PROCEED
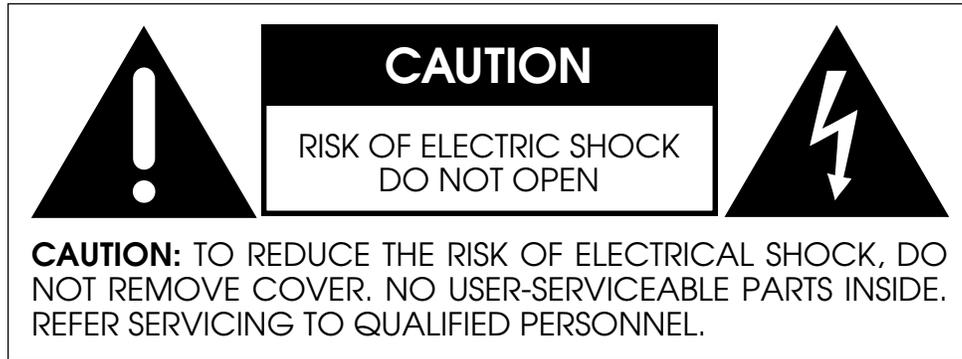
DAP Digital Audio Processor

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Marking by the "CE" symbol (shown left) indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community.

Important Safety Instructions

Please read all instructions and precautions carefully and completely before operating your DAP digital audio processor.

1. **ALWAYS** disconnect your entire system from the AC mains before connecting or disconnecting any cables, or when cleaning any component.

2. This product is equipped with a three-conductor AC mains power cord which includes an earth ground connection. To prevent shock hazard, all three connections must **ALWAYS** be used. If your electrical outlets will not accept this type of plug, an adapter may be purchased. If an adapter is necessary, be sure it is an approved type and is used properly, supplying an earth ground. If you are not sure of the integrity of your home electrical system, contact a licensed electrician for assistance.

3. AC extension cords are not recommended for use with this product. If an extension cord must be used, be sure it is an approved type and has sufficient current-carrying capacity to power this product.

4. **NEVER** use flammable or combustible chemicals for cleaning audio components.

5. **NEVER** operate this product with any covers removed.

6. **NEVER** wet the inside of this product with any liquid.

7. **NEVER** pour or spill liquids directly onto this unit.

8. **NEVER** block air flow through ventilation slots or heatsinks.

9. **NEVER** bypass any fuse.

10. **NEVER** replace any fuse with a value or type other than those specified.

11. **NEVER** attempt to repair this product. If a problem occurs, contact your Proceed® retailer.

12. **NEVER** expose this product to extremely high or low temperatures.

13. **NEVER** operate this product in an explosive atmosphere.

14. **ALWAYS** keep electrical equipment out of the reach of children.

15. **ALWAYS** unplug sensitive electronic equipment during lightning storms.

From all of us at Madrigal Audio Laboratories, thank you for choosing the Proceed DAP digital audio processor.

A great deal of effort went into the design and construction of this precision device. Used properly, it will give you many years of enjoyment.

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Unpacking and Placement

Unpacking

Unpack your Proceed® DAP digital audio processor and ***keep all packing materials for future transport***. Locate and remove the AC power cord from the cardboard slot it occupies within the shiping carton.

Placement

Place the DAP near the source equipment, thus keeping interconnecting cables (both digital and analog) reasonably short. It may be placed on a shelf or in a cabinet where it's convenient to operate.

> *Note that adequate clearance for the AC cord and connecting cables must be left behind the DAP. We suggest leaving at least three inches of free space behind the DAP to allow all cables sufficient room to bend without crimping or undue strain.*

Ventilation

Be sure to allow 2 to 3 inches of clearance above the DAP to allow heat dissipation through air circulation.

Mechanical drawings are included in this manual to facilitate special installations and custom cabinet work (see "Dimensions" at the end of this manual).

PRECAUTION

For your protection, review "Important Safety Instructions" before you install your DAP.

Operating Voltage

The DAP digital audio processor is set at the factory (internally) for 100V, 120V, 200V, 220V, or 240V AC mains operation as appropriate for the country in which it is to be sold. (*230V only in European Union countries, in compliance with CE regulations.*) Make sure that the label on the rear of the DAP indicates the correct AC operating voltage for your location. The operating voltage cannot be changed by the user, and any attempt to do so will void the warranty.

If the voltage indicated is incorrect relative to that supplied in your area, see your Proceed dealer.

DAP bottom-panel label

WARNING: BEFORE ATTEMPTING TO OPERATE THIS DEVICE, REFER TO OWNER'S MANUAL FOR PROPER OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS. HAZARDOUS VOLTAGE AVAILABLE INSIDE; DISCONNECT AC – MAINS CABLE BEFORE OPENING UNIT.

PROCEED® dap **S/N**

MADRIGAL AUDIO LABORATORIES, INC.

designed and manufactured in USA

No User Serviceable Components Inside.
For service, contact Madrigal Audio Laboratories or an Authorized Dealer. Any modification to this equipment will void all warranties.

