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Introduction

Thank you for purchasing TRENDnet KVM switch. KVM switch can save you MONEY, TIME, SPACE, and UTILITY FEE by controlling multiple PCs with one set of Keyboard, Mouse and VGA Monitor.

This KVM switch is loaded with features such as 19" Rack Mount Size, Stackable (Daisy-Chain) up to eight Switches, On Screen Display (OSD) Menu, Password security, Search PC by Name, Hot-Key Control, Front Panel Push Buttons, and Auto Scan. It also has complete keyboard and mouse emulation for simultaneous PCs boot-up process.

Features

- ✍✍ 19" rack mount size design.
- ✍✍ Support Microsoft Intellimouse, Microsoft Intellimouse Explorer, Logitech Net Mouse or the other fully compatible MS mouse.
- ✍✍ Support DOS, Win3.X, Win95/98/2000/ME, WinNT, Netware, Unix, Linux and more.
- ✍✍ Hot Plug - Add PCs or Remove Connected PCs for Maintenance without Powering Down the KVM Switch or other PCs.
- ✍✍ Very High Video Quality - Up To 1920X1440, Bandwidth: 200MHz
- ✍✍ No Software Required - easy PC selection via On Screen Display Menu, Push Buttons, or Hot Keys
- ✍✍ Eight characters password protection
- ✍✍ Auto Scan Mode for monitoring PCs with flexible Scan time from 5~99 seconds
- ✍✍ Keyboard status restored when switching PCs
- ✍✍ Bank and Port Number LED Display for easy monitoring
- ✍✍ Buzzer sound for switching port confirmation.
- ✍✍ Using Standard Keyboard, VGA, and Mouse cables.
- ✍✍ Dedicated Daisy-chain port
- ✍✍ Auto-detect daisy-chain bank

Package Contents

Model No.: TK-400R

4 port KVM Switch	1 PCS
User's Guide	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
Daisy Chain Cable	1 SET

Model No.: TK-800R

8 port KVM Switch	1 PCS
User's Guide	1 PCS
AC to DC Power Adapter	1 PCS

| Rack Mount Kit | 1 SET |
| Daisy Chain Cable | 1 SET |

Model No.: TK-1600R

16 port KVM Switch	1 PCS
User's Guide	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
Daisy Chain Cable	1 SET

Technical Specifications

Model No.	TK-400R	TK-800R	TK-1600R
PC Port	4	8	16
Console Port	1	1	1
PC Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Console Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Daisy-Chain Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
PC selection	On Screen Display Menu, Hot Key, Push Button		
7 segment LED	One Bank LED, Two PC Port LEDs		
On Screen Display Control	Yes		
Auto Scan Intervals	5~99 Sec.		
Keyboard Emulation	PS2		
Mouse Emulation	PS2		
VGA Resolution	1920X1440		
Bandwidth	200MHz		
Daisy Chain MAX Level	8 levels		
Housing	Metal		
Power Adapter	DC 12V 1A or DC 9V 1A		

Operation Temperature	0~40?		
Storage Temperature	-20 ~ 60?		
Humidity	0~80%, Non-Condensing		
Size / Unit Height	19" Rack Mount / 1RU	19" Rack Mount / 1RU	19" Rack Mount/ 2RU
Weight (kg)	1.5kg	2.2kg	3.5kg
Dimension (cm)	41(L) X 16.5(W) X 4.7(H)	41(L) X 16.5(W) X 4.7(H)	41(L) X 22.5(W) X 8.4(H)

System Requirements

Specifications:

Model No.	TK-400R	TK-800R	TK-1600R
For Console Port	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse
For Computer Port	4 HDB 15 pin male-to-male VGA cables 4 PS/2 cables male-to-male for Keyboards 4 PS/2 cables male-to-male for Mouse	8 HDB 15 pin male-to-male VGA cables 8 PS/2 cables male-to-male for Keyboards 8 PS/2 cables male-to-male for Mouse	16 HDB 15 pin male to male VGA cables 16 PS/2 cables male-to-male for Keyboards 16 PS/2 cables male-to-male for Mouse

Cable Connector Diagrams

PS/2 Cable:

Mini Din 6 pin Male to Male

VGA Cable:

HDB15 pin Male to Male

AT to PS/2 keyboard adapter:

