# COUNTERPOINT <br> ELECTRONIC <br> SYSTEMS 

DA-10 OWNER'S MANUAL
Solid Precision-Solid Value

## THANK YOU

Judging from the stereo equipment you own, you rank among discriminating music listeners. You are probably no beginner when it comes to high fidelity equipment. Nevertheless, we ask you to read and carefully follow these instructions to insure a successful partnership between you and your new DA-10 Digital Converter.

You now own a superb piece of high fidelity equipment. Used properly you are in for thousands of hours of musical enjoyment.

## TABLE OF CONTENTS

INTRODUCTION ..... page 1
Digital Section Features
Low jitter receiver
Digital Tape Dubbing
Digital-to-Analog Conversion Features
Multi-mode operation
20-bit resolution
Analog Features
Power Supply Features
INSTALLING THE DA-10 INTO YOUR SYSTEM ..... page 3
FAMILIARIZING YOURSELF WITH THE DA-10 ..... page 4
Front Panel Description
Source Select.
scms lamp.
lock lamp.
Tape Dubbing.
Tape Monitor.
DAC Trim.
Mode.
Back Panel Description
Digital Inputs and Outputs
Audio Outputs
A Note About Digital Connectors
Internal Adjustements
Changing the DACCard
TECHNICAL DISCUSSION ..... page 8
CARE ..... page 9
BREAK-IN AND WARM-UP PERIODS ..... page 10
FUSES ..... page 10
A.C. Mains Fuse
Caution! Hazardous Voltages!
SPECIFICATIONS ..... page 10
Motherboard Specifications
Digital Section
Digital Input/Output Format
Digital Receiver
Digital-to-Analog Section
Analog Section
Other
Power Requirements and Voltage Range
Domestic Range
Replacement Fuse
Dimensions
Weight
Options
YOUR WARRANTY ..... page 13
Warranty Service Inside The U.S.A.
Terms of Warranty
Registering your ownership
How to obtain the maximum coverage
When warranty service is needed
Be sure it is really in need of service!
Special Situations
Transfer of warranty
Warranty extension program
Warranty of Dealer's Demo units
Warranty Service Outside The U.S.A.
Warranty Service Outside The U.S.A.
Within the country of purchase
Outside the country of purchase
TROUBLESHOOTING ..... page 19
Be Sure It Really Needs Service!
First Ask Your Dealer for Help
RE-PACKING THE DA-10 FOR TRANSPORATION ..... page 19
DA-10 PrepUsing The Packing MaterialsPlacing The DA-10 Inside The Box

## INTRODUCTION

The Counterpoint DA-10 is a precisely engineered digital converter. Its intended use is to generate high quality audio from digital data supplied by DAT decks, CD transports and other digital sources that use the consumer AES/EBU EIAJ CP-340 format at 38, 44.1 and 48 kHz .

## Digital Section Features <br> Low jitter receiver

■ The DA-10's Crystal Semiconductor receiver recovers the digital clock with 1/4th to $1 / 5$ th of the jitter of Yamaha receiver-based products. For low-distortion audio, low word-clock jitter in the time domain is as important as the number of bits of D-A resolution.

## Digital Tape Dubbing

- Four digital inputs (3 coax and one optical) plus two complete digital tape loops offer complete tape-to-tape dubbing and tape monitor in the digital domain.
- Digital phase inverter permits inverting the polarity of the audio signal without audible side effects.


## Digital-to-Analog Conversion Features

## Multi-mode operation

- The DA-10 does not actually perform digital-to-audio conversion; it has no DAC or digital-to-audio converter. Rather, it operates as a mainframe and can support virtually any commercially available single bit or multibit DAC at 16, 18 or 20-bit resolution. See the Specifications section for a full technical description of the motherboard's available modes of operation.

■ Plug in DACCards permit single-bit, BitStream, mixed-mode or multi-bit operation. This feature assures that your DA-10 can always take advantage of the latest development in DAC's or to compensate for different ADC technologies.

## 20-bit resolution

- The Digital to Audio DACCard that was shipped with your new DA-10 uses the excellent Analog Devices AD1862, a highly-linear DAC which has no internal music-degrading opamps. This chip supports external trimming of low-level MSB, allowing use of the DA-10's "DAC Trim" feature.

■ The DAC Trim feature allows adjusting the Most Significant Bit ("MSB") of such multi-bit DAC's that support this feature to compensate for temperature drift and aging. Similar to adjusting phono cartridge VTA, this adjustment may be made by ear!

## Analog Features

Fully discrete, zero-feedback cascoded FET input IN (current-to-voltage) converter circuitry designs out the op amp-based $100 \%$ feedback blunder most commonly-committed by audio designers (who really should know better).