Special Design Features

Congratulations on your purchase of the Proceed DAP. The Madrigal design team is confident you will enjoy the outstanding performance of the DAP for many years. In case you are interested in technical details, what follows is a brief outline of some of the key technologies in your new processor.

Superior isolation between sources

One of the advantages of a separate digital audio processor is that you can take the money which might have otherwise been spent on several built-in D/A converters and put it into one, superior processor which will enhance the performance of all the transports with which it is used. Ironically, many outboard processors fail to live up to this potential due to interference between their various digital inputs.

The DAP provides outstanding isolation between its inputs, realizing the full potential of the various digital transports with which it is used. In fact, all unselected digital inputs are capacitively shunted to ground upon entering the DAP to prevent their interaction with any portion of the circuitry inside the processor. As a result, the selected input effectively has the DAP "all to itself" for its conversion to analog.

Fully balanced design

The DAP is fully balanced in both the analog and digital domains. Even single-ended digital inputs (anything other than the balanced aes/ebu standard) are immediately converted to balanced signals before any further routing or processing of the signal. All digital filtering and processing is implemented in a balanced configuration, and conversion to analog is accomplished in two opposing polarity 18-bit converters per channel.

This approach maintains the integrity of the signal, reducing the opportunities for music-destroying noise and digital artifacts to enter the signal path.

24 bit digital architecture and HDCD® compatibility

All digital filtering and processing maintains a true 24-bit throughput capability, providing greater digital resolution than any existing source component. Even the most stringent requirements of professionals can easily be met with this design.

In addition, the DAP also incorporates High Definition Compatible Digital® decoding to take full advantage of the increased resolution available from HDCD® encoded 16-bit CDs. The High Definition Compatible Digital® format retains much of the resolution inherent in professional twenty bit recordings by encoding this information more efficiently within the sixteen bit space available within the Compact Disc format.
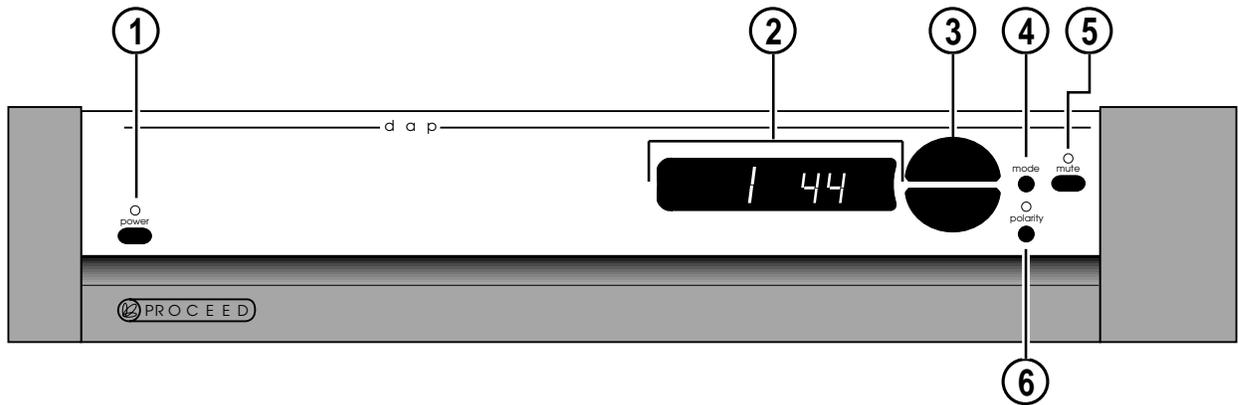
Front Panel

1   POWER & POWER LED

Assuming that the DAP's power cord is connected to AC power, pressing this latching power button connects the DAP to the AC mains and turns on the unit. When power is restored after an interruption, the DAP will be in **standby**; pressing any button will bring it out of standby.

While the DAP is in **standby**, the LED above the **power** button is red. When the DAP is ready to operate (that is, when it is not in standby mode), this LED is amber. Naturally, when AC power is off, the LED is off.

The benefits of having then DAP always warmed up and ready to go (and able to respond to a remote control) far outweigh the small amount of power used. We recommend unplugging the DAP only when you will be away from the house for an extended period of time (such as during a vacation), or during electrical storms. The DAP may be left on at all times, or can be forced back into standby with either a remote control command or by pressing and holding the **polarity** button for s few seconds.

2   MAIN DISPLAY

The **main display** provides information pertaining to the operation of the DAP, and is used in conjunction with the **up/down buttons** beside it. Normally, the **main display** indicates the number of the selected digital input (1 through 5) and the sampling frequency it is currently locked on (32, 44, or 48 kHz).

If an HDCD® recording is played, the display will flash **hd** and **cd** several times, and then remain on **hd** to indicate that decoding is taking place.

If the DAP is placed into its variable output mode, the **main display** will indicate the relative volume on a scale of 0–99. (See the discussion of the **mode button**, below.)

