

DUKANE

ITP65A

Interactive Touch Panel

User Guide for Windows and Mac



Notes

Warning

- This product contains high voltage; the user should not open the cabinet. Non-professional maintenance personnel should not try to repair this product.
- For safety, this product should be connected to an electrical outlet with a protective earth ground connection (3 prong plug) .

Important Note

- Clean with a soft cloth and avoid rubbing any hard object on the surface. Do not place any object or tape on the panel screen.
- This product should be placed where it cannot be splashed by water or where it may be subject to rainfall. If the panel is accidentally exposed to water, immediately disconnect the power plug, dry the surfaces, and if necessary contact your dealer.
- If possible during a thunderstorm, disconnect the power plug. Also if possible, disconnect the TV antenna feed if it is being used.

General Note

- Always activate a screen saver during operation. Do not display still images with high contrast for extended periods of time, like over 2 hours. If a still image remains on the screen for a long period an after image or ghost image may be present. This is a well known phenomenon with LCD technology. In most cases the after image will disappear gradually over time after the power has been switched off.
- Also note that when using a 4:3 display format, the sides or edges of the display may have a residual image trace. Please try to avoid this mode of operation for a long time.

Warning

- To prevent injury, the equipment must be firmly attached to a stand or the wall.
- If an antenna is connected to the panel it must be isolated from grounding, otherwise it may cause fire hazard during electrical storms (use an antenna isolator between the antenna and the antenna interface of the product).

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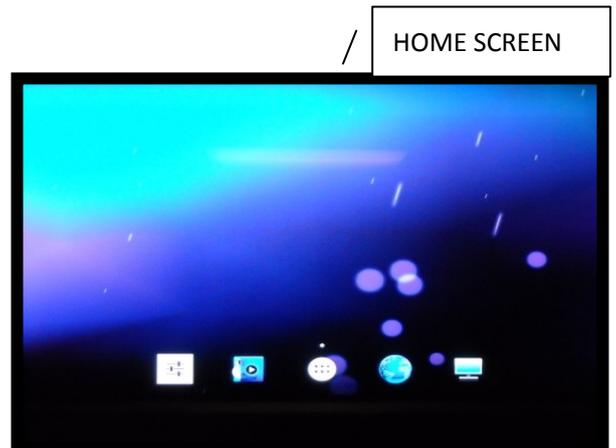
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Startup with a Windows or Mac computer

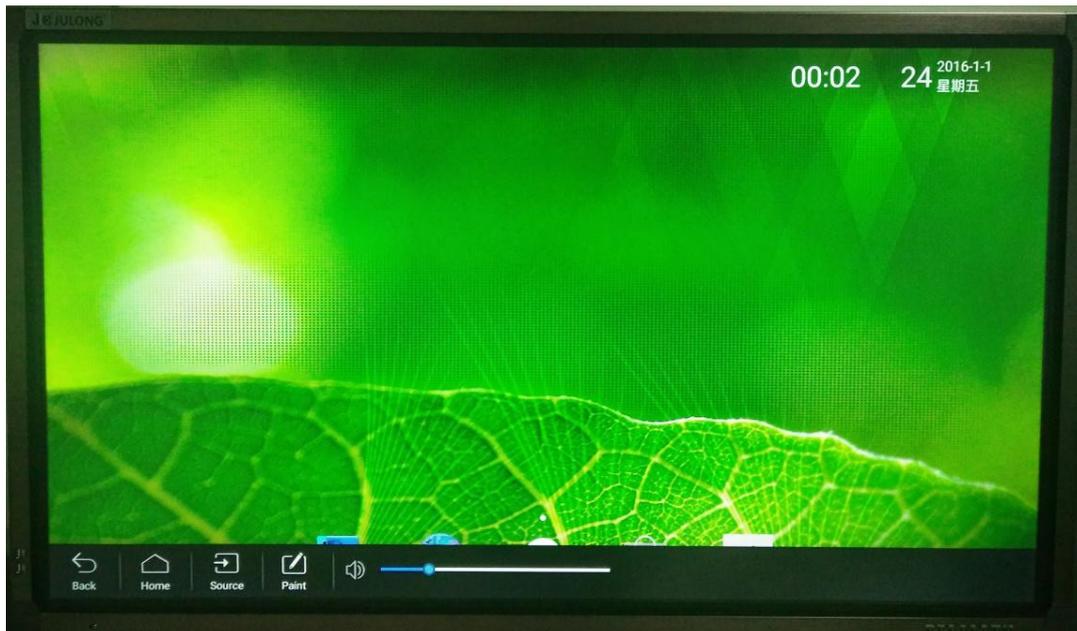
The Dukane model ITP65A can be a touch display for your PC or Mac. Access files and run the programs on your computer just like you were using your mouse. Interact with your finger for intuitive control right from the display.

1. The panel should be installed by an audio visual professional, in an upright landscape position.
2. Connect the AC power cord to the AC input on the back of the panel and connect the other end to an AC outlet.
3. Connect your PC or Mac to the panel using an HDMI or VGA cable. Connect to the HDMI1 , HDMI2 or VGA port on the back side of the panel.
4. For touch screen control connect the USB cable from the USB Type B port on the panel rear to the USB Type A port on your PC or Mac.
5. Toggle the power switch in the back of the panel to the ON position and press the POWER button on the front bezel of the panel or on the remote control.