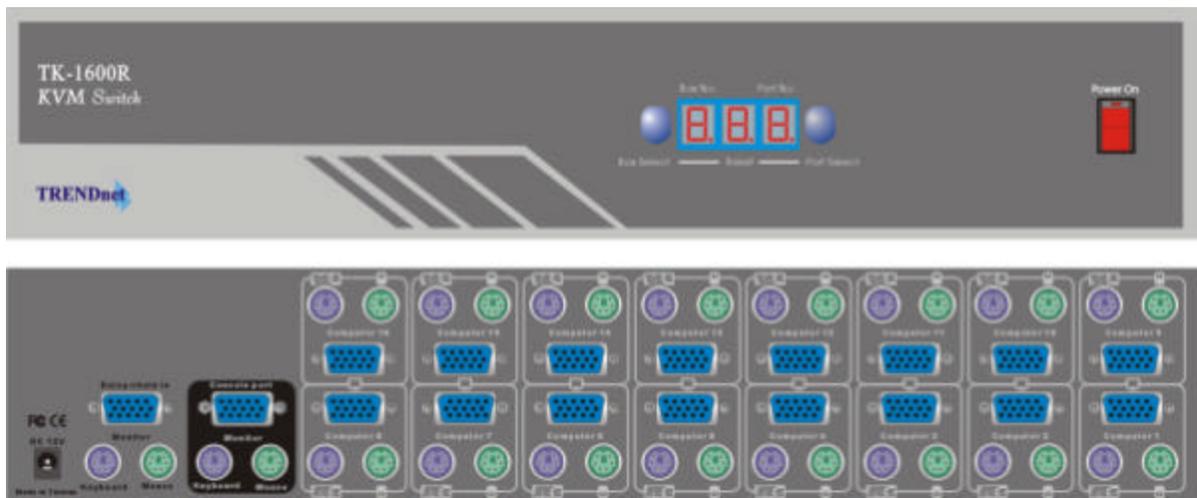Din 5 pin Female to Mini Din 6 pin Male

Product Details

Front Panel & Rear Panel of TK-400R:

Front Panel & Rear Panel of TK-800R:

Front Panel & Rear Panel of TK-1600R:

Hardware Installation

Before installing the KVM Switch, please make sure all of peripherals and computers have been turned off.

1. Install the Switch in a fairly cool and dry place; see "Technical Specifications" section for the acceptable operating temperature and humidity ranges. The installation site must be free from strong electromagnetic field generators (such as motors), vibration, dust, and direct exposure to sunlight. Install the Switch on a sturdy, level surface that can support its weight, or in a standard EIA19" equipment rack. To mount the Switch on the rack, install the included mounting brackets to the sides of the Switch, secure them with the screws, and then mount the Switch to the rack with the hardware provided by the rack manufacturer.
2. Connect the Power Adapter to the power outlet and then connect the power connector to Switch's DC 12V jack.
3. Connect the Keyboard, VGA, and Mouse cables to the KVM Switch's "Computer Ports" (starts from "Computer 1" port) and the Computers' Keyboard, VGA, and Mouse ports.
4. Connect the Keyboard, VGA monitor, and Mouse to the KVM Switch's "Console Port".
5. Power on the KVM Switch and the computers.

Daisy-Chain

You can daisy-chain eight TK -####R series KVM Switches together. To connect more then one TK-####R series KVM Switches together, turn off all computers and Switches, use the included daisy-chain cable, connect one end of the connectors to the Switches "Daisy-Chain In" Port and then connect the other end of the connectors to the other Switches "Console Port".

Note: Please don't press the KVM Switch's "Port Select" and "Bank Select" buttons or run hot-key function when the computers are booting up.

Usage

The power on state of the KVM switch:

After powering on the KVM switch, the LED display shows "Bank No." 1 (solid) and "Port No." 01 (Flashing). If there is a computer connected to "Computer 1" port, the Monitor shows the status of Computer 1 with a "status bar" asking you to enter the password. **The default password is eight zeros (i.e. 00000000)**. Please key in eight zeros (by using the number keys above the letter keys) and press "Enter", the Switch will beep once, confirming the login, and the "Port No." 01 LEDs will stop flashing.

If "Computer 1" port is not connected to a computer, the monitor will be blank, press the "Port Select" button once to select the next channel (port). Keep pushing the button until the connected computer is selecte d and you can then enter the password to login.

