# VIVID TV BOX VTB-100



# **Operation Manual**

#### Introduction

The compact unit easily turns your LCD, CRT monitor, plasma display or projector into a multimedia center. With a built-in TV tuner and multiple video ports, you can connect DVD players, digital cameras, VCRs or even game consoles. It provides S-video, composite (RCA) video connectors, audio pass-through and front-panel headphone support.

With advanced scaling technology, the unit provides 3:2 pull down correction that eliminates jitter from DVD movies that originated from motion picture films. Motion and adaptive de-interlacing also improves the clarity and sharpness of the overall image producing sharp, clear, saturated images.

Users can also adjust contrast, brightness, color, hue and channel from the remote control and on-screen menu.

#### **Precautions**

- 1. Do not expose this product to direct sunlight.
- 2. Keep the unit away from radiator, heat sources and magnetic field.
- 3. Do not place it in very dusty or humid locations.
- 4. Use this unit in a horizontal position only.
- 5. Do not put heavy objects on top of the converter.
- 6. Put the unit in an open space that has good ventilation.
- 7. If the unit is acting abnormally keep the unit away from TV or other electronic equipment.
- 8. Unplug the unit from the power supply when it is not to be used for a long period of time.

#### **Features**

- Stand-alone, Plug-n-Play. No software drivers required and no messy PC installation routines
- No PC compatibility problems & special firmware design for some famous PDPs (Plasma Displays).
- Built-in TV tuner, support up to 125 channels with Fine Tuning function.
- Provide user-friendly OSD (on screen display) to control functions.
- Automatic source standard detection (NTSC/PAL/SECAM for video or S-Video).
- Auto-scan air/cable TV channels, channel rename, and channel editing functions.
- Full screen TV display, support VGA (640x480), SVGA (800x600) and XGA (1024x768) display resolution.
- DE-INTERLACE function provides can provide high quality pictures with sharp & stable image output to VGA/DVI out.

- Localized TV system menu selection.
- Compatible for multi-signal inputs: TV tuner, Video, S-Video, Component (Y, Cb, Cr) & VGA.
- Support Sleep Timer Setting.
- Available in NTSC/Multi-PAL (BG, DK, I)/SECAM model.
- Re-mapping function for programming your favorite channels.
- Fully functional infrared remote control.
- Supports 3:2 pull-down for film mode.
- Supports MTS for NTSC system & NICAM for PAL.
- Supports 15pin D-Sub graphic card (VGA in); 15pin D-Sub monitor (VGA out) and DVI Monitor (DVI out).
- Supports Teletext (optional) for PAL
- Supports protection of Channel setting: V-Chip (optional) for NTSC system/USA.



# 1. O POWER

Pressing this button to switch the unit On or Off.

# 

Select the video source between TV/Cable, S-Video, AV, Component (Y, Cb, Cr) or PC

## 3. POWER LED / INFRARED RECEIVER

Lights when the TV BOX is powered up and ready to operate. Receive the Infrared signal from the remote control

- 4. Decrease the sound volume
- 5. \(\square\)\(\square\): Increase the sound volume
- 6. Adjust channel decrease
- 7. Adjust channel increase



- 1. **DC In-** Connect to a 12V power supply.
- **2. VGA Out-** Connect your 15 Pin Monitor to the VGA output.
- **3. VGA In-** Using the 15 pin VGA cable provided, connect one side to the VGA output on your pc and the other side to the VGA In of your unit.
- **4. Video-In** -Please connect the external video from VCR, LD/VCD/DVD or video game console to the Video In port.
- **5.** S-Video- Please connect it to the S-Video In port when the external Video device is S-Video.
- **6.** Component (Y, Cb, Cr) Input- Please connect them to the Component (Y, Cb Cr) In port when the external video device has Y, Cb, Cr Output's support.
- **7. RF In (VHF/UHF)-** Please connect your RF cable to RF IN port to receive antenna or cable TV signal.



