# ALAD-171T

# User's Manual

## Version Note

| No. | Ver. | Note | Date | Writer |
|-----|------|------|------|--------|
| 1 | A1.0 | First Publish | 20190128 | Tracy Liu |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## Copyright

## Acknowledgements

Award is a trademark of Award Software International, Inc.

IBM, PC/AT, PS/2 and VGA are trademarks of International Business Machines Corporation.

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows and MS-DOS are registered trademarks of Microsoft Corp.

RTL is a trademark of Realtek Semi-Conductor Co., Ltd.

All other product names or trademarks are properties of their respective owners.

For more information on this and other JHC products, please visit our websites at:

http://www.jhctech.com.cn

## Product Warranty (2 years)

JHC warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by JHC, or which have been subject to misuse, abuse, accident or improper installation.

JHC assumes no liability under the terms of this warranty as a consequence of such events.

Because of JHC.s high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If a JHC product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, JHC products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.

2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.

3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.

4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.

5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

## Declaration of Conformity

## CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from JHC. Please

contact your local supplier for ordering information. Test conditions for passing included the equipment being operated within an industrial enclosure.

In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

## FCC Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Technical Support and Assistance

Step 1.  Visit the JHC web site at www.jhctech.com.cn where you can find the latest information about the product.

Step 2.  Contact your distributor, sales representative, or JHC's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:

- Product name and serial number
- Description of your peripheral attachments
    - Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages

# Contents

CHAPTER

1

General Information

# 1.1 Introduction

ALAD-171T is a brand-new industrial display, which is designed to meet the needs of customers who want quick and easy integration with JHCTECH Embedded Box Computers, such as KMDA and BRAV series. JHCTECH offers two different touch screens of ALAD-171T to meet different demands.

ALAD-171T supports 17 inches 1280*1024 TFT LCD, with 5 wire heat-resistant resistive touch screen，optional projected capacitive touch, 1*Audio in, 2*3W speakers, DC 9~36V power input.

# 1.2 Features

1、Aluminum die-casting chassis, natural smooth design

2、17" TFT LCD, LED backlight

3、Resistive touch screen or projected capacitive touch screen

4、DC 9~36V wide power input

5、Versatile mounting methods for Panel mounting, VESA 100*100/75*75mm and Racking mounting

6、HDMI and VGA video input, audio in and 2x3W speaker

7、Flat bezel, IP65 front panel

# 1.3 Specifications

## 1.3.1 I/O Signal

1* HDMI
1* VGA
1* RS232
1* USB2.0 Type A Ports
1* 3-Pin DC-IN
1*Audio in

## 1.3.2 LCD and Touch

### LCD：

| Type | 17 inches TFT LED |
|------|-------------------|
| Resolution | 1280*1024 |

| Color | 16.19M colors |
|---|---|
| Pixel Pitch(mm) | 0.264*0.264 |
| Brightness(cd/㎡) | 600 |
| Viewing Angle | 80 degree(left), 80 degree(right), 70 degree(up), 80 degree(down) |
| Operating Temperature | -0℃~60℃ |
| Back light lifetime | 70,000 hours |

**TOUCH：**

| Type | 5-wire resistive touch | Projected capacitive touch |
|---|---|---|
| **Resolution** | Gap less | Gap less |
| **Light transmittance** | 83% | 90% |
| **Interface** | USB/RS232 | USB/RS232 |
| **Power Consumption** | +5 V @300 mA | +5 V @300 mA |
| **OS** | Windows and Linux | Windows and Linux |
| **Click Lifetime** | 35 million times | 3 billion times |

