

ROSETTA 800

8-channel
24 bit, 96 & 192 kHz, AD/DA Converters

User's Guide
v1.1 - March 2004



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Warnings

FCC warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to take whatever measures necessary to correct the interference at his own expense.

Copyright Notice

The Apogee Rosetta 800 is a computer-based device, and as such contains and uses software in ROMs. This software, and all related documentation, including this User's Guide contain proprietary information which is protected by copyright laws. All rights are reserved. No part of the software and its related documentation may be copied, transferred, or modified. You may not modify, adapt, translate, lease, distribute, resell for profit or create derivative works based on the software and its related documentation or any part thereof without prior written consent from Apogee Electronics Corporation, U.S.A.

Registration and Warranty Information

Be sure to register your Rosetta 800, either by filling in the enclosed Registration Card or by completing the on-line registration form at our Web site: <http://www.apogeedigital.com/support/>. If you do so, Apogee can contact you with any update information. As enhancements and upgrades are developed, you will be contacted at the registration address. Firmware updates are free for the first year of ownership unless otherwise stated. Please address any inquiries to your dealer or directly to Apogee at:

**APOGEE ELECTRONICS CORPORATION,
3145 Donald Douglas Loop South, Santa Monica, CA 90405, USA.
TEL: (310) 915-1000, FAX: (310) 391-6262
email: support@apogeedigital.com. Web: <http://www.apogeedigital.com/>**

APOGEE ELECTRONICS CORPORATION warrants this product to be free of defects in material and manufacture under normal use for a period of 12 months. The term of this warranty begins on the date of sale to the purchaser. Units returned for warranty repair to Apogee or an authorized Apogee warranty repair facility will be repaired or replaced at the manufacturer's option, free of charge.

ALL UNITS RETURNED TO APOGEE OR AN AUTHORIZED APOGEE REPAIR FACILITY MUST BE PREPAID, INSURED AND PROPERLY PACKAGED, PREFERABLY IN THEIR ORIGINAL BOX.

Apogee reserves the right to change or improve design at any time without prior notification. Design changes are not implemented retroactively, and the incorporation of design changes into future units does not imply the availability of an upgrade to existing units.

This warranty is void if Apogee determines, in its sole business judgment, the defect to be the result of abuse, neglect, alteration or attempted repair by unauthorized personnel.

The warranties set forth above are in lieu of all other warranties, expressed or implied, and Apogee specifically disclaims any and all implied warranty of merchantability or of fitness for a particular purpose. The buyer acknowledges and agrees that in no event shall the company be held liable for any special, indirect, incidental or consequential damages, or for injury, loss or damage sustained by any person or property, that may result from this product failing to operate correctly at any time.

USA: Some states do not allow for the exclusion or limitation of implied warranties or liability for incidental or consequential damage, so the above exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Service Information

The Rosetta 800 contains no user-serviceable components: refer to qualified service personnel for repair or upgrade. Your warranty will be voided if you tamper with the internal components. If you have any questions with regard to the above, please contact Apogee.

In the event your Rosetta 800 needs to be upgraded or repaired, it is necessary to contact Apogee prior to shipping, and a Return Materials Authorization (RMA) number will be assigned. This number will serve as a reference for you and helps facilitate and expedite the return process. Apogee requires that shipments be pre-paid and insured — unless otherwise authorized in advance.

IMPORTANT: ANY SHIPMENT THAT IS NOT PRE-PAID OR IS SENT WITHOUT AN RMA NUMBER WILL NOT BE ACCEPTED.

Declarations of Conformity

Declaration of Conformity—FCC

Apogee ROSETTA 800

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
(2) This device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits of 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. 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:

1. Re-orient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a different circuit from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

NOTE: The use of non-shielded cable with this equipment is prohibited.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

Apogee Electronics Corporation, 3145 Donald Douglas Loop South, Santa Monica, CA 90405.
Betty Bennett, CEO.

Industry Canada Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Declaration of Conformity – CE

Apogee Electronics Corporation hereby declares that the product, the Rosetta 800, to which this declaration relates, is in material conformity with the following standards or other normative documents:

- EN50081-1/EN55022; 1995
- EN50082-1/IEC 801-2, 3, 4; 1992
following the provisions of:
- 73/23/EEC – Low Voltage Directive
- 89/336/EEC – EMC Directive

Declaration of Conformity – Japan

Apogee Electronics Corporation hereby declares that the Rosetta 800, to which this declaration relates, is in material conformity with the VCCI Class A standard.

Declaration of Conformity – Australia

Apogee Electronics Corporation hereby declares that the Rosetta 800 is in material conformity with AN/NZS standard requirements.

OWNER'S RECORD

The serial number is located on the rear panel of the unit. We suggest you record the serial number in the space provided below. Refer to it whenever you call an authorized Apogee Electronics repair facility or the manufacturer. Please be sure to return your completed warranty card immediately!

ROSETTA 800 Serial No.

Purchase Date

Dealer

Phone

Address

CAUTION:

Any changes or modifications not expressly approved by APOGEE ELECTRONICS CORPORATION could void your authority to operate this equipment under the FCC rules.

Please register this unit by filling in the included registration card, or registering online at <http://www.apogeedigital.com/support/register.php>. Please read this manual – if you call for technical support, we'll assume that you have. There will be a quiz.