Note: Please do not change the password until you are familiar with the operation of OSD Menu. After

setting the new password, the eight-zero default password will no longer work. If you forget the password, you need to send the unit back to your distributor for factory reset. Performing the factory reset will set all the settings in the Switch back to their default values.
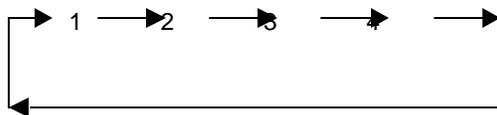
The Push Buttons

"Port Select" button:

Press this button once to move from one "Computer Port" to the next (see the illustrations below).

If the Switches are daisy-chain together, only the Master KVM Switch's "Port Select" button is functional. The Master KVM Switch is the first Switch of the daisy-chain, it has Keyboard, Monitor, and Mouse connected to its "Console Port". To select different Computer Port on the *Slave Switch,* from the *Master Switch*, push the "Bank Select" button to select the desired *Slave Switch* (Bank) and then push the "Port Select" button to select the Computer Port. The "Bank No." and "Port No." LED Display on the *Master Switch* will be the same as the LED Display on the selected *Slave Switch*.

TK-400R (4 Port)

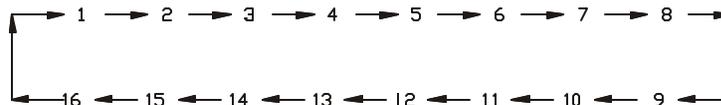*"Port selection sequence", you can keep pushing the button to cycle through every port on the Switch.*

TK-800R (8 Port)

TK-1600R (16 Port)

"Port No." LED Indication:

When the selected Computer Port is disconnected from the PC or if the PC is not powered up, the Switch's "Port No." LED will flash. When the selected Computer Port has a PC Connected to it and the PC is powered on, the selected "Port No." LED will stay solid.

If the Switches are Daisy-Chain together and the bank selection is at the *Mater KVM Switch* (Bank 1), only the Master Switch's Port No. LED will display numbers. All other *Slave Switches'* "Port No." LED will show **-- --** .

If you push the "Bank Select" button on the Master Switch and select one of the *Slave Switches*, the "Port No." LED will display the Port Number of a port that has a computer online.

"Bank Select" button:

After daisy-chaining KVM Switches together, you can push the "Bank-Select" button on the *Master KVM Switch* to select different Switch Bank on the daisy-chain. The Master KVM Switch is the first Switch of the daisy-chain, it has Keyboard, Monitor, and Mouse connect to its "Console Port". After selecting the desired "Bank", push the "Port Select" button to select the desired "Computer Port".
Note: In Daisy-Chain mode, only the Mater Switch's Bank and Port Select buttons are functional.

"Bank No." LED Indication:

When only one Switch is installed, this LED shows **1**. If the Switches are daisy-chain together and the Bank selection is at Bank 1 (The Master Switch), the "Bank No." LED on the Master Switch will show **1**, the second Switch's "Bank No." LED will show **2**, the third Switch's "Port No." LED will show **3…** and so forth.
After pushing the "Bank Select" button to select the *Slave Switch*, the "Bank No." and "Port No." LED display on the *Master Switch* will be the same as the LED display on the selected *Slave Switch*.

RESET

In rare occasions the Switch does not "recognize" the connected PCs properly and performing a reset (same as power off and then on) can solve the problem. To Reset the KVM Switch, press "Bank Select" and 'Port Select" buttons simultaneously and then release the buttons. The Switch will beep once, the LED display shows **-- -- --**, the Switch then beeps again, and the LED display shows **1 01**. If the "Computer 1" port is not connected to a live PC, the "Port No." LED will keep flashing, push the "Port Select" button to select the next available PC. After resetting the Switch, you will need to enter the password to login the console.
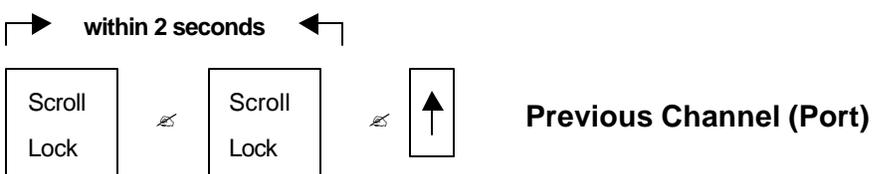When the Switches are daisy-chain together, resetting the *Master Switch* is the same procedure as described above. To reset the *Slave Switch*, press the *Slave Switch's* Bank Select and Port Select buttons at the same time and then release the buttons, the LED display shows **– – --**, w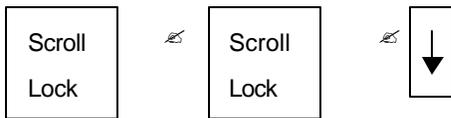ith the "Port No." LED (**-- --**) flashing. After that, reset *Master Switch*, the Bank Selection will switch to the *Master Switch* (Bank 1), and you can enter the password to login the console.