## 1.3.3 Audio (Optional)

**Speaker:** 1*Audio in, 2*3W speaker out

## 1.3.4 Power Consumption

**Input Voltage:** DC 9~36V

**Power Consumption:** TDP 12V/1.60 A (No consumption output)

**Power Adapter:** AC to DC 12V/5A, 60 W

**Power Requirement:** Minimum power input: DC 12V/2.5A

## 1.4 Environmental Specifications

**Operating temperature:** -0 ~ 60° C (With airflow)

**Relative humidity:** 10~95% @ 40°C (non-condensing)

**Storage temperature:** -40 ~ 80°C

**Vibration loading during operation:**1g 5~500Hz

**Shock during operation:**10g peak acceleration (duration 11ms)

**EMC:** CE, FCC Class A

# 1.5 Dimensions

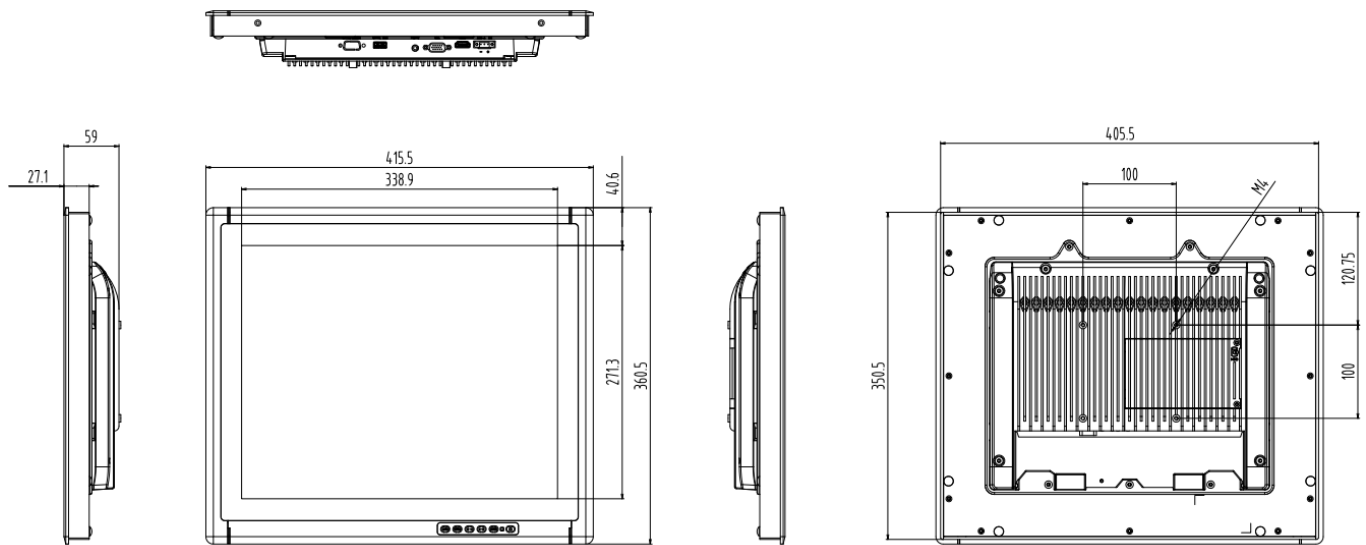**ALAD-171T Dimensions:**                                                                **Unit: mm**
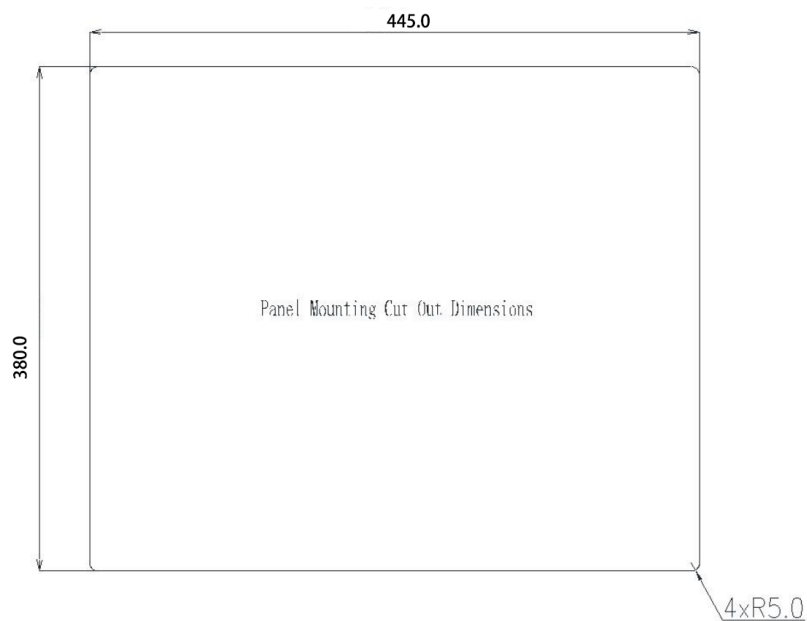


