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AP20 Software Updates

This document describes the latest software update for the AP20. Software updates can be easily done on the AP20 through an internet connection, or through a USB memory stick.

Software updates usually contain a variety of improvements, new features, and or bug fixes. In some cases updates may affect the setup and operation. Please read the summary of updates for this release before updating the AP20. Additional information on features can be found in the AP20 Installation and Operation Guide, TM-H392.

How to Check if an Update is Required

The current AP20 software version may be found by selecting Menu → System → System Info. The current version is displayed in the yellow box on the upper left of the screen. If your AP20 has an earlier software version you will need to update the software to use the features described in this document for V1.05.09.

Current version: 105.09
Build Date Tue Jun 9 12:27:16 PDT 2020

Check with Datasat Digital Entertainment Technical support at techsupport@ati-amp.com for the latest update.

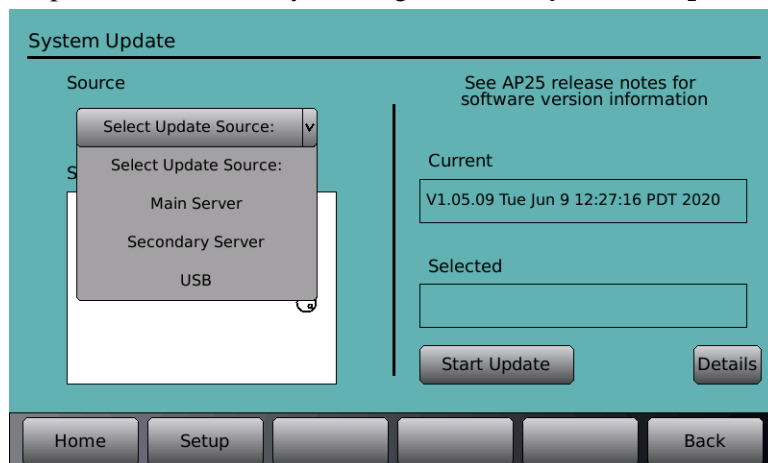
Software Update Procedure

The easiest way to update the AP20 is through the network. However, if an error occurs while downloading the update, then there may be a network security firewall at your facility that is preventing access to the Datasat web site.

If this or any other reason prevents the network update from working, then see the **Updating using a USB device** section for an alternate update method.


Updating to V1.05.09 using the network

1. Select **Menu → Network** to view the network screen. Verify the “Connection is UP” status at the bottom of the network screen.
2. Select the update menu screen by entering **Menu → System → Update System Software**.



3. Using the **Select Update Source** pull down menu, choose **Main Server**, or **Secondary Server**. Both will provide the same information. If you successfully connect to the server a list will appear of all available software versions. The most current will always be at the top of the list. Use the adjustment knob to highlight the desired software version.

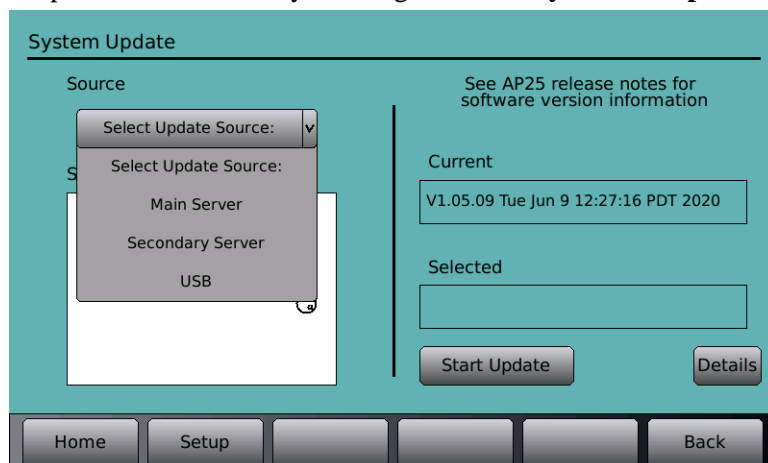
The current version of software loaded on the AP20 is displayed under **Current** on the right side of the screen. After pressing the Details button, the highlighted software version will display under **Selected** on the right side of the screen.

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4. Press the **Start Update** button.
5. The AP20 should immediately start downloading the update file.
6. When the installation process is finished, the AP20 will automatically reboot.
7. Wait for the Home screen to appear when the reboot completes.
8. Check the **Menu** → **System** → **System Info** screen and verify that V1.05.09 is installed.

Updating to V1.05.09 using a USB Device

1. Download the AP20 update file and copy it to a USB memory device in the root directory. (Check with Datasat Digital Entertainment Technical support for instructions). The correct filename is: ciAP20v10509_rel.upd.
2. Connect the USB device to the USB connector on the front of the AP20.
3. Select the update menu screen by entering **Menu** → **System** → **Update System Software**.