- Internal switch permits interfacing with current-mode or voltage-mode DAC's. This is similar to selecting between low-impedance MC or high-impedance MM phono cartridges.
- Passive antialiasing filter with gentle Bessel response reduces the phase shift and overshoot caused by steep analog filters. In addition, passive filters sound better than active filters based on integrated circuit op-amps.
- DC-coupling with servo control to eliminate all signal path capacitors improves resolution and allows long-term operating stability.
- Individually regulated low level voltages for each channel for high inter-stage isolation and to reduce dynamic distortions.


## Power Supply Features

Separate digital and analog transformers eliminate interference with the audio signal due to digital noise. The transformers are built at Counterpoint's Precision Magnetics division and use premium Nomex insulation and Teflon wire leads for reliability, and are fully vacuum impregnated and baked with $100 \%$ solids epoxy varnish for mechanical rigidity. Additionally, the transformers are mechanically isolated from the chassis on Imipolex-G grommets.
■ Seventeen voltage regulators guarantee highly stable operating voltages with zero interference between the various subsections in the DA-10.

- The DA-10 uses high-quality components throughout, including German 1\% metal-film resistors and film capacitors by TRT. The design is very conservative, and careful testing and burn-in assure reliable operation.
- The chassis and top cover, manufactured by Counterpoint's wholly-owned sheet metal facility, are painted with a tough and durable electrostatically-applied epoxy powder paint finish.
This digital audio product is intended to offer you years of fine music reproduction and will be a valued part of your home stereo system. Once you have enjoyed the outstanding performance of the DA-10, you will understand why Counterpoint has earned the reputation of continually striving for sonic perfection.


## INSTALLING THE DA-10 INTO YOUR SYSTEM

Step 1.
Unpack the DA-10 and save the box and the packing materials. They are essential for shipping purposes should updating, repair or resale be desired. The cartons can be flattened to save space if necessary and possibly used as a welcome mat at your doorstep.

Keep this owner's manual in a safe spot, it's your reference guide to the continued enjoyment of the DA-10. Don't let Fido get ahold of this manual, and be sure to let little Susie use a real coloring book for her artistic training. Replacement cost of this owner's manual is $\$ 10.00$.

## Step 2.

Place the DA-10 as near to the final installation position as possible while leaving yourself access to its rear panel input and output connectors.

## Step 3.

The DA-10 needs to be plugged in and you need to have paid the electric company recently. Use the included AC power cord to connect your DA-10 to a convenient wall outlet.

## Step 4.

Connect the Audio Outputs of the DA-10 to a "line level" input on your preamplifier, line section or receiver. DO NOT connect to the "phono" inputs. Use the "aux" inputs on your receiver or preamplifier if you are not certain which inputs are line level.

## Step 5.

Connect your digital sources to the DA-10's digital inputs. There are two types of digital input connectors on the DA-10: bayonet-type BNC's and TOSLINK optical (or you may have the optional ST-type glass fiber optical connector).

Note: Adapters are included with your DA-10 to permit use with RCA-phono type cables.

## FAMILIARIZING YOURSELF WITH THE DA-10

## Front Panel Description



Figure 1. DA-10 Front Panel.
Source Select. Use this control to select the digital program material to which you wish to listen.
scm lamp Standing for the "Serial Copy Management System" for dealing with copy protection of copyrighted works, SCMS is designed to allow unlimited duplication of the original work, but no duplication of any copies of the original. The scms lamp lights green if a digital copy can be made from the selected source, or red if such an attempt will fail.
lock lamp. This lamp will light when there is valid digital data being received at the source selected either by the SOURCE SELECT control or the TAPE MONITOR control.

Tape Dubbing. When this control is placed in the SOURCE position, the digital program material you've selected with the SOURCE SELECT will be presented to both sets of TAPE SEND jacks. If the switch is in the $1->2$ position, then any tape played on your Tape 1 machine will be fed to the digital inputs of your Tape 2 machine. By the same token, the $2 — 1$ setting permits copying tapes from Tape Machine 2 onto Tape Machine 1. It's a lot simpler than it sounds.

For best sound quality, we recommend leaving this switch in the OFF position unless you are actually making a recording.

Tape Monitor. This switch performs the tape monitor function of allowing you to listen to whatever digital signal source is connected to the DA-10's TAPE 1 RETURN or TAPE 2 RETURN connectors without disturbing the signal being fed to the TAPE SENDS.

DAC Trim. It's rather like adjusting the VTA of a phono tonearm: adjusting the MSB, or Most Significant Bit of a multi-bit DAC allows you to compensate for low-level nonlinearities caused by thermal drift or aging. The adjustment may be done by ear, and it is recommended you be seated in the listening position when doing so. Obviously the DA-10 must be within reach.