Figure 1.1



Figure 1.2

CHAPTER 2

System Setup

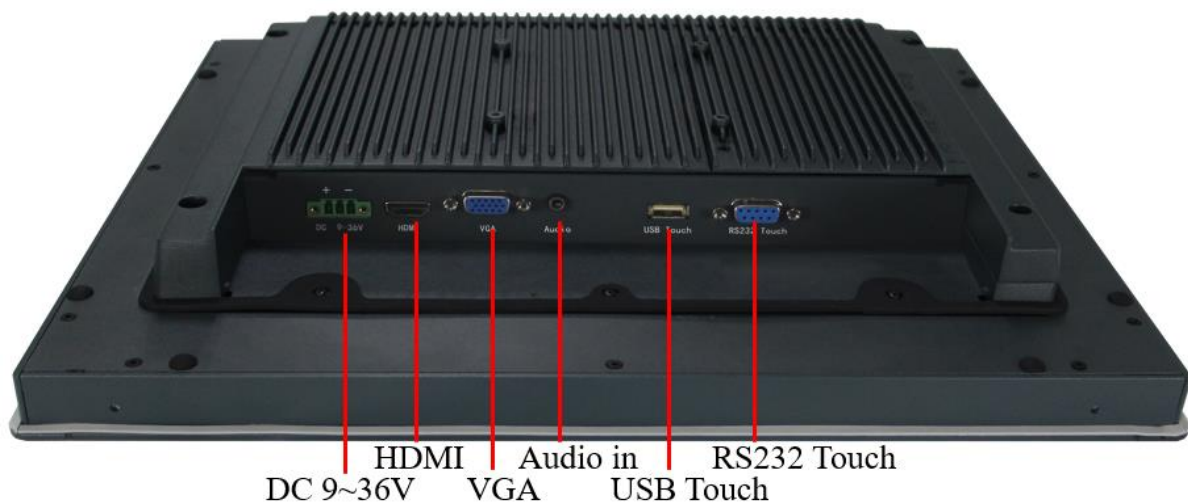## 2.1 I/O indication

**Front view:**
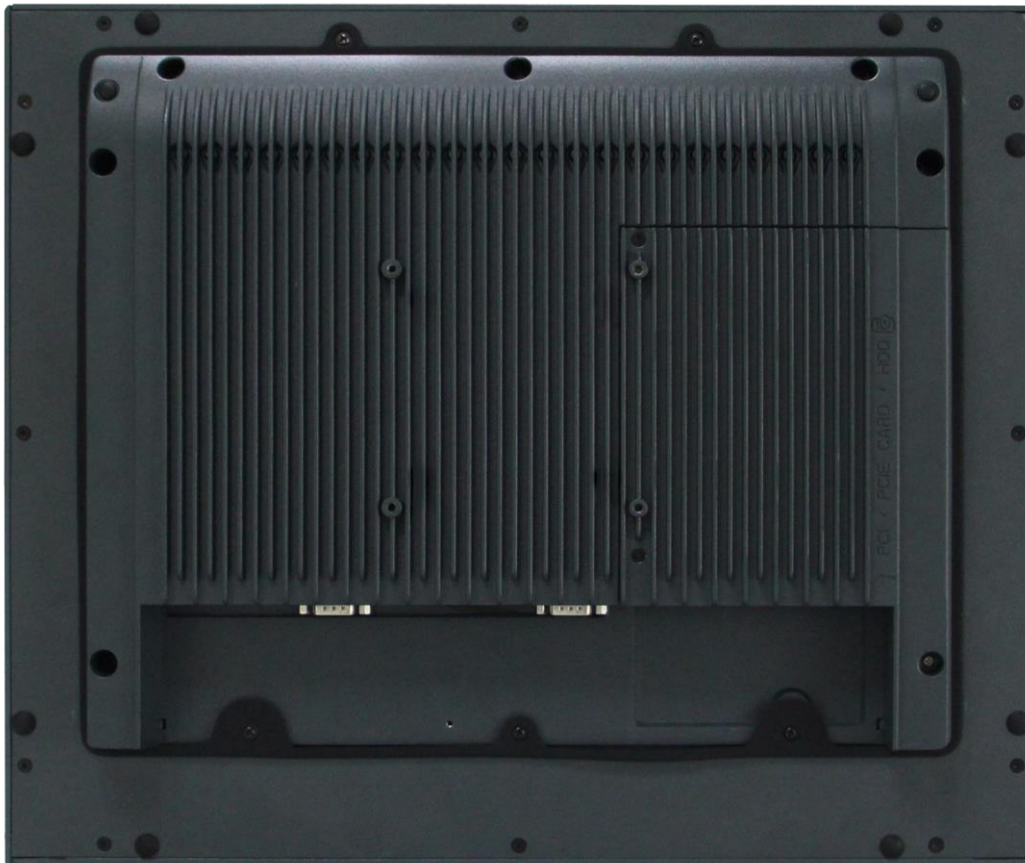


Figure 2.1

Remark: (1) OSD function keys

**Bottom view:**



HDMI    Audio in    RS232 Touch

DC 9~36V    VGA    USB Touch

Figure 2.2

**Rear view:**



Figure 2.3

## 2.1.1 Power Input Connector (DC-IN)

This 3-pin 3.81mm connector provides maximum of 60W power and is considered a low power solution. Connect a DC power cord to this connector. Use a power adapter within 9~36V DC output voltage. Using a voltage out of the range 9~36V may fail to boot the system or cause damage to the system board.



Figure 2.4 3-pin 3.81 Connector

| Table 2.1: Power Connector Pin Assignments | |
|---|---|
| Pin | Signal Name |
| 1 | +9~36V |
| 2 | NC |
| 3 | GND |

## 2.1.2 USB Connector

1 USB2.0 ports by type A connectors in the rear. Please refer to Table 2.2 for their pin assignments.
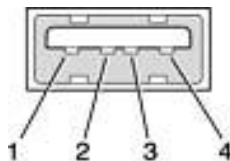


Figure 2.5 USB2.0 connector

| Table 2.2: USB2.0 Connector | |
|---|---|
| Pin | Signal name |
| 1 | VCC |
| 2 | USB_P0 |
| 3 | USB_P0+ |
| 4 | GND |