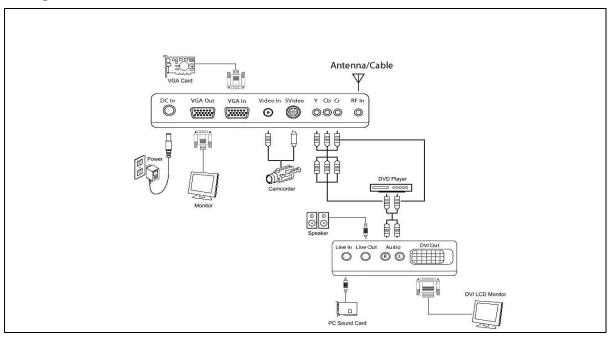
- **1. Line In-** Connect the audio from sound card to Line In port. Thus you should be able to have sound from PC/external speakers even when your TV Box is in standby mode.
- **2. Line Out-** Connect the Line Out to your PC/external speakers.
- 3. AUDIO (R&L) In- Please connect the external audio to the Audio In port.
- **4. DVI Out (Optional)-** Use the DVI Cable (male to male) to connect to DVI supported Monitor or other video devices.

## **Connection and Installation**



- 1. To prevent damage to your equipment due to ground potential influence, make sure that all devices on the installation are properly grounded. Consult your dealer for technical details if necessary.
- 2. Please turn off the power of all devices before connection.

To install the unit for the analog TV and A/V device connection, please refer to the diagram below.



#### Notes:

- \* Audio/Video connection: For audio connection, pleas use RCA audio (LTR) connector. For video connection, please choose either RCA video connector or S-Video connector.
- \* Moreover, for connection to a stand alone, please omit those connections associated with PC.

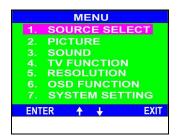
## **Operation Instruction**

## **Initial Settings**

For all function settings of the unit, you can use the supplied remote control unit.

Please refer to the following steps below:

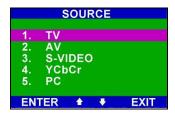
- 1. Install 2 AAA batteries into the Remote Control.
- 2. Power on the unit or press the Power button on the Remote Control
- 3. Press the "Source" button to select signal source.
- 4. Press the "Autoscan" button to scan and memorize all the channels.
- 5. After the auto scan is finished, please press channel "+","-" or channel number keys to select channels.
- 6. Press the "Menu" button and the OSD Main Menu window appears.
- 7. Press **1** or **↓**, to select the OSD Sub Menu.
- 8. Press "ENTER" for the he selected Sub Menu
- 9. If you don't want to select the Sub MENU, press" EXIT" button.



#### **Source Select Setting**

Source Select Sub-Menu provides TV, AV, S-VIDEO, YCbCr and PC mode selections.

1.In the SOURCE Sub Menu, press for **J** button to choose the Video Source; TV; AV; S-video; YCbCr; PC.

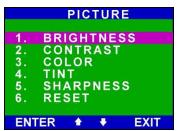


- 2. Press "ENTER" to select the source.
- 3. Press "EXIT" to return to the Main "MENU".

## **PICTURE setting**

*Picture* Sub-Menu provides *BRIGHTNESS*, *CONTRAST*, *COLOR*, *TINT*, *SHARPNESS* adjustment modes AND *RESET*.

1. In the **Picture** Sub-MENU, PRESS **↑** or **↓** button to choose the required item.

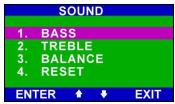


- 2. Press ←or → button to adjust the selected item.
- 3. Press **ENTER** to confirm the setting.
- 4. Select **Reset** to clear all adjustments and return to factory settings.
- 5. When finished making all picture adjustments, press the "Exit" button to return the main menu.

