

SONY®

PROFESSIONAL VIDEO MONITOR

FWD 47W802A & FWD 55W802A

HTML 5 Operations

HDMI

OPERATION MANUAL English

1st Edition

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WARNING

Owner's Record

The model and serial numbers are located on the rear. Record the model and serial numbers in the spaces provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED.

On transportation

When you carry the display unit, hold the unit itself, not the speakers. If you fail to do so, the speakers may come out of the unit and the unit may fall. This can cause injury.

WARNING

When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power plug to an easily accessible socket-outlet near the unit.

If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power plug.

For the customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

*If you have any questions about this product, you may call: Sony Customer Information Service Center
+1 (866) 833-6817 or <http://www.sony.com/>*

Declaration of Conformity

Trade Name: SONY
Model: FWD 47W802A or FWD 55W802A
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo, San Diego, CA 92127 U.S.A.
Telephone Number: +1 (866) 833-6817

Declaration of Conformity

Trade Name: SONY
Model: FWD 47W802A or FWD 55W802A
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo, San Diego, CA 92127 U.S.A.
Telephone Number: +1 (866) 833-6817

This device complies 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.

WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.

If used in USA, use the UL LISTED power cord specified below.

DO NOT USE ANY OTHER POWER CORD.

Plug Cap Parallel blade with ground pin (NEMA 5-15P Configuration)
Cord Type SJT or SVT, three 16 or 18 AWG wires
Length Minimum 1.5m (4 ft. 11 in.), Less than 2.5 m (8 ft. 3 in.)
Rating Minimum 6A, 125V

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both.

To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

IMPORTANT INFORMATION

If a monitor is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the monitor.
- Only using furniture that can safely support the monitor.
- Ensuring the monitor is not overhanging the edge of the supporting furniture.
- Not placing the monitor on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the monitor to a suitable support.
- Not standing the monitors on cloth or other materials placed between the monitor and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the monitor or its controls.

For customers in Canada

This class B digital apparatus complies with Canadian ICES-003.

The socket-outlet should be installed near the equipment and be easily accessible.
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Precautions

On safety

- A nameplate indicating operating voltage, power consumption, etc. is located on the rear of the unit.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for several days or more.
- To disconnect the AC power cord, pull it out by grasping the plug. Never pull the cord itself.

Cleaning

Be sure to unplug the power cord before cleaning the display.

On cleaning the display

Do not allow hard objects to scrape, or pound the display screen surface, or allow objects to hit the screen surface because that can damage the screen surface.

The display screen has a special surface treatment.

Follow the instructions below to prevent impair performance because of improper handling when cleaning.

- Gently remove any dust from the screen surface with a soft cloth. A cleaning cloth or cloth for wiping glasses is preferred.
- If it is excessively dirty, clean the screen surface with a soft cleaning cloth slightly dampened with water.
- Never use alcohol, benzene, thinner, acid or alkaline cleaning solvent, abrasive cleaners, or chemically-treated cloths because they will damage the screen surface.

Cleaning the cabinet

- Gently wipe off stains using a dry, soft cloth. Wipe off grimy stains using a cloth slightly moistened with a mild detergent, then wipe the area again using a dry, soft cloth.
- Do not use alcohol, benzene, thinner or insecticide. Doing so may damage the finish of the surface or remove the markings on the unit.
- There is a danger that the screen will be damaged if wiped with a cloth that is dirty.
- Allowing the unit to come into prolonged contact with rubber or plastic products may alter the unit or cause the protective coating to come off.

On the LCD panel

- Keeping the LCD panel facing toward the sun for a long time will damage the panel. Take this into account when you install the unit outdoor or by a window.
- Do not forcefully press or scratch the LCD screen. Do not place objects on the screen. Doing so may disrupt the display or damage the LCD screen.
- You may find that the screen is showing horizontal stripes or that it has afterimage. The screen may also look darker when using the unit in a cool environment. These do not indicate a screen malfunction. The screen will return to normal when the ambient temperature is higher.
- If a static image is displayed for a long time, screen burn or a residual image may occur. A residual image will

disappear over time. If ghosting occurs, use the screensaver function, or use some kind of video or imaging software to provide constant movement on the screen. If light ghosting (image burn-in) occurs, it may become less conspicuous, but once burn-in occurs, it will never completely disappear.

- The panel surface, cabinet or frame may warm up during use. This does not a problem.