ROSETTA 800

User's Guide

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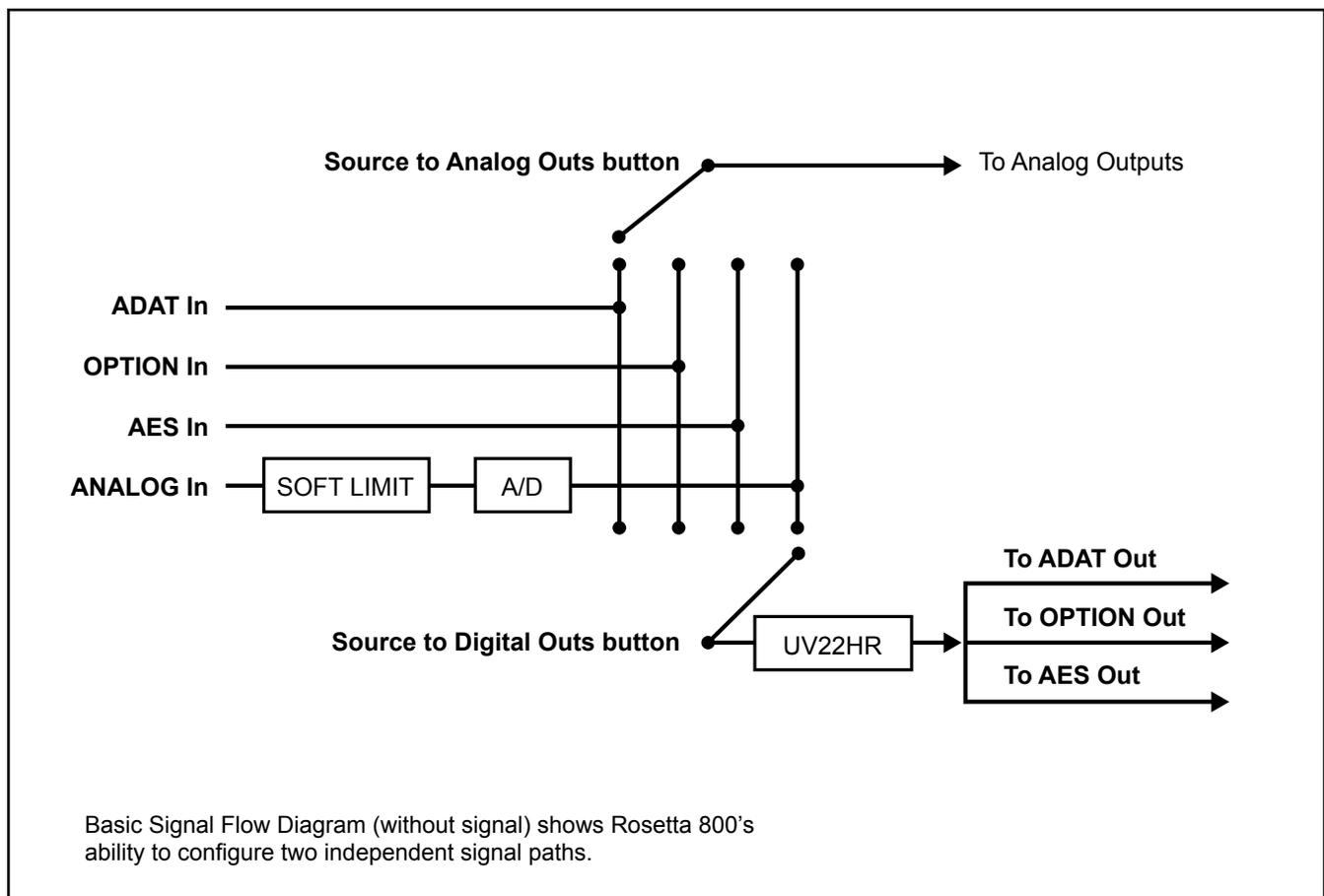
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Introduction

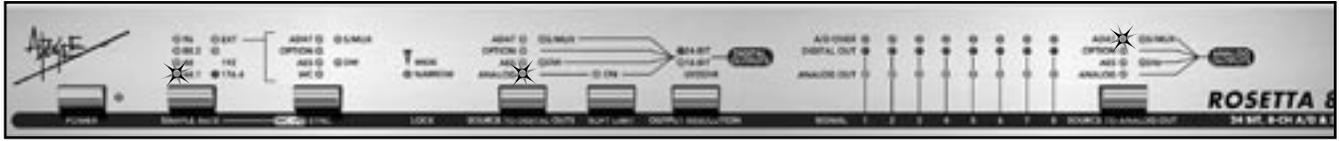
Apogee Electronics’ Rosetta 800 is a multi-channel Analog and Digital converter designed to provide the highest quality signal path for all modern digital systems, while setting a new standard of performance at an accessible price. The following features are included:

- Sample rates up to 96kHz, upgradeable to 192kHz.
- A wide range of digital interfaces options, including AES, ADAT – S/MUX, plus an Option card providing future expandability.
- Dual stage clock circuitry ensuring stable operation regardless of clock source.
- Soft Limit transient limiting circuitry available on all 8 Analog inputs.
- UV22HR bit resolution reduction algorithm.
- Advanced digital routing.

Signal Flow Diagram



Getting Started Quickly



CONNECTING POWER

The Rosetta 800 accepts an AC input of 100 to 240v AC at a frequency of 50 to 60 Hz. Thus, the unit may be connected to virtually any AC power outlet found worldwide without concern for voltage settings or fuse ratings.

RESET

To reset the Rosetta 800, power up the unit while pressing the SAMPLE RATE button. This provides a quick method to return to factory default settings when exploring the unit’s functionality and capabilities.

QUICKSTART

To get started using the Rosetta 800 quickly, please follow these steps:

- 1) Connect the AC input, and press the POWER button.
- 2) Connect an analog source to the ANALOG INs, connect a digital device to the appropriate digital I/O (ADAT is used in this example), and connect the ANALOG OUTs to a monitoring system.
- 3) Set SAMPLE RATE to *44.1*, set SOURCE TO DIGITAL OUTS to *ANALOG*, and set SOURCE TO ANALOG OUTS to *ADAT*, as shown above.

SIGNAL FLOW

The Rosetta 800 offers the possibility to configure two independent signal paths through the unit. In most cases, the first signal path is configured as an A/D stage before a digital recording device while the second signal path is configured as a D/A stage after the recording device.