Note: If the lamp above the DAC Trim is not lit, then the DACCard currently in the DA-10 does not support this feature. In this case, it is not advised that you make any changes to the setting of this control.

Mode. This control has three positions. The MUTE function is pretty self-explanatory: it shuts off the audio output. OPERATE and INVERT are the normal listening modes, the only difference being that INVERT digitally reverses the polarity of the audio signal to compensate for such recordings that are recorded "out of phase."

## Back Panel Description



Figure 2. DA-10 Rear Panel.

## Digital Inputs and Outputs

The DA-10 has facilities for up to four digital sources plus two digital tape decks or CD-R machines so long as the sources and recorders meet the AES/EBU and EIAJ CP-340 digital-audio standards for unidirectional, self-clocked, stereo digital-audio formats in a single serial channel operating at $38,44.1$ and 48 kHz . Examples of such sources are CD transports (or CD players with digital outputs), digital audio tape (DAT) decks, video disk or 'combi' players and digital audio broadcast (if the standards for such ever emerge and they are compatible with the DA-10)(A fine case of equivocation if I ever saw one).

We have tried to anticipate the standard digital sources you are likely to have and have labeled the connectors accordingly. However, if we missed one of your favorites (like a second laserdisk player) you can use any unused digital source input on the DA-10 because they all have the same sensitivity and handle the same data format. This includes the two "Tape Returns" inputs, which though primarily intended for dubbing or monitoring a recording in progress, are also standard digital inputs and may be used with any AES/EBU digital source.

## Audio Outputs

Connect your DA-10 to a line-level input on your preamplifier, line stage or receiver using these connectors.

## A Note About Digital Connectors

There are two types of digital inputs and outputs on the DA-10: electrical coaxial types and optical. The electrical coax inputs are bayonet-type Neill-Concelman connectors. BNC connectors, unlike the typical phono-type connectors used on lower-quality digital products, are designed for high-frequency matched impedance operation. When used with properly-designed digital audio cables, and when the source component's drive circuitry has been implemented decently the BNC format can sound nearly as good as the more expensive ST-type glass fiber system. An adaptor has been included for use with phono-type cables.

Toshiba-designed TOSLINK plastic fiber connectors are also used for optical inputs and outputs. Though not as good-sounding as a good electrical coaxial system, they are included as a convenience for use with digital sources that only offer TOSLINK digital outputs. Also note that, on some CD transports, the drive circuitry for the electrical coaxial outputs may have been improperly or less than optimally designed. In this case, the TOSLINK connection may actually sound better.

Please be certain to keep the caps installed on any unused TOSLINK's as any dust or foreign material that gets inside will pretty much keep them from working right. Never blow into them to clean them.

Some specially-ordered DA-10's have an ST-type glass fiber connector in the second CD (opto) input position. Always keep this part safely in its plastic condom when you are not using it. As with TOSLINK's, dust can wreak havoc with the optics inside these parts, and never, ever blow into them to clean them.

## Internal Adjustments

To prevent "DAC obsolescence," and to remain up-to-date with current trends in DAC designs the DA-10 was designed to be "DAC inspecific." This means that you can explore virtually any digital-to-audio conversion technology-from single bit to mixed-mode hybrid to full multibit-simply by plugging in different DAC "daughtercards", available from
Counterpoint. Contact your Counterpoint dealer, or Counterpoint Electronic Systems, Inc. to obtain information about available DACCards.

## Changing the DACCard

To change the DACCard you must remove the top cover of the DA-10. Be aware that the voltages within can be LETHAL!

Unless otherwise instructed, keep your fingers off components and the circuit board. Always unplug the DA-10 from the AC wall outlet before removing or replacing the top cover: a screw falling onto the circuit board may cause substantial damage.

- Disconnect the power cord from the rear of the DA-10.

■ Remove the DA-10's top cover. It is held in place with eight phillips screws: four on the DA-10's top, two along the right side of the DA-10's, and two along the left side.

- Carefully unplug the installed DACCard from the motherboard by holding it by its edges and applying 'wiggling' motion while pulling it upwards at the same time. It should unplug from the motherboard smoothly.
- Installation of the new DACCard is the reverse of the above. Carefully center it above the connectors. When it is correctly aligned it will begin to "seat" itself. Push down firmly and evenly, do not push down first one side then the other.


Figure 3. Location of the DACCard.
■ Set the motherboard's switches. The motherboard must be set to feed data to the DAC in the correct format, and to correctly handle the DAC's audio output mode (current or voltage).

The switch information for the DACCard is silkscreened on the DACCard. Set the two Mode switches and the Audio Port switch's M1, M0, M2 and MX switch on the motherboard accordingly.