Bright spots and dark spots on the LCD screen

Although the LCD screen is manufactured by high technology with an effective resolution of at least 99.99%, it may show dark spots (pixel defects) or bright spots (red, blue, green, etc.) that are continuously lit or flashing. These are phenomenon of LCD screens that generated sometimes by pixel defects. These may occur after the device has been used for an extended period of time.

These are not screen malfunctions.

On installation

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- When you install multiple equipment with the unit, the following problems, such as malfunction of the remote control, noisy picture, noisy sound, may occur depending on the position of the unit and other equipment.

On repacking

Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit, repack it as illustrated on the carton.

If you have any questions on this unit, contact your authorized Sony dealers.

On the illustrations

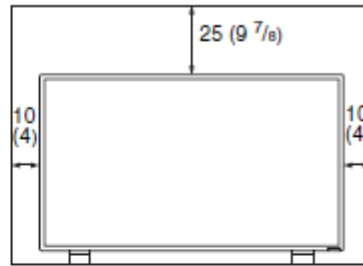
The illustrations of the display in the Operating Instructions are of the FWD-46B2.

Recommendations on Installation

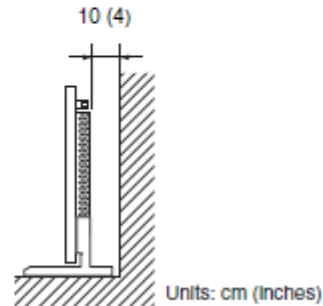
Provide an ample amount of space around the display

- To prevent internal heat buildup from sealing off the display, make sure to ensure proper ventilation by leaving open the minimum amount of space around the display, as illustrated below.
- The ambient temperature must be 0 °C to 40 °C (32 °F to 104 °F). Be careful when installing the display near a ceiling. The temperature there can become much higher than the normal, lower-level room temperature.
- When using the stand, you use the applicable Tabletop Stand SU-S02 (not supplied). For the fitting method, see the installation manual of the Tabletop Stand.
- Consult with Sony qualified personnel for wall mount installation.
- Regarding the installation of hardware such as brackets, screws, or bolts, we cannot specify the products. Actual installation is up to the authorized local dealers. Consult with qualified Sony personnel for installation.
- While the display is on, a certain amount of heat builds up inside. This can cause burns. Avoid touching the top or rear of the display when it is powered on or just after it has entered standby mode.

When using the Tabletop Stand Front



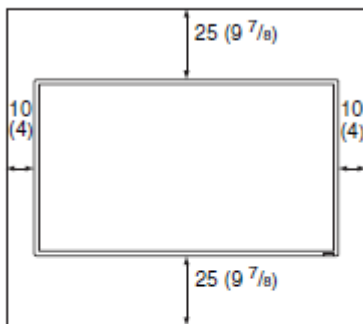
Side



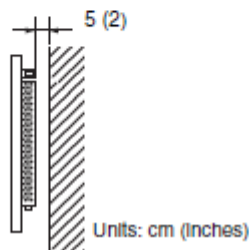
Note

When moving or installing the display when it is attached to the tabletop stand (not supplied), do so with at least 2 people.

When mounting the display horizontally Front



Side



What is HTML5

HTML5 is the 5th generation of the HTML protocols. This new protocol has the ability to insert audio and video images into an HTML page without the need of pointers and separate files. One page can be sent to the display to show these elements without any support from a local server. This allows simple signage construction from a web page without the need for proprietary software or systems. Simply configure the monitor and all page development can be done off site using simple HTML authoring software and techniques. Information on HTML5 can be found at <http://www.w3.org/TR/html5>

Modes of Operation

The FWD 47W802A and the FWD 55W802A have additional software included that is not found in the sister consumer models. This allows access to extra menus and settings that support HTML operation.

This software enhancement has three modes of operation

Normal Mode

In this mode the TV operates just as the KDL sister model. The same menus are used and operation is identical.