Keyboard Hot-Key Commands:

You can also conveniently command KVM Switch through simple key sequences. To send commands to KVM Switch, **the "SCROLL LOCK" key must be pressed twice within 2 seconds.** You will hear a beep, confirming that the keyboard is in **hot-key** mode. If you did not press any command key within 2 seconds after entering the hot-key mode, the keyboard will return to regular Operation System Control mode.
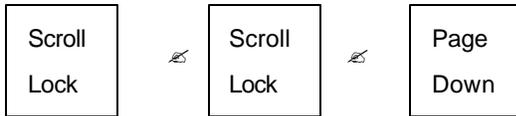
Hot-Key Commands:

within 2 seconds

| Scroll Lock | ✍ | Scroll Lock | ✍ | ↑ | **Previous Channel (Port)** |

Scroll Lock	✍ Scroll Lock	✍ ↓	**Next Channel (Port)**

Note: You can also press the "up arrow key" or "down arrow key" again within 2 seconds from the last stroke command to select the next or previous port.
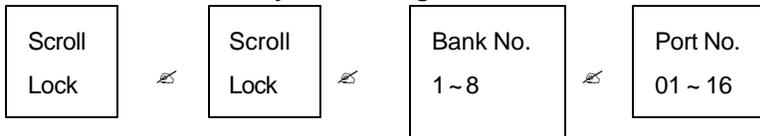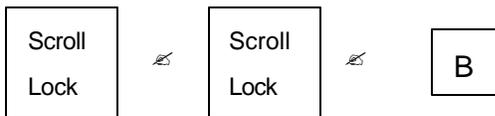
Scroll Lock	✍ Scroll Lock	✍ Page Up	**Previous Bank**

Scroll Lock	✍ Scroll Lock	✍ Page Down	**Next Bank**

To select PC Port in Daisy-Chain Configuration:

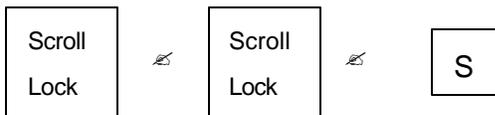|				Note:
Scroll Lock	✍ Scroll Lock	✍ Bank No. 1 ~ 8	✍ Port No. 01 ~ 16	**Port No. =** 01 ~ 04 (TK-400R) 01 ~ 08 (TK-800R) 01 ~ 16 (TK-1600R)

Note: Please use the number keys above the letter keys on the keyboard to enter the bank and port numbers.
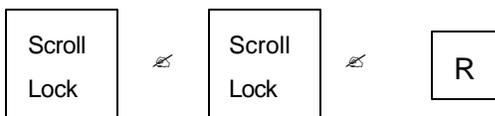
Scroll Lock	✍ Scroll Lock	✍ B	**Beep Sound Off / On** (for auto-scan mode only)

Note: The default is Beep Sound On

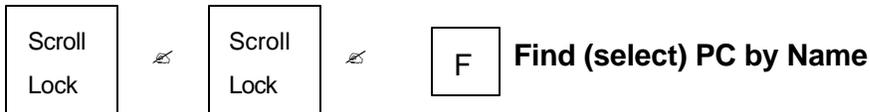|			
Scroll Lock	✍ Scroll Lock	✍ S	**Auto Scan Mode**

Note: In Auto Scan Mode, the Switch will automatically scan from one computer to the other. The Switch will "beep" once when changing from one computer port to the next. You can turn the beeping sound off or on by pressing "Scroll Lock" key twice and then press "B". During the scan, the Switch's LEDs will display the "Port No." that it is currently monitoring. The default scan interval time is 10 seconds. You can change the time interval in OSD menu (see On Screen Display Operation below). In daisy-chain configuration, it is possible to set different scan time interval for each Switch. When the Switch is in Auto Scan Mode, press any key to cancel the Auto Scan Mode and the Monitor will show the screen of the last scanned PC.