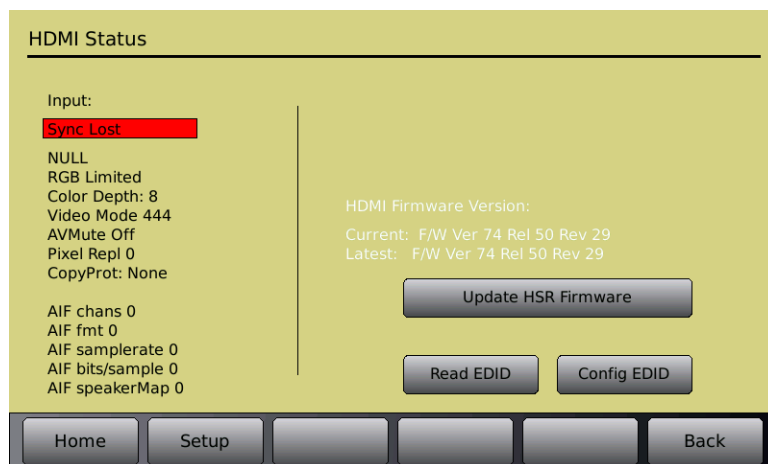


4. Using the Select Update Source pull down menu, choose **USB**.
5. Select the update file.
6. Press the **Start Update** button.
7. The AP20 should immediately start downloading the update file.
8. When the installation process is finished, the AP20 will automatically reboot.
9. Wait for the Home screen to appear when the reboot completes.
10. Check the **Menu** → **System** → **System Info** screen and verify that V1.05.09 is installed.

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HDMI Firmware Update Procedure

Updating the HDMI board firmware requires a separate update procedure from the main AP20 software update. Update the AP20 software before updating the HDMI firmware. This will assure that the latest HDMI firmware is available. To access the firmware update menu select **Menu → Setup → Decoder → HDMI**. The current loaded version and latest available version for the installed HDMI board will be displayed. Select the **Update HSR Firmware** button if an update is needed. Once the update is completed, reboot the AP20. Verify that the latest version is installed.



- ☒ **Note:** Not all input sources will have the Decoder selection available. If this is not displayed, set the input source for HDMI.

Updates for V1.05.09 Software Release


This section describes any new features, enhancements and bug fixes that are included in V1.05.09 since the previous software version V1.05.08.

Version: 105.09
Build Date Tue Jun 9 12:27:16 PDT 2020

Improvements for V1.05.09

- Updated **HSR-41T HDMI board firmware**, now Ver. 74 Rel. 50 Rev. 29. This firmware fixes the following HDMI issues:
 - Mute stuck ON when DSD audio extraction is active.
 - Powering off a TV when it is in off/standby would result in the loss of audio extraction from the currently active Source device.
 - Inactive input ports would leave some Source devices thinking that they should send a signal and authenticate with the HSR41T. Since the authentication could not be completed, these Source devices could get themselves into a bad state requiring a reset or power cycle to start working again.
 - There was a timing issue when, with no TV connected, at startup if the Host commanded the HSR41T to select input 4 this would result in no signal received on the input port. Note: There is now a longer delay in the application startup (500-600 ms).
 - Occasionally, with some Source devices, 1080p video would be selected instead of the expected video format.
- Added **Time/Date setup** screen. To access select Setup>System>More, then select the Set Time/Date button.
- When selecting the **Automation Manual Control buttons** via VNC, they now turn green momentarily to indicate that the button has been pressed.

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Updates for V1.05.08 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.05.08 since the previous software version V1.05.07.

Version: 105.08
Build Date Tue Jan 28 11:56:06 PST 2020

Improvements for V1.05.08

- Updated HDMI HSR-41.2 (HSR41P) board firmware, which fixes an issue with a Christie projector experiencing a loss of video.
- Added support for new HSR-41T HDMI board (firmware Ver. 74 Rel. 50 Rev. 25). This board supports:
 - HDMI 1.4 & 2.0b mandatory formats
 - Up to “4K” pixel rates at 24-60 Hz (4:4:4)
 - 4K 4:2:0 format video at 60 Hz
 - Up to 12 bit Deep Color and HDR
 - All typical color spaces
 - Audio extraction (I2S standard) and loop through

This board does not support on screen display (OSD).

- Fixed a rare issue in which there is no audio after switching formats.

Updates for V1.05.07 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.05.07 since the previous software version V1.05.06.

Version: 105.07
Build Date Thu Apr 18 14:59:31 PDT 2019

Improvements for V1.05.07

- Corrected an issue with the **AES67** option. AES67 output channels that were turned off were being attenuated instead of completely muted.


Updates for V1.05.06 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.05.06 since the previous software version V1.05.05.

Version: 105.06
Build Date Thu Dec 20 11:33:12 PST 2018

Improvements for V1.05.06

- Added support for **AES67**, Audio over Ethernet transmitter option board (H790).
- Added display of **HDCP type** to the home screen.
- Output delay** resolution changed from 0.1ms to 0.01ms (System> Formats > Channel Profile > Channel Delays).
- Added **“Apply” button** to network screen to allow network settings changes to be applied remotely (Setup > Network > Apply). Selecting “Apply” will bring up a popup menu asking permission to restart the unit
- Parametric filters**: Changed range from 20->200Hz to 20->20000Hz (Setup > Paramtrc).
- Allow keyboard entry of **Parametric frequency** by double tapping on **freq button**. Double tapping brings up a virtual keyboard for entry.

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7. **Routing Matrix:** Added an “Off” setting to the routing matrix for each channel (Setup > Routing). This feature is useful if there are multiple output profiles, where some of them do not use that speaker.
8. **Dirac2:** Added support for non-persistent level adjustments during Dirac measurements
9. Corrected an issue with incorrect format changes, in which the unit would sometimes try to change format before reading the entire format name.

Updates for V1.05.05 Software Release

Version: 105.05
Build Date Tue Apr 3 13:16:40 PDT 2018

1. Added support for AP25. This version does not affect features of the AP20.

Updates for V1.05.03 Software Release

Version: 105.03
Build Date Tue Jan 2 11:12:06 PST 2018

2. Added support for AP25.
3. Increased number of formats from 20 to 40.
4. Fixed issue with user installed screensaver (ap20.jpg), which caused the screensaver to be lost on re-boot.
5. Fixed an issue that caused occasional random long audio delays (up to 1 second) when Dirac 2 was selected.