## 2.1.3 COM Connector

There is a COM which is D-sub 9-pin connector which is connected with computer RS232 serial port.
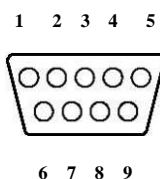


Figure 2.6 COM Connector

| Table 2.3: COM Serial Port Pin Assignments | |
|---|---|
| Pin/Type | RS232 Signal |
| 1 | NC |
| 2 | RXD |
| 3 | TXD |
| 4 | NC |
| 5 | GND |
| 6 | NC |
| 7 | NC |
| 8 | NC |
| 9 | NC |

## 2.1.4 OSD Functions (ALAD-1 1 Lines)

The OSD of the ALAD-171T Series display (1280 x 1024 resolution) was selected

to illustrate examples below:

| Button | Function | Status | Hot Key |
|--------|----------|--------|---------|
|  | Indicate operation status. | Red：off mode/ sleep mode. Green：Normal operation. | |
|  | Turn on or turn off the power. | | |
|  | Display the OSD Menu /Exit a menu of sub-menu. | | |
|  | Select video signal: VGA/HDMI；select next menu item. | | |
|  | Confirm function: Auto setting default function in VGA. | | |
|  | Select left/up menu item. | | Adjust the brightness. Press it will display brightness menu, press it again will up brightness, and press  will down brightness |
|  | Select right/down menu item. | | Adjust the contrast. Press it will display contrast menu,press it again will down contrast, and press  will up contrast. |