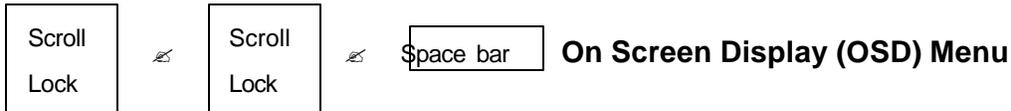|			
Scroll Lock	✍ Scroll Lock	✍ R	**Reset to OSD default value**

Note: Not including password

Note: During the ROM Flash, you will see ROM REFLASH *flashing on the screen and the Master Switch's "Port No." LED shows "-- -- ". The ROM Reflash process takes about 55 seconds.*

| Scroll Lock | ✐ | Scroll Lock | ✐ | F | **Find (select) PC by Name** |

Note: After entering the "Find" command, the "Find" icon appears on the
screen. Enter the first few letters of the PC's name that you wish to find

F I N D :

and hit "Enter", the "Find" icon will display the first Computer on the Switch that matches the letters ,
with Bank Number and Port Number on the left hand side of the Computer Name. Press the "Up
Arrow" or "Down Arrow" key and see if there is more computer matches the letters. After finding the
desired Computer Name, hit "Enter" to view that computer. If the selected computer is not online, the
Switch will not switch to that Computer Port. If the computer is online and it is the computer that you
are looking for, press "Esc" key to cancel the "Find" mode, otherwise, use the arrow keys to select
the next computer.

| Scroll Lock | ✐ | Scroll Lock | ✐ | Space bar | **On Screen Display (OSD) Menu** |

On Screen Display Operation

After entering the OSD Menu, the following small window (taken from TK-1600R) appears on the monitor.

BANK : 1

0		SYSTEM	0	☼	SYSTEM	02
0	☼	SYSTEM	0	☼	SYSTEM	04
0	☼	SYSTEM	0		SYSTEM	06
0		SYSTEM	0	☼	SYSTEM	08
0		SYSTEM	1		SYSTEM	10
1	☼	SYSTEM	1	☼	SYSTEM	12
1		SYSTEM	1	☼	SYSTEM	14
1	☼	SYSTEM	1		SYSTEM	16

OSD:**10**SEC.   CHANGE PASSWORD

SCAN:**1 0** SEC.   CONSOLE   **ON**/OFF

ESC : QUIT

TAB : NEXT   INSERT :EDIT

⌐/⌐ : SELECT PORT

PgDn/PgUp: BANK SELECT

a.   The 1ST line is Bank No., press "Page Up" or "Page Down" key to select the "Bank" (Switch).

b.   The 2nd line is the PC Name list (the number on the left is Port Number). You will find the Port Number listed from 01 to 16 depends on how many ports are on the KVM Switch. You can define your own PC Name (maximum 10 characters), please see instructions below. The factory default PC Name for each port is SYSTEM ##, where ## is the Port Number. The sun symbol " ☼ " on the left of the PC Name means this PC is online.

Use up arrow key " ⬆ " or down arrow key " ⬇ " to select the destination PC Name. You will see a hand on the selected Computer Name's right hand side, pointing to the selected computer name. After you have selected the desired PC Port, you can press the ENTER Key to switch to the selected PC Port. After finding the PC that you are looking for, hit "Esc" key to cancel the OSD operation.

Use " PgUp " key or " PgDn" key for selecting previous or next Bank Number (Switch Number).
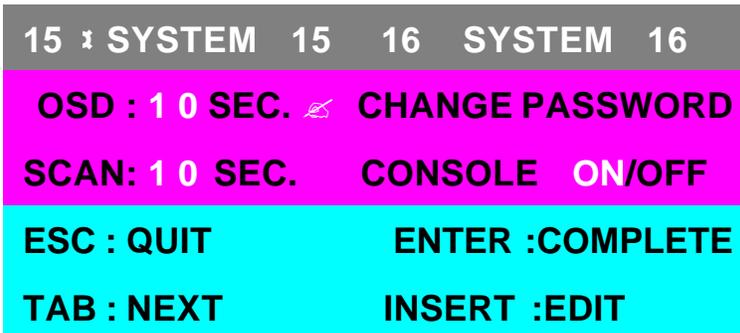
Changing Computer Name

BANK : 1

| 01 | SYSTEM | 01 | 02 | ⚡SYS⋮EM | 02 | ✍ |

After selecting the desired PC Name, press " INS" key to edit PC name. The name can be up to 10 characters long (please use only numbers and/or letters). After finishing the name edit, press "Enter " key to save the information.