Updates for V1.05.02 Software Release

Version: 105.02
Build Date Mon Apr 24 03:18:03 PDT 2017


1. Added **H335 rev. G** DSP backplane board support.
2. **HDMI:**
 - a. Added status support for HSR-41.2 board (HDMI 2.0 and HDCP 2.2).
 - b. Improved performance with HDCP compliant digital audio.
3. Added **Speaker Parametric Filters (PEQs)**.
4. **Digital Audio out** – Added option for “Off”.
5. Updated **Parametric Filters** screen with improved look/feel.
6. Improved **Crossover Filter** processing, and added options for more filter types.
7. Improved **Parametric, 1/3 Octave** and **Bass/Treble** Filter code.
8. Fixed issue that caused **1/3 Octave EQ** to not be correctly enabled at startup.
9. Fixed **Optical Bass Extension** pinknoise in the case where channels 2 and 3 may be routed to other channels.
10. Fixed issue in which **Dirac** setup software would not detect the AP20 if a static IP address was used and a gateway was not configured.
11. Fixed issue with no audio with **TosLink** on the AP20L version.

Updates for V1.05.01 Software Release

Version: 105.01
Build Date Wed Dec 2 14:18:58 PST 2015

12. **Dirac version 2 support.** May now choose between Dirac 1 and Dirac 2 on the System Setup 2 screen (Menu → System → More). When Dirac 1 is selected the Home screen will display “Dirac”. When Dirac 2 is selected the Home screen will display “Dirac 2”.

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13. HDMI:

- c. Added support for HSR-41 board including firmware programming and latest firmware version.
 - d. Added HDMI status screen (Menu → System → Formats → Format Options → Decoder Setup → HDMI). Note: To access this screen the input source needs to be HDMI.
 - e. Added additional 4K resolutions and Chroma sub-sample rate 4:2:0.
 - f. Changed display of HSR firmware from Rel Ver Rev to Ver Rel Rev.
14. Updated layout of Expert Nav Mode screen.
15. Automation Serial Port – Added parity options: None, Even, Odd.
16. Increased length of Identity Screen field (Menu → System → More) from 19 characters to 39 characters.
17. Fixed Channel Invert setting not being saved.
18. Fixed display of H539 option board voltages.
19. Fixed issue with multiple format changes in Macro in which only the last format change takes effect. This was due to format changes deferred during RUNMACRO command received from the network.
20. Removed Cs/Hcs channel labels from the Digital Cinema Format Options screen.

Updates for V1.05.00 Software Release

Version: 105.00
Build Date Thu Mar 6 11:38:54 PST 2014

1. Password hiding feature. When the password is entered, each character typed will be displayed as a '*' character.
2. Password lock button added to the System > Access screen. The Lock button requires the password to enter the setup menus. The lock is also automatically enabled after 60 minutes if there is no action on the GUI.
3. Fix for monitor level, when monitor is tracking fader, that restores the monitor output level. The monitor level is set at its maximum level when the master fader level is at or above the GUI monitor level setting. The monitor level is attenuated as the master fader is moved below the GUI monitor level setting.
4. Fixes an issue where a control may be triggered by a tap on the screen to exit the screen saver. During screen saver mode, the first tap on the screen will exit the screen saver but not activate any controls that may be behind the screen saver.
5. Fix for a GUI bugs on Input/EQ/Prof Edit screens that caused screen taps or clicks to be applied to items hidden underneath the combos controls.
6. Automation bug fixed where certain IP address ranges would cause parsing problems with a TCP-send command in macro.
7. Changed the voltage tolerance on the H335 1.3V to allow for normal changes in the reference level. The H335 voltage limit was 1.23 to 1.37 and now is 1.21 to 1.39.
8. Output delays can now be set up to 120 ms (was 41ms). However, the sum of the output delays cannot exceed 353ms calculated with each group of 8 output channels (1-8 and 9-16). The maximum delay on an AP20 with H335 Rev. F and 16 output channels would be 353ms calculated on a group of 12 channels and 4 channels (1-12 and 13-16).
9. Added an option to copy the side surrounds to the rear surrounds on the Digital Cinema Format Options screen, with Matrix selected.
10. Fixed a configuration error with HDMI source where the back surrounds were disabled.
11. There is no longer a reboot required after a software update. A Soft boot happens automatically.

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12. Update for HDMI Selection on the Source Selection Screen. A separate control labeled HDMI Input is now used to select the HDMI input port. If the HDMI is selected as the audio source, then the HDMI input control is used to select the port for both audio input and the video pass-through. If a non-HDMI source is selected for audio, then the HDMI input control selects the HDMI port for just the video pass-thru. The HDMI input port selection can be set "Off" to disable the HDMI video pass-through.
13. Fix for RTA. Pink noise now works when mic input is used.
14. Added logging for voltage errors.
15. Added Dirac AB mode display on the home screen.
16. Fix for the serial automation setting for 38400 baud rate. This was previously configured to the wrong baud rate.
17. Fix for Dirac clip issue that occurred with non contiguous channel assignment.
If a Dirac room tune was performed with the previous software version and one of the AP20 channels was skipped, then the compensation for the Dirac filters would be omitted from the highest Dirac channel. This allowed the possibility that the signal on that channel would clip. In order to fix this with an existing set of Dirac coefficients the Dirac coefficients must be retransferred from the PC program to the AP20.