## SOUND Setting

The **SOUND** Sub-Menu provides **BASS**, **TREBLE**, **BALANCE** adjustment modes and the **RESET** mode.

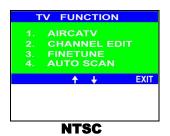
1. In the SOUND Sub MENU, Press for **J** button to choose the required item.

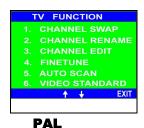


- 2. Press "Enter" to select the item.
- 3. To adjust the selected item by  $\rightarrow$  and  $\leftarrow$  button.
- 4. When finished, press "Exit" to return to SOUND Sub MENU.
- 5. Select RESET to clear all adjustment and return to factory setting.
- 6. When finished, press the "Exit" button to return to the Main MENU.

## **TV FUNCTION Setting**

TV Function sub-menu provides different function selections for the NTSC and PAL models. Please refer the following diagrams.





NTSC system

Select *AIRCATV*, *CHANNEL EDIT*, *FINETUNE* and *AUTO SCAN* by pressing the button, and then pressing "*ENTER*" to confirm the setting.

PAL system

Select *CHANNEL SWAP*, *CHANNEL RENAME*, *CHANNEL EDIT*, *FINETUNE*, *AUTO SCAN* and *VIDEO STANDARD* by pressing the "ENTER" to confirm the setting.

## 1. AIRCATV (for NTSC model only)

Before scanning channels, please select appropriate frequency tables among *AIR* (ANTENNA) and CATV (Cable).



To scan program channels automatically, press the *AUTOSCAN* button. The unit can auto detect the TV system. After finishing *AUTOSCAN*, the scanned program channel will be saved.

## 2. Channel Swapping (for PAL model only)

Press **1** or **1** and "Enter" button to enter the **CHANNEL SWAP** function.



The **Original** column remains the present channel number. Key in the channel number you like to swap at the **TARGET** column.

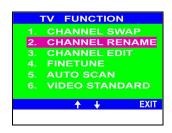


For example, if you want to change the channel 11 to channel 22. Press the number key on the remote control unit. After key in the number 22, the channel 11 will be swapped with the channel 22

## 3. Channel Rename (for PAL model only)

The **CHANNEL RENAME** function allows you to edit the channel's name. After you edit the channel name, it will shows below the channel number. This function is only available when you select your frequency table to "**CATV**" in **AIRCATV** function.

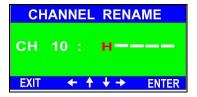
Press or and "Enter" button to enter the **CHANNEL RENAME** function.



After entered the **CHANNEL RENAME** function, the Channel List dialog will show up. Press the button to select the channel you want to rename then press "Enter" to enter the channel rename dialog.



The CHANNEL RENAME function provides 5 characters for user's edit. Press the to select the character, press  $\leftarrow$  to move to the next character you want to change.



After you have entered the channel name, press "Enter" then the channel name will be saved.



The channel list will depend on the channels you've scanned. The scanned channel will be marked with a check, which means this channel is available.

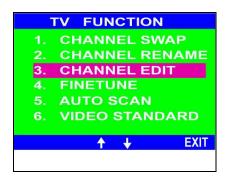
All the channels will be listed on the channel list screen. Each screen shows 10 channels. You can press to move to the next page.



The channel list will depend on the channels you've scanned. All the channels will be listed on the channel list screen. Each screen shows 10 channels. You can press to move to the next page.

## 4. Channel Editing

Select the "CHANNEL EDIT" function on the TV Function Screen by pressing the or button. Then press the "Enter" button to entry the function.



Press ← or → to select "ADD" or "ERASE" functionality.



#### Adding a channel.

• For example to add CH 60Use the Remote Control unit, to select CH 60, then enter the TV function sub-menu, press ↑ or ▶ button to enter the CHANNEL EDIT.

And then press or ▶ button to access ADD, and confirm ADD by pressing the "Enter" button on your Remote Controller.