Figure 2.7 OSD key

## 2.1.5 OSD Setting

◆**Signal source input**



Figure 2.8

1) Press the <signal source>button to select the input mode;

2) Press [SOURCE] to shift the cursor

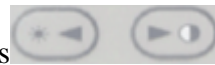3) Press "AUTO" button to select signal channel

◆**Picture**

Press menu button to display the main menu

1) Press [◄◄] [►►] to select picture

2) Press [◄◄] [►►] to adjust the option, and then press [◄◄] [►►] to adjust the value

3) Press "Menu" button to return to the previous menu, press "Menu" button to exit the present menu
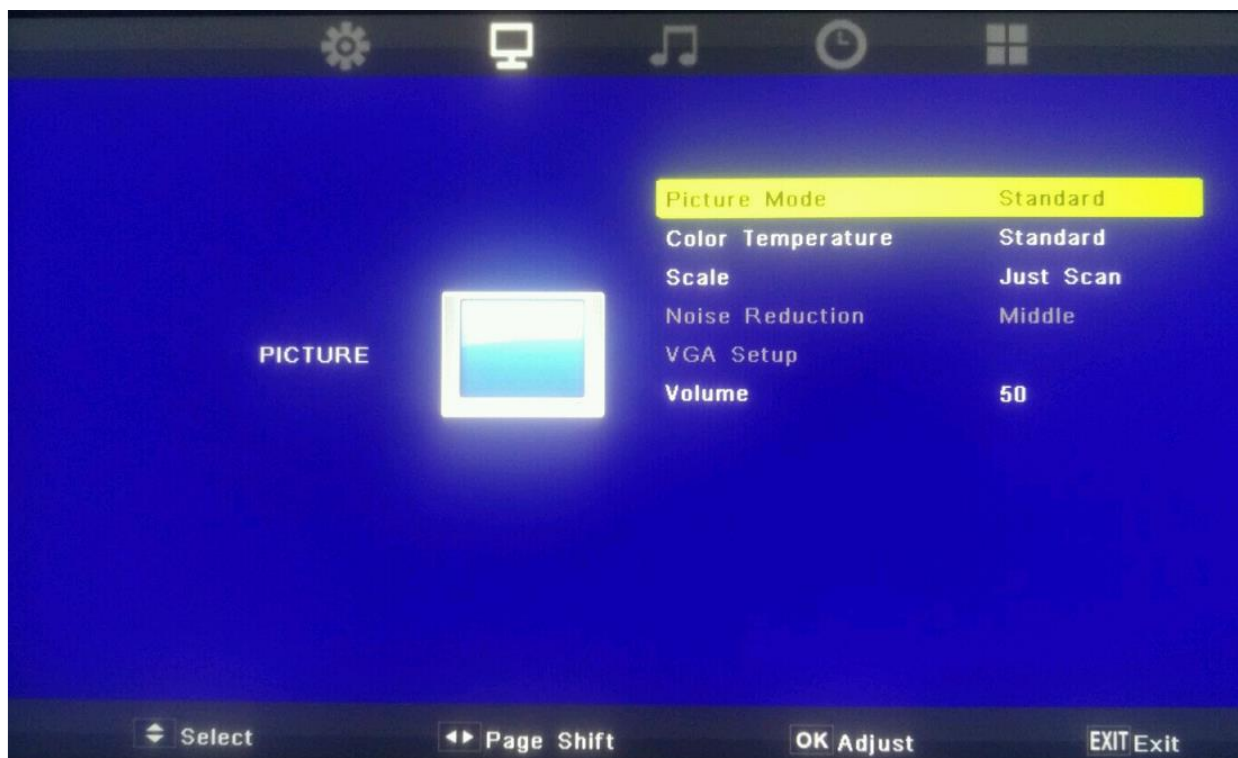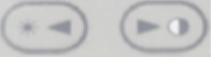


Figure 2.9

## ◆Sound mode

Press [icons] to select sound mode (user, standard, music, movie, sport).