Updates for V1.04.03 Software Release

Version: 104.03
Build Date Wed Sep 25 16:46:29 PDT 2013

V1.04.03 fixed an issue where Dirac filter gain is not correctly applied. This could possibly lead to clipping of the audio under certain circumstances.

Updates for V1.04.02 Software Release

Version: 104.02
Build Date Wed Apr 24 14:11:34 PDT 2013


This section describes any new features, enhancements and bug fixes that are included in V1.04.02 since the previous software version V1.04.00.

1. Added option to have the monitor level follow the main fader. This option is selected by a checkbox control labeled Monitor Out Tracks Fader in **Menu -> System -> More**. The default setting is off.
2. The output mute operation is changed from a hard mute to a soft mute. This eliminates a slight click that can be heard between format switching and other audio changes.

Updates for V1.04.00 Software Release

Version: 104.00
Build Date Nov 9 3:18:24 PST 2012

This section describes any new features, enhancements and bug fixes that are included in V1.04.00 since the previous software version V1.03.06.

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New features for V1.04.00

1. The Digital Cinema Formats Options has been revised. This menu is accessed at **Setup > Formats > Format Options > Digital Cinema Options** for digital inputs DigIn 1>16, DigIn 1>8, and DigIn 9-16. The following selections are available:


Selection	Description
Default	No routing changes
5.1 DCP	Input is 5.1 DCP options for HI and VI from DCP
7.1 DCP	Input is 7.1 DCP options for HI and VI from DCP
5.1 DCP to 7.1 Speakers	Input is 5.1 DCP / Only for LS/RS will be copied to Lbs / Rbs options for HI and VI from DCP
ES Matrix	Input is 5.1 mix with matrix surrounds. LS/RS is matrix decoded to Lbs / Rbs
Matrix	Input is 2 Ch mix which is to be matrix decoded to front and surround speakers. Option available for bass enhancement

- ☒ Note: If VI-N was selected on channel 16, you will need to re-enable that option on the DC options screen after the update.
- 2. The decoder for Dolby and DTS audio functions are now available with the AES digital input source. To use the decoder the input source must be selected as **Digital Ch: 1>2** or **Digital Ch: 9>10**.
- 3. There has been a short cut method added that allows the selection of current format from almost all setup screens. This shortcut simplifies the steps to select a new format by not requiring the user to return to the home screen.
Shortcut method to select a new format:
 - a. Tap three times on the top left corner of the screen.
 - b. A pop menu appears with the format options.
 - c. Select the desired format from the popup screen.
- 4. Updates for the Automation Macro and Events editor.
 - The Delete Macro function no longer requires that all individual actions be deleted first. A Confirmation Popup menu will appear before the macro is deleted.
 - Deleting an Event will require confirmation to delete event to make it work like delete macro.
 - Added the ability to run macro from within another macro. Nested macros limited to 5.
 - Added function to copy macro events
 - Added commands to move macro events up or down in the event list.

See manual for more details.
- 5. Added serial mode to lock two AP20 units with the current format and volume.
Select Automation > Serial > Serial Command Mode = Linked AP20.
Use null modem cable.
- 6. Power On macro. The system will execute a specially named macro during the boot sequence. In order to have a macro run during power on, just name the macro as POWERON.

Improvements for V1.04.00

1. Fixed a navigation error in which the software would return to the root system screen after navigating to the home screen, changing formats, and then returning to the setup menus. Now the software returns to the last setup menu as long as it remains a valid option for the new format.

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Also fixed a problem in Expert Mode where the software sometimes returns to the normal System screen instead of the Expert Nav System screen.

- The Expert Setup menu will now have buttons disabled and grayed for any options that are not available for the currently selected source.
- GUI Text changes:
 - On the Edit Format screen, changed wording for the Copy selection to say “to new Format”.
 - On the Edit EQ screen, changed wording for the Copy selection to say “to new EQ”.
 - On the Edit Profile screen, changed wording for the Copy selection to say “to new Profile”.
 - Expanded the text for the Fire Alert message.
 - Fixed channel selection button to show correct name on RTA/EQ screen and set for Line Out.
- Expanded System info screen – now toggles between 2 pages a) board revisions and b) voltage/temperatures.
- Added dash to keyboard for entering Identify information.

Updates for V1.03.06 Software Release

Version: 103.06
Build Date Sep 7 13:01:27 PST 2012

This section describes any new features, enhancements and bug fixes that are included in V1.03.06 since the previous software version V1.03.05.

Improvements for V1.03.06

- A fix was made to correct a problem in DSP4/DSP5 firmware that caused the fade-in command to be ignored. The problem was rare (about 1 out of 500) but over time would occur unexpectedly leaving the theater with no audio after a format switch.
- A fix was made to correct an occasional error that occurred with manufacturing test when testing the TOS input.

Updates for V1.03.05 Software Release

Version: 103.05
Build Date May 24 14:16:36 PST 2012

This section describes any new features, enhancements and bug fixes that are included in V1.03.05 since the previous software version V1.03.04.

Improvements for V1.03.05


- A fix was made for the flash programmer test (used in production).
- A fix was made to eliminate erroneous bad temperature readings. This error could cause the AP20 to display an overheat indicator and pop-up message in error after power cycle.

Updates for V1.03.04 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.03.04 since the previous software version V1.03.03. Note: V1.03.04 version was not released to production.