## **Erasing a channel**

• For example to Erase CH 60

Use the Remote control unit, to select CH60, and then enter the TV function submenu, press 

or 

button to enter CH Edit and then press 

or 

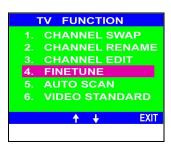
or 

button to access ERASE, and confirm Erase by passing the "Enter "button on your Remote Controller.

After Adding/Erasing a channel, press the "**Exit**" button to return to the TV function sub-menu. When you have finished Channel Editing; press the "**Exit**" button again to return to the main menu.

## 5. Fine Tuning

Press or and "Enter" button to enter the **FINE TUNE** function. Press or to fine-tune the frequency of the current channel to make it clear, then press "Exit" to return to TV Function sub-menu once finished.



#### 6. Video Standard

Press or and "Enter" button to enter the VIDEO STANDARD function. The VIDEO STANDARD function is to precisely lock up the right channel during the AUTOSCAN process.



Please refer the Appendix B to select the standard in your country.



## **RESOLUTION Setting**

The *RESOLUTION* Sub-Menu provides *640 X 480, 800 X 600, 1024 X 768* modes.

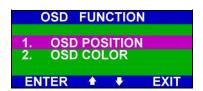
1. To enter "*1024 x 768*", "*800 x 600*", "*640x480*" resolution, press **1** or **1** button to select one of them, then press "*Enter*" to confirm the setting and *Exit* to main menu



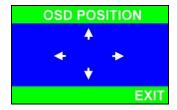
## **OSD FUNCTION Setting**

The OSD FUNCTION Sub-Menu provides OSD POSITION, OSD COLOR settings.

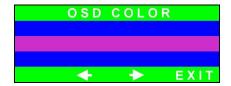
1. In the OSD Function Sub Menu, use or to select the item required.



2. Press the "Enter" button to choose the "OSD POSITION", another "OSD POSITION" sub-menu appears, Use or button to move the position of menu position on the display. After setting, press the "Exit" button to return to the OSD function Sub-Menu.

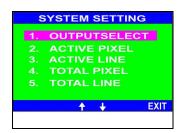


3. Press "Enter" button to choose the "OSD COLOR", using the → or button to choose your favorite OSD color. After setting, press "Exit" to return to the OSD function sub-Menu.

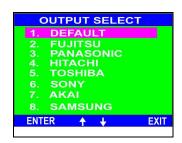


## **System Setting**

The System Setting Sub Menu provides users to set the best display setting for their Plasma displays.



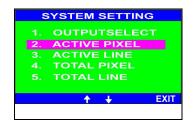
For the best video quality and performance for the Plasma displays, user can select the plasma manufacturer manually by "OUTPUT SELECT" function. Press the \*\*Independent of the select the "OUTPUT SELECT" function.

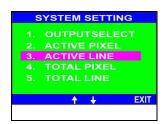


Choose the brand name of your plasma manufacturer by pressing the \*\*Enter\*\* and the \*\*Enter\*\* button. Select the "Default" item if you connect to a LCD monitor or you want to restore the default value after you adjusted the display output values on ACTIVE PIXEL / ACTIVE LINE / TOTAL PIXEL / TOTAL LINE functions. Return to the SYSTEM SETTING Sub Menu; press the "Exit" button.

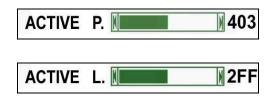
When you don't find any suitable display settings in the **OUPUT SELECT** function, choose the following functions to set the display values manually. Please notice that the functions are for the advanced users.

The **ACTIVE PIXEL** / **ACTIVE LINE** functions provide users to fine-tune the **vertical** and **horizontal** display values of the plasma display.

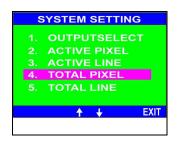


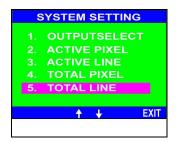


Press button on the remote control to adjust the display screen values.