Finally, an **infrared receiver and transmitter** for remote control of the DAP is positioned on the left side of the main display. Owners of learning remote controls such as those provided with Proceed preamplifiers may transmit infrared control codes from the DAP to their learning remotes to "teach" the remote how to control the DAP. Subsequently, the IR receiver in the main display will respond to the learning remote's commands for input selection, volume control, and certain other commands. (See *Remote Control of the DAP* for more information.)

3   **UP/DOWN BUTTONS**

These **up/down buttons** are used to make adjustments on the DAP, including source and volume selection. While the **up/down buttons** normally select the digital input (1 through 5) to be processed, they may also be used to control the output level of the DAP. (See **mode button**, below.)

4   **MODE BUTTON**

Pressing this button toggles the DAP between input selection and volume selection modes.

Ordinarily, the DAP should be used at its maximum output level, with volume control provided by a high quality active preamplifier which follows the DAP in the signal path. This approach provides the best sonic performance as well as improved user convenience.

However, if for some reason a high quality active preamplifier is not available, pressing the **mode button** will cause the DAP to change into its variable output mode of operation, wherein the **up/down buttons** are used to control the output level of the processor. Pressing the **mode button** a second time will return the DAP's **up/down buttons** to their normal input selection function.

5   **MUTE**

Pressing the **mute** button will reduce the main output level of the digital audio processor by approximately 20 dB. Pressing the **mute** button a second time will return the DAP to its previous output level. This function is available at all times, whether the DAP is in input select or variable output mode.

If you have the DAP in its variable output mode of operation and adjust the volume with either the front panel buttons or a remote control while in the mute mode, the digital audio processor will adjust its volume *from the muted volume* and *disengage* the mute function. By so doing, the DAP avoids sudden, unexpected changes in volume.

6   POLARITY

The DAP is a *non-inverting* device—that is, digital inputs which indicate a positive voltage generate a positive analog output. Some recordings may benefit from deliberately inverting the polarity (sometimes referred to as "*absolute phase*") by 180° to correct for a similar polarity inversion incurred during the recording process. Pressing the **polarity** button will illuminate the polarity indicator LED above the button, indicating that the DAP is now inverting the polarity of the music signal. Pressing the **polarity** button a second time will extinguish the LED and return the DAP to its non-inverting state.

Pressing and holding the **polarity** button for several seconds will force the DAP into **standby**.
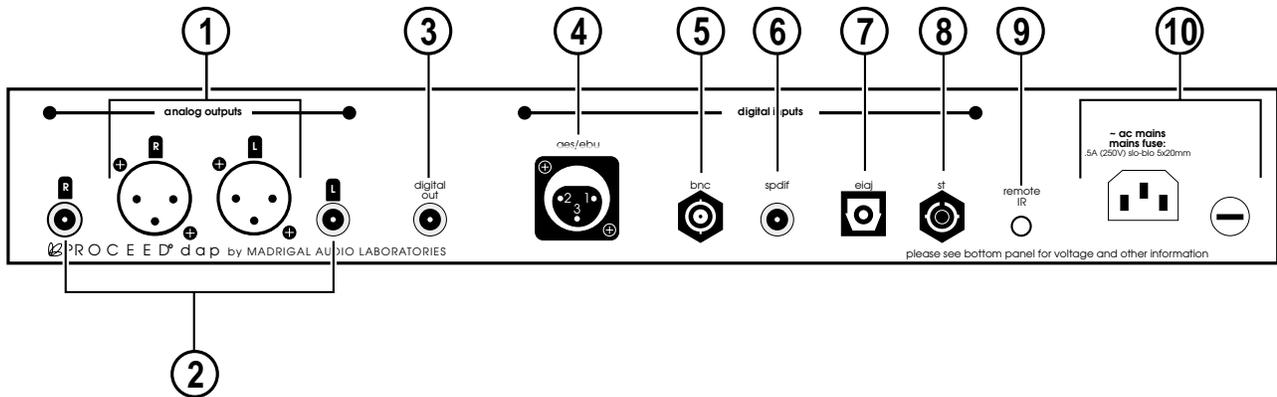
Rear Panel

Caution!	**Disconnect all associated equipment from the AC mains BEFORE making any signal connections and applying power to the DAP.**

1 BALANCED ANALOG OUTPUTS

These outputs provide balanced analog audio (*via* cables equipped with XLR-type connectors) to a preamplifier, integrated amplifier, or receiver equipped with balanced inputs. Balanced interconnection between the DAP and the component that follows it offers the best quality interconnection and is highly recommended.

If you engage the variable output mode of operation of the DAP, these outputs may be routed directly to a power amplifier that accepts balanced inputs. This mode of operation is less desirable sonically than using a high quality active preamplifier, but may be advantageous under some circumstances.