Improvements for V1.03.04

- Input channels 7/8 are routed to 9/10 if a) copy surrounds to rear surrounds is set, and b) input source is 8 channel analog or 8 channel digital 1-8.
- Added NetDiag with additional log information.
- Add option to select 10Mbps only or 100Mbps only
- Network config changes now save immediately.
- Removed Surround EX option from the menus.

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Updates for V1.03.03 Software Release

Version: 103.03
Build Date January 12 17:04:38 PST 2012

This section describes any new features, enhancements and bug fixes that are included in V1.03.03 since the previous software version V1.03.02.

Improvements for V1.03.03

1. **Format Options for Dig In 1>8, and Dig In 1>16**
There are 2 new format option screens which are available when the input source is selected as Dig In 1-16, or Dig In 1>8. One is labeled as Matrix and Routing, and the other labeled as Digital Cinema Format Options.
2. **Temperature Alert**
There will be a red flashing alert indicator in case the internal temperature has reached a critical level of 50C or greater. The flashing alert message appears only on the Home screen.
3. **Automation Updates**
 - a) Conditional Automation Actions. A conditional action is executed conditionally based on a previous event.
 - b) Variable Pulse length. The automation pulse width can be set between 100ms and 1000ms in 5ms increments.
 - c) Copy Macro. This feature is useful to create a macro similar to an existing macro without reentering all the events.
 - d) Fire Event. A Fire event will shut down the AP20 audio and display a popup on the home screen that says "Fire". The AP20 audio and menus are disabled until the unit is reset from the back power button.
4. **VNC**
 - a) Arrow Keys for VNC. Arrow keys have been added to work as the up/down keys (that simulate adjustment knob turn) when using VNC on a remote device that does not have a keyboard.
 - b) RealVNC Fix. Fixes an operational problem with using RealVNC on IOS. When using RealVNC the client software must be configured with "Picture Quality" set to high.
 - c) Disable Hextile Encoding. A VNC option has been added to disable Hextile encoding. This will improve performance with some clients.
5. **Keyboard Updates**
Added line-editing and cut/paste
6. **HDMI and Decoder Updates**
 - a) Added **Disable Surround Remap**
When enabled, this option will not remap the playback of 5.1 content to 7.1 speaker configuration.
 - b) Added **DTS LFE +10dB**
Removes the +10dB LFE boost applied to the LFE channels when playing DTS decoded audio. This option may be required for older DTS audio discs.
 - c) **Phantom Center on NEO:6**
A problem was fixed for phantom center so it now works when playing DTS NEO:6 audio.
 - d) **HDMI 5.1 and 7.1 PCM mode**
A problem was fixed to have 5.1 PCM content from HDMI remap to 7.1 speaker configuration.
7. **New serial/network automation commands**
The following automation commands were added in the AP20 and are available for either serial or Ethernet remote control or automation systems.
@SCR [ON,OFF]<cr>

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This command can be used to remotely activate or deactivate the screen saver mode. The screen saver mode may be dim screen, graphic or black. This command will have no effect in cases where the AP20 screen saver mode is disabled.

Select ON to turn on the screen and removing the screen saver.

Select OFF to display the screen saver.

@PINKNOISE CHAN [0,1-16]<cr>

This command turns on the pink noise for the selected channel 1-16. Select 0 to turn off the pink noise.

@PULSE [1-21]<cr>

Directly create a pulse one of the AP20 GPO signals 1 through 21

@FADER<space>[+][-][Value]<CR>

This is used to set or read the fader level.

Parameters

[+] Add [Value] to current fader.

[-] Subtract [Value] to current fader.

[Value] Value to set the fader in tenths or, if +/- is used, it is the value to increment or subtract from the current fader.

Omit this argument to only read the fader value.

Returns

[Level] Current master fader level in tenths.

@POWER<space>[0,1]<CR>

This is used to control the power mode.

Parameters

[0] Power off, or sleep mode.

[1] Operating mode. Requires 15 seconds for unit to be operational.

8. Bug Fixes

a) Fix for missing audio

Loss of H331 or H332 audio after a front panel power on button reset.

b) snmpManager address

Fixed an issue with remnants of the snmpManager name after the name was changed in the GUI.

9. Miscellaneous

a) Boot Splash Screen

Boot sequence now includes the Datasat graphic and progress bar.

b) System Button

The text on "System" navigation button is removed when already on the System screen.

c) Fade In/Fade Out message

Added note to set fade In/Fade Out to 0ms when switching to/from digital film soundtrack to analog film.


d) Power Switch

When pressing the power switch a pop message appears: "Hold Button to Power Off". Release the power button and the message disappears.

Hold the power button down for 1 second and the unit turns off.

e) VNC Window Name

The name that appears on the remote VNC window title was changed to "Datasat AP20".

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Update for V1.03.02 Software Release

Version: 103.02
Build Date November 15 16:58:54 PST 2011

V1.03.02 improved the stability of the audio clock input circuit. Previous software versions could possibly have a glitch that would cause channel pairs to swap on some of the newer AP20 units.

Updates for V1.03.00 Software Release

Version: 103.00
Build Date July 28, 2011, 10:43:13 AM

This section describes any new features, enhancements and bug fixes that are included in V1.03.00 since the previous software version V1.02.03.