For example, when the Rosetta 800 is configured to the Quickstart setting noted above, the following two signal paths are present: 1) the analog sources to be recorded are connected to the Rosetta analog inputs, converted to digital and routed to all Rosetta digital outputs including the ADAT output, connected to an ADAT recording device input; 2) the ADAT device output is connected to the Rosetta ADAT input, which is converted to analog and routed to the Rosetta analog outputs, connected to a monitoring system. Other configuration examples are given in the back of this manual.

USING THIS MANUAL

While the regularly scheduled manual runs in the adjacent text, in-depth explanations, operational warnings and other digressions will be presented in these columns.

In this manual, “parameters” are defined as the characteristics of operation, such as **SAMPLE RATE** or **SYNC** source, and are capitalized in this manner :

SAMPLE RATE.

“Values” are defined as the choices available for each parameter – for example, the parameter **SAMPLE RATE** has the values *44.1*, *48*, and *96*. Values are italicized in this manner: *44.1*

“Settings” are defined as the entire set of parameters and values.

SYMBOLS:

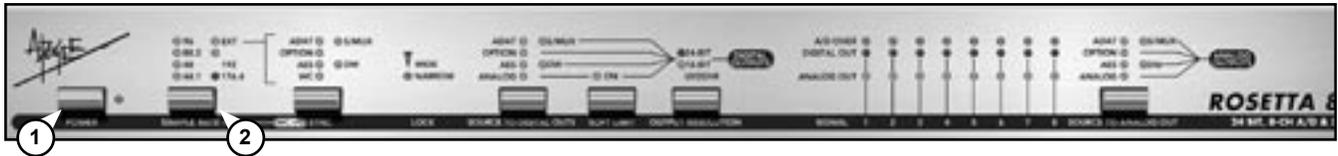


The exclamation mark alerts the user to potential pitfalls of operation.



The musical note indicates in-depth explanations.

Navigating the Front Panel



1) The Power Switch LED indicates that the Rosetta 800 is receiving a proper AC input, and is in Standby mode. The LED goes out when the Rosetta 800 is powered on.

2) The 176.4 and 192 values cannot be selected on the 96kHz version of the Rosetta 800. The unit may be upgraded to 192kHz operation at any time.

3) A different AES format may be selected for each sample rate range.

4) When clocking to an AES input (i.e SYNC is set to AES), the format must be specified by selecting a SYNC value of either AES or AES + DW.

Advanced Settings:
Advanced settings are accessed by pressing and holding one front panel button while using a second button to modify values. These advanced settings are described in light gray boxes after the primary description of each button.

1) POWER SWITCH – The Power Switch may be configured to operate in the manner best suited to the installation of the unit. For example, if the Rosetta 800 is installed in a rack with a Master power switch, the unit’s power switch may be configured appropriately. Please see the section of this manual entitled “Internal Adjustments” for details. **1**

2) SAMPLE RATE – This parameter modifies operation in two distinct ways according to the value selected:

- 1) When any of the values 44.1-192 are selected, the unit derives its clock from an internal crystal and runs at the selected sample rate. **2**
- 2) When EXT is selected, the unit derives its clock from the source selected by the SYNC parameter; the 44.1-192 LEDs now display the sample rate of the selected source.

SAMPLE RATE Advanced settings: **3** **4**
When running at a sample rate between 88.2-192 kHz, the Rosetta 800’s AES I/O may be configured for Single wire or Double wire operation.

- 1) Select the desired SAMPLE RATE value.
- 2) Press and hold SAMPLE RATE to determine the current AES format, as indicated by the three DW LEDs on the front panel; if DW is on, the AES format is Double wire; if DW is off, the format is Single wire.
- 3) While pressing the SAMPLE RATE button, press the SYNC button to toggle DW (Double Wire) on or off.

Navigating the Front Panel - *continued*



3) SYNC – When SAMPLE RATE is set to *EXT*, the SYNC parameter determines the source of the unit’s clock.

- *ADAT* – clock is derived from the ADAT input 1-8 with a resultant sample rate in the 44.1-48kHz range.
- *ADAT + S/MUX* – clock is derived from S/MUX Input 1-4 with a resultant sample rate in the 88.2-96kHz range.
- *OPTION* – clock is derived from the Option Card input. **5**
- *AES* – the AES input is scanned and clock is derived from the first valid AES signal found. The signal is treated as Single wire format. **6**
- *AES + DW* - the AES input is scanned and clock is derived from the first valid AES signal found. The signal is treated as Double wire format.
- *WC* – clock is derived from the Word Clock In connector.

SYNC Advanced settings: **7** **8**

The Rosetta 800 may be configured to accommodate digital systems whose word clock signals run at a multiple of the sample rate frequency.

1) To configure the Rosetta 800 to sync to a word clock input of one frequency while running at a sample rate whose frequency is a multiple of the word clock:

- 1) Connect the word clock signal to the Word Clock In and set SYNC to *WC*.
- 2) Press and hold the SYNC button to determine the current “target” sample rate range.
- 3) While pressing the SYNC button, press the SAMPLE RATE button to toggle through the possible “target” ranges. For example, to sync the Rosetta 800 to a 44.1kHz Word Clock input while running at 88.2kHz, maintain the SYNC button depressed while pressing the SAMPLE RATE button until both the *88.2* and *96* LEDs light.

2) To configure the Rosetta 800 to sync to another source (internally or other SYNC values besides *WC*) and output a Word Clock signal whose frequency is a multiple of the sample rate frequency:

- 1) Set the unit to the desired clock source and sample rate
- 2) Press and hold the SYNC button to determine the current Word Clock Output frequency range.
- 3) While pressing the SYNC button, press the SAMPLE RATE button to toggle through the possible ranges. For example, to run the Rosetta 800 at an 88.2kHz sample rate while outputting a 44.1kHz word clock, set the SAMPLE RATE to *88.2*, maintain the SYNC button depressed while pressing the SAMPLE RATE button until both *44.1* and *48* LEDs light.