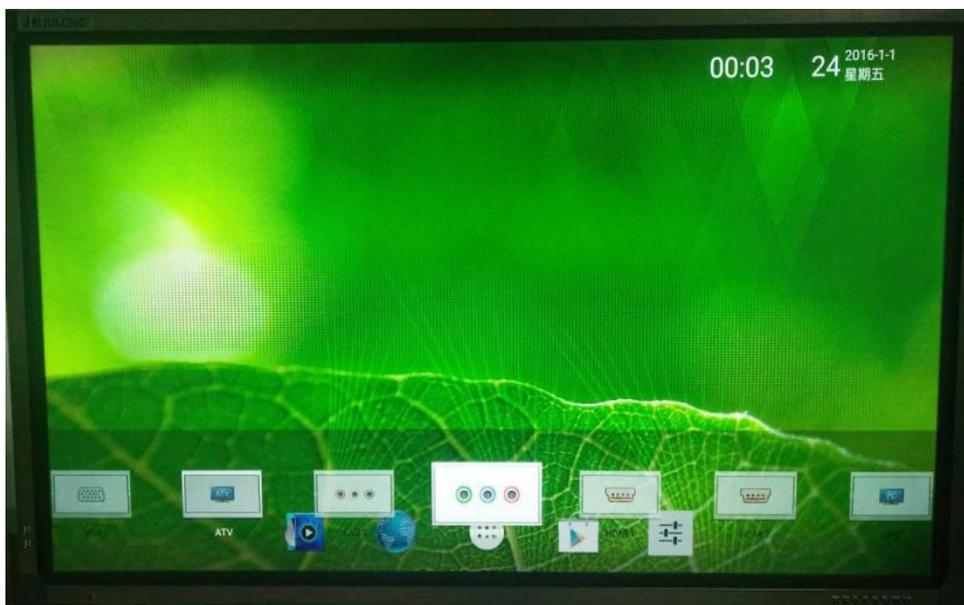
6. First the Android screen appears. Wait for the home screen to appear.
7. Turn your computer on and be sure the image is being output to the display.

8. Choose your connected source (HDMI or VGA) by pressing the **TV/AV** button on the panel bezel, or by pressing the **INPUT** button on the remote control, or by swiping up with your finger from the bottom of the screen to get the Navigation menu as shown on the following image.



On the Navigation menu (shown above) select the Source icon  by double tapping with your finger.

The Source row will appear.



The source icons appear as;

VGA, ATV, CVBS, YPBPR1, HDMI1, HDMI2, OPS, DTV

Next touch the appropriate source icon and pull it to the center to select the desired source. Double tap

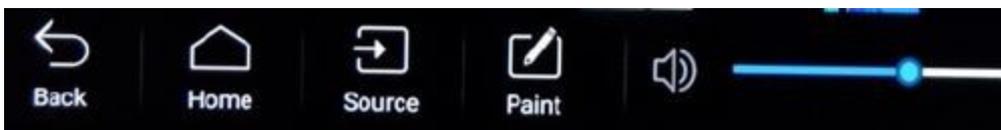
the source icon or press “OK” on the Remote.

Selection of the HDMI1 source is shown below. HDMI2 or VGA as the source are other options.



9. You should now see the selected source as the panel image. Operate your computer using the touch panel as you would a mouse.

Tip; You can access the panel Navigation menu (shown below) at any time by swiping up from the bottom of the panel screen.



General Information

Introduction

Dukane large-size Interactive Touchable LCD panels combine bright display and interactive touch technology. With this panel you can access files and run programs on your computer just like you were using your mouse. Interaction is by using your finger or stylus for intuitive control right from the display.

This panel permits immediate finger touch control through the use of an internal Android operating system. The touch sensing bezel uses an Infrared sensing system to locate multiple touch points. It does not require any initial calibration.

The panel has a bright long lasting LED backlight as its illumination source and it has an extremely rugged dark bezel.

This Interactive Touch Panel can be used in teaching, conferences, advertising, display, collaboration,

planning, and other applications. Dukane touch software is available for use with a Windows or Mac computer. A view of the software showing a world map follows.



Features

- **Interactive touch function**

The panel has an interactive 10 touch capability using an edge embedded high-speed infrared touch detection system. When it is connected to a computer, it will control the computer providing interactive operation.

- **Multi-touch function**

The panel has a built-in touch system with a multi-touch function (10 points) under a Windows Operating system. It enables the objects (in programs and pictures) to be zoomed, dragged, rotated, and resized.

- **Free calibration function**

The panel does not require any calibration. Users can plug and play without any delay for a program boot up or down loading. The default factory settings are for the Windows multi-touch mode.

- **High-quality LED screen**

For a perfect picture the panel features a high brightness, high contrast, accurately mapped, color optimization, motion and still image compensated processor. The LED backlight provides consistent brightness and long life.

- **Digital multimedia functions**

Simple operation is by plugging in a USB 2.0 standard memory stick. A user can then look at the

images, play movies, listen to music, etc. by accessing the files on the memory stick.

- **Multimedia function**

The panel has HDMI and VGA ports, so it can be used as computer monitor. It also has, USB, and composite video inputs, plus audio input / output for use with a variety of external devices. It has stereo speakers to provide sound output.

- **Remote and mouse function**

The panel can be used with an optional remote control or mouse for distant external control.

- **The touch response speed is up to 300 dots per sec.**

The high-speed touch sensor permits perfect easy writing and fast control..

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Accessories

Description	Quantity	Purpose	
Power Cord	1	Connect the panel to the 115VAC building power.	
IR Remote Control	1	Control the Touchable LCD panel from a distance	
Pointer	1	Pen for the Touchable LCD	
Pen	2	Pen for the Touchable LCD	
<i>IPBOARD</i> Software CD	1	Touch software	
Cables	1	USB and HDMI cables	Cables
Touchable LCD Information sheet	1	Note that the User Guide and other support items are available on the Dukane product web page	User Guide at http://dukaneav.com/ www.dukaneav.com/
<i>Antenna</i>	1	Short Wi-Fi antenna on panel rear	Antenna 5"

General Preparation

Using the Remote Control

Use the remote control by pointing it towards the remote sensor window located at the lower left front of the panel.

Cautions Regarding Using of Remote Control

- Do not expose the remote control to impacts or other rough treatment. In addition, do not expose the remote control to liquids, and do not place it in an area with high humidity.
- The remote control may not work properly if the remote sensor window of the panel is in direct sunlight or strong lighting. In such a case, block the external lighting or move the panel. You can also operate the remote control closer to the remote sensor window.

Installing the Batteries

For initial operation add 2 AAA batteries to the remote control. If the remote control fails to operate, replace the batteries.

1. Open the battery cover.
2. Insert two size AAA batteries. (Place the batteries with their terminals corresponding to the (+) and (-) indications in the battery compartment.
3. Replace the cover.