(Treble or bass can be applicable in the user mode)

## ◆Treble:

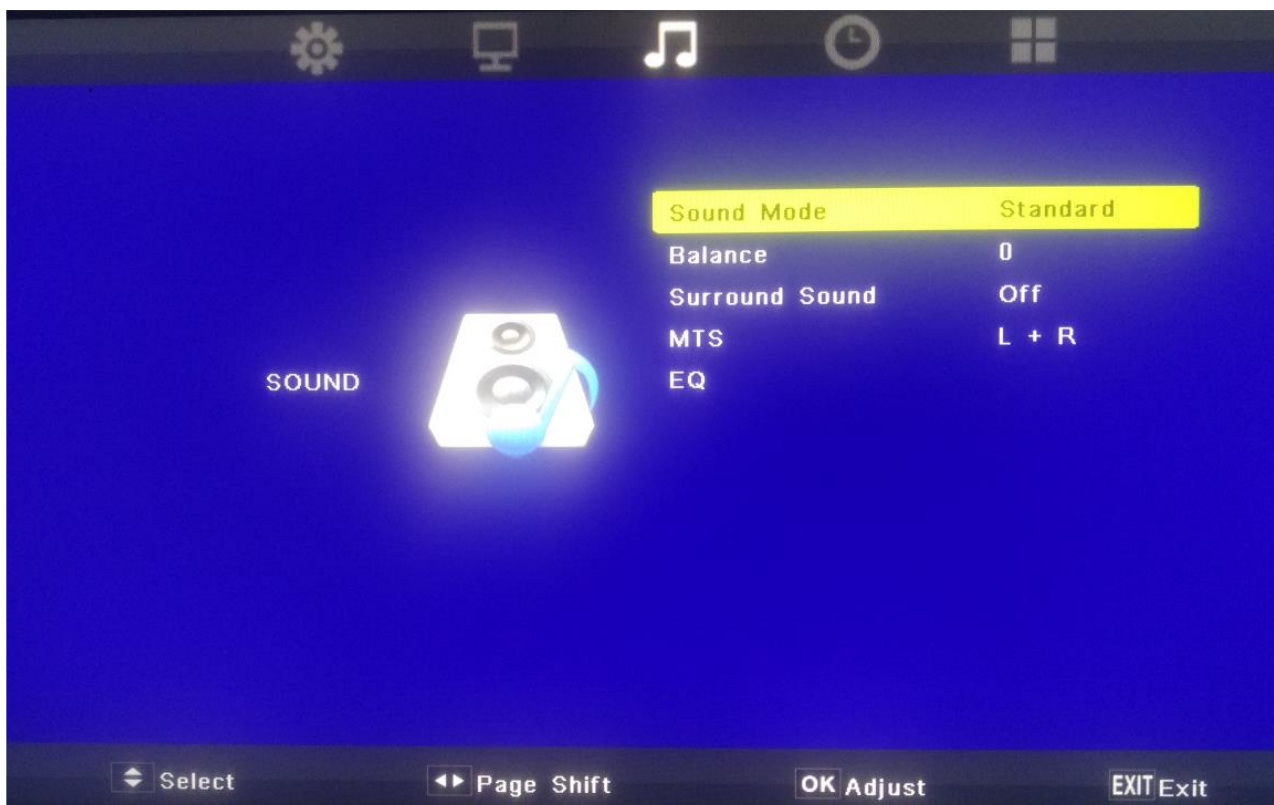Adjust the treble value to the best.

## ◆Bass:

Adjust the bass val.



Figure 2.10

## ◆Sleep time:

Turn off "Monitor" or select "Monitor" enter in sleeping time.

**Note: The time is the setup complete to the begin sleeping, last minute system will prompt "press any key to cancel", make sure whether you need to turn off "Monitor"; the system will set to off automatic at the same time.**

## ◆Auto sleep:

Turn off or select "Monitor" to enter in sleeping automatically.