Caution!	**If you elect to use the variable output mode of the DAP to allow direct-connection to a power amplifier, be certain to turn the volume down to a low level before playing any music. Sending a line-level (maximum volume) signal to your power amplifier may endanger your loudspeakers.**

The pin assignments of these XLR-type male outputs conform to the international AES standard, and are as follows:

Pin 1: Signal ground
Pin 2: Signal **+** (non-inverting)
Pin 3: Signal **−** (inverting)
Connector ground lug: chassis ground

Refer to your preamplifier's operating manual to verify that the pin assignments of its input connectors correspond to the DAP. If not, wire the cable so that the appropriate output pin connects to the equivalent input pin, or reverse the leads of *both* your speaker cables to "reverse the reversal" and restore correct polarity.

Connect the right-channel and left-channel balanced outputs of the DAP to the corresponding inputs on your preamplifier (or power amplifier if you are using the variable output mode of the DAP).

2 SINGLE-ENDED ANALOG OUTPUTS

These outputs provide single-ended analog audio (*via* cables equipped with RCA-type connectors) to a preamplifier, integrated amplifier, or receiver equipped with single-ended inputs. Most components accept this type of output.

If you engage the variable output mode of operation of the DAP, these outputs may be routed directly to a power amplifier. This mode of operation is less desirable sonically than using a high quality active preamplifier, but may be advantageous under some circumstances.

Caution!

If you elect to use the variable output mode of the DAP to allow direct-connection to a power amplifier, be certain to turn the volume down to a low level before playing any music. Sending a line-level (maximum volume) signal to your power amplifier may endanger your loudspeakers.

Connect the right-channel and left-channel single-ended outputs of the DAP to the corresponding inputs on your preamplifier (or power amplifier if you are using the variable output mode of the DAP).

3 DIGITAL OUTPUT

This output provides digital audio (*via* a 75Ω cable equipped with RCA-type connectors) to the digital input of a DAT, CD-R, MD, DCC, or any other component that accepts an S/PDIF electrical digital input. It automatically sends a copy of the currently selected digital source's datastream to the connected device for recording or further digital processing.

Connect the digital output of the DAP to the RCA input of your digital recorder using a high quality 75Ω cable such as Madrigal MDC-2.

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4   AES/EBU DIGITAL INPUT

This input accepts digital audio conforming to the 110Ω AES/EBU digital interface standard (*via* a cable equipped with XLR-type connectors) from the digital output of a digital FM tuner, compact disc player, laserdisc player, or digital audio recorder.

The pin assignments of these AES/EBU XLR-type female input connectors are:

Pin 1: Shield
Pin 2: Digital **+** (non-inverting)
Pin 3: Digital **–** (inverting)
Connector ground lug: chassis ground

These pin assignments are consistent with the standards adopted by the Audio Engineering Society and the European Broadcast Union. Refer to the operating manuals of your digital sources to verify that the pin assignments of their output connectors correspond to the DAP. If not, wire the cables so that the appropriate output pin connects to the equivalent input pin.

Connect the AES/EBU output of your digital source component to the AES/EBU (XLR) input of the DAP using a high quality 110Ω cable such as Madrigal MDC-1.

5   BNC DIGITAL INPUT

This input accepts digital audio conforming to the 75Ω S/PDIF digital interface standard (*via* a cable equipped with BNC-type connectors) from the digital output of a digital FM tuner, compact disc player, laserdisc player, or digital audio recorder.

Connect the digital output of your digital source component to the BNC input of the DAP using a high quality 75Ω cable such as Madrigal MDC-2.

6   SPDIF (RCA) DIGITAL INPUT

This input accepts digital audio conforming to the 75Ω S/PDIF digital interface standard (*via* a cable equipped with RCA-type connectors) from the digital output of a digital FM tuner, compact disc player, laserdisc player, or digital audio recorder.

Connect the digital output of your digital source component to the RCA input of the DAP using a high quality 75Ω cable such as Madrigal MDC-2.

7   EIAJ DIGITAL INPUT

This input accepts digital audio conforming to the EIAJ optical (sometimes called "Toslink") digital interface standard from the EIAJ digital output of a digital FM tuner, compact disc player, laserdisc player, or digital audio recorder.

Connect the digital output of your digital source component to the EIAJ input of the DAP using a high quality EIAJ optical cable.

8   ST DIGITAL INPUT

This input accepts digital audio conforming to the ST optical (sometimes called "AT&T"—ST is a trademark of AT&T and the correct designation for the interface) digital interface standard from the ST digital output of a digital FM tuner, compact disc player, laserdisc player, or digital audio recorder.

Connect the digital output of your digital source component to the ST input of the DAP using a high quality optical cable.

9   REMOTE IR

A ⅛" (3.5 mm) "mini" jack in the lower right corner of the rear panel provides direct access to the infrared control circuitry of the DAP. This **remote IR** input facilitates a wide range of installation options. If desired, the DAP may be placed inside a cabinet or outside the normal line-of-sight in the listening area, with the controlling IR signal being relayed to the DAP by any of a number of commercially-available IR repeaters.