Precaution on battery use

Improper use of batteries can result in a leakage of chemicals and/ or explosion. Be sure of follow the instruction below.

- Place batteries with their terminals corresponding to the (+) and (-) indications.
- Different types of batteries have different characteristics. Do not mix batteries of different types.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries and/or cause old batteries to leak chemicals.
- Remove batteries as soon as they are non-operable. Chemicals that leak from batteries can cause a skin rash or damage the device. If chemical leakage is found, wipe it with a dry cloth.
- If the remote control is not used for an extended period of time, remove the batteries from the remote control.
- The batteries and the remote control should not be exposed to excessive heat such as sunshine, heaters, or fire.

Power Connection

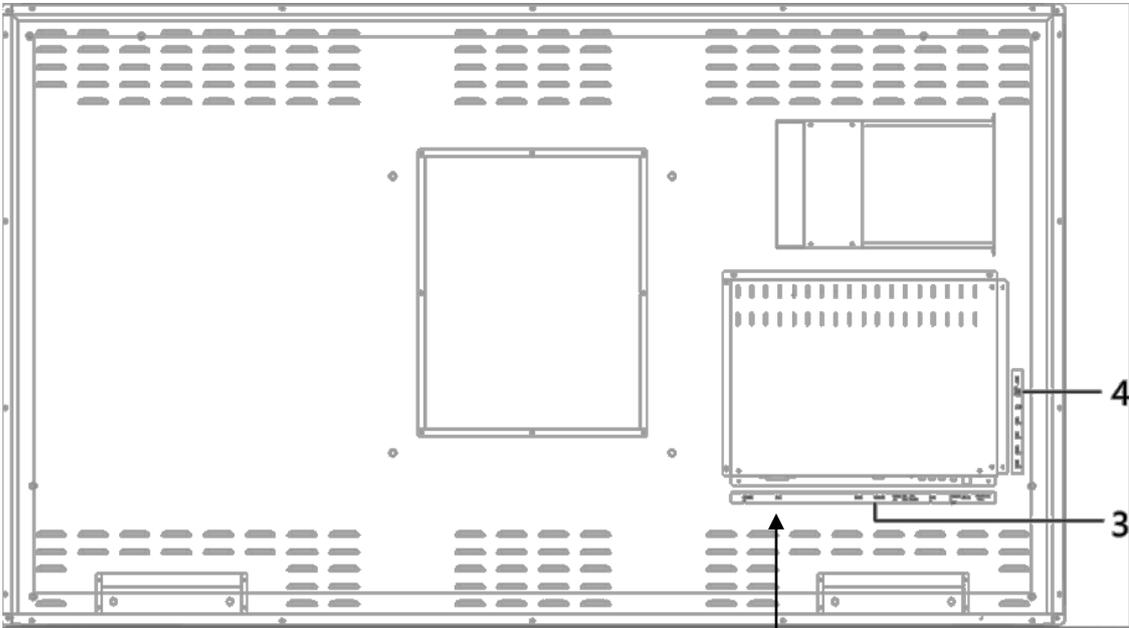
Insert the panel's AC plug into a convenient AC outlet. The panel power port is on the bottom side of the input ports unit. Normal Input voltage range: 100V ~ 240V. Frequency range: 50Hz/60Hz \pm 5%

Note: This product should be operated only from the type of power source indicated on the marking label. Unplug the AC cord from the power outlet when not using for a long period of time.

Identification of Components

Panel (Front View)

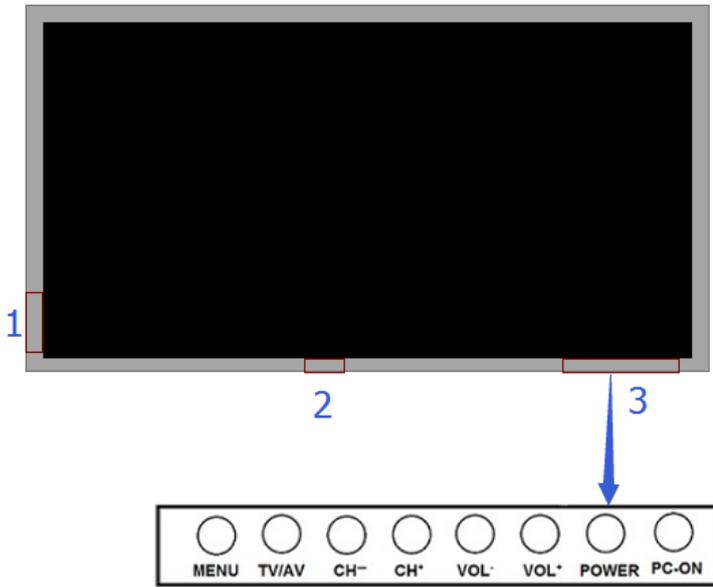
Front view



Rear view

Power receptacle and switch

Note: The power cord receptacle and the power rocker switch are on the bottom left side of strip 3.



1. USB ports

2. Indicator

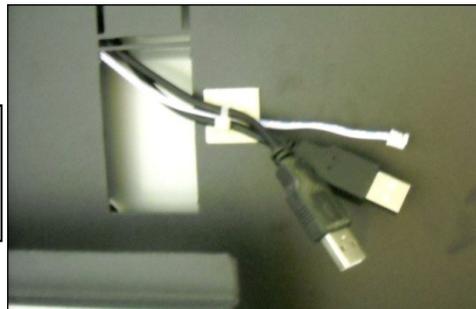
3. Keypad.

USB Ports; At location 1 on the front panel bezel lower left.



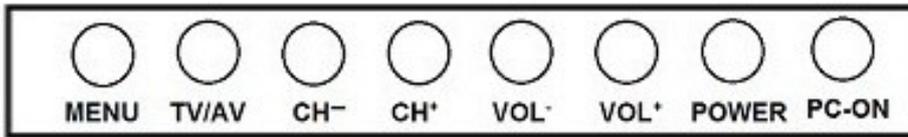
These 2 front bezel USB ports are routed to the 2 open USB cables on the rear of the panel. The cables have USB Type A connectors. They are used for connection to an optional computer if it is installed. They may be connected via a jumper USB extension cable to any of the USB panel ports or to an external computer.