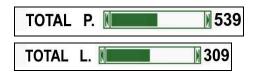


The **TOTAL PIXEL** / **TOTAL LINE** functions provide users to fine-tune the **vertical** and **horizontal** display values of the TV BOX.



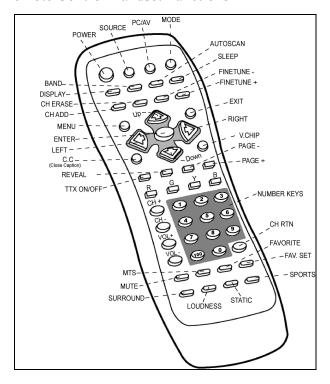


Press button on the remote control to adjust the output display values of TV Box.



To restore the default value, please choose the "DEFALUT" item in the OUTPUT SELECT sub menu.

#### Remote Control Handset Functions



#### 1. POWER

Powers the unit on and off.

#### 2. SOURCE

Selects the video source between TV/cable, AV, S-video and YCbCr (Component).

#### 3. PC/AV

Switches the AV and PC modes.

#### 4. MODE

Adjusts the video resolution – 1024x768, 800x600, 640x480

## 5. DISPLAY

Displays current setting information on your screen.

#### 6. BAND

Press the button to switch AIR or Cable system. For NTSC system only.

#### 7. AUTOSCAN

Scan program channels automatically and save scanned channels.

### 8. SLEEP

Automatically switches off the TV Box as desired; 5, 10, 15, 30, 60, 90 minute options.

#### 9. CH ADD

Adds the current channel, which you lose from the TV cable.

#### 10. CH ERASE

Press the button to erase the current channel, which you don't like to see.

#### 11. FINE TUNE -

Tunes the TV channel signal down by continuous clicking the button.

#### 12. FINE TUNE +

Tunes the TV channel signal up by continuous clicking the button.

#### **13. MENU**

Press the button to pop up the OSD MENU

#### 14. Arrow Buttons

Press the "Arrow" button to choose the items on the main menu or Sub-menu.

Press button to choose item on the menu or to move the

OSD position.

#### **15. EXIT**

Exits the current menu selection and return to the previous menu. Press this key repeatedly to close all items.

#### **17. ENTER**

Selects the currently highlighted menu item or to confirm the setting.

#### 19. C.C (This function is only supported by USA/NTSC area)

Enables / disables the closed caption function.

## 21. V.CHIP (This function is only supported by USA/NTSC area)

Locks the channel for security considerations.

#### 22. TTX ON / TTX OFF (for Most Pal system regions)

Activates the Teletext menu. / Press the button to disable the Teletext menu. This key is to enable/disable the Teletext function

#### 23. REVEAL

Displays the hidden text in Teletext page when suggested and the text will disappear automatically in 6 seconds.

#### 24. PAGE -

Pages down the Teletext index menu.

#### 25. PAGE +

Press the button to page up the Teletext index menu.

#### 26. R/G/Y/B

The Red, Green, Yellow, Blue color buttons corresponds to the option line at the bottom of Teletext index menu. Not functional when there is no Teletext service available.

#### 27. NUMBER KEYS

Selects the channel or key in the values.

#### 28. CH + / -

Click to switch the channel forward and back.

## 29. VOL + /-

Click to turn the volume louder or lower.

#### **30. CH RTN**

Press the button to return the last channel.

#### **31. MUTE**

Mutes the volume.

#### **32. MTS**

Enables the MTS function in NTSC system. If you are in Pal system area, press this button to execute the "Nicam" stereo function.

## 33. FAVORITE

Press the button to switch on the "Favorite Channel"

#### 34. FAV.SET

Sets the current channel to "Favorite Channel".

#### 35. SURROUND

Activates the surround effect.