Figure 4. Location of Motherboard switches.
■ Re-install the top cover.

## TECHNICAL DISCUSSION

Digital audio technology is a moving target. Developing a state of the art digital converter is a frustrating experience: no sooner does one makes a "final" decision regarding which DAC chip is to be used than hey presto! a newer, intriguing design appears on the market. To base a High End digital audio product on a single DAC chip is risky: it would be obsolete as soon as it hit the dealers' shelves. To avoid this, DA-10's are designed to be DAC inspecific: they are designed without DAC's on the printed circuit board. Instead they are to be used with a variety of plug-in DAC daughterboards, both multibit and single bit.

Though we have chosen the Analog Devices 20-bit multi-bit DAC to be offered as "standard equipment" because they use no op-amps, are trimmable, and sound better than Burr-Brown's competing 20-bit part, customers who wish to upgrade or are curious about other DAC's can avail themselves to alternative DAC technology by purchasing and plugging in DACCards to stay current with DAC technology. See information on DACCards in Specifications section of this manual for a list of supported DAC's.

For best low-level linearity some multi-bit DAC's allow in-circuit trimming. Single-bit DAC's neither offer nor need trimming; they have a different problems, and low-level nonlinearity or linearity drift are not among them. The high-end manufacturers that use trimmable multi-bit DAC's generally trim them at the factory, but they don't stay trimmed: they drift with age and temperature. This leads to a loss of timberal focus and a vagueness to the sound. When using a DACCard with a trimmable DAC in the DA-10, the front-panel "DAC trim" control is enabled that allows the listener to align the DAC's low-level linearity within a $\pm 6 \mathrm{~dB}$ range. Like adjusting the VTA of your phono cartridge, it takes a little listening to become sensitive to the sonic effects, but once heard, it's easy to hear when the DAC is correctly adjusted.

Nearly every multi-bit D-A converter product on the market utilizes an op-amp with 100\% feedback to convert the DAC's output current to voltage. Most DAC's have the op-amps built right inside them with no way to bypass them. This includes the highly touted UltraAnalog DAC's with TWO internal op-amps in series per channel. Similarly, all one-bit D-A converters (with the exception of Crystal Semiconductor's CS4303) have onchip op-amps to integrate and filter the bitstream. Again, the audio signal passes through at least two internal op-amps of indifferent quality.

[^0]It should be no surprise that Counterpoint doesn't consider op-amps running with huge amounts of feedback to be suitable for hi fi. What should come as a surprise is that so many well-known companies who built their reputations on good-sounding vacuum-tube or low-feedback discrete solid-state designs have inexplicably about-faced on this subject by designing digital audio products that use the aforementioned DAC's. Hello, Audio Research? VTL? Made any op-amp preamps lately?

Anyway, it was a major design criterion for the DA-10 to completely eliminate all such devices from the signal path, especially in the critical I-to-V (current-to-voltage) conversion stage because this stage is the place where the DAC's current output becomes an audio signal and if the quality is not preserved at this point then no amount of circuit finessing will bring it back.

We further decided that our l-to-V conversion process should use as little feedback as possible. Consequently, the DA-10 uses a totally discrete analog I-to-V converter with hand-matched FET's and bipolar transistors which operates with zero feedback. This circuit directly converts the current output of a multi-bit DAC to line-level audio with no overshoot or high-feedback op-amp-derived sonic artifacts.

When the DA-10 is used with single-bit DAC's the use of op-amps is presently unavoidable since (as previously described) the op-amps are built right into the DAC chips. In this case, the I-to-V conversion stage is bypassed, the DAC's output signal filtered and buffered, and presented directly to the DA-10's output jacks.

All DAC's generate copious high-frequency noise that must be filtered out to prevent overloading the following audio stages and creating intermodulation distortion. Most D-A converter products use an op-amp-based high-order filter with a steep cutoff, a guaranteed recipe for high frequency ringing. The DA-10 uses a passive third-order LC filter with a Bessel response for minimum ringing and group delay. Our filter requires no feedback.

Word-clock jitter in the DA-10 is held to less than 50pSrms, by using the latest Crystal Semiconductor receiver chip. Earlier receiver chips, including the ubiquitous Yamaha used in nearly all competing D-A converters have jitter in the 175-200pSrms range.

## CARE

To avoid potential electrical shock, do not operate the DA-10 in a damp, rainy or moisture-filled environment and never operate the DA-10 with its top cover removed.

Remember, the faceplate of your DA-10 is manufactured from an aluminum alloy which is an extremely soft metal. It cannot withstand the careless use of tools during installation into a cabinet or rack.