USB cables on rear of the panel.



When an optional computer is included as part of the panel , it uses the OPS (Open Pluggable Specification) attachment standard.

Bezel Keypad Buttons; At bottom right front bezel on the panel.



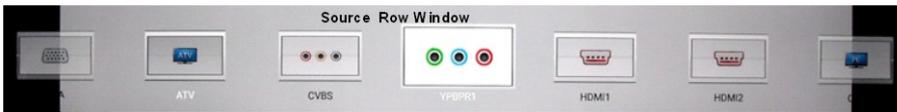
2. Keypad buttons ;

2.1 Menu

Press this button to display the **OSD** (On Screen Display) menu items for the panel settings. Except when an Android screen is present, then Android icons for the Wallpaper and Widgets appears.

2.2 AV/TV/Source

Press this button to provide the row of input source icons as shown below.



Use the Vol+/- buttons to move the source icons left or right. You can also move them by finger dragging them. To select the desired source, move the icon to the middle where it is larger. Then double tap with your finger. That source will become active for the panel.

2.3 Ch +/-

Press these buttons to change and select the OSD menu items. For TV operation, press the Ch+ or Ch- button to change the TV channel.

2.4 Vol +/-

Press these buttons to change and select the OSD menu items. For volume operation the Vol+ or Vol- button to increase or decrease the sound level. When adjusting the volume, the volume slider will be visible.



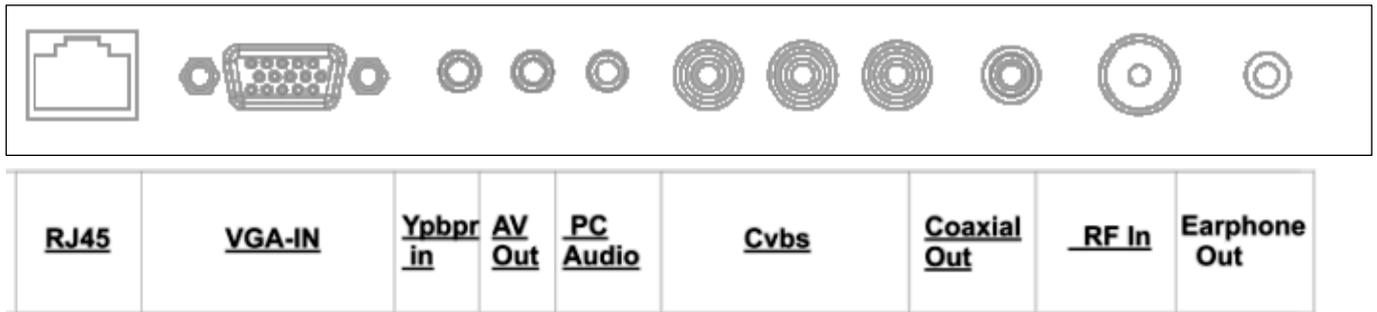
2.5 Power

Turn the panel power ON and OFF.

2.6 PC-ON

Not used if accessory computer is not included. Turns the accessory PC ON/OFF.

Panel (Rear View)



List of connections

1. RJ45

Connect to the Internet or LAN for the internal Android OS.

2. VGA Input (DB-15)

Connect to the VGA output jack on your computer.

3. YPbPr Input Audio (3.5 mm mini)

Connect to the audio output jacks of a DVD player or Set-Top Box.

4. AV Out(AV Audio L, R) (3.5 mm mini)

Connect to the digital audio input of a digital audio component.

5. PC Audio Input (3.5 mm mini)

Audio output jack from your computer, 3.5mm mini stereo

6. Cvbs composite video (RCA x 3)

Connect to the video and audio output jack for composite video, RCA x 3

7. Coaxial Out (RCA)

Connect to the digital audio input of a digital audio component.

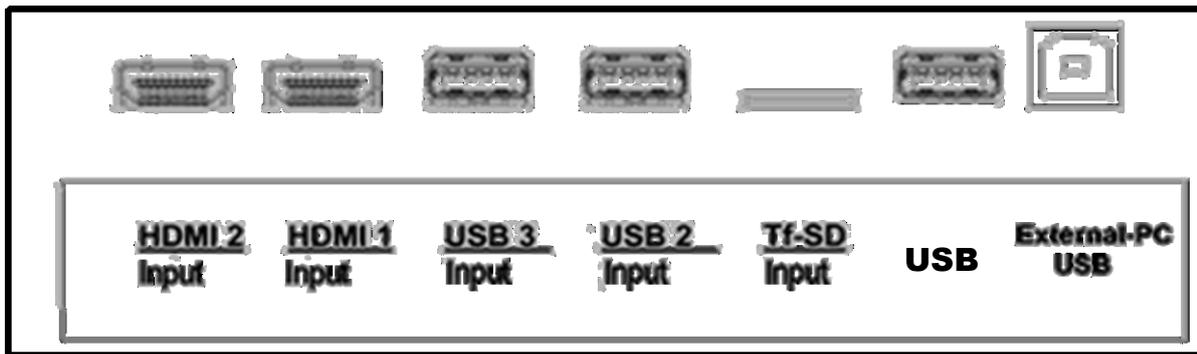
8. RF In

Connect to the RF Input with coax cable. International PAL 9.5 mm IEC 75 ohm slide connector.

9. Earphone Output (3.5 mm mini)

Connect to your earphones, 3.5 mm mini stereo..

Location 4 on rear of the panel, in vertical position



1. HDMI 1 & 2 Input ports

For connecting units with a HDMI or DVI interface such as a computer or a DVD player. (A HDMI-to DVI adapter cable is required when you are connecting a DVI device to this panel.)

2. USB Ports; USB 2 and USB 3

USB input ports on the panel for the panel internal Android OS. USB 2 and USB 3

3. Tf-SD Input

Port for Tf-SD input card . The TF Card, short for Trans-Flash Card (*which is also the Micro SD card*),

4. USB Port

USB 1 Input port on the panel for the panel internal Android OS.

5. External-PC USB “Touch USB”

Use for External computer to connect to the panel. (Type B, USB port). Use this for touch operation with your computer.

