# User's Manual

## 1.Setup for Operation

Once the circuit has been connected, a setup procedure for optimal operation is required some time.
The following instructions are likely to form the basis of the finished product operation manual.

- 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.

- 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.

**1) Functions on OSD Menu**

| OSD Menu | Descriptions |
|---|---|
| Auto Adjustment | Auto Geometry & Auto Color Balance |
| Auto Geometry | Automatically adjust the Horizontal position, Vertical position, Horizontal size, and Phase. In order to have good Auto Adjustment operation, You would better have full screen Window's background or characters on the screen prior to proceeding this function. |
| Auto Color Balance | Auto adjust the color balance of the screen |
| Horizontal Position | Adjust the horizontal position of the screen's image. |
| Vertical Position | Adjust the Vertical position of the screen's image. |
| Horizontal Size | Adjust the horizontal size of the screen's image. |
| Phase | Adjust the focus of the screen's image. |
| Brightness | Adjust the brightness of the screen. |
| Contrast | Adjust the contrast of the screen. |
| Color | Temperature, Red, Green & Blue |
| Language | Select one of the five language(English, French, German, Italian, Spanish) |
| Advanced | Factory Preset, Sharpness, DOS/GFX, OSD Horizontal / Vertical Position |
| Cancel | Ignore current changes and keep the pervious data. |

**2) Hotkey Function Definition**

| OSD KEY | Functions |
|---|---|
| DOWN | Brightness control |
| UP | Contrast control |
| SEL | Auto Geometry Adjustment |

## 2.Applicable Graphic Mode

The microprocessor measure the H-sync, V-sync and V-sync/H-sync polarity for RGB inputs, and uses this timing information to control all of the display operation to get the proper image on a screen.
This board can detect all VESA standard Graphic modes shown on the table below and provide more clear and stable image on a screen.

| Spec<br>Mode | Pixel Freq. | Horizontal Timing | | | | Vertical Timing | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Sync Polar | Freq | Total | Active | Sync Polar | Freq | Total | Active |
| | MHz | | KHz | Pixel | Pixel | | Hz | Line | Line |
| 640x350 @70Hz | 25.144 | P | 31.430 | 800 | 640 | N | 70.000 | 449 | 350 |
| 640x480 @70Hz | 28.287 | N | 31.430 | 800 | 640 | P | 70.000 | 449 | 400 |
| 720x400 @70Hz | 28.287 | N | 31.430 | 900 | 720 | P | 70.000 | 449 | 400 |
| 640x480 @60Hz | 25.175 | N | 31.469 | 800 | 640 | N | 59.940 | 525 | 480 |
| 640x480 @72Hz | 31.500 | N | 37.861 | 832 | 640 | N | 72.809 | 520 | 480 |
| 640x480 @75 | 31.500 | N | 37.500 | 840 | 640 | N | 75.000 | 500 | 480 |
| 800x600 @56Hz | 36.000 | P | 35.156 | 1024 | 800 | P | 56.250 | 625 | 600 |
| 800x600 @60Hz | 40.000 | P | 37.879 | 1056 | 800 | P | 60.317 | 628 | 600 |
| 800x600 @72Hz | 50.000 | P | 48.077 | 1040 | 800 | P | 72.188 | 666 | 600 |
| 800x600 @75Hz | 49.500 | P | 46.875 | 1056 | 800 | P | 75.000 | 625 | 600 |
| 1024x768 @60Hz | 65.000 | N | 48.363 | 1344 | 1024 | N | 60.005 | 806 | 768 |
| 1024x768 @70Hz | 75.000 | N | 56.476 | 1328 | 1024 | N | 70.070 | 806 | 768 |
| 1024x768 @75Hz | 78.750 | P | 60.023 | 1312 | 1024 | P | 75.030 | 800 | 768 |

# FCC RF INTERFERENCE STATEMENT

**NOTE :**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technical for help.
- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.


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