

Definitive Technology[®]
The Leader in High-Performance Loudspeakers[®]

ProSub 800/1000

PowerField[®] Subwoofer with
Active Crossover & Power Amplifier

Owner's Manual

Congratulations

Congratulations on your purchase of a Definitive Technology ProSub Subwoofer. This revolutionary subwoofer utilizes state-of-the-art components, a non-resonant monocoque cabinet and low diffraction construction in order to achieve the most lifelike sound possible in your listening room for many years to come. The ProSub is a compact, high quality powered speaker system intended primarily for use as a subwoofer in superior quality music or home theater systems.

This ProSub powered subwoofer incorporates a high current power amplifier, electronic crossover and precise equalization in order to achieve the highest possible level of low frequency performance. The amplifier and electronic crossover are completely self-contained modules which are housed in the subwoofer. The ProSubs incorporate Definitive's proprietary PowerField[®] technology, by which the amplifier is specifically engineered in conjunction with the driver for optimum load matching and power transfer characteristics. The integrated electronic crossover incorporates high level inputs and outputs as well as a low level input, precise equalization, continuously variable low pass filter (between 40 and 150 Hz), fixed speaker level high pass filter (to match the ProMonitors) and a precision volume control. The tremendous built-in flexibility allows easy, seamless integration with all main speaker systems and optimum performance in any room. The crossover incorporates circuitry which allows for exceptional performance as either a single subwoofer or when two subwoofers are used.

Our engineers have spent many years in developing this product. To ensure that you only experience the finest performance possible from your subwoofer, we encourage you to take a moment with this owner's manual and familiarize yourself with the proper installation and setup procedures for your subwoofer.

Safety Precautions



CAUTION! To reduce the risk of electric shock and fire, do not remove the cover or back plate of this device. There are no user serviceable parts inside. Please refer all servicing to licensed service technicians. Avis: Risque de choc électrique, ne pas ouvrir.

CAUTION! The international symbol of a lightning bolt inside a triangle is intended to alert the user to uninsulated “dangerous voltage” within the device’s enclosure. The international symbol of an exclamation point inside a triangle is intended to alert the user to the presence of important operating, maintenance and servicing information in the manual accompanying the device.

CAUTION! To prevent electrical shock, match wide blade of plug to wide slot, fully insert. Attention: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu’au fond.

CAUTION! To reduce the risk of electrical shock, do not expose this equipment to rain or moisture.

1. Read Instructions—All safety and operating instructions should be read before operating the device.
2. Retain Instructions—The safety and operating instructions should be retained for future reference.
3. Heed Warnings—All warnings on the device and in the operating instructions should be adhered to.
4. Follow Instructions—All operating and safety instructions should be followed.
5. Water & Moisture—The device should never be used in, on or near water for risk of fatal shock.
6. Carts & Stands—The device should only be used on carts or stands recommended by the manufacturer.
7. Wall & Ceiling Mounting—The device should be mounted on a wall or ceiling only as recommended by the manufacturer.
8. Ventilation—The device should always be located in such a way that it maintains proper ventilation. It should never be placed in a built-in installation or anywhere that may impede the flow of air through its heat sink.
9. Heat—Never locate the device near heat sources such as radiators, floor registers, stoves or other heat-generating devices.
10. Power Supply—The device should only be connected to a power supply of the type described in the operating instructions or as marked on the device.
11. Power Cord Protection—Power cables should be routed so they are not likely to be stepped on or crushed by items placed on them or against them. Special attention should be paid to areas where the plug enters a socket or fused strip and where the cord exits the device.
12. Cleaning—The device should be cleaned in accordance with manufacturer’s instructions.
13. Periods Of Non-Use—The device should be unplugged when not being used for extended periods.
14. Dangerous Entry—Care should be taken that no foreign objects or liquids fall or are spilled inside the device.
15. Damage Requiring Service—The device should be serviced by licensed technicians when:
 - The plug or power supply cord has been damaged.
 - Objects have fallen or liquid has spilled inside the device.
 - The device has been exposed to moisture.
 - The device does not appear to be operating properly or exhibits a marked change in performance.
 - The device has been dropped or the cabinet becomes damaged.
16. Service—The device should always be serviced by licensed technicians. Only replacement parts specified by the manufacturer should be used. The use of unauthorized substitutions may result in fire, shock, or other hazards.

Subwoofer Installation

Your new ProSub Subwoofer contains a built-in amplifier and sophisticated electronic crossover. There are several ways to install your subwoofer. One setup is not considered “better” than another; rather, each is a function of what type of entertainment system you own and how you plan to integrate your components. Read the installation suggestions below to determine which options best suit your needs. Please take care to perform all wiring procedures with your system completely powered down.