**Note: The time is "Monitor" sequence playing time, and have no operating time**

◆**OSD time:**

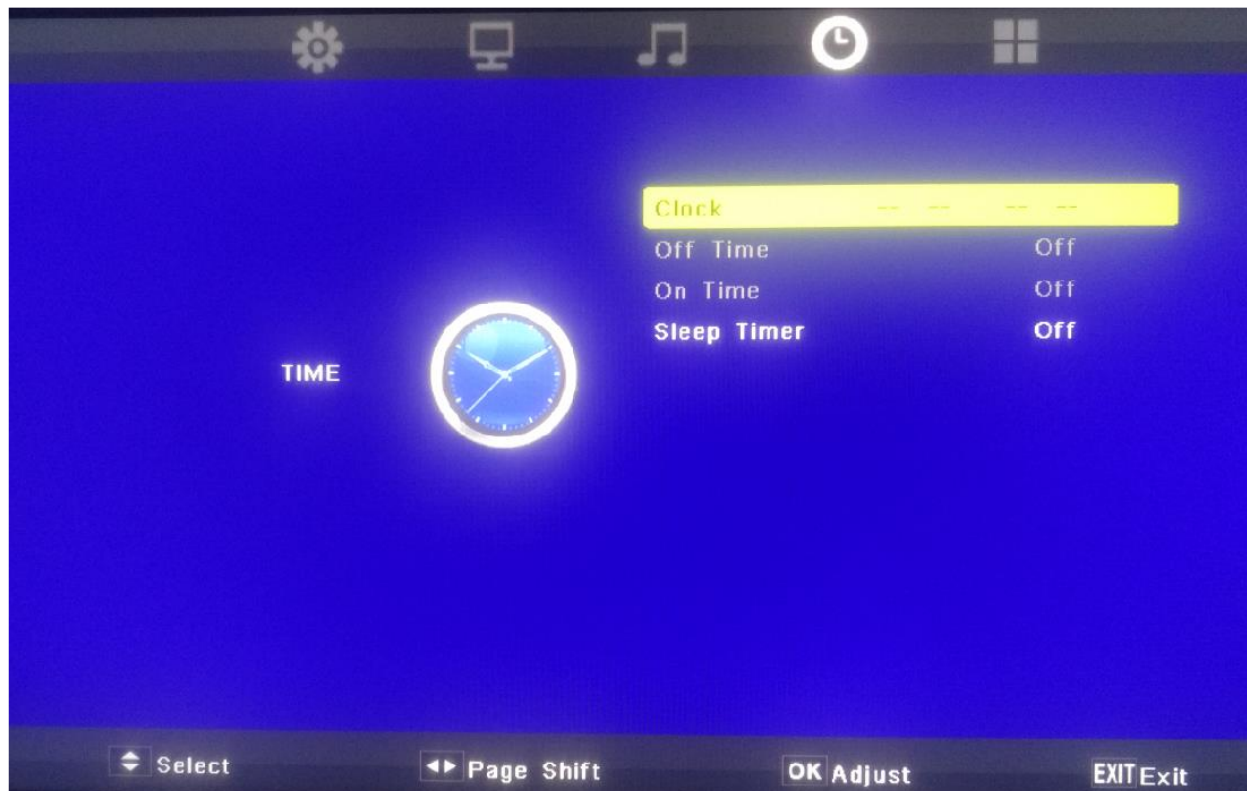Display the time when menu have no operating.



Figure 2.11

◆**OSD language:**

Sets the present OSD language.

◆**Scale mode:**

Selects the scale mode of the picture.

◆**Blue screen:**

No signal display blue or black screen.

◆**Key lock:**

Locks the key on "Monitor" panel, avoid the unexpected operation.