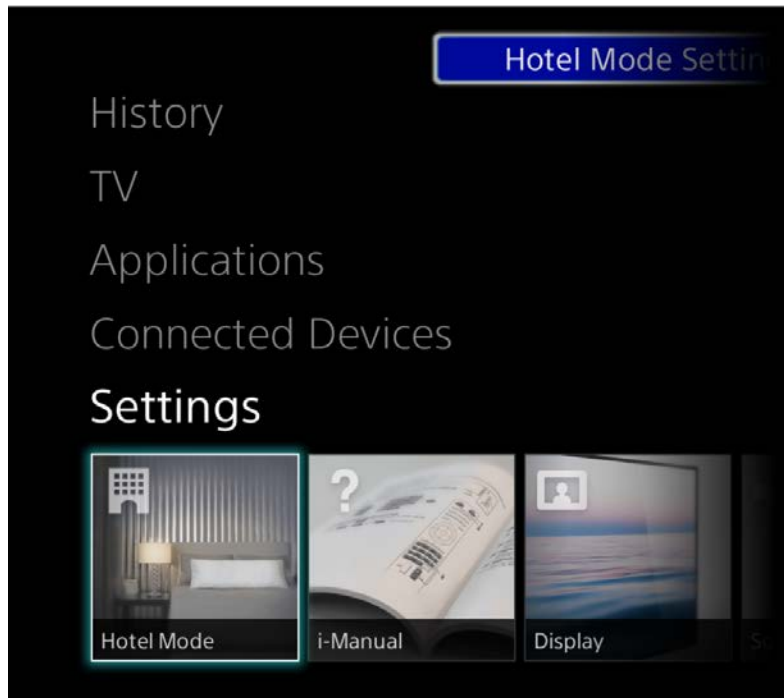
Hotel Mode Setting

This mode can be identified by an extra menu selection in the setup menus and a large blue banner at the top of the screen. In this mode, there are selections for various selections including setting the URL and security settings for signage operations.



Hotel Mode Settings in process

Displayed at the top of the screen in Hotel Mode Setting



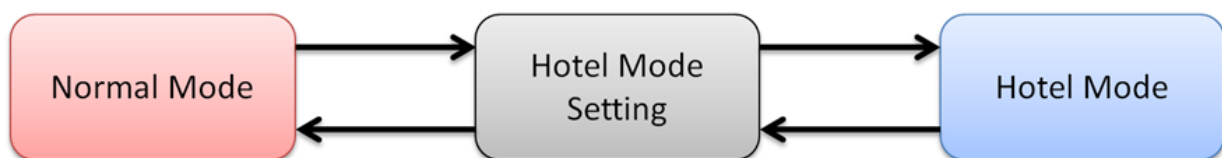
New menu added in Hotel Mode Setting

Hotel Mode

This mode can be identified in that several menu selections are not available including the setup menus. Operation is limited in many ways to prevent outside interference from local monitor operation.

Navigating these Modes

Each mode can only be accessed by being in the adjacent mode. As an example, in order to access the normal mode from the Hotel mode, you first have to go to the Hotel Setup mode before you can go to the Normal mode.



When you receive your FWD monitor, it will be preset to the Normal Mode after the TV setup selections are finished.

To navigate from the Normal Mode to the Hotel Mode Setting

- Turn on the TV
- Press the Power button on the remote to turn the TV off
- Press the DISPLAY button
- Press the MUTE button
- Press the VOL+ button
- Press the POWER button

To turn on the Hotel Mode

- Select “Hotel Mode” at the top of the menu selections

To navigate from the Hotel Mode to the Hotel Mode Setting

- Turn on the TV
- The TV needs to have a display during this procedure (no input video is needed)
- Press the DISPLAY button
- Press the MUTE button
- Press the VOL+ button
- Press the HOME button
 - The TV will go into power standby and require the power button to be pressed in order to display an image

To navigate back to Normal Mode

- Turn on the TV
- Press the Power button on the remote to turn the TV off
- Press the DISPLAY button
- Press the MUTE button
- Press the VOL- button
- Press the POWER button

Hotel Mode Menu Selections

Below are the settings available from the Hotel Mode Setting menu

- Hotel Mode
 - On or Off
 - Moves from Hotel Mode Setting to Hotel Mode
 - Note that once this is selected, you must use the procedure described in “Navigating These Modes” to return to “Hotel Mode Setting”
- TV/Remote Controls
 - Both
 - Allows control of the TV using either the handheld remote or the controls on the TV
 - Remote Only
 - Deactivates the controls on the TV
 - No Controls
 - Allows only IP control. Both the TV controls and the remote are deactivated
- Display Key
 - On or Off
 - Deactivates any window display if the “Display” key on the remote is pressed
- AC Power On
 - Standard
 - The TV will return to the same power state as it was when unplugged
 - Always On
 - The TV will go to a power on and display an image when plugged in
 - Always Standby
- Wide Mode
 - On or Off
 - Activates or deactivates the remote in selecting a wide image display
- Signal Source HDMI 1, 2, 3, 4, Video 1, & Video 2/Component
 - Use with labels
 - Identification labels generated by the video source will be displayed
 - Use without labels
 - No source labeling will be displayed
 - Do not use
 - The input will not be accessible
- Initial Input
 - Most recent