The incoming signal for the remote IR input should conform to widely-accepted IR repeater standards: that is, the signal present should be between 3-12 volts DC at less than 100 mA current, with a positive tip polarity, as shown below:

IR input tip polarity

−   +

3-12 volts @ less
than 100 mA
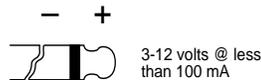
Your Proceed dealer can help you take advantage of these design features to maximize your system's versatility. *(Note that the DAP is not supplied with an infrared remote control. Instead, it can teach a learning remote such as those provided with Proceed preamplifiers the needed commands, reducing the overpopulation of remote controls on your coffee table by one. See "Remote Control of the DAP" for more information.)*

10   AC MAINS FUSE AND AC POWER RECEPTACLE

An **ac mains fuse** is provided which disconnects the DAP from the wall outlet's AC power under fault conditions. If this fuse should "blow" for any reason, replace it only with the same value fuse (0.5A/250V slo-blo 5x20mm). If it blows a second time, please contact your Proceed dealer for service.

Caution!

Replacing the ac mains fuse with a anything other than the recommended value fuse will places the DAP at substantial risk of damage!

Plug the supplied three-prong power cord into the **ac power input** receptacle provided before plugging the power cord into the wall. If a longer AC power cord is required for your application, be sure to use a three-conductor power cord which conforms to IEC standards.

Caution!

The Proceed DAP has been safety-tested and is designed for operation with a three-conductor power cord. Do not defeat the "third pin" or earth ground of the AC power cord.

Using the DAP

Input Selection

The DAP has five digital inputs. Using the **up/down buttons**, you may scroll through the five inputs in either direction. The number of the selected input will be shown in the center of the **main display**, while the sampling frequency the DAP has locked onto is displayed on the right side. (If no digital audio signal is available, the sampling frequency portion of the display will show two hyphens ("--") to indicate the lack of DAS.) The digital data from the selected input is also automatically made available to whatever device is connected to the DAP's **digital output**.

Volume Control

The DAP may be placed in its variable output mode of operation by pressing the **mode button**, at which time the sampling frequency display within the main display will be replaced by a relative volume scale which runs from 0-99. Through most of the useful range of this scale, the increments are slightly more than ½ dB per step, providing excellent volume resolution.

Many audiophiles assume that having fewer components in the signal path automatically and always means better sound quality: simpler is better. While there is some merit to this concept, it is often taken too far. Specifically, volume control is best done in the analog domain, in a high quality active preamplifier. The reasons for this fact are fairly straightforward.

- "Digital" volume controls (volume control performed in the digital domain)—even extremely good ones such as the implementation in the DAP—reduce volume by scaling down the numbers which represent the music. In this process, some low level information is inevitably lost. While this loss can be partially mitigated by techniques such as those in the DAP, it is impossible to completely avoid some loss of musical information if any significant volume reduction is performed in the digital domain.
- Volume controls performed in the analog side of the circuit that are passive in nature (so-called "passive preamps") vary the effective output impedance of the processor by inserting an additional, variable resistance between the processor and the power amplifier. This variable output impedance makes these systems unduly cable sensitive and often changes the sound of the system as a function of the volume setting. This inconsistency can hardly be considered high performance.
- By contrast, a high quality active preamplifier serves as a buffer between all sources and the power amplifier and provides consistently high performance at all volume levels and with all sources.

For the reasons outlined above, it is recommended that the variable output mode of the DAP be used as a "stopgap" measure rather than as the primary mode of operation. If your preamplifier fails, or if you are still saving up for a high quality preamplifier, the DAP's variable output level circuitry will provide performance which is unsurpassed among digital volume controls. For the finest musical performance (particularly reproduction of low-level information such as hall ambience, etc.), use a high quality preamplifier such as the Proceed PRE or PAV, and leave the output of the DAP at maximum.

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Remote Control of the DAP

The DAP includes both an infrared receiver and an infrared transmitter. With this capability, it can "teach" a learning remote control such as those provided with Proceed preamplifiers any commands that might be needed for remote operation. These include input selection, volume control, mode, polarity, etc.

Specifically, the DAP can send all of the necessary IR commands from its **main display** window, enabling you to teach a learning remote any or all of its pre-programmed commands, as well as some optional special commands that are available to solve specific installation-related problems.

The DAP has two special modes of operation into which is may be placed in order to facilitate the "teaching" of remote control commands to a learning re-mote control. The first allows you to easily teach the commands for which there are corresponding front panel buttons. The second allows you to teach "special" commands to the remote control for which there are no correspond-ing front panel buttons.

Teaching DAP Front Panel Commands

1 PRESS AND HOLD THE MODE BUTTON UNTIL "L 00" APPEARS IN THE DISPLAY
A momentary press of the **mode** button will, of course, simply toggle the DAP's up/down buttons between input selection and volume control modes. When you "camp on" the **mode** button instead, the DAP will wait for a few seconds to make sure that your press-and-hold action is quite deliberate, and then enter a teaching mode which allows you to program a learning remote control with infrared (IR) commands. The DAP's **main display** will show the letter "L" (for "Learn") and a two-digit number when in this mode.