5) If no Option card is present, the *Option* value may not be selected.



6) When clocking to an AES input, the AES format must be specified by selecting a SYNC value of either *AES* or *AES + DW*, not via the SAMPLE RATE Advanced settings.



7) The Word Clock Out will always be the same frequency as the Word Clock In.



8) A different Word Clock configuration may be set for each sample rate range.

Navigating the Front Panel - *continued*



9) The clock circuitry of a typical D-to-A converter must be designed as a compromise between the ability to attenuate input signal jitter and the ability to accept any bitstream, regardless of its stability. The more the clock is allowed to track timing variations of the input, the more jitter remains in the clock at the conversion stage, with the degradation of conversion quality as a result. The ROSETTA 800’s Dual Stage Clock overcomes this compromise by employing one clock stage to accept the bitstream and store bits in a buffer, and a second stage to clock bits out of the buffer to the conversion stage. The first stage is optimized to track timing variations of the input, while the second stage is optimized to attenuate jitter and ensure that conversion takes place with the lowest jitter clock possible.



10) When the Rosetta 800 is running at the 176.4 – 192 kHz sample rate range, neither ADAT nor ADAT + S/MUX may be selected.

4) LOCK - These LEDs indicate the Lock status of the Rosetta 800’s dual stage clock. Two levels of lock precision are displayed, *Wide* and *Narrow*. **9**

5) SOURCE TO DIGITAL OUTS – This parameter configures the first of two available signal paths by selecting the input source(s) routed to ALL digital outputs. A total of eight channels may be routed, either entirely from one source or from one digital source and the Analog source. To select a digital source and the Analog source simultaneously, toggle through the entire set of possible values until both desired SOURCE TO DIGITAL OUTS values are lit. Assignment of each of the 8 channels to a digital or analog source is accomplished (by pairs) with the Advanced settings noted below: **10 11 12**

SOURCE TO DIGITAL OUTS Advanced settings:

When two sources have been selected, the following Advanced settings become available:

- To display current routing:
 - 1) Press and hold the SOURCE TO DIGITAL OUTS button to display the current configuration of analog and digital sources as indicated by the DIGITAL OUT LEDs. If the DIGITAL OUT LED is on, the source for the corresponding channel pair is the Analog input; if the DIGITAL OUT LED is off, the source is the selected digital input. For example, in FIGURE 1, channels 1-2 and 7-8 are set to the Analog source, while channels 3-4 and 5-6 are set to the ADAT source.

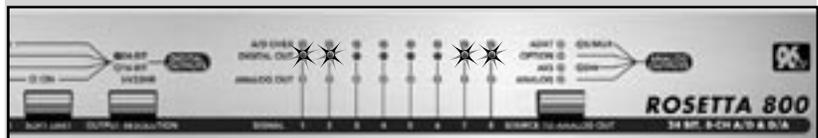
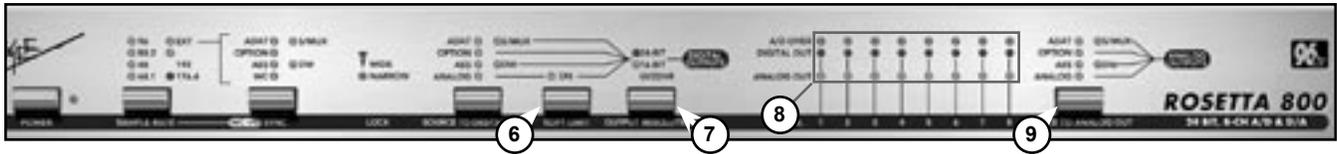


FIGURE 1

- To modify routing:
 - 1) While pressing the SOURCE TO DIGITAL OUTS button, press the SOFT LIMIT button to select the pair of channels to be modified; the selected pair is indicated by the flashing A/D OVER LEDs.
 - 2) While pressing the SOURCE TO DIGITAL OUTS button, press the OUTPUT RESOLUTION button to toggle the selected pair between ANALOG and the selected digital source.

Navigating the Front Panel - *continued*



6) SOFT LIMIT – This button engages Soft Limit, Apogee's proprietary transient limiting circuitry, on all 8 Analog inputs. Soft Limit transparently rounds transient spikes in a manner similar to analog tape, allowing several more dB of signal to be recorded onto the digital medium.

7) OUTPUT RESOLUTION – This button engages UV22HR, Apogee's proprietary bit-resolution reduction algorithm, on all digital outputs. UV22HR should be applied when 16-bit digital devices are connected to the Rosetta 800's Digital outputs, such as DAT recorders or CD burners. By adding an algorithmically generated, inaudible concentration of energy at around 22kHz, UV22HR preserves 24-bit resolution in a 16-bit digital signal. 

8) SIGNAL LEDs

- 1) A/D OVER – These red LEDs indicate the occurrence of digital OVERs (defined as 3 consecutive samples at full scale) in the A/D converter section.
- 2) DIGITAL OUT – These LEDs indicate the digital level of the source(s) routed to the digital outputs.
- 3) ANALOG OUT – These LEDs indicate the digital level of the source(s) routed to the analog outputs.

9) SOURCE TO ANALOG OUT – This parameter configures the second available signal path by selecting the input source(s) routed to the analog outputs. A total of eight channels may be routed, either entirely from one source or from one digital source and the analog source. To select a digital source and the Analog source simultaneously, toggle through the entire set of possible values until both desired SOURCE TO ANALOG OUT values are lit. Assignment of each of the 8 channels to a digital or analog source is accomplished (by pairs) with the Advanced settings listed below:

SOURCE TO ANALOG OUT Advanced settings:

When two sources have been selected, the following Advanced settings become available:

- To display current routing:
 - 1) Press and hold the SOURCE TO ANALOG OUT button to display the current configuration of analog and digital sources as indicated by the ANALOG OUT LEDs. If the ANALOG OUT LED is on, the source for the corresponding channel pair is the Analog input; if the ANALOG OUT LED is off, the source is the selected digital input.
- To modify routing:
 - 1) While pressing the SOURCE TO ANALOG OUT button depressed, press the SOFT LIMIT button to select the pair of channels to be modified; the selected pair is indicated by the flashing A/D OVER LEDs.
 - 2) While maintaining the SOURCE TO ANALOG OUT button depressed, press the OUTPUT RESOLUTION button to toggle the selected pair between ANALOG and the selected digital source.