- The TV will select this input when powered on
 - TV, HDMI, Video
 - The TV will select this input when powered on
- Maximum Volume
 - 0, 1, 2, 3, etc.
 - Sets the maximum audio volume level that can be used on the TV
 - Setting this to 0 allows full range of audio levels
- Initial Volume
 - 0, 1, 2, 3, etc.
 - Sets what the audio volume level will be at power on
- Lineout Offset
 - 0, 1, 2, 3, etc.
 - Allows adjustment of the audio delay from the TV audio outputs
- Startup Application
 - On or Off
 - If set to On, then the TV ignores the setting set into “Initial Input” and uses the URL source describes in “Startup Application URL” for display.
- Startup Application URL
 - Opens a window and lets to key in the source URL using the remote
- IP Control
 - Authentication
 - None
 - Control from an IP source without authentication
 - Normal
 - Control from an IP source using a PIN based authentication
 - Pre-Shared Key
 - Control from an IP source using a fixed code string authentication
 - Normal and Pre-Shared Key
 - Control from an IP source using either PIN or fixed string authentication.
 - Pre Shared Key
 - Type in Key
 - Use the remote to type in the key information
- Initialize Hotel Settings
 - Cancel
 - Returns you to the Hotel Mode Setting without saving any of the items changes
 - Start
 - Saves any changes made under the Hotel Mode Setting menu
- Export Hotel Settings
 - Export to USB
 - Saves the Hotel Mode Settings to a USB stick so they can be imported to another display.

How To set up the TV for HTML5 Feeds

TV setup is quite simple below is a simple checklist of what needs to be done to get the TV ready for an HTML5 feed.

Before setup, the following decisions should be made.

- A. How should the TV be controlled?
- B. How should the TV respond if power is disconnected?
- C. Will sources be 4:3 or 16:9 aspect ratio?
- D. Will there be any external input sources?

Once these are decided, it will be easy to set the TV to the right configuration.

1. The TV must be in the Hotel Mode Settings mode. This can be identified by the large blue banner at the top of the screen.



2. Press the "Home" button and navigate to the "Setup" pages
3. Scroll the pages to the right and find "Network"
 - a. Press the button at the center of the up/down/left/right keys (Enter) to access the network settings.
 - b. Select "Network Setup"
 - c. Select "Setup Network Connection"
 - d. Select "Auto"
 - e. Follow the on screen instructions
 - f. After setup has finished, select "Refresh Internet Content" and press enter.
4. Press the "Home" key to return to the main menus.
5. Scroll to the far left and find the "Hotel Mode" menu and press "Enter"
6. DO NOT SELECT HOTEL MODE ON/OFF. Doing so will remove the menu and you will need to follow the procedure on page 10 in order to get back to this spot.
7. TV Control
 - a. Set the "TV/Remote Controls" setting. Only set "No Control" if you plan on controlling the TV only through the IP input. We strongly suggest you test this before setting the TV to No Control.

- b. If you plan on using IP control, navigate to the IP Control settings.
 - i. Select the authentication method you would like to use. If it includes a key, fill in the “Pre-Shared” window.
- 8. TV Power up
 - a. Under the Hotel Mode menu find AC Power On. Select the required method the TV should respond to when power is applied
 - b. Navigate to each Signal Source setting and select the proper display or if it is going to be an active input
 - c. If the TV is going to wake up with a connected video source, go to the “Initial Input” menu and set which source that would be.
 - d. If the TV is going to wake up and display content from the LAN or USB storage device, then navigate to the Startup application URL menu.
 - i. Input the URL that will be the source for the IP content.
 - If the source is from a USB stick, use the file path, file://localhost/doc
 - e. Go to “Startup Application” on/off and turn this on.
 - f. Navigate to the “Maximum Volume” menu setting and set the volume level to the maximum level that you would allow at the TV’s final installed location.
 - g. Navigate to “Initial Volume” menu and set the volume to what is required at TV power on.
- 9. If the source for video content is only going to be 4:3, navigate to the “Wide Key” menu and set it to “do not use”.
- 10. Once everything is set, navigate to Initialize Hotel Settings and select “Start”
- 11. Once the settings are saved you can export them to a USB stick for archive or to program another TV.
- 12. At this point it is possible to set the monitor to Hotel Mode using the Hotel Mode On setting at the top of the menu selections.