The DAP will display a "L 00" code when it has entered its teaching mode and is ready to help the remote control learn the commands that correspond to the DAP's front panel buttons. If no further buttons are pressed within approximately ten seconds, the DAP will "time out" and return to normal operation.

2 PRESS ANY FRONT PANEL BUTTON TO CAUSE THE DAP TO SEND THE CORRESPONDING IR COMMAND
Line up the IR window of your remote control with the left side of the **main display** of the DAP, at a distance of approximately 6"-12". Select the to-be-learned button on the remote, then press the corresponding button on the DAP to fire the appropriate IR code. *(Tip: most learning remotes need to be held fairly still while they learn new IR commands; movement can garble the received IR.)*

Notice that the **mute** LED changes its status (either on or off) briefly after you press a button. This LED change indicates that the DAP is transmitting the command which corresponds to the button you just pushed. You may repeat this process until all commands have been learned by your remote control. The **up** and **down** buttons cause a longer stream of IR codes to be sent to your learning remote to enable it to "learn" the press-and-hold function one would use when making large changes in volume.

(If you are uncertain as to how to prepare your remote control for learning new commands, refer to the instructions provided with the remote control.)

3   REPEAT THE PROCESS OF "TEACHING" NEW COMMANDS TO THE VARIOUS BUTTONS ON YOUR REMOTE CONTROL UNTIL ALL FRONT PANEL COMMANDS HAVE BEEN LEARNED BY YOUR REMOTE
If you take longer than approximately ten seconds between front panel button pushes, the DAP will time out and return to normal operation. If this occurs, return to step #1 in this section.

4   WHEN FINISHED, EXIT THE PROGRAMMING MODE BY ALLOWING THE DAP TO "TIME OUT," OR PRESS AND HOLD THE MODE BUTTON
The DAP will "time out" and return to normal operation after approximately ten seconds of inactivity on your part. Alternatively, you may press and hold the mode button to return to normal operation if you wish to hurry it along.

You may wish to continue on to the next section to teach a remote control the DAP's special commands, in which case you should go directly to the next section. At some point, however, you should test all your newly "learned" commands to ensure that they were "learned" correctly.

Teaching Other DAP Commands

As mentioned above, the DAP has the capability to teach learning remote controls special commands for which there are no front-panel counterparts. These include commands that provide direct access to the various inputs by number, and **display on/off** modes.

In addition, there are several "hard assignment" commands available in the DAP which will place it into a certain mode of operation regardless of its current state. For example, a hard assignment command to enter **standby** will *leave* the DAP in **standby** if already there, or *switch* it to **standby** if it is currently operating. This type of hard assignment command is especially helpful when you do not necessarily know the current status of the DAP, as might be the case in a multi-room home entertainment system (for example).

1   PRESS AND HOLD THE MODE BUTTON UNTIL "L 00" APPEARS IN THE DISPLAY

A momentary press of the **mode** button will, of course, simply toggle the DAP's up/down buttons between input selection and volume control modes. When you "camp on" the **mode** button instead, the DAP will wait for a few seconds to make sure that your press-and-hold action is quite deliberate, and then enter a teaching mode which allows you to program a learning remote control with infrared (IR) commands. The DAP's **main display** will show the letter "L" (for "Learn") and a two-digit number when in this mode.

The DAP will display a "L 00" code when it has entered its teaching mode and is ready to help the remote control learn the commands that correspond to the DAP's front panel buttons. If no further buttons are pressed within approximately ten seconds, the DAP will "time out" and return to normal operation.

2   PRESS AND HOLD THE MUTE BUTTON UNTIL "L 01" APPEARS IN THE DISPLAY

By holding this button for several seconds, you are instructing the DAP to give you access to programming options *beyond* those represented by the front panel buttons.

The following table lists the special commands that are available for the DAP. In the second column are the programming "codes" used in the **main display** to represent those special commands.

special commands table

hard assignment for **operate**	L 01
hard assignment for **standby**	L 02
display off	L 03
display on	L 04
volume mode	L 05
input select mode	L 06
−10 step in volume control	L 07
+10 step in volume control	L 08
toggle display on/off	L 09
select input 1	L 10
select input 2	L 11
select input 3	L 12
select input 4	L 13
select input 5	L 14

3   USE THE UP/DOWN BUTTONS TO SELECT THE CODE THAT CORRESPONDS TO THE SPECIAL FUNCTION YOU WOULD LIKE TO TEACH YOUR REMOTE CONTROL

Pressing the **"up"** button will increase the program code number by one; **"down"** will decrease the program code number by one. Select the desired code number from the list above.

4   MOMENTARILY PRESS THE MODE BUTTON TO TRANSMIT THAT CODE
Line up the IR window of your remote control with the left side of the
main display of the DAP, at a distance of approximately 6"-12". Select the
to-be-learned button on the remote, then fire the selected code from the
DAP by pressing **mode**.