Unpacking

Each loudspeaker leaves our plant in perfect condition. Any visible or concealed damage most likely occurred in handling after it left our plant, and should be reported at once to your Definitive dealer or the delivery company that delivered your loudspeaker. Please unpack your system carefully. Save all cartons and packing material in case you move or need to ship your system. Record the serial number found on the back of the subwoofer in the appropriate place on your warranty card.

Inputs/Outputs

Your Definitive Technology ProSub subwoofer operates from either high level (speaker-type) or low level (RCA-type) outputs on your electronics. Use the low level jack when connecting the subwoofer to the LFE output jacks of a receiver, a preamp or a signal processor. Use the high level speaker terminal inputs to connect the subwoofer to the amplifier output (speaker) jacks of your receiver or amplifier. Use the high level output jacks to connect the subwoofer to a pair of left and right main speakers. (See wiring diagrams.)

When connecting the subwoofer to your system, it is recommended that you use high quality speaker cable and try to maintain cable runs of the same length for the left and right channels. Should you perchance experience any level of ground hum or noise, try plugging the subwoofer into the same circuit as your amplifier. Also, consult the “Troubleshooting” section of this manual. To prevent accidental damage to your subwoofer from overdriving the system, the subwoofer features an internal overload protection circuit.

Subwoofer Placement

Your Definitive Technology subwoofer has been designed to operate at frequencies generally below 150 Hz. Because low-frequency information in this range essentially is non-directional, your subwoofer can be located anywhere in your listening room that is most convenient. Also, the continuously variable low pass filter operates at a very fast roll-off, ensuring great performance wherever you place your subwoofer. There are, however, some general rules that you should bear in mind when locating your subwoofer:

1. For maximum output the subwoofer should be placed in a corner or against the wall.
2. Corner placement will increase the subwoofer's efficiency, which in turn will increase your system's maximum output and improve the dynamic capability of the subwoofer.
3. While one Definitive Technology subwoofer will always sound great, the use of two subwoofers will definitely enhance your system's performance by providing a smoother and more consistent response pattern. Here, it is recommended that you locate the subwoofers on the same side of the room as the main speaker of the same channel (if you are feeding them discrete left and right channel signals).
4. **When using the ProSub with Definitive ProMonitors, consult the ProMonitor instruction manual for other placement tips.**