◆**Reset:**
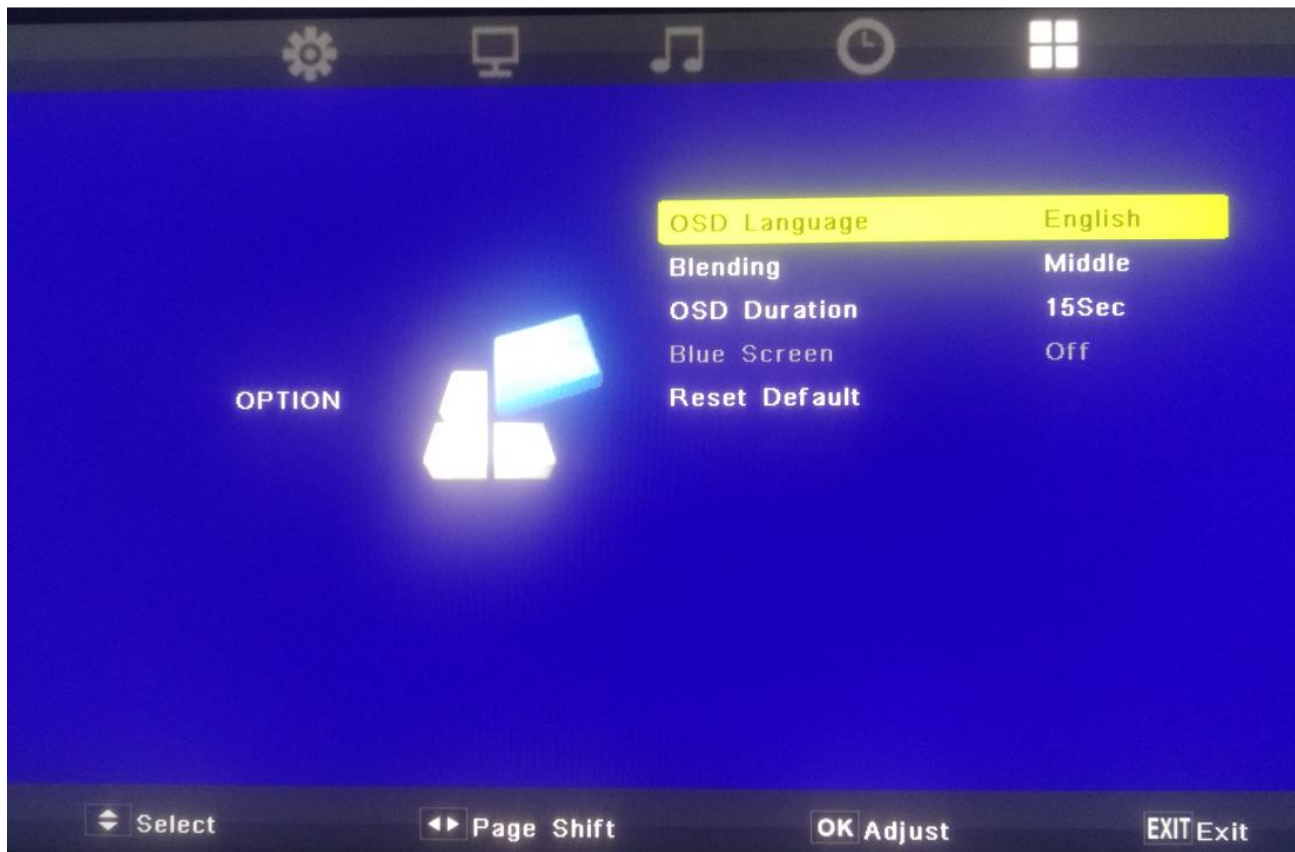
Return to the factory setting.

Figure 2.12

## 2.2 Touch Drivers

It is available online at the JHCTECH website as follows:

http://www.jhctech.com.cn

## 2.3 Installation

### 2.3.1 Panel Mount

Step 1. Install the panel PC into the panel opening.

Figure 2.13

Step 2. Pull out the 4 clamps from the holes around the two sides of the bezel.



Figure 2.14

Step 3. Insert the screws into each clamp and fasten them.

Figure 2.15

## 2.4 Packing List

◆1 x VGA cable 15P 1.8 meter

◆1 x HDMI Cable 1.8 meter（optional）

◆1 x USB-A to USB-A 1.8 meter

◆1 x DC 12V/5A Power Adapter

◆1 x CD-ROM for Touch Driver