Notice that the **mute LED** lights up briefly after you press **mode**. This LED
indicates that the DAP is transmitting the command which corresponds
to the code you have selected. You may repeat the process of selecting
special commands (using **the up/down buttons**) and then transmitting
them (pressing **mode**) until all desired commands have been learned by
your remote control.

(If you are uncertain as to how to prepare your remote control for learn-
ing new commands, refer to the instructions provided with the remote
control.)

**5   REPEAT THE PROCESS OF "TEACHING" NEW COMMANDS TO THE
VARIOUS BUTTONS ON THE DAP REMOTE CONTROL UNTIL ALL DE-
SIRED COMMANDS HAVE BEEN LEARNED BY THE REMOTE CONTROL.**
If you take longer than approximately ten seconds between button
pushes, the DAP will time out and return to normal operation. If this oc-
curs, return to step #1 in this section.

**6   WHEN FINISHED, RETURN TO NORMAL OPERATION BY ALLOWING
THE DAP TO "TIME OUT"**
The DAP will "time-out" and return to normal operation after approxi-
mately ten seconds.

Care & Maintenance

To remove dust from the cabinet of the DAP, use a feather duster. To remove dirt and fingerprints, we recommend isopropyl alcohol and a soft cloth. Moisten the cloth with the alcohol *first* and then lightly clean the surface of the DAP.

Caution!

At no time should liquid cleaners be applied directly to the DAP, as direct application of liquids may result in damage to electronic components within the unit.

U.S. and Canadian Warranty

90-Day Limited Warranty

This Proceed® product is warranted to be free from defects in material and workmanship under normal use for a period of ninety (90) days from the date of purchase. *To extend the warranty of this Proceed product*, return the warranty registration card along with a copy of the original receipt of purchase to Madrigal Audio Laboratories, Inc., P. O. Box 781, Middletown, CT 06457.

Five Year Extended Warranty

The *extended warranty* for this Proceed product is *five (5) years* from the date of purchase. During the warranty period, any Proceed component exhibiting defects in materials and/or workmanship will be repaired or replaced, at our option, without charge for either parts or labor, at our factory. The warranty will not apply to any Proceed component that has been misused, abused or altered.

Any Proceed component not performing satisfactorily may be returned to the factory for evaluation. Return authorization must first be obtained by either calling or writing the factory prior to shipping the component. The factory will pay for return shipping charges only in the event that the component is found to be defective as above mentioned. There are other stipulations that may apply to shipping charges.

There is no other express warranty on this component. Neither this warranty nor any other warranty, express or implied, including any implied warranties of merchantability or fitness, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and other states do not allow the exclusion or limitation of incidental or consequential damages, so that the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. **This warranty is applicable in the United States and Canada only.** Outside of the U.S. and Canada, please contact your local, authorized Proceed distributor for warranty and service information.

Obtaining Service

We take great pride in our dealers. Experience, dedication, and integrity make these professionals ideally suited to assist with our customers' service needs.

If your Proceed component must be serviced, please contact your dealer. Your dealer will then decide whether the problem can be remedied locally, or whether to contact Madrigal for further service information or parts, or to obtain a Return Authorization. The Madrigal Technical Services Department works closely with your dealer to solve your service needs expediently.

Important!

> ***Return authorization <u>must</u> be obtained from Madrigal's Technical Services Department BEFORE a unit is shipped for service.***

It is extremely important that information about a problem be explicit and complete. A specific, comprehensive description of the problem helps your dealer and the Madrigal Technical Services Department locate and repair the difficulty as quickly as possible.

A copy of the original bill of sale will serve to verify warranty status. Please include it with the unit when it is brought in for warranty service.

Warning!

> ***All returned units must be properly packaged (preferably in their original packing material), and the proper return authorization numbers must be marked on the outer carton for identification. If the packaging to protect the unit is, in our opinion or that of our dealer, inadequate to protect the unit, we reserve the right to repackage it for return shipment at the owner's expense. Neither Madrigal nor your dealer can be responsible for shipping damage due to improper (that is, non-original) packaging.***

Your dealer can order a new set of shipping materials for you if you need to ship your component and no longer have the original materials. There will be a charge for this service. We *strongly* recommend saving all packing materials in case you need to ship your unit some day.

Specifications

The correlation between published specifications and performance is unreliable. A list of numbers reveals virtually nothing. All technical measurements must be subject to qualitative as well as quantitative interpretation.

Measurements of the DAP yield excellent results by any standards. However, only those specifications that apply to its actual operation are included here.