When cleaning the exterior of your DA-10, the direct use of dusting sprays, abrasive cleaners and particularly alcohol should not be used. At Counterpoint, detail cleaning of all metal surfaces is done using Windex ${ }^{T M}$ spray glass cleaner or diluted ammonia solution. However, because the formulas for cleaners of this type vary, or change without notice, Counterpoint will not assume responsibility for the results obtained with any particular product.

Please be certain to keep the caps installed on any unused optical connectors as any dust or foreign material that gets inside will pretty much keep them from working right. Never blow into them to clean them.

## BREAK-IN AND WARM-UP PERIODS

Your new DA-10 has already been on for over 100 hours while it was burning-in at the factory. Even so, like all high quality audio components, it will require several hours of actually playing music before it sounds its best. Each time you turn on your DA-10, it is immediately ready to play but it has not really settled into its final, optimum, condition until at least 30 minutes has passed.

## FUSES

## A.C. Mains Fuse

This fuse is located inside the DA-10, on the front left hand corner of the circuit board, directly hehind the ON/OFF switch. If this fuse "blows" it is most likely an indication of a fault in the DA-10. However, it is possible that the fuse itself may have been faulty, so you may wish to try a new one before you call your dealer.

## Caution! hazardous Voltages!

Before replacing this fuse, be certain that the DA-10 is disconnected from the A.C. receptacle. The replacement value of this fuse is 1 Amp "Fast Blow." Use of a larger or slower fuse can void your warranty.

## SPECIFICATIONS

## Motherboard Specifications <br> Digital Section

## Digital Input/Output Format

All inputs and outputs meet digital-audio standards per AES/EBU and EIAJ CP-340 for unidirectional, self-clocked, stereo digital-audio formats in a single serial channel operating at $38,44.1$ and 48 kHz .

Connections are made via BNC, TOSLINK and (optionally) ST-type connectors.

## Digital Receiver

Crystal Semiconductor CS8412, REV 'C' or better. Onboard selection of Normal Audio Port Modes may be made via a switch. Jitter less than 50 pS rms.

Digital Interpolation Filter: 8X Burr-Brown DF1700/NPC5813. This filter is automatically bypassed whenever DAC's with internal filters are installed.

## Digital-to-Analog Section

The DA-10 is intended to be DAC inspecific. As such, every effort has been made to make available to installed DACCards all necessary digital formats and clock rates. Serial data is presented to the DACCard's directly from the output of the receiver for use by DAC's with internal digital interpolation filters and also from the output of the DA-10's onboard digital interpolation filter for DAC's without filters.

Serial formats available to DACCard's with onchip interpolation filters.
Master Clock Frequency is $256 x$ Fs on all the following formats:
L/R, 16-24 Bits
L/R, I2S Compatible
L/R, 16 Bits,LSBJ
L/R, 18 Bits, LSBJ
L/R, MSB Last

For DACCard's without onchip interpolation filters, SCK is available at 192xFs, 256xFs, 384xFs and 512xFs at 16,18 and 20 output bits.

A Note to Developers: The DA-10 may be used to listen to different DAC IC's for development of your own products. Blank DACCards are available for "rolling your own" DACCards. Contact Mike Elliott [via fax only] at Counterpoint for further details.

## Analog Section

Analog performance will vary with the type of DACCard installed. Refer to the specifications section of your DACCard's Installation Manual.

## Other

Power Requirements and Voltage Range
22 Watts, $50 / 60 \mathrm{~Hz}$. Available in 100, 120, 220 and 240 Vac versions.

## Domestic Range

105 to 133 Vac, other voltage ranges scale accordingly.

## Replacement Fuse

Value 1 Amp 3AG fast-blow.

## Dimensions

Front Panel: $19^{\prime \prime}$ wide by $2-3 / 4^{\prime \prime}$ tall ( $480 \mathrm{~mm} \times 70 \mathrm{~mm}$ ) Front-to-Rear: 11 inches ( 280 mm ) not including knobs.

## Weight

$14 \mathrm{lbs}(6.5 \mathrm{~kg})$.

## Options

As shipped, the DA-10 includes one Analog Devices-based DACCard, Part Number DA10-AD20 which uses the AD1862 20-bit multibit DAC.

Other available DACCards include Burr-Brown's PCM63 20-bit multibit "Colinear" DAC (Part Number DA10-BB63); Burr-Brown's PCM67 hybrid single/multi-bit DAC (Part Number DA10-BB67); Crystal Semiconductor's CS4328 delta-sigma 18 bit DAC (Part Number DA10-CS18); Philips' 7323 BitStream 18 bit DAC (Part Number DA10-7323); Philips' 7350 BitStream 20-bit DAC (Part Number DA10-7350); and Ultra Analog's UA20 20-bit DAC (Part Number DA10-UA20).

Contact your Counterpoint dealer for complete information on pricing and availability.