The HTML5 Application

The FWD 47W802A and FWD 55W802A use Opera Presto as a rendering engine. This is a Linux based operating system. Not all features of the Opera Presto system are available on the TV. Only operations specific to HTML operation are implemented. For instance, the FWD can only support one window display.

Below are the supported Application Programming Interfaces (API's)

Item	Status	Detail
Media Elements	Supported	See V4.6 descriptions
Canvas	Supported	
SVG	Supported	
WebGL	Supported	
WebStorage	Not Supported	
Offline Apps	Supported	Up to 5MB per domain, 10MB total
Web Fonts	Supported	
Selectors	Supported	
WebSocket	Supported	
Web Workers	Supported	
Viewport	Not Supported	
Indexed DB	Not Supported	
Geolocation	Not Supported	
W3C Widget	Not Supported	

The following HTTP protocols are supported

- HTTP Authentication
 - Basic
 - Digest
- JavaScript dialogs
 - Alert
 - Prompt
 - Confirm

Note that

- file dialog is not supported
- Accept-Language field holds main language as the first priority and English as the second.

Supported URL Schemes include

- http
- https
- data

Supported SSL/TLS CA Certificates

The Root CA certificates listed below are held in the system for SSL server verification. These support external server authentication.

- AddTrust External CA Root
- COMODO Certification Authority
- DigiCert Global Root CA
- DigiCert High Assurance EV Root CA
- Entrust.net Certification Authority (2048)
- Entrust.net Secure Server Certification Authority
- Entrust Root Certification Authority
- Equifax Secure Certificate Authority
- GeoTrust Primary Certification Authority
- GlobalSign Root CA
- GlobalSign Root CA – R2
- GTE CyberTrust Global Root
- SCEI DNAS Root 01
- SCEI DNAS Root 02
- SCEI DNAS Root 03
- SCEI DNAS Root 04
- SCEI DNAS Root 05
- Thawte Premium Server CA
- Thawte Primary Root CA
- Thawte Server CA
- ValiCert Class 2 Policy Validation Authority
- Verisign Class 3 Public Primary Certification Authority
- VeriSign Class 3 Public Primary Certification Authority – G5

Supported Media Elements

The FWD 47W802A and FWD 55W802A support <audio> and <video> tags defined in [HTML5].

Note that there are maximum widths and height attributes and that the type attribute is required in the source element.

Below is an example

```
<video width="960" height="540">  
  <source src=http://XXXXXXX.com/video.mp4 type="video/mp4"/>  
</video>
```

Supported Video Formats

Protocol	Container	Video	Audio	Manifest	MIME Type
HTTP(S)	MP4	AVC	AAC-LC/HE-AAC	-	video/mp4
HTTP(S)	MPEG2 TS	AVC/MPEG2	AAC-LC/HE-AAC/MP1L2	-	video/m2ts
HLS/HTTP(S)	MPEG2 TS	AVC/MPEG2	AAC-LC/HE-AAC/MP1L2	M3U8	application/vnd.apple.mpegurl
MSSS/HTTP(S)	MP4	AVC	AAC-LC/HE-AAC	M3U8	application/vnd.ms-sstr+xml

Supported Audio Formats

Protocol	Container	Audio	MIME type
HTTP(S)	MP4	AAC-LC/HE-AAC	audio/aac
HTTP(S)	MP3	MP3	audio/mp3

Supported Codecs

Codec	Supported Specification
MPEG4 part 10 (AVC/H.264)	BP@L3, MP@L4, HP@L4
AAC-LC	32k, 44.1k, 48k / 384kbps (max) / up to 5.1 ch
HE-AAC	32k, 44.1k, 48k, / (ISO/IEC 14496-3 compliant / profile level3) / up to 2ch

Inserting Broadcast Video

To embed a running video image from an external TV input or video from the TV tuner into the html page, it is required to set the width and height attributes

An example would be:

```
<object type="application/x-decimated-video" width="960" height="540"/>
```

Channels can be changed using the remote control as well as changes to the input source.

- The engine of the TV can only handle one video source, so there are some limitations
 - If the page contains two or more broadcast video objects, then only the first one will be displayed
 - If the page contains a broadcast video image and a video or audio element, then the broadcast window will just be a black square instead of a moving picture.

Operation from USB Storage

It is possible to substitute the LAN input with a USB storage device. By configuring the USB storage, the content can be plugged into the display with just power as a connection.