#### **36. LOUDNESS**

Enhances the volume setting

#### **37. STATIC**

Enables Interlace Mode

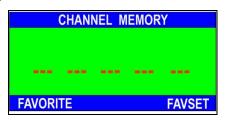
#### 38. SPORTS

Enables De-interlace Mode

## **Favorite Channel Setting**

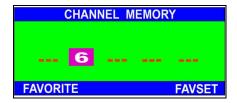
The favorite channel setting function provides 5 channels to set favorite channels. Please refer the following instructions to set up the favorite channel.

Choose the channel you'd like to set, press "FAVSET" button on the remote control unit.

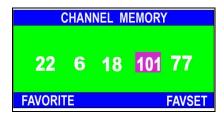


Press the "Favorite" button to select the position of the channel. The favorite channel selection will follow the position sequence.

After selecting the position, press the "FAVSET" button, the channel will be set.



You can replace the channel on your favorite channel list. Please follow the step 2, choose the channel and the position. Then press the "FAVSET" button; the original channel will be replaced by the new ones.



## **Teletext Operation**

Enabling and Disabling Teletext

Press ''TTX ON/OFF'' on the remote control to display the teletext index menu.



Press the same button to disable teletext function and return to the normal picture. You can press key 26,27,28,29 (Red,Green,Yellow, Blue) on the remote control to correspond the option line at the bottom of index menu



## Select a Teletext Page

Enter the desired page number on the index with the digit keys on the remote control. Press "PAGE +" and "PAGE - " on the remote control to search subject pages foward and backward. It shall remain the current page with the top line blinking in green color when you have entered a non-existent or incorrect page number.

Select a Teletext Sub-page

Press ''PAGE +'' and ''PAGE -'' on the remote control to activate sub-pages up and down.

Note: The Teletext function is available by option on purchase

## **Trouble Shooting**

| Symptom                                   | Solution   |
|---|--|
| No picture on display                     | <ul> <li>Make sure the power cord is<br/>connected to an AC outlet,<br/>DC plug is connected to DC<br/>In port and the power is on.</li> </ul> |
|   | • Check the connection of your source signal.  |
|   | • Unplug and re-plug the DC adaptor to reset the unit.   |
| Video is distorted                        | • Check your antenna connections or try adjusting your antenna.  |
|   | • Check all of your connection.  |
| No Sound                                  | Check audio connections.   |
|   | <ul> <li>Make sure the speakers are<br/>working.</li> </ul>  |
|   | <ul> <li>Press Volume +up key on<br/>Remote Controller.</li> </ul>   |
| The remote control can't control the unit | <ul> <li>Make sure batteries are installed.</li> </ul>   |
|   | • Check remaining battery life.  |
| Missing channel                           | • Some Satellite/Cable TV providers use scrambled or encoded signals that may require a device to descramble and receive the channels.         |

# **Specifications**

| Power                   | 12VDC, 1200mA                      |  |
|-------------------------|------------------------------------|--|
| Video Input             | Composite video RCA connector.     |  |
| YCbCr (Component) Input | Component video Y.U.V connector    |  |
| S-Video Input           | S-Video 4-pin mini DIN connector   |  |
| Audio Input             | Stereo R+L RCA connectors          |  |
|                         |                                    |  |
| Line In                 | Phone Jack 3.5φ                    |  |
| Line Out                | Phone Jack 3.5φ                    |  |
| RF In                   | F-Female connector for NTSC system |  |
|                         | EC-Female connector for Pal system |  |
| VGA Output              | D-Sub 15 pin Female connector      |  |
| VGA Input               | D-Sub 15 pin Male connector        |  |
| DVI Output (Optional)   | DVI Female connector               |  |
| Power Consumption       | 15W nominal                        |  |
| Resolution mode         | 640 x 480, 800 x 600, 1024 x768    |  |
| Dimensions (L*W*H)      | 225 x 160 x 31mm                   |  |
| Weight                  | 2.0 kg                             |  |