## YOUR WARRANTY

Your Counterpoint DA-10 Digital Converter was engineered and built by dedicated people, with manufacturing techniques designed to achieve the highest standards available in the industry. Each Counterpoint DA-10 undergoes rigorous testing procedure and has been checked twice by Audio Precision ${ }^{T M}$ computer-aided testing equipment, to catch any failure-prone devices or components not up to spec which may have not revealed themselves during the breakdown tests. As a final step, each and every unit is listened to before it is shipped out from Counterpoint.

## Warranty Service Inside The U.S.A.

## Terms of Warranty

Counterpoint Electronic Systems, Inc. (Counterpoint), warrants to the owner who does not register his ownership, that for a period of 3 years commencing from the date of manufacture the DA-10 when shipped in its original packing, will be free from defects in manufacture and materials.

If you register your purchase with Counterpoint (see below), Counterpoint warrants to the registered owner that for a period of 3 years commencing from the date of original purchase the DA-10 when shipped in its original packing will be free from defects in manufacture and materials.

The foregoing warranty is the only warranty, express or implied given by Counterpoint, i.e. there is no warranty of the merchantability and there is no warranty of fitness for a particular purpose. Counterpoint hereby disclaims any express or implied warranties other than the warranty in the first two paragraphs to the fullest extent permitted by law. If applicable law does not permit Counterpoint to disclaim implied warranties, any warranties implied by law are limited to the 3 year term of express warranty given by Counterpoint. No other person, including any employee of Counterpoint or any service person, is authorized to make any other warranty or to alter or extend the terms of the warranty given by Counterpoint.

NOTE: The warranty given by Counterpoint does not apply to the appearance of the DA-10. The warranty applies only if your Counterpoint DA-10 fails to function properly under normal use and within the manufacturers's specification.

Under no circumstances will the following be included as warranty coverage:
■ 1. Any Counterpoint DA-10 not operated in agreement with the instructions contained in the owner's manual.

- 2. Any resulting damage of any nature.
- 3. Any Counterpoint DA-10 which, in our strict judgement, has been repaired, altered or modified by any facility or personnel not authorized by Counterpoint.

■ 4. Any Counterpoint DA-10 which, in our strict judgement has been subject to neglect, abuse, accident, tampering, or has had its serial number removed or defaced.

## Warranty Service Inside The U.S.A.

The sole and exclusive remedy under this warranty is repair or replacement at Counterpoint's option of any DA-10 that proves to be defective in manufacture of materials within the 3 year period from the date of manufacture or purchase depending on whether ownership is unregistered or has been registered. To the fullest extent permitted by law, Counterpoint disclaims all liability for any other direct, incidental or consequential damages alleged to be caused by a defective DA-10, i.e. Counterpoint will not be held responsible for any personal injury, property damage (other than the cost of replacing the product) or any other monetary damage such as lost wages or profits caused by any use, attempted use or inability to use the DA-10.

NOTE: By using the DA-10, you agree that repair or replacement at Counterpoint's option will fully satisfy Counterpoint's warranty obligation to you, whether in contract, tort, negligence, strict liability or other applicable law.

## Registering your ownership

## How to obtain the maximum coverage

The DA-10's warranty coverage normally expires 3 years from the date of manufacture. By registering your warranty within 90 days of purchase you can extend the 3 year coverage period to begin the date you purchased it rather than the date the product was manufactured. Additionally, if you're a registered owner, we can notify you about new DACCards and if modifications or updates become available for the DA-10.

So don't wait! Register your warranty by simply sending a photocopy of the original sales receipt (or other equivalent proof that you purchased it on that date) within 90 days of the day you purchased your DA-10 to the following address:
$>$ Counterpoint Electronic Systems, Inc.
2281 Las Palmas Drive
Carlsbad, CA. 92009
Atten: Warranty Registration
And we'll send you a handsome 3 year warranty certificate for your records. The 3 year warranty covers all labor and parts.

## When warranty service is needed

In most cases Counterpoint will attempt to provide in the field solutions. Yet if the service needed cannot be properly handled in the field Counterpoint's only solution would be to issue a Return Authorization Number and have the DA-10 returned to Counterpoint.

To obtain service under this warranty you (or your dealer) must return your Counterpoint DA-10, properly packaged in its original, undamaged shipping carton and materials, to the Counterpoint factory.

## Warranty Service Inside The U.S.A.

Shipments to the factory will not be accepted without a Return Authorization ("RA") number. You will need to call Counterpoint at (619)31-5050 to obtain an RA number. Before we can issue an RA number, we will need the following information:


1. the model number (DA-10),
2. the serial number (from the DA-10's rear deck),
3. your name, address, and a daytime phone number,
4. a brief explanation of the problem.