The TV can use several types of applications including html, image, css, and js files.

To do this;

- The USB device must be formatted as FAT32
- A Manifest must be included on the USB and stored using the path
 - /sony/apps/webapps/<application_folders>/app/manifest.json
 - The manifest includes application information
 - Application ID
 - Title
 - Splash Image
 - Initial URL
 - The manifest file must be named "manifest.json"
 - Below is an example of a manifest

```
{
  "name": {
    "default": "en_US",
    "en_US": "Example B2B Application"
  },
  "uuid": "com.example.app.myapplication",
  "description": {
    "default": "en_US",
    "en_US": "Created for an example"
  },
  "version": "1.0",
  "manifest_version": "1.0",
  "app": {
    "launch": {
      "web_url": "http://example.com/myapp"
    }
  },
  "splash": "splash.jpg",
  "icons": {
    "128x128": "icon.png"
  },
  "minimum_web_platform_version": "1.0"
}
```

- And must contain an autorun.txt file stored as
 - /sony/autorun.txt
- The autorun.txt file must contain a UUID to identify which application stored in the webapps folder should be launched
 - "uuid": "com.example.app.myapp"
- Any directory name can be used and you can store more than one application in the webapps folder.
- Applications are stored under the file path:
 - /sony/apps/webapps/<application_folders>/app/doc
- A application index can be displayed at power on using a local host path
 - file://localhost/doc

```

...
  "app": {
    "launch": {
      "local_path": "file://localhost/doc/index.html",
    }
  },
...

```

Remote Control though an IP Connection

IP control is based on the JSON-RPC 1.0 protocol over HTTP and includes access security. <http://www.json-rpc.org> Control can be accomplished though a web application such as JavaScript or from other standalone applications.

Access Security

There are four methods security available in the menu settings.

- None
 - No authentication is required to access the TV
- Normal
 - A PIN based authentication is required to access the TV
- Pre-Shared Key
 - A fixed code string based authentication is required to access the TV
- Normal and Pre-Shared
 - Either a PIN based or code stream based authentication is used to access the TV

Normally “Pre-Shared Key” is used to access the TV. In this case, an IP control request is accepted if the HTTP request header has the following header field.

X-Auth-PSK: <Key>

Another example would be: X-Auth-PSK: secret if the code word was “secret”

Services and Methods

A service consists of one or more methods. The HTTP server in the TV can manage one or more services and listens on port 80. SSL protocol is not supported.

A service would be identified as:

`http://<address>/sony/<service_name>`

A method is identified by a method field as a JSON-RPC protocol. Below is a sample.

```
{
  "method": "getVersions",
  "version": "1.0",
  "params": [],
  "id": 123
}

{
  "method": "getMethodTypes",
  "version": "1.0",
  "params": ["1.0"],
  "id": 4649
}
```

A service that has two or more versions and uses the same method can be identified by:

```
{
  "method": "doSomething",
  "params": [],
  "version": "2.1",
  "id": 100
}
```

The version field must be included in each request even if the method has only one version.

Below is an example of a basic sequence.

```
// create XHR object
var xhr = new XMLHttpRequest();

// open service url with pre-shared key header
xhr.open("POST", "http://192.168.0.100/sony/system", true);
xhr.setRequestHeader("X-Auth-PSK", "mysecret");

// set callback function
xhr.onload = function() {
  console.log(this.responseText);
};

// send request
xhr.send(JSON.stringify({
  "method": "getSystemInformation",
  "params": [],
  "id": 101
})));
```

Below would be a power off sequence

```
function powerOff(ip, secret) {  
  var xhr = new XMLHttpRequest();  
  xhr.open("POST", "http://" + ip + "/sony/system", true);  
  xhr.setRequestHeader("X-Auth-PSK", secret);  
  xhr.send(JSON.stringify({  
    "method": "setPowerStatus",  
    "params": [{  
      "status": false  
    }],  
    "id": 102  
  }));  
}
```

Trademark information

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This TV supports DiSEqC 1.0. This TV is not intended for controlling motorized antennas.