Improvements for V1.03.00


1. **DTS decoders.** DTS coherent acoustics decoding is implemented for the HDMI, S/PDIF and TOSLINK inputs. These inputs will autodetect the DTS bitstream and decode to fit 5.1 or 7.1 speaker configuration. The speaker configuration is set in the Decoder Options button in the Format Options screen.
2. **DTS Neo: 6.** DTS Neo:6 is implemented for HDMI, S/PDIF and TOSLINK inputs. Neo:6 transforms 2-channel PCM input to fit a 5.1 or 6.1 speaker configuration. To use Neo:6 it must be enabled in the Decoder Options screen (under Format Options). After enabled, it operates only when receiving 2-channel unencoded PCM bitstream,
3. **DTS-HDMA.** DTS-HDMA decoding is implemented for the HDMI input. The HDMI input will auto-detect the DTS-HDMA bitstream and decode to fit 5.1 or 7.1 speaker configuration. The speaker configuration is set in the Decoder Options button in the Format Options screen.
4. Implements Fade-In/Fade-Out during a format change. The Fade-in/Fade-out period can be up to 2 seconds and is set in the **Global Delay and Surround Offset** screen (from Format Options screen)
5. The corner frequencies for the bass and treble are now adjustable. The corner frequency for bass can be set from 50Hz to 300Hz. The corner frequency for the treble can be set from 1.5kHz to 12kHz. The corner frequency cannot be set for individual channels—the setting affects all channels in current EQ set.
6. Changed the microphone level adjustment to show proper dB increments.
7. Added Black Screen as a screen saver option.
8. Changed setup menu relock time to 1 hour. The setup menu relock means that the password would have to be reentered to enter the setup menus. A screen relock button was also added to the Setup > Access screen in order to manually relock the setup menus.
9. Added SNMP functionality including setup screen accessible through the network setup screen.
10. System update screen was changed to show the version number in the details box. The list of software updates was ordered to show the most current version on top.
11. Added the microphone audio to the hearing impaired audio when using the nonsync input with the microphone playing on the surround channels.

Updates for V1.02.03 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.02.03 since the previous software version V1.02.02. Note: V1.02.03 version was not released to production.

Improvements for V1.02.03

1. **Software update from internet/USB.** There is a new menu for performing a software update from the internet or USB memory device. See manual for full details on the operation.
2. **Hearing Impaired Delay.** There is now an option to set the delay for the hearing impaired output channel. This option is available per format.

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3. **Nonsync with Microphone option.** This software now provides the option to play audio from the nonsync input and the microphone input at the same time. Microphone audio is not mixed with the nonsync audio but must be routed to different speakers. This is configured by the Nonsync Level and Routing format option when nonsync is the selected source. See the manual for further details.
4. **Fader control added to automation actions.** Master Fader control was added to the available actions for automation. The master fader can be either set to a specified value, or it can be incremented or decremented through automation.
5. **Serial commands added to automation actions.** A specified string of characters can be transmitted on the serial port as an automation action.

Updates for V1.02.02 Software Release

Version: 102.02
Build Date Jan 13 2011 12:19:25

This section describes any new features, enhancements and bug fixes that are included in V1.02.02 since the previous software version V1.02.01.

Improvements/Bug Fixes for V1.02.02


1. **Optical Gain.** Fixed possible clearing of the Optical Gain settings when changing format.
2. **Format Renaming.** Fixed a condition where AP20 would possibly reset after renaming a format.

Updates for V1.02.01 Software Release

This section describes any new features, enhancements and bug fixes that are included in V1.02.01 since the previous software version V1.02.00.

Features new to V1.02.01

1. **Matrix decoder for nonsync.** The matrix decoder option is now available to operate with formats that use Nonsync1 or Nonsync2 as the input source. Bass enhancement can also be optionally enabled for those formats.
2. **Bass Enhancement Setup GUI.** Controls for generating pink noise have been added to the bass enhancement GUI for proper setup of the bass level. The bass enhancement parameters are set globally so the same parameters apply to all formats using nonsync1/2 or optical film sources.
3. **Surround delay offset.** A surround channel delay has been added as a format option for any format. The surround delay applies to the internal AP20 channels 5, 6, 7 and 8.
4. **Format Volume Trim.** A volume trim may now be configured on any format. The trim applies to all channels and can be used to balance the general sound level between separate formats.
5. **“More” formats button.** An option to “Enable More Buttons” has been added to the button assignment screen which can extend the number of formats the projectionist can access from 8 to 20 formats. When enabled, format button 8 on the home screen becomes the <More> button. Selecting the <More> button brings up a pop-up window which allows you to select from all assigned formats. The operation of the first 7 format buttons is unchanged.
6. **Output Trim.** An output channel level trim option has been added Routing/Crossovers screen (Formats > Channel Profile > Routing/Crossovers). This configuration value may be used to help balance the output levels for each group of crossover output channels.
7. **Screen calibration mode.** A change was made in order reduce the chances of accidentally entering the screen calibration mode. Now the screen calibration mode is entered only if the following conditions are met:
 - a. The user is on the Home screen
 - b. The code (1812 on the control knob) is selected within the first 2 minutes after startup.
8. **PanaStereo serial automation mode.** A serial automation option has been added for compatibility with external automation units that support the PanaStereo serial commands. When this option is selected the mute and volume commands can be made to

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Improvements/Bug Fixes for V1.02.01

1. **Automation screens.** Fixed some anomalies with the automation GUI, including some that stopped the automation GUI from properly updating after deleting or renaming tasks, and an AP20 reset after certain automation configuration sequences.
2. **8-channel Version.** Hide output mapping option and fixed monitor mix screen for 8 channel versions only.
3. **Mic Power.** Fixed issues with mic power not being enabled consistently on the 3rd octave EQ screen.
4. **Pink Noise Issue.** Fixed the problem with pink noise, and Dirac noise playing on channels 9-16 when using the output mapping option to copy channels 1-8 to channels 9-16.
5. **Screen on power off.** Fixed a condition that could cause the AP20 front panel to light up after being powered off.
6. Changed text for **S/PDIF1** to **TosLink A** and **SPDIF2** to **TosLink B**. **S/PDIF 3** is now **S/PDIF Coax**.
7. A slight correction was made to the SR level used with the optical film card.
8. A 3dB adjustment was made to fix the level for A-type noise reduction option used with the optical film card.
9. A slight adjustment was made to the VU meters to correct the levels.
10. Fixes the problem with the no signal showing on the VU meter display when playing content from the HDMI source.