6. Connector for the Wi-Fi antenna is located above the row of ports. Attach the short antenna.

IR Remote Control Unit

1 → POWER

2 ← MUTE

3 → 1-9

4 → 0

10 → ZOOM

11 ← INPUT

15 → OK

16 → EXIT

17 ← MENU

6 → VOL +

7 → VOL -

8 → SLEEP

20, 18 → Red, Green, Yellow, Blue

19, 21 ← Red, Green, Yellow, Blue

22 ← Playback controls

23 → Bottom row of buttons

SLX-V59

- 1. POWER**
Press to turn panel ON or OFF.
- 2. MUTE**
Press to mute sound, press again to restore sound.
- 3. 0-9 Keys**
Press any number of 0-9 buttons to select a TV channel.
- 4.** This key has no function.
- 5. RECALL**
Returns to the previous channel viewed. Another function is to select the picture playing mode in the Multimedia mode.
- 6. DISPLAY**
Press to display the source and channel's information.
- 7. VOL +/-**
Press to increase or decrease the volume.
- 8. SLEEP**
Sets the sleep timer.
- 9. CH +/-**
Changes the channel up and down.
- 10. ZOOM**
Press the key to makes the pictures zoom in and out.
- 11. INPUT**
Press this key to choose the input signal.
- 12. AUTO**
Press to auto adjust the PC source input.
- 13. PMODE NA**
Not Available
- 14. SMODE NA**

15. ▲/▼/◀/▶ / ENTER

Press the arrows to navigate through the menus or adjust an item. Press **ENTER** to confirm a selection or enter a submenu.

When watching digital TV programs, press ▲ button to record a program; press ▼ button to display Recorded List; press ◀ button to time shifting; press ▶ button to play or pause.

16. EXIT

Exits the menu screen.

17. MENU

Access or return to the main menu.

18. DVD MENU

When using the DVD input, access or return to the main DVD menu.

19. TITLE

Display the title.

20. SETUP

Press the key to setup the panel.

21. LANG

Sets the track.

22. Functional buttons for the DVD or player

23. Multimedia keys

Select Panel Input source

Source Selection

Press the **AV/TV** button on the panel bezel, or press **INPUT** button on the IR Remote Control, to display the input source list on the lower portion of the panel. Touch and slide the desired source icon to the center. Double tap with your finger or press the “OK” button on the Remote to select this source. See the image below.

Another way to access the source list is to swipe upward from the bottom of the panel screen to get the Navigation menu and touch the Source icon.



The Sources appear as a row of icons.



The sources are listed as;

VGA, ATV, CVBS, YPBPR1, HDMI1, HDMI2, OPS, DTV

Press **EXIT** button to quit or let window time out. Note; OPS is for the optional internal PC.

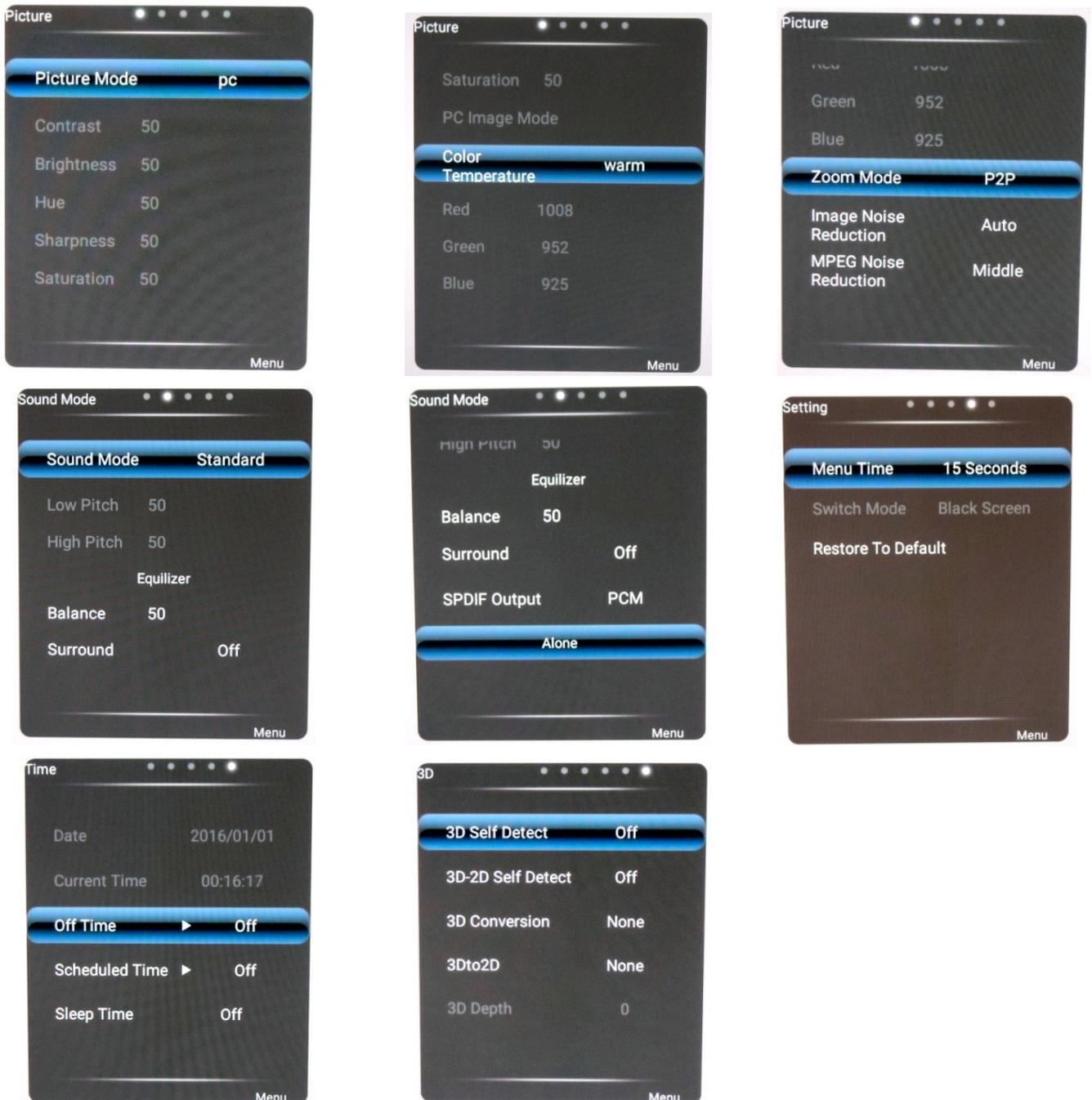
Panel Settings

The bezel **MENU** button opens the panel settings menu as shown below, when an external source is selected (will not open if the Android OS window is present, see Note at section end).