11) A blinking digital source LED indicates that the selected source is not synchronous with the unit's clock source.

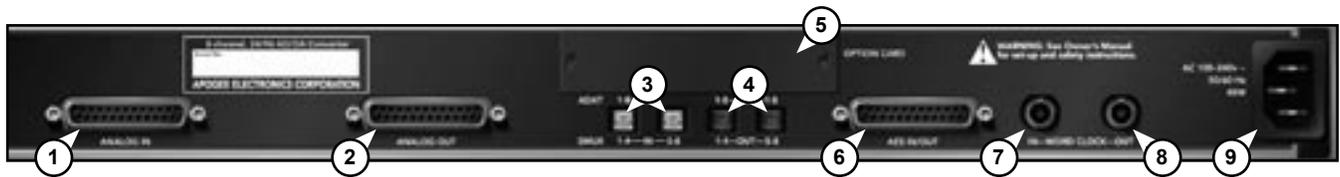


12) The S/MUX and DW LEDs located in the SOURCE TO DIGITAL OUTS value list are indicators only and cannot be selected.



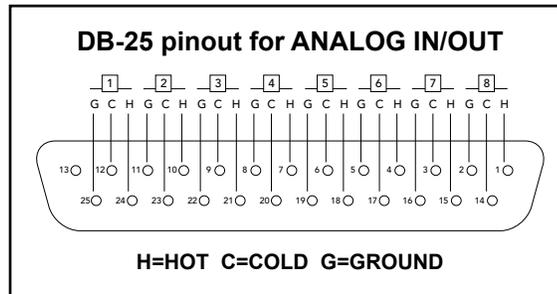
13) OUTPUT RESOLUTION can be set to 16-Bit UV22HR only when SAMPLE RATE is set to the 44.1-48 kHz range.

Connections on the Rear Panel



- 1) **ANALOG IN** – This DB-25 connection accepts 8 balanced line-level analog inputs at a nominal level of +4 dBu = 16 dBFs
- 2) **ANALOG OUT** - This DB-25 connection provides 8 balanced line-level analog outputs at a nominal level of –16 dBFs = +4 dBu.

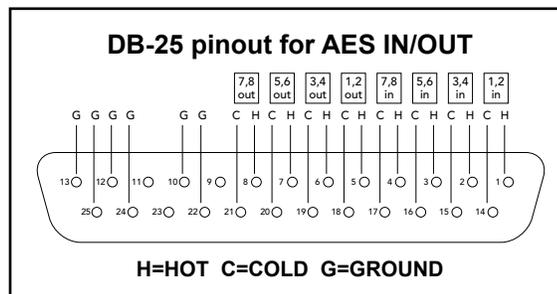
To set the Analog In/Out to a different calibration level, please see the section of this manual entitled “Internal Adjustments”. The pinout of the Analog In/Out connectors is compatible with the Tascam analog cable standard.



- 3) **ADAT – S/MUX IN** – These Toslink connections accept ADAT or S/MUX format optical inputs according to the front panel configuration. When connecting ADAT signals, use the Toslink connection labeled IN 1-8. When connecting S/MUX signals, use connector “1-4” for the first four channels and connector “5-8” for the second four channels.
- 4) **ADAT – S/MUX OUT** - These Toslink connections provide ADAT or S/MUX format optical outputs according to the front panel configuration. When connecting ADAT signals, both Toslink connections provide a duplicate output. When connecting S/MUX signals, use connector “1-4” for the first four channels and connector “5-8” for the second four channels.

- 5) **OPTION** - This slot is reserved for Option cards, which provide additional input/output formats, such as FireWire.

- 6) **AES IN/OUT** – This DB-25 connection accepts 8 channels of AES/EBU digital input and provides 8 channels of AES/EBU digital output. When the AES I/O has been configured for double wide operation, only the first 4 channels of input and output are available. The pinout of the AES IN/OUT connection is compatible with the Yamaha AES cable standard.



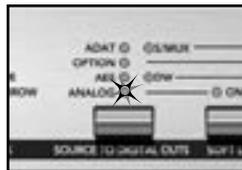
- 7) **WORD CLOCK IN** - This BNC connection accepts a TTL Logic clock signal. The Word Clock In is un-terminated.
- 8) **WORD CLOCK OUT** - This BNC connection provides a TTL Logic clock signal output.
- 9) **AC IN** - This IES connection accepts an AC input of 100 to 240 VAC at a frequency of 50 to 60 Hz.