Updates for V1.02.00 Software Release

Version: 102.00
Build Date Nov 1 2010 18:53:21


This section describes any new features, enhancements and bug fixes that are included in V1.02.00 since the previous software version V1.01.03.

1. **Dolby Digital Decoder.** Incorporates the Dolby Digital decoding on any HDMI, S/PDIF TosLink, or S/PDIF coax inputs. When a Dolby Digital stream is detected the AP20 automatically decodes the input and places the audio onto the first 6 internal AP20 channels. The internal channel assignment is Ch1-Left, Ch2-Right, Ch3-Center, Ch4-LFE, Ch5-Left Surround and Ch6-Right Surround.
2. **Optical Film Card.** This software version has setup and configuration menus for the AP20 optical film card, which is an optional card available from DataSat Digital Entertainment that allows it to process audio for 35mm film projectors with a standard optical sound head. Once the AP20 has the optical film card has been installed you can create any format with the optical film card as an input source. The format option menus can be used to select between mono, A, or SR film formats, as well as matrix decoder and optical bass extension options.

The film Setup menus are accessed by first entering the Format Options screen, then selecting the “Setup” navigation button on the bottom of the screen. The optical film setup menus include optical gain adjustment, slit loss EQ, azimuth display and optical bass extension parameters. The Optical film setup parameters are a global configuration so they can be set once and apply to all optical card formats. See TN-H457 technical notice for additional details.
3. **Automation configuration.** All of the screens used for configuring the automation were revised to improve the automation setup process for ease and speed. See the AP20 V1.2 manual for details on operating the new menus. In addition to the improved look, these features were added:
 - The available actions that can be defined within a macro has been expanded to include mute/unmute, and outputting a network command (sending TCP data to a specified IP address and port).
 - Events and automation buttons are no longer limited to triggering a macro, but can directly trigger a single action.
 - The GPIO pin numbers have been included on the automation test screen for easy reference.
4. Updates for **1/3 Octave EQ** and **Parametric EQ** screens
 - Added a next/previous channel selection button to the third octave EQ screen and Parametric EQ screen to allow a simplified method for sequencing through different channels.

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- Buttons on the navigation bar were changed to allow quick access to the levels menu or the Copy EQ menu.
- The configuration field for the X-Curve on the RTA was moved to the RTA options window.
- 5. Updates for the **Audio Levels** screen.
 - Added an option for multi-channel pink noise.
 - When multi-channel pink noise is enabled pink noise can be enabled on multiple channels.
 - When multi-channel pink noise is disabled, selecting pink noise on one channel automatically disables pink noise from the other channels. The gain field for the pink noise channel is automatically selected to simplify the adjusting the gain after selecting the pink noise.
 - The navigation buttons on the levels screen allows you to go directly to the third octave EQ screen, or the parametric EQ screen.
 - A direct link to the audio levels screen has been added to the Formats screen. It is no longer in the Channel Profiles setup screen.
- 6. **Channel Delays.** The fields for setting individual delays for the internal AP20 channels have been moved out of the levels screen. The channel delay is now set in a new screen labeled “Channel Delays” in the channel profile setup screen.
- 7. **Format Options.** Format options for surround channel offset and rear channel support have been added. Format options, which are apply only to the specific format, are accessed by first selecting the format, then navigating to **System->Formats** and **selecting the Format Options** button.
 - **Surround offset level** was added as an option for each format in order to offset the surround channel level from -6dB to +6dB.
 - **Nonsync Level and Routing.** This format option only for Nonsync inputs was modified to add the Matrix Decoder option. The gain adjustment was also changed so that only the gain adjustment fields for the selected nonsync input (1 or 2) are displayed on the menu.
 - **Extended Surround Options.** This screen was added to Nonsync, Mic, and Optical Film card inputs to allow the surround channels to be copied to the Rear Surround channels (Ch7 and Ch8). The option to matrix decode the surround channels to the Rear Surround channels is now available only for 8-channel analog input and 8/16 channel digital inputs.
 - **Mic Level and Routing.** This menu was modified for improving the looks and adding a graphical description.
 - **HDMI Options.** This option is available for HDMI inputs only.
 The speaker configuration can be set to either 5.1 or 7.1. If the 7.1 speaker configuration is selected and Dolby EX content is being played then the EX channel is routed to internal AP20 channels 7 and 8. Otherwise, if the 5.1 speaker configuration is selected or if standard Dolby 5.1 content, channels 7 and 8 are silent.
 A second option allows the use of a phantom center channel.
- 8. **View Log File.** This screen was improved for speed. The scroll operation now works using the control knob.
- 9. **Identify.** There are a series of text fields that can be entered into the AP20 that is intended to be used for identification of the AP20.
 - Three text fields are added in the **Systems->Access Control** screen. These are labeled “Screen”, “Theater”, and “Circuit”.
 - The text entered in the “Screen” field will be displayed at the bottom of the home screen above the navigation menu. This information can be useful for verification of the correct AP20 when connecting through VNC.
 - The Screen, Theater, and Circuit information may be used by a remote theater management system or other custom application software.
- 10. The touch-screen calibration parameters are no longer copied with the Master configuration to avoid loading the wrong calibration file on an AP20.