Navigating the OSD Menu

Use " Tab " key to select different Feature in OSD Menu. There are five features in OSD Menu; Computer Name, OSD Time, SCAN Interval, CHANGE PASSWORD, and CONSOLE ON/OFF.

15 ⚡SYSTEM 15	16 SYSTEM 16
OSD : 1 0 SEC. ✍	CHANGE PASSWORD
SCAN: 1 0 SEC.	CONSOLE ON/OFF
ESC : QUIT	ENTER :COMPLETE
TAB : NEXT	INSERT :EDIT

a. The " **OSD**: 10 SEC" means that the OSD Menu last 10 seconds. After entering the OSD Menu, if no command is entered within 10 seconds, the Menu will disappear. You can modify this number from 05 to 99 seconds. To change the OSD time, use "Tab" key to select the OSD, hit "Insert", key in the desired time, and then hit "Enter" to save. The factory default value is 10 seconds.

b. The "**SCAN** TIME" is the scan interval time (from port to the other). The default interval time is 10 seconds and the maximum interval time is 99 seconds. To change the SCAN interval time, use "Tab" key to select SCAN, hit "Insert", key in the desired time, and then hit "Enter" to save. The default scan interval time is 10 seconds.

c. To change the password, use "Tab" key to select "**CHANGE PASSWORD**", hit "Enter", enter the current password and hit "Enter", the "new password window" pops up.

ENTER PASSWORD :⋮
ESC : QUIT   ENTER :

10

ENTER NEW PASSWORD : ⏐
ESC : QUIT   **ENTER : COMPLETE**

Enter the new password (maximum 8 characters; please use only numbers and/or letters) and hit "Enter", the "retype new password" widow appears ".

RETYPE NEW PASSWORD : ⏐
ESC : QUIT   **ENTER : COMPLETE**

Retype the new password and hit "Enter". The screen will show "New Password Complete". Hit "Esc" to go back to OSD Menu. Please note that the default password is 8 zeros (i.e. 00000000).

NEW PASSWORD COMPLETE
ESC : QUIT   **ENTER : COMPLETE**

d. The "**CONSOLE ON/OFF**" feature allows you to turn off (exit) the console. To do so, use "Tab" key to select CONSOLE ON/OFF, use left arrow (✍) or right arrow (✍) key to select OFF, and then hit "Esc". When the CONSOLE is off, you need to enter the correct password to enter the CONSOLE. The CONSOLE will stay ON until it is turned OFF. Performing RESET and Power off the Switch also turns the CONSOLE off. When the CONSOLE is on, any user can use the console/OSD and change the Switch's configuration (except changing the password). It is recommended that you turn the CONSOLE off after you have finished configuring the KVM Switch.

e. After entering the CONSOLE (by entering the correct password), you will see the PC Name displayed on the monitor. You can hit "Esc" key to remove the name displayed on the screen.

102	¤ SYSTEM 02

Troubleshooting

Precautions:

a. Ensure that all cables are well seated.

b. Label all cables properly to avoid confusion.

c. The Power Jack polarity is center positive and the power adapter output is DC12V, 1A (or DC9V, 1A).

d. Don't press any keys on the keyboard while the computer is booting up. Otherwise, it might cause the keyboard error or keyboard is not detecte d error.

1. The computer boot up fine, but keyboard doesn't work.

✍✍ Make sure the keyboard works when directly plugged into the computer.

✍✍ Try a different keyboard, but use only 101, 102 or 104-key keyboard.

2. **The Mouse is not detected during PC boot up.**

✍✍ Make sure the mouse works when directly plugged into the computer.

✍✍ Make sure the mouse is a true PS/2 mouse. A combo mouse will work, as long as it is set to PS/2 mode and the correct adapter was used.

✍✍ Avoid moving the mouse or pressing the mouse's buttons when switching from port to port.

✍✍ Avoid switching ports when the PC is shutting down.

✍✍ When you switch from one PC port to another PC port, the best scan time interval is 5 seconds or more. Normally, it takes a couple of seconds for the VGA monitor changes from one resolution mode to another. So, it is not recommended to set the scan interval time to below 5 seconds.

CERTIFICATIONS

FCC

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received. Including interference that may cause undesired operation.

CE – Certificate

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B