This menu permits adjustment of the external input image properties; Picture, sound, timers, menu display time and 3D effects. This menu can also be accessed by using the **MENU** button on the Remote Control.

For both cases the other surrounding buttons can be used to navigate the menu. Touch the window or Press "OK" on the Remote Control to select a property for adjustment.

Windows for the Panel Menu



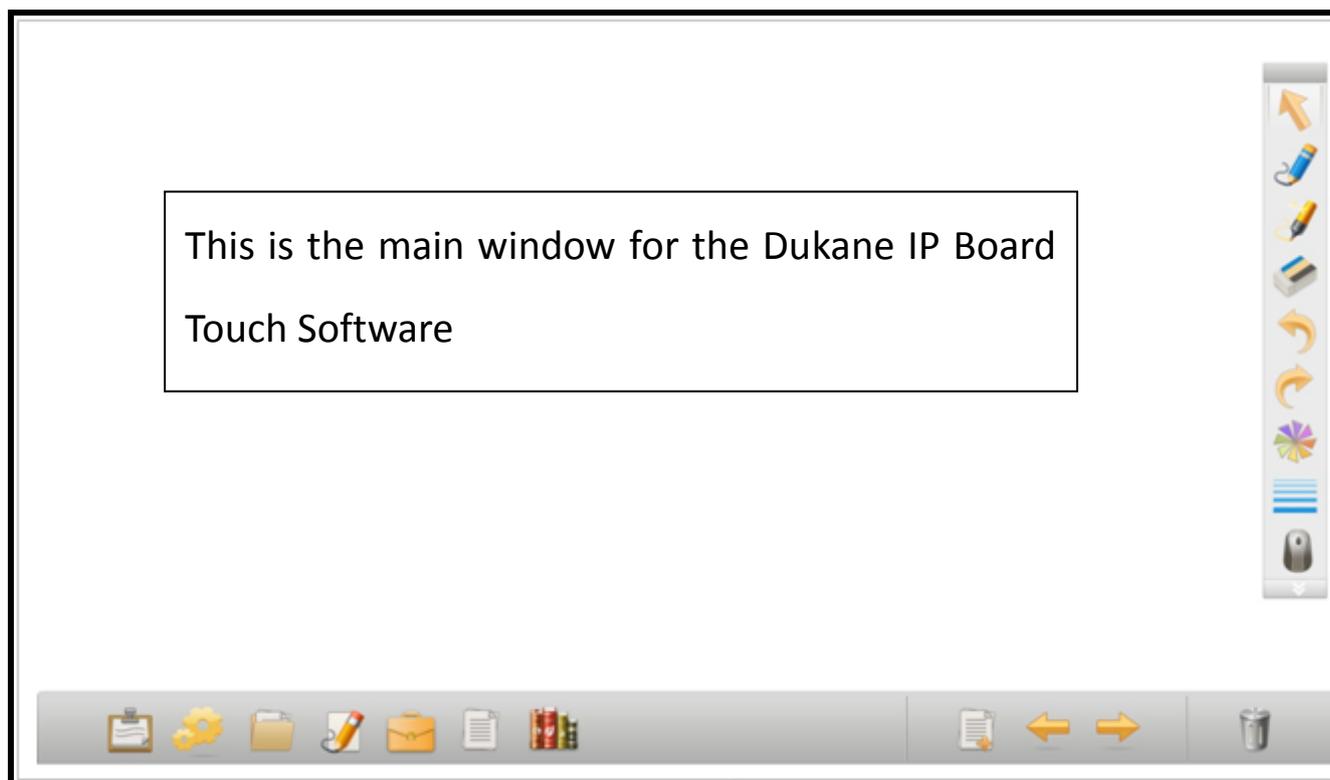
Mac Users note: *If your cursor is not calibrated press the **Menu** button on the panel bezel or remote control and under the **Picture** menu change the “Zoom Mode” setting to “P2P” to ensure proper calibration. Shown above.*

Note; If the Android OS window is open when the MENU button on the bezel is pressed, then an Android screen will open with icons for the Wallpaper choices and the Widgets.

For the panel menu, perform an upward swipe of the finger from the bottom bezel to get the Navigation menu and tap the **Source** icon. Then select the desired source. Now press the **MENU** button on the bezel.

Use Dukane Annotation software

1. Insert the included software CD-ROM into your PC or Mac. Software is also available for download at www.dukaneav.com at the product page.
2. For Windows copy the zip file to your PC, extract the zip file and double click Autorun.exe.
3. For Mac copy the zip file to your Mac, extract the zip file and double click the .dmg file.



Use your own annotation software:

1. Check with your software provider to ensure that you have the proper software license to use on a 3rd party display.
2. Open the software and run as you normally would. The panel gives you complete control just like you were using your mouse.