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Updates for V1.01.03 Software Release

Version: 101.03
Build Date Aug 3 2010 18:47:17

This section describes any new features, enhancements and bug fixes that are included in V1.01.03 since the previous software version V1.01.00.

1. Fixed a rare occurrence of channel pairs being swapped.
2. Fixed a problem with the program watchdog that could cause the program to reset unnecessarily.
3. Added the exclamation (!) on the keyboard for entering the setup password.
4. Fixed a bug with LCD touch screen driver that could on occasion select the incorrect button.
5. Fixed problem with manufacturing test missing certain errors in the voltage readings.
6. Fixed an issue with EDID speaker allocation mapping when using PCM through HDMI.
7. Modified the DSP firmware for compatibility with new H335 boards from manufacturing.
8. Fixed a problem that occurred when playing pink noise within the RTA screen and changing the "Input" selection to "Line Out".
9. Fixed a problem that occurred when using VNC connected to the AP20 and using the computer keyboard to enter data in a text box.
10. Fixed a bug with scroll on the "Format Change" list box, which was located in the Automation Events screen when using "Edit Event" popup window.
11. Modified the EQ button so that it will not appear green whenever the EQ is disabled.
12. When Dirac processing was enabled, all channels that have not been given Dirac coefficients are now set to pass the audio. Previously all non-Dirac channels were mute.

Updates for V1.01.00 Software Release


Version: 101.00
Build Date June 23 2010 15:24:46

This section describes any new features, enhancements and bug fixes that are included in V1.01.00 since the initial V1.00.01 software version.

Additional information for some items is included in the AP20 Installation and Operating Guide V1.1.

Features new to V1.01.00

1. Added a screen to Copy or Clear EQ settings from/to any specified channels. The entry to this screen is at Menu → Formats → EQ Setup → Copy/Clear EQ.
For more information see the Copy/Clear EQ section in the AP20 Installation and Operating Guide.
2. Added format option for playing 5.1 soundtracks in a 7.1 configuration. This connects the Left Surround to the Back Left Surround speakers, and same for the right surrounds.
3. Added code for Serial automation function.
For more information see the Serial Events section in the AP20 Installation and Operating Guide.
4. Revised the crossover setup screen. Each output channel may now be routed from any of the 16 input channels with an optional high pass and/or low pass filter applied.
For more information on see Crossovers section in the AP20 Installation and Operating Guide.
5. Added a Monitor Mix window that allows the monitor channels to be individually muted.
For more information see the Booth Monitor Volume section in the AP20 Installation and Operating Guide.
6. Revisions to the Audio Levels screen
7. Added pink noise buttons on the levels page to allow playing pink noise on multiple channels.
 - a. Channel delay now has 1ms resolution.
 - b. Added additional entry to the Audio Levels screen from the fourth button on the Format screen.
 - c. Added Master fader setting and mute control.

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- d. Audio levels are now stored with the EQ setup file instead of the channel profile setup. This allows the levels to be set to correctly match for the EQ setup.

Note: Due to this change, when updating from V1.00.01 to V1.01.00 the old levels will be lost. They must be reentered manually as described in the Software Update Procedure section of these notes.

8. A “startup” format configuration item was added to the Format page. The startup format defines the format that the AP20 will switch to upon power-up. Along with any valid format, the startup can be defined as “Last Format” which sets the startup format automatically to the last format selected before turning off the AP20.

Improvements/Bug Fixes for V1.01.00

1. Improvements to the Home screen.
 - a. Created larger format buttons. The number of format buttons on the Home screen is now eight.
 - b. Added current operating parameters on the top of the screen. This includes the current format, EQ set, channel profile, source, Dirac Live configuration, and the format fader value (only when the Format Fader option is enabled).
2. Revised the network screen to simplify the setup. The network display now also displays the connection status at the bottom of the screen (connection is Up/Down).
For more information see the Network section in the AP20 Installation and Operating Guide.
3. Added a back button on the navigation bar for all setup menus. Pressing the back button goes back to the previous screen, for up to 20 screens.
4. Changed the title of the “Audio Profile Setup” to “Channel Profile”.
5. Updated the USB Download screen for clearer user interpretation. The functions remain the same.
6. Added text to display the current format, EQ Setup and Channel Profile in various setup screens.
7. Several keyboard enhancements including adding a Cancel button to the keyboard and adding the ability to include line breaks in creating manual automation buttons.
8. Drop down list is now used to select macros when assigning Automation Buttons. Word break and line break are now allowed on manual automation buttons.
9. Changing the format names will now change the references in the automation macros so that they continue working as previously defined. Changing the EQ Set names or Channel Profile names changes their references in the Formats so they continue to work as previously defined.
10. Changes to the RTA/EQ screen.
 - a. When the RTA “Input” selection is set for “Line Out” the RTA displays the output for the selected channel number. The channel name button identifies the channel using the input channel name followed by the output channel crossover ID.
 - b. The continuous/manual setting for the RTA is now saved in the configuration file.
 - c. Added text on the RTA display to show the current Format and EQ.
 - d. Added text on the RTA display to show the current Master Fader value.
11. The display update speed was improved on various screens.
12. Fixed issue with LFE and Center channels being swapped when playing HDMI content.

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