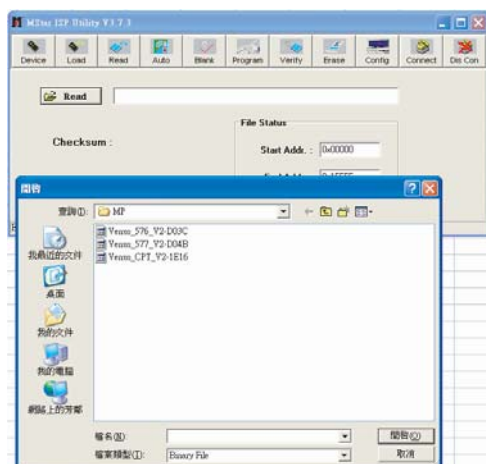


1. Set the options.

- Manufacture: MSTAR
- Device Type: TSUM16\_ROM128K\_ext\_flash
- Communication Port: DSUB15 (Analog)
- External Memory: PM25LV010E

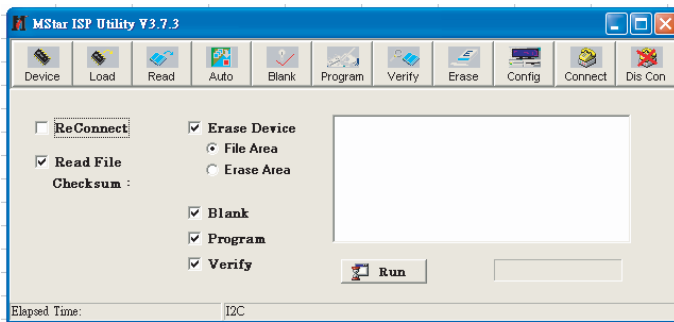


2. Click 'Connect File' button, and select the MCU code.

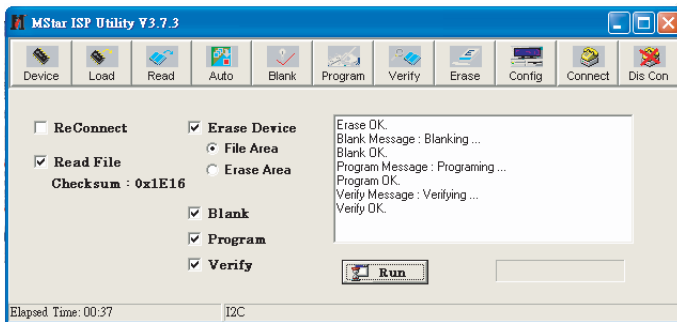


3. Click 'Read File' button, and select the MCU code.

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4. Click 'Auto Program' button.



5. If Program and Verify is OK, turn off the hard power and than turn on again.