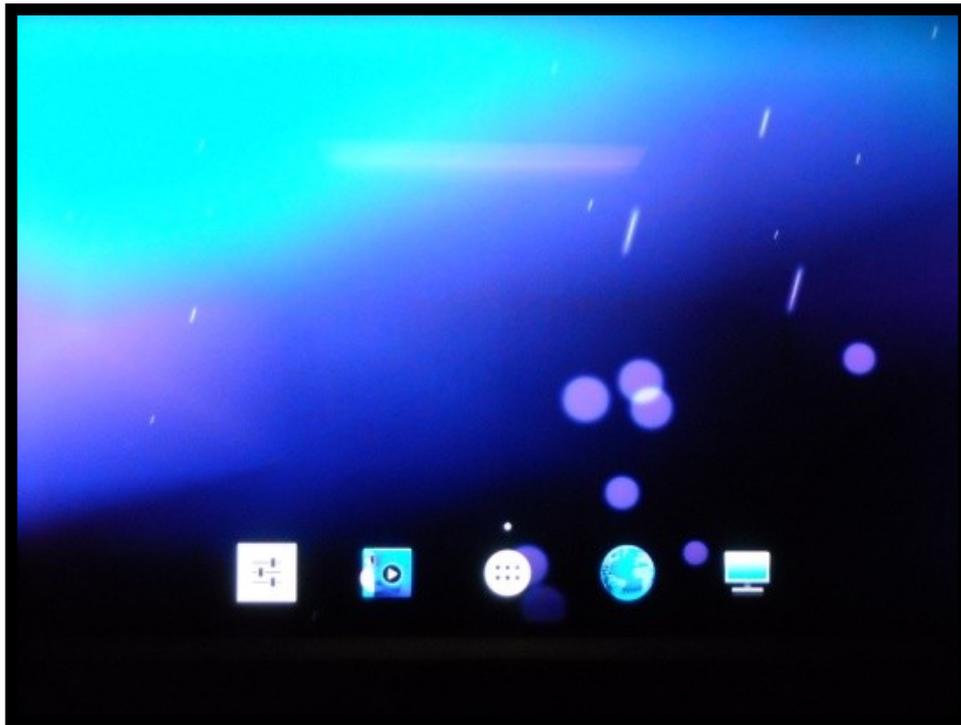
Android OS Operation

The panel has an internal Android OS which permits independent touch screen operation. Using the internal system images files can be viewed, videos shown, and the contents of the USB and SD port memory devices shown. A web browser using wireless Wi-Fi or the wired RJ-45 port is also operational.

The Android home screen is accessed by upward swiping from the screen bottom to get the Navigation menu. Then touch the HOME icon.



The HOME screen has the icons for the Settings, Files, Applications, browser, and the selected external source.



For setup of the operating System and Wi-Fi activation, touch the settings icon.



A setup window will open. Navigate to the desired property.

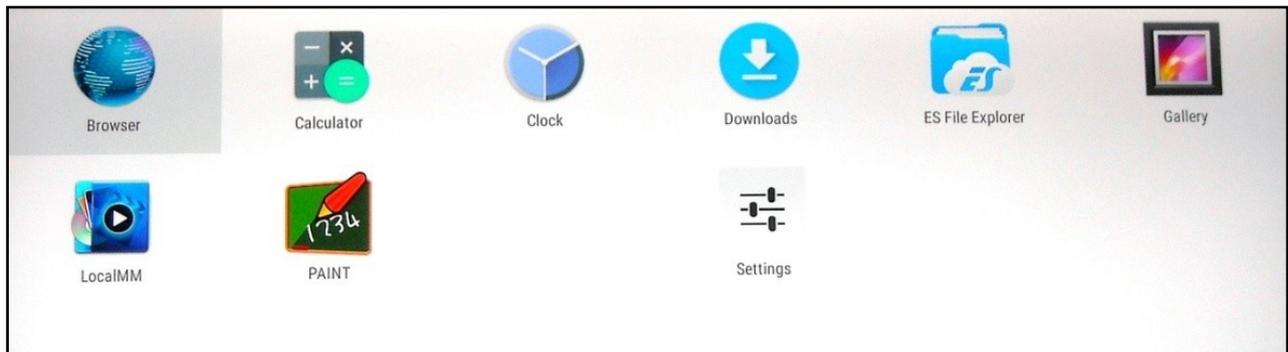
To move back from a window swipe your finger upward from the bottom panel edge to get the Navigation menu. Then touch "Back".



To use the apps touch the applications icon.



The Applications window will open.



To view the files in the USB port devices, the ES File Explorer can be used.



To use the Web Browser activate the Wi-Fi reception or use a wired LAN connection.

The antenna for the WI-Fi should be installed on the panel rear.

Then touch the browser icon.



To remove an application press and hold the icon till the **Remove** icon appears. Then drag it to the **Remove**. It will then be deleted.

The Android OS is like other operating systems that have customized controls and functions.

TV Tuner

This panel has a built in TV Tuner that is intended for international applications where the PAL TV system is in operation. The TV tuner does not affect any aspect of the touch panel operation. This tuner has the capability to receive the analog (pre-digital) N American NTSC TV system signals. To utilize the tuner a suitable signal, such as from a NTSC broadcast, must be connected to the antenna (RF) port. The channel (Ch) buttons on the Remote control can be used to set the receiver. Please note that this tuner will not operate with the current digital ATSC signals used for N. American TV broadcasting.

Troubleshooting

If, after reading User Guide, if you have additional questions related to the use of your Touch Panel, display please contact your dealer.

Before calling service, please identify the symptoms and try following the suggested solutions.

Remote Control

Problem	Possible Solutions
Remote Control does not operate	<ul style="list-style-type: none">● The batteries could be weak. Replace the batteries.● Check the orientation of the batteries.

Video and Audio

Problem	Possible Solutions
No picture (screen is not lit) No sound	<ul style="list-style-type: none">● Make sure the power cord is plugged in.● Press POWER on the panel or on the remote control.● Try another source, there may be no input signal.
Dark, poor or no picture (screen lit), good sound	<ul style="list-style-type: none">● Select a different picture mode.● Adjust the brightness in the video setting.
No color/dark picture /color is not correct	<ul style="list-style-type: none">● Adjust the color in the video setting.
Only snow and noise appear	<ul style="list-style-type: none">● Check the input signal.
Dotted lines or stripes	<ul style="list-style-type: none">● Move the panel away from noise sources such as cars, neon signs, or hair dryers. Move the source away from the panel
Double images	<ul style="list-style-type: none">● Maybe due to reflected or ghost signal.
Good picture, no sound	<ul style="list-style-type: none">● The sound be muted. Press MUTE again to cancel.● Make sure the stereo is set to stereo or mono.
Audio noise	<ul style="list-style-type: none">● Communication problems may occur if infrared communication equipment (e.g. infrared cordless headphones) are used nearby. Move the infrared equipment away.