Notes on Digital TV function

- Any functions related to Digital TV (DVB) will only work in countries or areas where DVB-T/DVB-T2* (MPEG-2 and H.264/MPEG-4 AVC) digital terrestrial signals are broadcast or where you have access to a compatible DVB-C (MPEG-2 and H.264/MPEG-4 AVC) cable service. Please confirm with your local dealer if you can receive a DVB-T/DVB-T2* signal where you live or ask your cable provider if their DVB-C cable service is suitable for integrated operation with this TV.
- Your cable provider may charge a fee for their services, or require you to agree to its terms and conditions of business.
- This TV set complies with DVB-T/DVB-T2* and DVB-C specifications, but compatibility with future DVB-T/DVB-T2* digital terrestrial and DVB-C digital cable broadcasts are not guaranteed.
- Some Digital TV functions may not be available in some countries/areas and DVB-C cable may not operate correctly with some providers.



- Not all the TV model series have 2nd generation T2* Digital Video Broadcast technology.
- * DVB-T2 is available for TV model series W809A/W808A/W807A/W805A only.

Troubleshooting

When the illumination LED is flashing in red, count how many times it flashes (interval time is three seconds).

Press **I/⏻** on the TV to turn it off, disconnect the AC power cord (mains lead), and inform your dealer or Sony service centre of how the indicator flashes (number of flashes).

When the illumination LED is not flashing, check the items in the tables as follows.

Also refer to "Troubleshooting" in the i-Manual. If the problem persists, have your TV serviced by qualified service personnel.

There is no picture (screen is dark) and no sound.

- Check the antenna (aerial)/cable connection.
- Connect the TV to the AC power (mains), and press **I/⏻** on the TV or remote.

Some programmes cannot be tuned.

- Check the antenna (aerial) or dish.

For satellite models only:

- The satellite cable might be short-circuited or there might be connection problems of the cable. Check the cable connection and then turn the TV off with the Mains power On/Off switch, and turn it on again.
- The frequency that you entered is out of range. Consult the received satellite broadcasting company.

There is no Cable TV services (programmes) found.

- Check the cable connection or tuning configuration.
- Attempt the "Digital Auto Tuning" by selecting "Antenna" instead of "Cable".

The remote does not function.

- Replace the batteries.
- Your TV may be in SYNC mode. Press **SYNC MENU**, select "TV Control" and then select "Home (Menu)" or "Options" to control the TV.

The "Parental Lock" password has been forgotten.

- Enter 9999 for the PIN code. (PIN code 9999 is always accepted.)

The TV surrounds become warm.

- When the TV is used for an extended period, the TV surrounds become warm. You may feel hot when touching there by the hand.

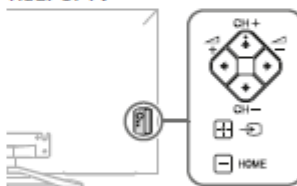
Frozen audio or video, a blank screen, or the TV does not respond to TV or remote buttons.

- Perform a simple reset of the TV by unplugging the AC power cord for two minutes, then plug it in again.

The CH+/-, Δ +/-, \uparrow / \downarrow / \leftarrow / \rightarrow , \odot , \oplus and HOME buttons cannot be located on the TV.

- See below illustration for location of the buttons on the TV.

Rear of TV



The illumination LED is turned on.

- If you do not wish to light up the illumination LED, you can turn it off. Press **HOME**, then select "Settings" → "System Settings" → "General Set-up" → "Illumination LED" → "Off". You can also press **OPTIONS**, then select "Illumination LED" → "Off".



Specifications

System

FWD

Panel system

LCD (Liquid Crystal Display) Panel

TV system

Analogue: Depending on your country/area selection: B/G/H, D/K, L, I, M

Digital: DVB-T/DVB-C

DVB-T2 (except FWD-55/47/42W802A)

Satellite: DVB-S/DVB-S2 (except KDL-55/47/42W802A)

Colour/video system

Analogue: PAL, SECAM, NTSC3.58, NTSC4.43

Digital: Refer to the i-Manual.

Channel coverage

Analogue: UHF/VHF/Cable, Depending on your country/area selection.

Digital: UHF/VHF/Cable, Depending on your country/area selection.

Satellite: IF Frequency 950-2150 MHz (except FWD-55/47/42W802A)

Sound output

10 W + 10 W

Input/Output jacks

Antenna (aerial) cable

75 ohm external terminal for VHF/UHF

Satellite antenna (except FWD-55/47/42W802A)

Female F-Type Connector IEC169-24, 75 ohm.

DiSEqC 1.0, LNB 13 V/18 V & 22 kHz tone,

Single Cable Distribution EN50494.

AV1

21-pin scart connector (CENELEC standard) including audio/video input, RGB input and TV audio/video output.