Configuration Examples

CONFIGURATION #1 :

To configure the Rosetta 800 to function as an A/D and D/A converter for an AES digital device, make the FRONT PANEL SELECTIONS and REAR PANEL CONNECTIONS as follows:

FRONT PANEL SELECTIONS

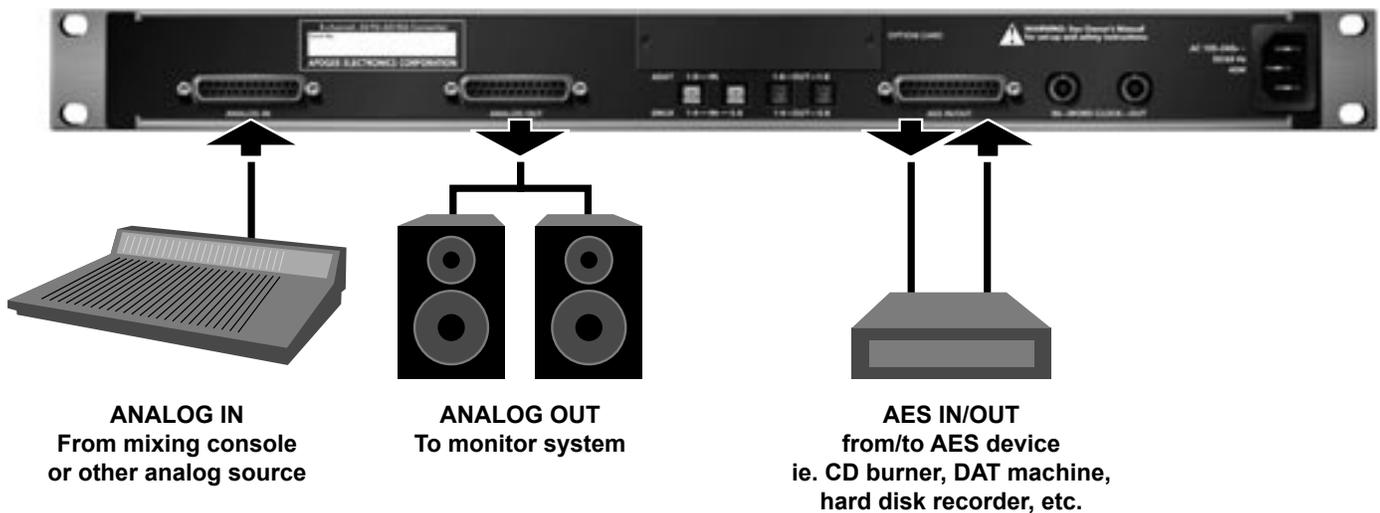


Select "ANALOG"
as SOURCE TO DIGITAL OUTS



Select "AES"
as SOURCE TO DIGITAL OUTS

REAR PANEL CONNECTIONS



ANALOG IN
From mixing console
or other analog source

ANALOG OUT
To monitor system

AES IN/OUT
from/to AES device
ie. CD burner, DAT machine,
hard disk recorder, etc.

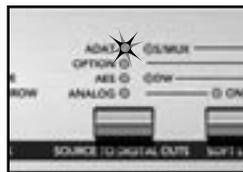
SEE FLOW DIAGRAM ON PG. 12

Configuration Examples - *continued*

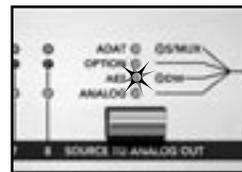
CONFIGURATION #2 :

To configure the Rosetta 800 to convert an ADAT input to AES for recording on an AES digital device, while monitoring the AES device output via the ANALOG OUTs, make the FRONT PANEL SELECTIONS and REAR PANEL CONNECTIONS as follows:

FRONT PANEL SELECTIONS

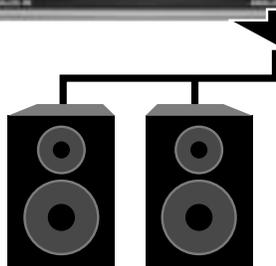


Select "ADAT"
as SOURCE TO DIGITAL OUTS

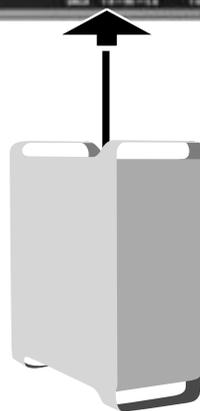


Select "AES"
as SOURCE TO ANALOG OUT

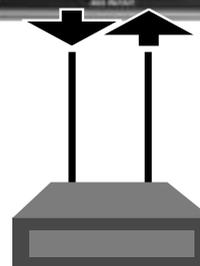
REAR PANEL CONNECTIONS



ANALOG OUT
To monitor system



ADAT IN
from ADAT device ie.
computer based DAW, MDM,
DAT machine, etc.



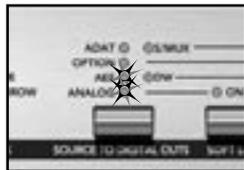
AES IN/OUT
from/to AES device
ie. CD burner, DAT machine,
hard disk recorder, etc.

Configuration Examples - *continued*

CONFIGURATION #3 (advanced settings) :

To configure the Rosetta 800 to accept 6 channels of analog input and 2 channels of AES input for recording on an ADAT digital device while monitoring the ADAT device output via the ANALOG OUTs, make the FRONT PANEL SELECTIONS and REAR PANEL CONNECTIONS as follows:

