I1 Universal Integrated Amplifier

The I1 integrated amplifier is possibly the most complex project that CH Precision has ever undertaken – and the most versatile product we have ever produced. Imagine the core qualities and capabilities of the C1 DAC Controller and A1 Amplifier combined in a single box. Now throw in the choice parts of the L1 Line-stage and add the option of a P1 phono-stage, all combined in a single, standard CH chassis and you begin to get the picture.

The I1 is supplied in standard form equipped with four digital inputs (CH-Link HD, AES/EBU, S/PDIF and TosLink - although a second identical digital input board can be added in the spare chassis slot if you need the extra connections) one set of balanced and two pairs of single-ended analog inputs. The factory fitted Ethernet Control Board, which allows the unit to be remotely accessed, configured and controlled via the CH-Control Android App, can be replaced with a full network streaming capable Ethernet input and a separate, asynchronous USB input card can be added to enable connection of computer sources for file replay. The discrete, fully-complementary analog input boards can be fitted with additional internal circuit blocks that allow owners to convert either or both of the RCA analog inputs into current-sensing MC phono-inputs, complete with switchable replay EQ settings for RIAA, eRIAA, Decca, Columbia, EMI and Teldec (DGG) curves. Finally, a Clock-Sync board allows you to slave the I1 to external master clocks, or designate its internal clock as the system master. Dominating the interior of the I1 chassis, you'll find a massive 1000VA transformer that's more than capable of supporting the 100 watt/channel into 8 Ohms rated output; in combination with the 100,000uF of reservoir capacitance it allows the output stage to handle awkward loudspeaker loads with ease.

How did we pack so much functionality into a single chassis? By leveraging the power of sophisticated software control, modular construction and advanced digital processing. The I1's volume control is a remarkable hybrid design, that uses an R-2R resistor ladder in the analog domain for setting coarse levels, with fine adjustment taking place in the digital domain, a combination that allows incredibly precise level control without eroding bit depth, resolution or dynamic range. Likewise, the I1's advanced analog-to-digital conversion stage allows us to set overall cartridge gain and replay EQ in the digital domain, providing unparalleled phono replay flexibility, accuracy and features in an integrated unit. You mean we turn the analog inputs into digital? Yes – but if you don't tell your friends they'll never know. Indeed, many listeners swear that the I1's phono-stage delivers some of the finest analog sound they've ever enjoyed! Which tells you that its digital replay is pretty impressive too...

"A (very) few integrateds can match (the I1) in one area or another, but I know of nothing with a comparable combination of pedigree, versatility, footprint, expandability, upgradability, value, and world-class sonics."

ALAN TAFFEL, THE ABSOLUTE SOUND

Standard Inputs

- Factory fitted with CH-Link HD, AES/EBU, S/PDIF and TosLink digital inputs
- The CH-Link HD interface allows for synchronized transfer of high definition audio content (up to 32bit/768kHz) and DSD, offering the ideal interconnection to the D1 CD/SACD Transport or other CH-Link HD equipped units
- Standard digital inputs accept PCM to 24bit/192kHz, DSD 1bit/2.822MHz (DSD64 DoP encoded)
- Ethernet Control Board (replaced by the network streaming board if ordered or retro-fitted)

Optional Digital Inputs

- The I1 can accept two digital input boards, allowing multiple digital sources to be connected. The second board can be either another standard Digital Input Board or the USB Input Board
- Ethernet audio streaming input board, UPnP/DLNA compatible, allows connection to audio servers (NAS drives), streaming services or internet radio
- PCM to 24bit/192kHz (384kHz for uncompressed formats)
- DSD 1bit/2.8224MHz (DSD64), 5.6448MHz (DSD128) or 11.2896 MHz (DSD256)
- Native DSD and DoP
- WAV, AIFF, FLAC, ALAC, AAC and MP3 formats supported in PCM
- DSF and DFF formats supported in DSD
- Asynchronous USB audio input board – PCM to 24bit/384kHz, DSD 1bit/5.6448MHz (DSD128 DoP encoded)

Digital to Analog Conversion

- Individual Multi-bit Delta-Sigma converters for each channel
- Fully complementary, dual mono symmetrical circuit topology
- Discrete dedicated, shunt topology regulated linear power supplies for low noise and maximum channel separation

Processing And Clocking

- Proprietary CH-PEtER synchronous data over-sampling processing to DXD sample rate
- Resolution enhancement of audio material recorded at less than 24bits
- Two ultra low jitter VCXO oscillators, one per time domain
- Optional master/slave Clock-Sync board allows synchronization with external clocks or when used with the D1 CD/SACD transport
- Clock-Sync board also allows use of the T1 10MHz Time Reference clock

Display

- 480 x 272 pixel, 24bit RGB AMOLED
- 15 standard, user-selectable text colors
- User definable RGB option for text color

Remote Control Options

- Infrared Remote Control handset for basic functions
- Ethernet-based CH-Control Android App

Volume Control	• By-passable 0.5dB step hybrid volume control, coarse steps using an R-2R resistor ladder, with fine steps in the digital domain, to maximise system resolution • Post volume control balanced XLR line-level analog outputs
Analog Input Board	• Discrete, fully differential analog input circuit • Balanced XLR and single-ended RCA inputs • 6V RMS maximum input level • Input offset and balance user selectable
Analog-to-Digital conversion	• DXD 384kHz/24bit
Optional Phono-Stage	• Current-sensing MC Input for optimum signal to noise performance • No adjustment required for cartridge loading • User adjustable gain • One or both RCA analog inputs can be configured as MC phono-inputs • Switchable replay EQ – RIAA, eRIAA, Decca, Columbia, EMI, Teldec (DGG)
Amplification Stage	• Pure Class A ultra low-noise driver and Class AB output stages • Adjustable global feedback (0 to 100% in 20% steps) • ExactBias circuitry maintains optimum performance parameters • No output relay in signal path • Argento binding posts for loudspeaker connection – accept both spades and banana plugs
Power Supply	• Shielded 1000VA power transformer • Hyper fast soft recovery diode bridge rectifiers • Total of 100'000uF ultra low ESR reservoir and filtering capacitors
Optional Hardware	• Digital Input HD Board – four stereo digital inputs – CH-Link HD, AES/EBU, S/PDIF and TosLink. Up to two Digital Input boards can be fitted in the I1 • Phono Input Board – current-sensing phono stereo inputs, dedicated to low-impedance MC cartridges • Ethernet Audio Input Board – enables bit-exact, ultra low jitter playback of high-resolution files over an Ethernet network. Stream music from UPnP/DNLA networks, Tidal, Qobuz and internet radios. Browse music by using the CH-Control App or third-party UPnP-compatible iOS or Android app • USB Audio Input Board – enables bit-exact, ultra low jitter playback of high-resolution audio files directly from a computer or a music server • Clock Synchronization Board – master/slave clock synchronization board. Allows the I1 to become the system clock master or to sync from an external clock generator such as the T1

"(With the I1) CH Precision finds a middle way, one that keeps music as attractive as possible, yet also keeps it precise, detailed, and accurate. It's a bit of a high-wire act, and the CH Precision walks it perfectly."

ALAN SIRCOM, HI-FI PLUS MAGAZINE

"This integrated amp challenges the sound of high-quality separates, while at the same time condensing their essence into an unbelievably compact system...

It will drive most speakers comfortably... while offering ease of use combined with a positively mind-boggling array of functionality – most of which is actually useful!

...the (CH Precision) I1 is definitely as close to audio Nirvana as any compact audio system has transported me."

DENNIS DAVIES – THEAUDIOBEAT.COM