COMPONENT IN

YPbPr (Component Video): 1080p (50, 60 Hz), 1080i (50, 60 Hz), 720p (50, 60 Hz), 576p, 576i, 480p, 480i

Audio input (phono jacks)

AV2

Video input (common phono pin with Y input)

HDMI IN 1, 2, 3, 4

Video (2D): 1080p (30, 50, 60 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (30, 50, 60 Hz), 720/24p, 576p, 576i, 480p, 480i, PC Formats

Video (3D):

Frame Packing 1080p (30 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (30, 50, 60 Hz), 720/24p

Side-by-Side 1080p (50, 60 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (50, 60 Hz)

Over-Under 1080p (30, 50, 60 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (50, 60 Hz)

Audio: Two channel linear PCM: 32, 44.1 and 48 kHz, 16, 20 and 24 bits, Dolby Digital

ARC (Audio Return Channel) (HDMI IN 1 only)

MHL (Common with HDMI 2)

Video (2D): 1080p (30 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (30, 50, 60 Hz), 720/24p, 576p, 576i, 480p, 480i

Video (3D):

Side-by-Side 1080/24p, 1080i (50, 60 Hz), 720p (50, 60 Hz)

Over-Under 1080p (30 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (50, 60 Hz)

Audio: Two channel linear PCM: 32, 44.1 and 48 kHz, 16, 20 and 24 bits, Dolby Digital

DIGITAL AUDIO OUT (OPTICAL)

Digital optical jack (Two channel linear PCM, Dolby Digital)

AUDIO OUT /

Audio output (stereo minijack)

Headphones jack

1 (HDD Rec), 2, 3

USB HDD device port (1 only), USB port



CAM (Conditional Access Module) slot



LAN
10BASE-T/100BASE-TX connector (Depending on the operating environment of the network, connection speed may differ. 10BASE-T/100BASE-TX communication rate and communication quality are not guaranteed for this TV.)

Others

Supplied accessories

Refer to "What's in the box" in Quick Start Guide.

Optional accessories

Camera and Microphone Unit: CMU-BR200/CMU-BR100

USB Wireless LAN Adapter: UWA-BR100

Passive 3D Glasses: TDG-500P



SimulView™ Passive Glasses: TDG-SV5P



Operating temperature

0 °C - 40 °C

Operating humidity

10% - 80% RH (non-condensing)

Power and others

Power requirements
220 V – 240 V AC, 50 Hz

Energy Efficiency Class
FWD-55W80xA: A+
FWD-47W80xA: A+

Screen size (measured diagonally) (Approx.)
FWD-55W80xA: 138.8 cm / 55 inches
FWD-47W80xA: 119.3 cm / 47 inches

Power consumption
in "Home"/"Standard" mode
FWD-55W80xA: 79.0 W
FWD-47W80xA: 66.0 W

in "Shop"/"Vivid" mode
FWD-55W80xA: 157 W
FWD-47W80xA: 139 W

Average annual energy consumption*¹
FWD-55W80xA: 110 kWh
FWD-47W80xA: 92 kWh

Standby power consumption*²
0.25 W (15 W in software/EPG update mode)

Display resolution
1,920 dots (horizontal) × 1,080 lines (vertical)

Dimensions (Approx.) (w × h × d)

with Table-Top Stand
FWD-55W80xA: 125.3 × 76.8 × 29.8 cm
FWD-47W80xA: 108.3 × 67.2 × 29.8 cm

without Table-Top Stand
FWD-55W80xA: 125.3 × 73.5 × 6.4 cm
FWD-47W80xA: 108.3 × 63.9 × 6.4 cm

Mass (Approx.)

with Table-Top Stand
FWD-55W80xA: 20.7 kg
FWD-47W80xA: 16.7 kg

without Table-Top Stand
FWD-55W80xA: 18.4 kg
FWD-47W80xA: 14.6 kg



- The "x" that appears in the model name corresponds to a numeric digit, related to design, colour or TV system.
- Do not remove the dummy card from TV CAM (Conditional Access Module) slot other than to insert a smart card fitted in CAM.
- Optional accessories availability depends on countries/region/TV model/stock.
- Design and specifications are subject to change without notice.

*¹ Energy consumption per year, based on the power consumption of the television operating 4 hours per day for 365 days. The actual energy consumption will depend on how the television is used.

*² Specified standby power is reached after the TV finishes necessary internal processes.

FWD 47W802A
FWD 55W802A
USA Models Only

Sony Corporation

<http://www.sony.net/>

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