FRONT PANEL SELECTIONS

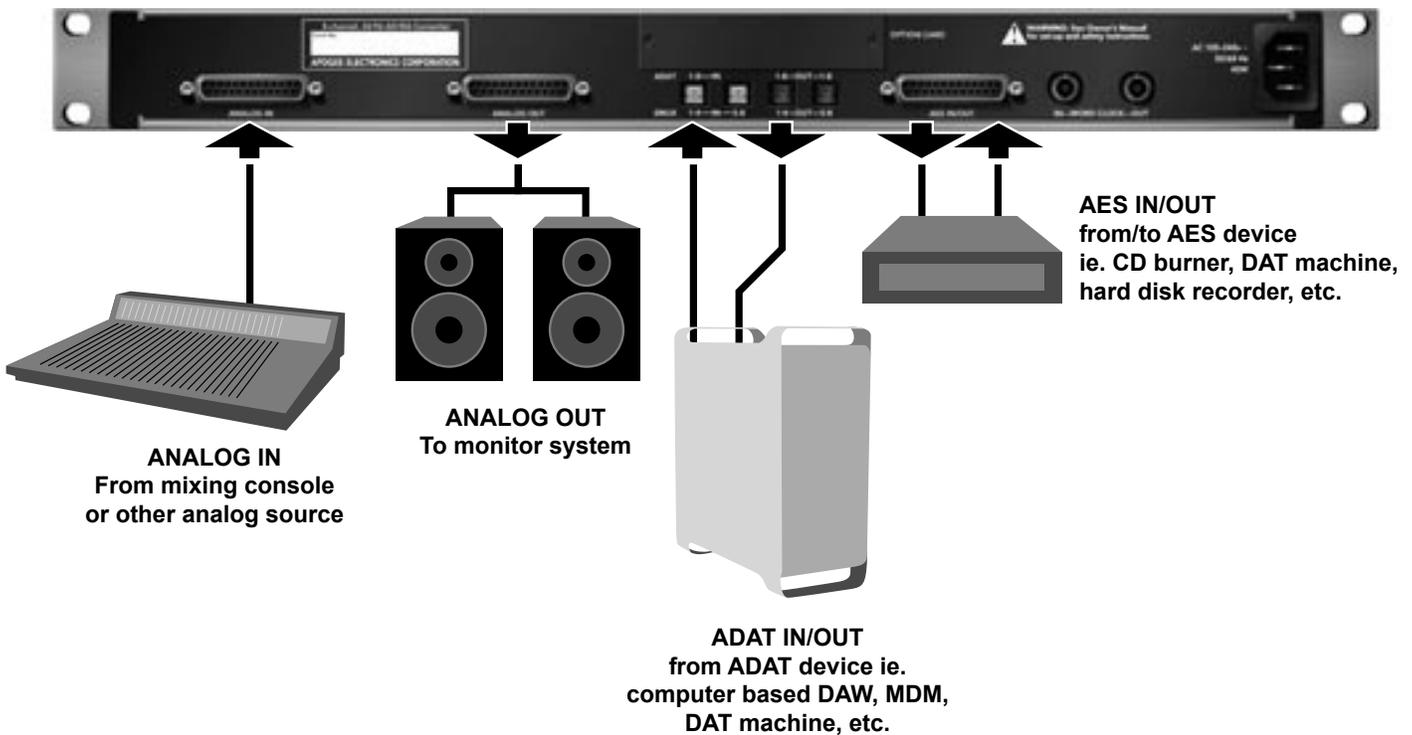


Select “AES” and “ANALOG” as SOURCE TO DIGITAL OUTS (refer to “SOURCE TO DIGITAL OUTS Advanced Settings” on page 6)