- **Frequency response**: 10 Hz – 20 kHz, +0dB, –0.2dB
- **Total harmonic distortion**: 0.005% @ 1 kHz, A-weighted
- **Maximum output**: 2 V rms (0 dB output)
- **Dynamic range**: 98 dB (or better)
- **Signal to noise ratio (balanced outputs)**: 105 dB (ref: 0 dB output)
- **Channel separation:** better than 110 dB
- **Analog filter**: Bessel-tuned, linear phase to 40 kHz
- **Low-level linearity**: deviation unmeasurable to below -70 dB
  approximately +1.7 dB below -90 dB
  (undithered, referenced to 0 dB @ 1 kHz)
- **Volume range**: -116 dB to 0 dB
- **Volume resolution**: 0.55 dB steps above 43 in display,
  gradually increasing step size at lower levels
- **Digital inputs**: 1 each AES/EBU, BNC, RCA, EIAJ, ST
- **Digital input impedance**: 110Ω (AES/EBU electrical)
  75Ω (S/PDIF electrical)
- **Digital outputs**: 1 RCA (S/PDIF)
- **Digital output impedance**: 75Ω (S/PDIF electrical)
- **Audio outputs**: 1 set balanced stereo outputs
  1 set single-ended stereo outputs
- **Other input**: 1 ⅛" mini-jack for external IR repeater
- **Power consumption**: less than 40 W
- **Mains voltage**: determined by the needs of country for which
  the unit was manufactured; cannot be reset by dealer or user
- **Output impedance**: less than 20Ω
- **Overall dimensions**: See "Dimensions"
- **Shipping weight**: 25 lbs. (12.4 kg)

For more information, see your Proceed dealer, or contact:

> **Madrigal Audio Laboratories, Inc.**
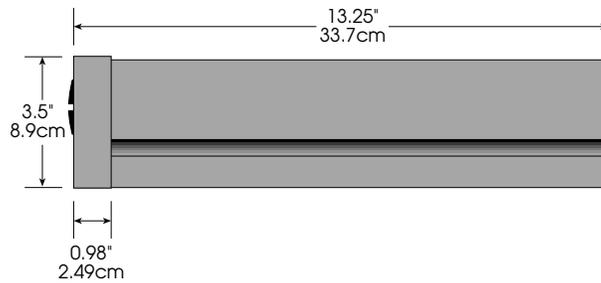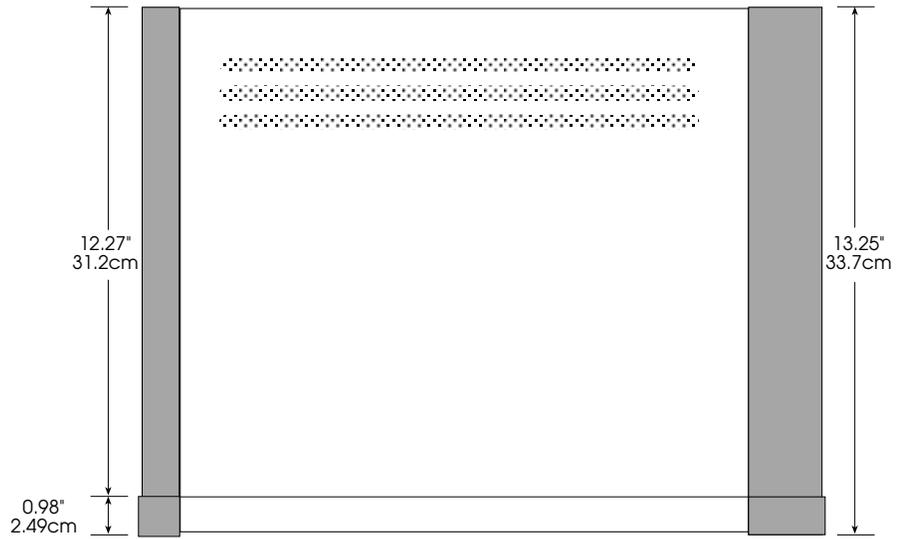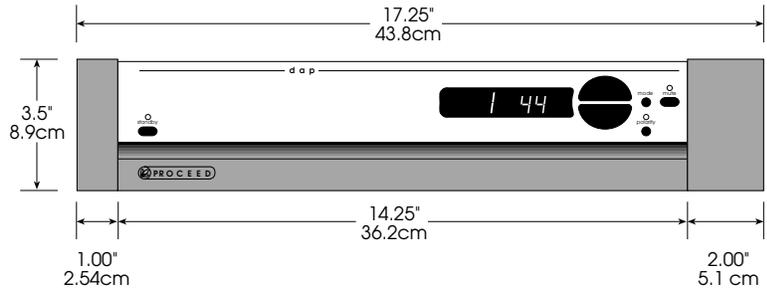> *P.O. Box 781, 2081 South Main Street*
> *Middletown, Connecticut 06457 USA*
> *Telephone (860) 346-0896   FAX (860) 346-1540*

Dimensions

17.25"
43.8cm

3.5"
8.9cm

14.25"
36.2cm

1.00"
2.54cm

2.00"
5.1 cm

12.27"
31.2cm

13.25"
33.7cm

0.98"
2.49cm

13.25"
33.7cm

3.5"
8.9cm

0.98"
2.49cm

MADRIGAL

PROCEED®