General Problem

Problem	Possible Solutions
One or some TV channels can't be displayed	<ul style="list-style-type: none">● These channels may be locked. Please unlock them.● These channels may not be selected in the channel list. You may reset the list or select them with 0-9 number buttons
Some items can't be accessed	<ul style="list-style-type: none">● If a setting option appears in gray, this indicates that the settings option is unavailable for the current input mode.
Panel cabinet creaks	<ul style="list-style-type: none">● When the panel is in use, there is a slight rise in temperature, causing the cabinet to expand or contract. This may be accompanied by a slight noise.
Control buttons do not operate	<ul style="list-style-type: none">● Disconnect the panel power cord and wait for a few seconds. Then reconnect the power cord and turn on the unit again.

Note: If your problem is not solved, turn your unit off and then on again. Never attempt to repair a defective panel yourself.

Specifications

Item	Specification
Model	ITP65A
Size	65" Diagonal
Max. Colors	1.06 Billion Colors
Pixel Pitch	0.74 mm x 0.74 mm
Max. Brightness	450 cd/sq. m
Contrast Ratio	4000:1
Active Display Area	56.2" x 31.6"
Installation	Landscape Orientation
Touch Surface	Low-glare, tempered glass
Speaker Output	15 W x 2
Power Requirement	AC 100-240 V, 50/60 Hz
Power Consumption Max	480 W

Power Standby	< 0.5 W
MTBF	+50,000 hours
Dimensions	60.1" x 35.5" x 3.6"
Weight	150 lbs.

Specifications of Touchable LCD panel Control Board

OSD Language	, English, Chinese		
Screen	Panel Type	LCD with LED, TFT	
	Interface	Dual/ Single LVDS Interface (Max: 10 bit)	
	Max Resolution	1920 X 1080	
Video Input	TV Receiver	Receiving Frequency Range	55.25MHz ~ 863.25MHz
		Input Impedance	75Ω
		Video System	PAL/SECAM/NTSC
		Audio System	B/G, D/K, I, M
		Max Storage Channels	200CH
	PC-RGB	Format	Up to SXGA@75Hz
	HDMI	480i, 480p, 57i, 576p, 720p, 1080i, 1080p	
	CVBS	Video System	PAL/SECAM/NTSC
		Video Signal Magnitude	1.0 V _{p,p} ±5%
Audio Input	PC Audio	Earphone out	0.2 ~ 2.0 V _{RMS}
	CVBS	Left/ Right Channel Audio Terminal Input	0.2 ~ 2.0 V _{RMS}
	Audio YPbPr		
Audio Output	Frequency Response	100Hz ~ 15KHz@±3dB(1KHz, 0dB for Reference Signal)	
	Max Output Power	2 X 9W (8ΩTHD + N < 10% @ 1KHz (Supply Power Voltage: 24V, Audio Input: 0.5 V _{RMS}))	
Power	Input Voltage	24V/12V/5V/5VSB	
	Flooding Screen Voltage	5V,12V	

	Power Management	Stand-by Power Consumption < 0.5W (Board Only)
Comb Filtering Function	3D	
Release Interleave Function	3D	
Weak Signal Enhanced Function	Yes	
De-noise Function	Yes	
Extended Function	DVD, External USB, External HDMI, External AV Input	
USB Function	For Multimedia Play and Software Upgrade	

Key Function	Menu, Ch+, Ch-, Vol-, Vol+, Signal Source, Power		
Terminals	Input	TV	1 IEC Connector (PAL 75 ohm type)
		USB	3 USB Port (A Type)
		HDMI	2 HDMI Terminal (A Type)
		PC-RGB	1 D-Sub Terminal(Blue, 15Pin)
		PC- Audio	1 Terminal (Black) mini
		CVBS	1 RCA Terminal (Yellow)
		CVBS audio	2 RCA Terminal (Red, White)
	Output	AV Audio Output	1 (Black) mini stereo
		Earphone Output	1 (Black) mini stereo
		Video Coaxial Output	1 RCA Terminal (orange)

TFT-LED-LCD Screen Specification

Items	Specification
Driver	a-Si TFT active matrix
Display colors	1073.7M (8-bit +FRC) (Colors)
Color Gamut	72% (NTSC)
Number of Pixels	1920 x 1080 pixel
Pixel Arrangement	RGB Vertical Stripe
Pixel Pitch	0.744mm
Display Mode	Transmissive; Normally Black
Surface Treatment	HCLR, 3H
Total Power Consumption	220W (including BLU & Signal)
RoHS	RoHS Compliance

Optical Touch Overlay		Specification
Active Touch Area		The same as active display area
Frame Material		Aluminum Alloy and Kirksite
Appearance Color		Black
Glass Size		1463.6+0/-1 (W) x 854.7+0/-1 (D) x 4.0±0.2 (H) mm
Glass Type		Tempered Glass
Response Time		< 10 ms
Touch Resolution		32768 (W) x 32768 (D)
Data Communication		Coordinate Output
Minimum Discernible Object		5 mm
Touch Accuracy		±2 in the 90% touch area
Touch Method		Finger, brush-pencil, pointer or any other touching medium.
Touch Times		Unlimited
Interface Type		USB
USB Line Length		Normally 1.5 meter long
USB	Terminal Type	B type USB
	Communication Interface	Full speed USB 2.0
	Power Supply	USB
Temperature Range	Operating Temperature	-10°C ~ 70°C
	Storage Temperature	-40°C ~ 85°C
Relative Humidity	Operating Humidity	0 ~ 85% RH, Non-condensing
	Storage Humidity	0 ~ 95% RH, Non-condensing
Power		< 1W
Current		< 200mA
Antistatic		ESD: touch discharge 8kV, air discharge 15kV
Touch Type		Single touch /Multi-touch gesture recognition / 10-point touch
Operating System compatibility		Windows 7/ 8 /10 /Mac / Linux
Firmware Upgrade Function		Support USB upgrade

Note; Specifications subject to change without notice.

Latest manuals and software at Dukane AV Div website; www.dukaneav.com

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