## Write the RA Number, clearly and legibly, on either the shipping box or the shipping label.

If the DA-10's original carton and packing materials are in good shape, use them to ship the product. Otherwise, call Counterpoint and order a new carton and packing materials. There is a nominal charge.

When you return the DA-10 to the Counterpoint factory for repair or update and we find it packed in other than the original shipping materials, or in shipping materials that in the judgement of Counterpoint or the freight carrier are damaged or defective or substandard, then Counterpoint will re-package the unit in a factory carton for return shipping. You will be charged a nominal fee for the new material.

You will need to pay for postage, insurance and shipping costs required to ship your Counterpoint DA-10 to the factory for service. However, Counterpoint will pay to return the product via prepaid, insured surface freight. We reserve the responsibility of determining the method and carrier used to return your DA-10.

## Be sure it is really in need of service!

Check everything out first. It has happened all too often when products arrive at our factory for service, we discover that there is actually nothing wrong. This ends up being an inconvenience to you along with unnecessary use of time for our technical staff. Ultimately it costs you extra money as this is not considered warranty service. So, please be certain that it is your DA-10 that is in need of service.

If your DA-10 is returned for warranty repair or general repair and Counterpoint finds it to be operating within specifications, it will be returned with a handling fee of $\$ 65.00$, plus return shipping charges. Therefore, be very certain that any problem you may be experiencing is actually due to a failure of the DA-10 itself.

If there are unusual circumstances surrounding the failure, please describe them clearly in an accompanying note so we may more easily duplicate the conditions.

## Special Situations <br> Transfer of warranty

■ If the original owner did not register ownership with Counterpoint, then the DA-10's warranty expires 3 years after the date of manufacture.

- If the original owner did establish warranty and you wish to transfer the warranty to your name, simply send a photocopy of the receipt or bill of sale from the previous owner to you to the Warranty Registration address below.

$>$ Counterpoint Electronic Systems, Inc.<br>2281 Las Palmas Drive<br>Carlsbad, CA. 92009

Atten: Warranty Transfer

## Warranty extension program

Counterpoint offers a warranty extension program to all owners with warranty on file. During the period while your original warranty is valid you may purchase an extended warranty from Counterpoint at any time. However, when the warranty is about to expire we will send you a final letter to notify you that you have an option to purchase an additional 3 year parts and labor warranty. This additional warranty can be purchased for a nominal fee. Contact Counterpoint for the exact price. But don't hold us responsible if you have not informed us of a change of address or if the U.S. Postal Service forgot to deliver your mail.

## Warranty of Dealer's Demo units

When a Counterpoint Audio Dealer demonstrates a Counterpoint product in his or her store, it most likely has been supplied to that dealer as a demo unit with the understanding that it will be used for this purpose for three year. As a result, Counterpoint extends to the dealer a special three-year warranty to cover this period.

The day the three-year demo period expires, Counterpoint's regular three-year warranty period begins, whether the unit has been sold or not.

If you purchased a dealer's demo unit after the expiration of the three-year dealer demo warranty period, the three-year warranty will have already been started in the dealer's name. As soon as we receive your proof of purchase, we will transfer the ownership to your name and you will receive the remainder of the three-year warranty program.

If you purchased a dealer demo before the three-year dealer demo warranty expired, any remaining time left in the three-year program will be cancelled, and the full three-year warranty period will begin on the date of purchase.

If you have purchased your DA-10 as a dealer demo piece and are unsure about its status, please contact your Counterpoint dealer or Counterpoint.

Warranty Service Outside The U.S.A.

## Warranty Service Outside The U.S.A.

## Within the country of purchase

If a Counterpoint product is purchased outside the United States and its territories from a factory-authorized importing distributor or its agents, warranty conditions will be extended by the importing distributor, which may be different from those warranty conditions specified above. Warranty service, if needed, is the sole responsibility of the importing distributor.

## Outside the country of purchase

If a Counterpoint product is removed from the country in which the consumer purchase was made, neither Counterpoint nor any of its authorized importing distributors or agents in any subsequent country are obligated by the terms of this or any warranty. Any repairs will be made at the discretion of Counterpoint, its authorized importing distributor, or agents.

If you've made your purchase of the DA-10 in the U.S. and take the unit out of the U.S., your warranty for the DA-10 is only valid in the U.S. Counterpoint representatives outside this country are not obligated to honor our warranty as they have established their own warranty policy for customers who have purchased the DA-10 in their country. However, they may charge you for service or you can return the unit to Counterpoint for warranty/non-warrranty service.