Select “ADAT” as SOURCE TO ANALOG OUT

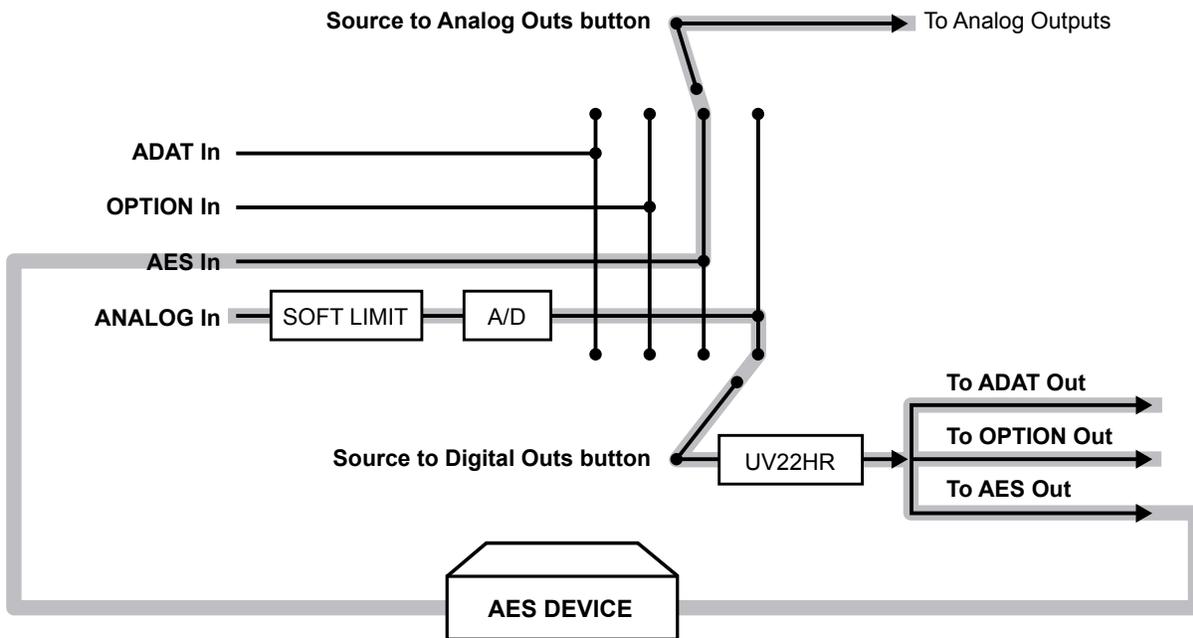
REAR PANEL CONNECTIONS



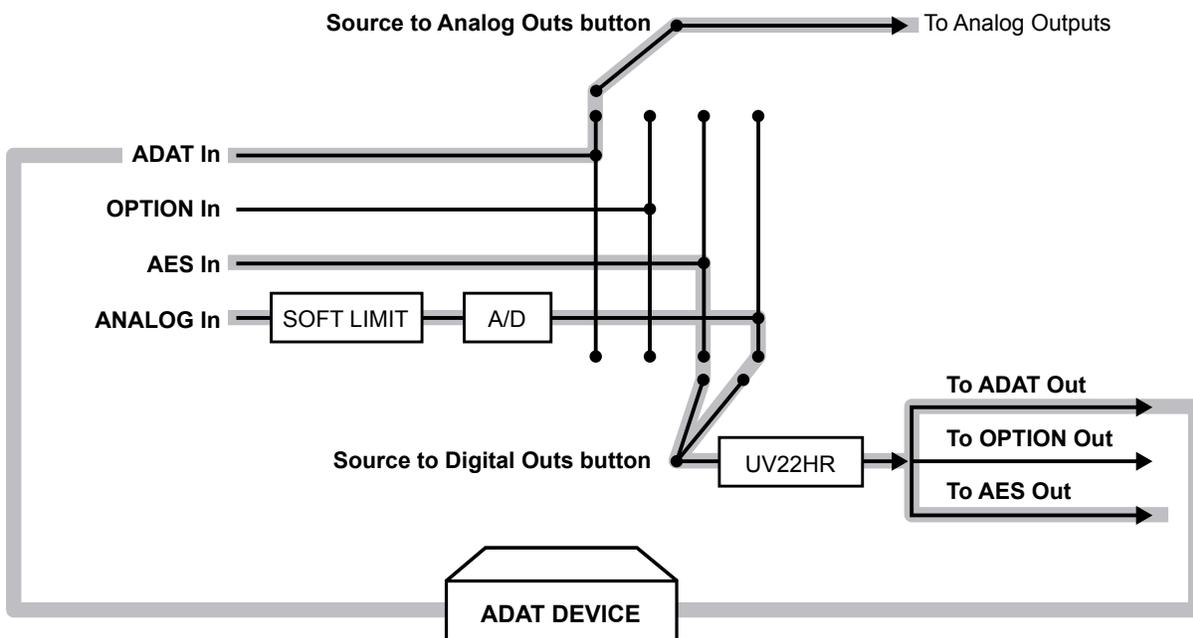
SEE FLOW DIAGRAM ON PG. 12

Configuration Examples - *continued*

FLOW DIAGRAM CONFIGURATION #1:



FLOW DIAGRAM CONFIGURATION #3 (advanced settings) :



Internal Adjustments

ANALOG INPUT/OUTPUT CALIBRATION

Calibration levels for the Analog Inputs and Outputs are set with internal jumpers. A “block” of 6 jumpers offers 3 level settings for each input and output channel. The locations of these jumpers are indicated in FIGURE 3.

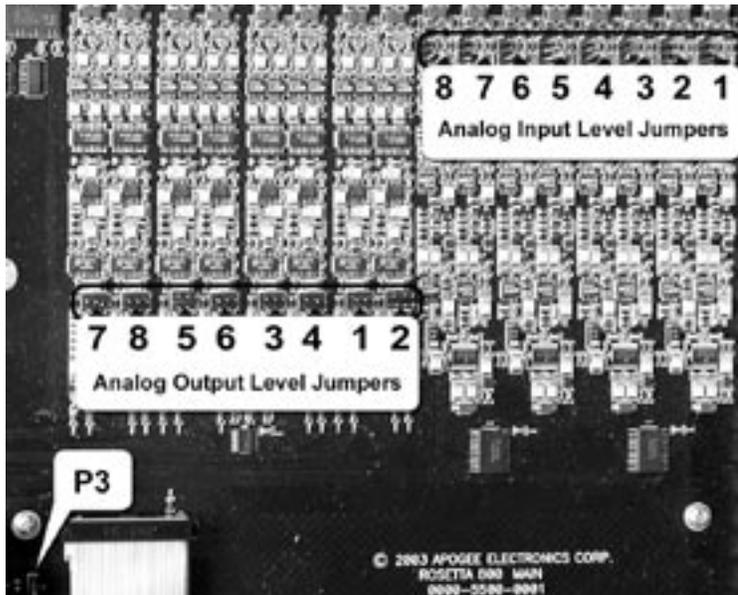


FIGURE 3

FIGURE 4 depicts the reference analog and digital levels obtained when applying a shunt to each pair of jumpers. For example, when a shunt is applied to the middle pair of each input and output “block”, a +4 dBu analog input results in a –16 dBfs digital output, while a –16dBfs digital input results in a +4 dBu analog output.

JUMPER (as seen from front)	ANALOG Reference Level	DIGITAL Reference Level
	-10 dBV	-13 dBfs
	+4 dBu	-16 dBfs
	+4 dBu	-20 dBfs

FIGURE 4

POWER SWITCH CALIBRATION

JUMPER P3 (as seen from front)	DESCRIPTION
	When AC power is applied to the input, the unit does not power up immediately; to power on the unit, the POWER button must be pressed.
	When AC power is applied to the input, Rosetta 800 powers on immediately; nevertheless, the POWER switch is functional.

FIGURE 5

Features and Specifications

- **8 channels of premium 24-bit AD/DA conversion**
- **Sample rates up to 96k with optional 192k upgrade**
- **8 channels of AES, ADAT I/O**
- **Optional Firewire card for compatibility with OS X, and Windows XP**
- **“Soft Limit” for maximum digital level without overs**
- **“UV22HR” for superior dither to 16-bit**

INPUTS:

- Analog In 1-8: Balanced, DSUB connector
- AES in: x 4, transformer balanced, DSUB connector
- Optical - ADAT/SMUX In: Toslink
- WC In: BNC 75 ohm

OUTPUTS:

- Analog Out 1-8: Balanced, DSUB connector.
- AES Out: x 4, transformer balanced, DSUB connector
- Optical - ADAT/SMUX Out: Toslink
- WC Out: BNC 75 ohm

SPECS:

- Sample rates: 44.1 - 48k, 88.2 - 96k (+/-10%); 176.4 - 192k (optional)
- Frequency response: 10 –20k (+/- 0.2 dB) at 44.1k
- Analog max levels: +6dBV, +20dBu, +24dBu max (set by internal jumper)
- Dynamic range: 114 dB A weighted (AD + DA)
- THD+N: -105 dB (AD), -103 dB (DA)
- Power: 90-250 VAC, 50-60Hz, 45Watt

Due to on-going development Apogee reserves the right to change all information and specifications without notice.

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