## **Broadcasting System**

| Country            | System | VHF | UHF |
|--------------------|--------|-----|-----|
| Afghanistan        | PAL    | В   |     |
| Albania            | PAL    | В   | G   |
| Algeria            | PAL    | В   | G   |
| Alaska             | NTSC   | M   |     |
| Angola             | PAL    | I   |     |
| Antigua & Barbuda  | NTSC   | M   |     |
| Argentina          | PAL    | N   | N   |
| Aruba              | NTSC   | M   |     |
| Australia          | PAL    | В   | Н   |
| Austria            | PAL    | В   | G   |
| Azores             | PAL    | В   |     |
| Bahamas            | NTSC   | M   |     |
| Bahrain            | PAL    | В   |     |
| Bangladesh         | PAL    | В   |     |
| Barbados           | NTSC   | M   |     |
| Belgium            | PAL    | В   | Н   |
| Benin              | SECAM  | K   |     |
| Bermuda            | NTSC   | M   |     |
| Bolivia            | NTSC   | N   |     |
| Brazil             | PAL    | M   | M   |
| Brunei Darussalam  | PAL    | В   |     |
| Bulgaria           | SECAM  | D   | K   |
| Burma              | NTSC   | M   |     |
| Burkina Faso       | SECAM  | K   |     |
| Burundi            | SECAM  | K   |     |
| Cambodia           | NTSC   | M   |     |
| Cameroon           | PAL    | В   |     |
| Canada             | NTSC   | M   | M   |
| Canary Islands     | PAL    | В   | G   |
| Chile              | NTSC   | M   |     |
| China              | PAL    | D   | D   |
| Colombia           | NTSC   | M   | M   |
| Congo              | SECAM  | D   |     |
| Costa Rica         | NTSC   | M   | M   |
| Cuba               | NTSC   | M   | M   |
| Cyprus             | PAL    | В   | G   |
| Czechoslovakia     | SECAM  | D   |     |
| Denmark            | PAL    | В   |     |
| Djibouti           | SECAM  | K   |     |
| Dominican Republic | NTSC   | M   | G   |
| Ecuador            | NTSC   | M   |     |
| Egypt              | SECAM  | В   | M   |
| El Salvador        | NTSC   | M   |     |
| Equador            | NTSC   | M   |     |
| Ethiopia           | PAL    | В   | M   |
| Finland            | PAL    | В   | M   |
| France             | SECAM  | L   | G   |
| Gambia             | SECAM  | K   | G   |

| Germany              | PAL       | В   | L   |
|----------------------|-----------|-----|-----|
| Ghana                | PAL       | В   |     |
| Greece               | SECAM     | В   | G   |
| Greenland            | NTSC      | M   |     |
| Guam                 | NTSC      | M   | G   |
| Guatemala            | NTSC      | M   |     |
| Guyana               | SECAM     | K1  | M   |
| Guinea               | SECAM     | K   | M   |
| Haiti                | NTSC      | M   | K1  |
| Hawaii               | NTSC      | M   |     |
| Honduras             | NTSC      | M   |     |
| Hong Kong            | PAL       |     |     |
| Hungary              | SECAM     | D   |     |
| Iceland              | PAL       | В   | I   |
| India                | PAL       | В   | K   |
| Indonesia            | PAL       | В   | G   |
| Iran                 | SECAM     | В   |     |
| Iraq                 | SECAM     | В   | G   |
| Ireland              | PAL       | A/I | G   |
| Israel               | PAL       | В   |     |
| Italy                | PAL       | В   | I   |
| Japan                | NTSC      | M   | G   |
| Jamaica              | NTSC      | M   | G   |
| Johnston Island      | NTSC      | M   | M   |
| Jordan               | PAL       | В   | 141 |
| Korea (Dem, People's |           |     |     |
| Rep. of)             | PAL       | D   |     |
| Korea (Rep. of)      | NTSC      | M   | G   |
| Kuwait               | PAL       | В   | M   |
| Laos                 | PAL       | M   | G   |
| Lebanon              | SECAM     | В   |     |
| Lesotho              | PAL       | I   |     |
| Liberia              | PAL       | В   |     |
| Luxembourg           | PAL/SECAM | В   |     |
| Macao                | PAL       | В   | G/L |
| Madagascar           | SECAM     | K1  |     |
| Malta                | PAL       | В   | K1  |
| Malaysia             | PAL       | В   | Н   |
| Mali                 | SECAM     | K1  | G   |
| Mariana Islands      | NTSC      | M   |     |
| Mauritius            | SECAM     | В   |     |
| Mauritania           | SECAM     | В   |     |
| Mexico               | NTSC      | M   |     |
| Micronesia           | NTSC      | M   |     |
| Midway Islands       | NTSC      | M   |     |
| Maldives             | PAL       | В   |     |
| Monaco               | PAL/SECAM | /L  |     |
| Mongolia             | SECAM     | D   | G/L |
| Morocco              | SECAM     | В   |     |
| Mozambique           | PAL       | В   |     |
| Netherlands          | PAL       | В   |     |
| New Zealand          | PAL       | В   | G   |