To obtain service under this warranty you (or your dealer/distributor) must contact
Counterpoint's Customer Service department in the U.S.A. at 619-431-5050 (voice) or 619-431-5986 (fax) and provide the following information;

1. the model number (DA-10),
2. the serial number (from the DA-10's rear deck),
3. your name, address, and a daytime phone number,
4. a brief explaination of the problem.

In most cases Counterpoint will attempt to provide in the field solutions. Yet if the service needed cannot be prpoperly handled in the field Counterpoint's only solution would be to issue a Return Authorization Number and ask to have the Counterpoint DA-10, properly packaged in its original, undamaged shipping carton and materials, and returned to the Counterpoint factory.

Shipments to the factory will not be accepted without a Return Authorization (RA) number. Write the RA Number, clearly and legibly, on either the shipping box or the shipping label.

If the DA-10's original carton and packing materials are in good shape, use them to ship the product. Otherwise, call Counterpoint and order a new carton and packing materials. There is a nominal charge.

## Warranty Service Outside The U.S.A.

When you return the DA-10 to Counterpoint factory for repair or update and we find it packed in other than the original shipping materials, or in shipping materials that in the judgement of Counterpoint or the freight carrier are damaged or defective or substandard, then Counterpoint will re-package the unit in a factory carton for return shipping. You will be charged a nominal fee for the new material.

You will need to pay for postage, insurance, any required customs or tariffs and shipping costs needed to ship your Counterpoint DA-10 to the factory for service. When we return it we'll insure the product and return it freight collect, or you may pay in advance if you desire. We reserve the responsibility of determining the method and carrier used to return your DA-10. All charges to return the unit will be handled on a freight collect basis. If returning the unit freight collect is not possible than payment in advance is required before the unit will leave our factory.

If your DA-10 is returned for warranty repair or general repair and Counterpoint finds it to be operating within specifications, it will be returned with a handling fee of $\$ 65.00$, plus return shipping charges. Therefore, be very certain that any problem you may be experiencing is actually due to a failure of the DA-10 itself.

If there are unusual circumstances surrounding the failure, please describe them clearly in an accompanying note so we may more easily duplicate the conditions.

Your receipt of purchase or original bill of sale or other satisfactory proof of the date of purchase of your Counterpoint DA-10 must be made available to obtain service under this warranty. The warranty applies only if your Counterpoint DA-10 fails to function properly under normal use and within its published specifications.

Under no circumstances will the following be included as warranty coverage:

- 1. Any Counterpoint DA-10 not operated in agreement with the instructions contained in the owner's manual.
- 2. Any DA-10 has that been subjected to incorrect AC Mains voltage.
- 3. Any resulting damage of any nature.

■ 4. Any Counterpoint DA-10 which, in our strict judgement, has been repaired, altered or modified by any facility or personnel not authorized by Counterpoint.

■ 5. Any Counterpoint DA-10 which, in our strict judgement has been subject to neglect, abuse, accident, tampering, or has had its serial number removed or defaced.

## TROUBLESHOOTING.

## Be Sure It Really Needs Service!

Before sending your DA-10 to us for repair, be very thorough and careful with your troubleshooting: be certain that it is the DA-10 that is at fault. Because if you send it to us for repair and we find nothing wrong, we will check it out anyway, critically listen to it as though it were a new unit and return it with a handling fee of $\$ 65.00$, plus return shipping charges.

## First Ask Your Dealer for Help

Your Counterpoint Authorized Dealer is your best source of assistance. He is in a much better position to help because he knows you, your needs and your system. In addition, your Dealer is backed up by the special support resources within Counterpoint.

## RE-PACKING THE DA-10 FOR TRANSPORTATION

Providing you've retained all packing materials, the following is a step-by-step procedure for re-packing the DA-10. If you do not have the box and packing materials contact Counterpoint to obtain them. There is a nominal charge for the materials.

Counterpoint is not responsible for any darnage resulting from the proper or improper re-packing of the DA-10.

## DA-10 Prep

Step 1.
Turn OFF the DA-10 and disconnect it from all audio and electrical connections.

## Using The Packing Materials

Step 2.
It is best to wrap the DA-10 unit in the original plastic wrap or a suitable substitute. This will protect the unit from scratches when handled or from the foam endcaps.

Step 3.
The packing material consists of two identical universal end pieces. Put the foam end caps on each side of the unit. Make sure each fits snugly on each side of the DA-10.

## Placing The DA-10 Inside The Box

Step 4.
Check to see that the box is sealed on the bottom and open on the top. If not, seal the bottom of the box with packing tape. Now place the DA-10 inside the shipping box.

Step 5.
Seal the top of the box shut with an ample amount of packing tape. The DA-10 is now ready for transportation.



[^0]:    Note: Not one manufacturer of single-bit D-A converters offers a good-sounding op-amp, and you know they're not buying someone else's op-amp to put inside their DAC.

