

ALTMANN UPCI

ULTRA PRECISION CLOCK INJECTOR
 (patent applied for)
FEATURES:

- improves the sound quality of digital audio-reproduction- and recording-systems significantly
- makes a complete signal reconditioning of very high precision
- interfaces between optical (TOSLINK, ST) and galvanic (AES, S/P DIF) transmissions
- makes a „Direct Clock Injection“ to the receiver (DA-converter or AD-converter)
- generates optimal signal shape and duty factor for the output signal
- attenuates transmitter jitter (CD, DVD, SACD/DSD, DAT transports, master clocks)
- attenuates line induced jitter
- available for all common sampling frequencies fe. 44.1, 48, 96 or 192 kHz
- output signal voltage level switchable for S/PDIF or AES connections
- delivers high-end performance even with lowest cost transmitters (fe. cheap CD/DVD/DAT players)
- improves AD recordings by attenuating line induced distortions and master clock distortions
- improves transmission reliability



AMM - UPCI - TOS - 96 in original size

DESCRIPTION:

The ALTMANN - ULTRA PRECISION CLOCK INJECTOR (UPCI) is a high performance transceiver device, primarily designed to raise audio-recording and -reproduction performance.

The ALTMANN UPCI receives digital audio data from a transmitter (fe. CD, DVD, DSD, DAT player, master or reference clock) via TOSLINK, ST, Cinch or XLR connection, then does a complete signal reconditioning, and then transmits the „new born“ signal via „Direct Clock Injection“ into the Cinch, XLR or BNC input of the receiver (fe. AD or DA converter).

DESCRIPTION CONTINUED:

The signal reconditioning procedure generates a brand new signal with optimal shape, duty factor and timing out of a corrupted input signal that may contain several kinds of distortion.

The ALTMANN UPCI is directly plugged into the digital input of a DA converter, respectively the clock input of an AD converter.

„Direct Clock Injection“ is a technique developed by ALTMANN in order to overcome cable losses and additional line induced distortion after the signal has been reconditioned.

Therefore the injected receiver, which most commonly is a DA converter in the case of audio reproduction or an AD converter in the case of a digital audio recording chain, gets the audio or clock signal in perfect shape and timing. Thus the clock recovery circuitry in the injected receiver is relieved and the internally generated master- and word-clocks will have lower phase noise.

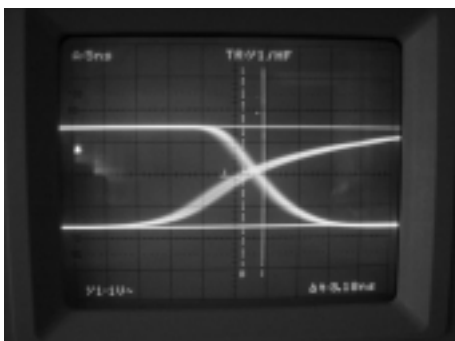
This will strongly attenuate jitter-related audible artifacts in recording and reproduction.

The subjective performance improvements of the ALTMANN UPCI have been evaluated in numerous listening tests with the following results:

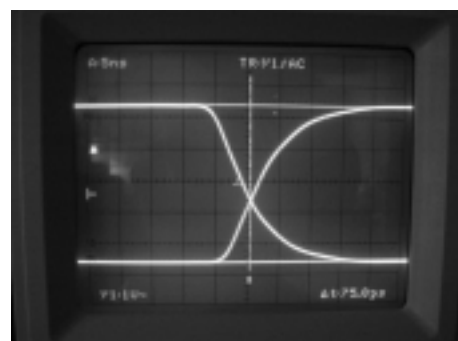
- improved ease of listening
- increased clarity
- improved high frequency response
- better instrument separation
- more information
- better timing
- better soundstage
- improved overall audio performance

SCOPE SHOTS:

The following scope shots show an example of the signal regeneration capabilities of the ALTMANN UPCI.



Jittered signal at UPCI input. Low voltage.
Slow transition times.



Reconditioned signal at UPCI output. Very small residual jitter. Fast transitions. Restored voltage level.

The ALTMANN UPCI is covered by a 5 years limited warranty.

TECHNICAL DATA:

supported sample frequencies	44.1, 48, 88.2, 96, 192 kHz
compatibility	CD, DVD, SACD/DSD, DAT
supported signal types	biphase mark code
initial input signal recognition time	typ. < 1 sec
timelag between input and output	typ. 100ns @ 44.1kHz, typ. 30ns @ 192 kHz
capture range of sample frequency	± 150 ppm, larger capture range upon request
residual output jitter	typ. 0,25 ppm, depends on input signal
AES mode output voltage	5Vpp
S/PDIF mode output voltage	0,5Vpp, when terminated
Input options	ST optical, TOSLINK, Cinch, BNCadapt, XLRadapt
Output	Cinch, BNC, XLR, optical upon request
Dimensions	65 x 55 x 24 mm + external power supply

ORDERING INFORMATION:

AMM - UPCI -input (TOS/ST/CIN/BNC/XLR) -sample frequency (44.1/48/88.2/96/192)

fe.	AMM - UPCI - ST - 48	means ST-optical input, 48 kHz sampling frequency
	AMM - UPCI - TOS - 44.1	means TOSLINK input, 44.1 kHz sampling frequency
	AMM - UPCI - XLR - 96	means XLR input, 96 kHz sampling frequency

Note: The AMM - UPCI standard output is via Cinch plug. BNC or XLR adapters are supplied, if required.

APPLICATIONS:

CD & DVD mastering / premastering
 recording studio / control room
 high quality broadcast applications
 high end consumer audio

TOTAL SATISFACTION POLICY:

The AMM - UPCI can be obtained directly from ALTMANN, Germany.

If the customer is not satisfied with the product, he can return it within 14 days to ALTMANN, Germany for a full refund on the price of the product (applies only for customers located in Europe).

ONLINE SUPPORT:

Updated information and user manuals can be accessed on our web-sites:

www.altmann.haan.de
www.altmann-micro-machines.de
www.jitter.de