| Nepal                | PAL       | В    |              |
|----------------------|-----------|------|--------------|
| Nicaragua            | NTSC      | M    |              |
| Niger                | SECAM     | K    |              |
| Nigeria              | PAL       | В    |              |
| Norway               | PAL       | В    | G            |
| Oman                 | PAL       | В    | G            |
| Paraguay             | PAL       | N    | G            |
| Pakistan             | PAL       | В    |              |
| Panama               | NTSC      | M    |              |
| Philippines          | NTSC      | M    |              |
| Polynesia            | SECAM     | K1   | M            |
| Poland               | SECAM     | D    |              |
| Portugal             | PAL       | В    | K            |
| Puerto Rico          | NTSC      | M    | G            |
| Romania              | PAL       | D    | M            |
| Saint Lucia          | NTSC      | M    | K            |
| Samoa                | NTSC      | M    |              |
| Saudi Arabia         | SECAM     | В    |              |
| San Marino           | PAL       | В    | G            |
| Senegal              | SECAM     | K    | G            |
| Seychelles           | PAL       | В    | -            |
| Sierra Leone         | PAL       | В    |              |
| Singapore            | PAL       | В    | G            |
| South Africa         | PAL       | I    | G            |
| Spain                | PAL       | В    | I            |
| Sri Lanka            | PAL       | В    | G            |
| Sudan                | PAL       | В    | <del>-</del> |
| Suriname             | NTSC      | M    |              |
| Swaziland            | PAL       | В    |              |
| Sweden               | PAL       | В    | G            |
| Switzerland          | PAL       | В    | G            |
| Syria                | SECAM     | В    | G            |
| Taiwan               | NTSC      | M    |              |
| Tanzania             | PAL       | В    | M            |
| Thailand             | PAL       | В    | I            |
| Togo                 | SECAM     | K    | -            |
| Trinidad & Tobago    | NTSC      | M    |              |
| Tunisia              | SECAM     | В    |              |
| Turkey               | PAL       | В    |              |
| Uganda               | PAL       | В    |              |
| United Arab Emirates | PAL       | В    | G            |
| United Kingdom       | PAL       |      | G            |
| U.S.A                | NTSC      | M    | I            |
| U.S.S.R              | SECAM     | D    | M            |
| Venezuela            | NTSC      | M    | K            |
| Vietnam              | SECAM     | N    |              |
| Yemen                | PAL       | В    |              |
| Yugoslavia           | PAL       | В    |              |
| Zaire                | SECAM     | K1   | G            |
| 20110                | DECI IIVI | 13.1 | <u> </u>     |