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PRIMARE SPA22/SP32
HD AUDIO UPGRADE

Welcome

Welcome to the Primare SPA22/SP32 HD Audio Upgrade! This sheet describes the additional features provided by the upgrade, and explains how to use them.

Introduction

The Primare SPA22/SP32 HD Audio Upgrade provides the following new features:

• Individual HD format settings including Multi-PCM.
• Improved and extended trigger options.
• Easy lipsync access using ◣◢ button.
• Improved layout of the on-screen menus and display.

New HD audio formats

Standard DVDs all use "lossy" multi-channel soundtracks, reducing the amount of data that needs to be stored on the disc using perceptual coding.

Blu-ray players provide three lossless audio formats: Dolby TrueHD, DTS-HD Master Audio, and Linear Pulse-Code Modulation (LPCM). These formats will all convey eight discrete channels (7.1) of no-loss audio that exactly duplicate the original studio masters.

The new Primare SPA22/SP32 HD Audio Upgrade lets you take advantage of these audio formats to achieve a huge increase in realism with your movie soundtracks.

Formats decoded

Format	Variants
Dolby	Dolby Prologic IIx
Dolby Digital	EX, Plus, TrueHD
DTS	DTS-ES, DTS-NEO:6, DTS 96/24, DTS-HD Master Audio, DTS-HD High Resolution Audio
PCM	2ch-PCM, Multi-PCM, LPCM

Dolby TrueHD

• Lossless encoding of up to 8 channels of audio, built on MLP technology.
• Maximum bit rate of 18.64Mbps.
• Up to eight channels of 24bit/96kHz audio.
• Up to six channels of 24bit/192kHz audio.

DTS-HD Master Audio

• Lossless encoding of up to 8 channels of audio.
• Maximum bit rate of 24.5Mbps
• Up to eight channels of 24bit/96kHz audio.
• Up to two channels of 24bit/192kHz audio.

Input connections

To decode the new HD formats the Blu-ray player should be connected to one of the three HDMI audio/video inputs. By default, the following two inputs are already configured:

Input	Name	Audio	Video
3	BLU-RAY.	HDMI 1	HDMI 1
6	DVB	HDMI 2	HDMI 2

Changing the lipsync

You can change the AV Delay (lipsync) from the front panel to compensate for processing delay in some video displays. Choose the setting that gives correct lipsync.

To change the lipsync

● Press the ◣◢ button on the front panel, or the **BAL/ST** button on the remote control, until the display shows the current AV Delay:

`AV DELAY        0ms`

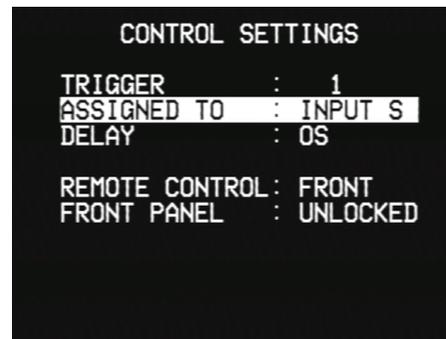The AV Delay can be changed from 0ms to 140ms.

After a short delay the display will revert to the normal display.

Input trigger control

You can now control the trigger outputs depending on which input is selected.

On the **CONTROL SETTINGS** menu choose the trigger you want to use, and set **ASSIGNED TO** to **INPUT S** to specify that you want to control the trigger from the **INPUT SETTINGS** menu.
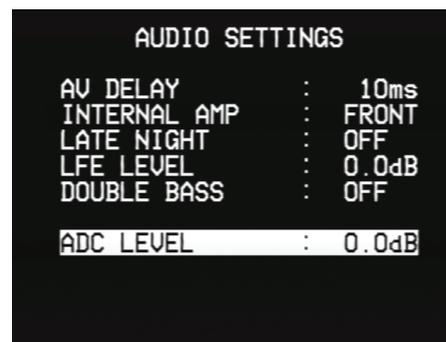
For example:

```
       CONTROL SETTINGS

   TRIGGER        :    1
   ASSIGNED TO    : INPUT S
   DELAY          : 0S

   REMOTE CONTROL: FRONT
   FRONT PANEL   : UNLOCKED
```

On the **INPUT SETTINGS** menu set the trigger output setting as required for each input:

```
        INPUT SETTINGS
   INPUT     :  2
   STATUS    :  ENABLED
   ALIAS     :  DVD
   AUDIO     :  DIGITAL 4
   VIDEO     :  COMPONENT 1
   OFFSET    :    0.0dB
   2CH MODE  :  STEREO
   TRIGGER 1 :  ON
   TRIGGER 2 :  ---
   TRIGGER 3 :  ---
   -> HDMI SETTINGS
```
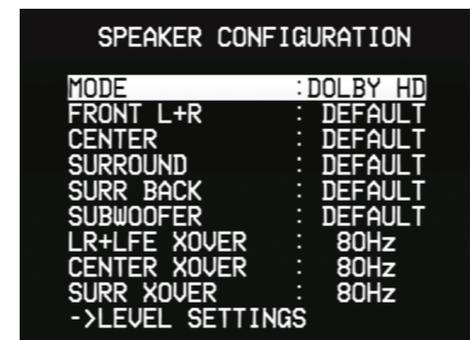
Each trigger can be set to **---** (no change), **OFF**, or **ON**, to control the trigger output when the input is selected.

ADC level

```
       AUDIO SETTINGS

   AV DELAY       :   10ms
   INTERNAL AMP   :   FRONT
   LATE NIGHT     :   OFF
   LFE LEVEL      :   0.0dB
   DOUBLE BASS    :   OFF

   ADC LEVEL      :   0.0dB
```

The **ADC GAIN** setting has been renamed **ADC LEVEL**: It allows you to adjust the threshold for automatically setting the ADC input level, and can be adjusted between 12.0dB (more dynamic range) and -12.0dB (more headroom).

Speaker settings

```
     SPEAKER CONFIGURATION

   MODE            :DOLBY HD
   FRONT L+R       : DEFAULT
   CENTER          : DEFAULT
   SURROUND        : DEFAULT
   SURR BACK       : DEFAULT
   SUBWOOFER       : DEFAULT
   LR+LFE XOVER    : 80Hz
   CENTER XOVER    : 80Hz
   SURR XOVER      : 80Hz
   ->LEVEL SETTINGS
```

On the **SPEAKER CONFIGURATION**, **LEVEL SETTINGS**, and **SPEAKER DISTANCE** menus the **MODE** setting now provides the following options:

GENERAL, **DOLBY D**, **DOLBY HD**, **DTS**, **DTS HD**, **MULTIPCM**, and **OTHER.**

This allows you to add an offset to the **GENERAL** settings for the new HD audio sources.

Recalling settings

For security, the **RECALL FACTORY SETTINGS** and **RECALL INST SETTINGS** options on the **MEMORY MENU** now both prompt for you to confirm the operation before proceeding:

```
        MEMORY MENU

    <-back


    CONFIRM FACTORY RECALL?
```
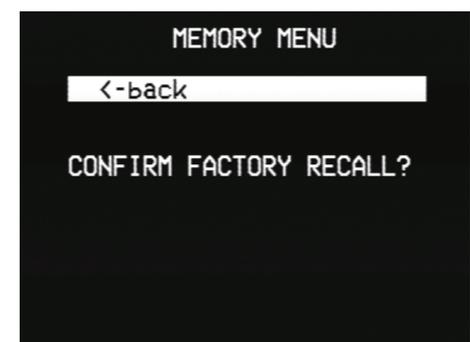
● Select **CONFIRM** to proceed or **<-back** to cancel.