Wiring Diagrams

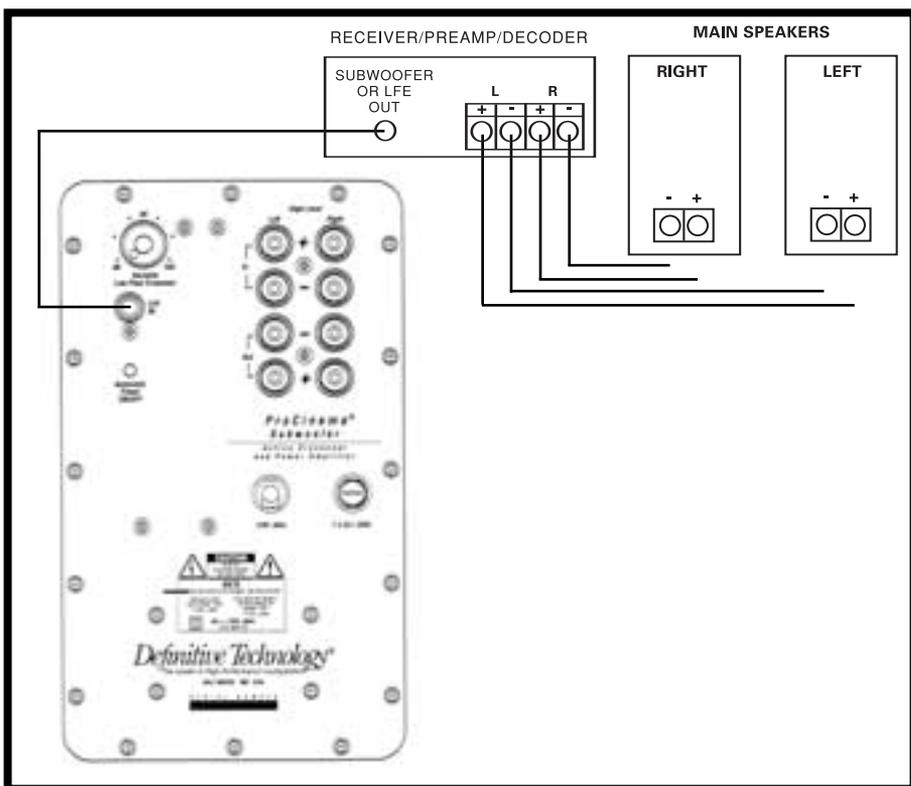
Low Level LFE Connections

Most new model receivers, preamps and decoders feature a mono (line level) output intended to be used with subwoofers. This is the simplest connection method to use. You can feed the mono or LFE subwoofer output of your receiver or decoder to the LFE low level input on the subwoofer and achieve full performance. Usually, if your receiver or decoder already has a built-in low pass crossover, you should turn the low pass control on your ProSub to 150. Also, these subwoofer outputs tend to have less gain than main line level outputs, thus the gain control on your subwoofer may need to be adjusted accordingly for proper balance. Use the LFE input on the subwoofer to hook the subwoofer up to the LFE (low frequency effects) output on Dolby Digital AC-3[®] decoders, receivers, etc.

High Level Speaker Wire Connections

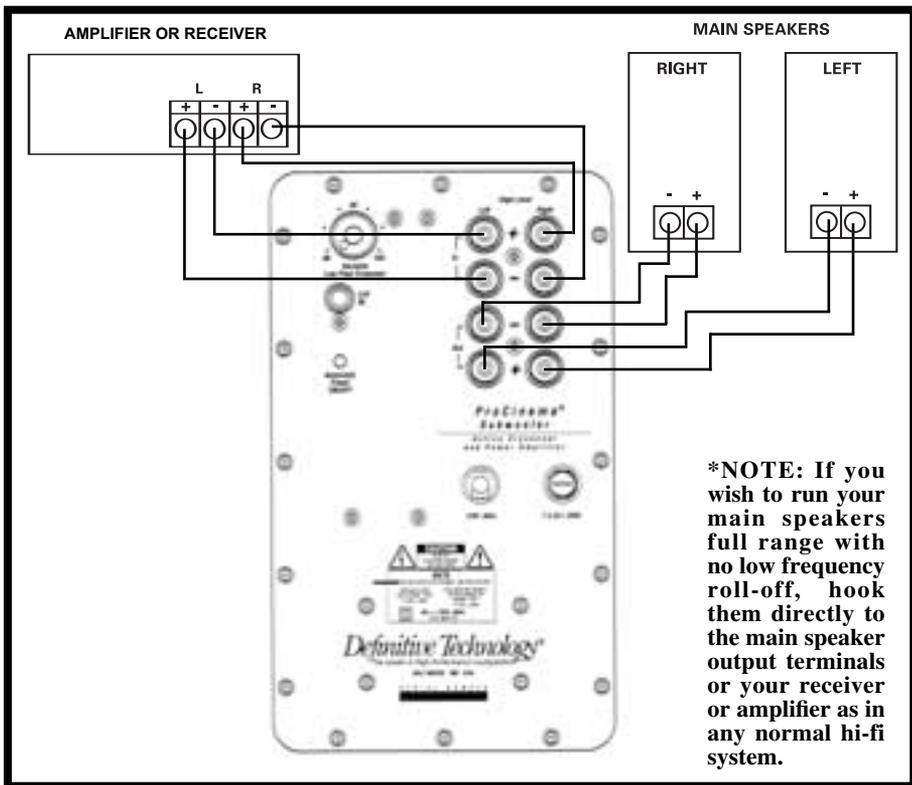
Your Definitive Technology ProSub subwoofer can also be hooked up via high level connections. In this situation, you have the option of running your main speakers “full range” or rolling off the low end by using the high pass filter built into the subwoofer. For high level wiring, your interconnects are simply equal distance lengths of high quality speaker cable.

To hook up your ProSub subwoofer via the high level connections, simply run speaker cable from the right channel high level connector on the subwoofer to the right channel speaker connector of your receiver or amplifier. Repeat this process for the left channel. Please take care that the red (“+”) terminal on the subwoofer is connected to the red (“+”) terminal on your receiver or amplifier, and that the black (“-”) terminal on your receiver or amplifier is connected to the black (“-”) terminal on the subwoofer. This will ensure absolute phase throughout your system.



Your main speakers can now be connected in one of two ways. If you wish to utilize the high pass filter built into your subwoofer, simply connect your main speakers to the high level out terminals on the subwoofer. Again, take care to make red to red (“+”) and black to black (“-”) terminal connections. This connection will provide a smoothly contoured roll-off of the low frequencies going to your main speakers. We recommend this hook-up (wiring the main speakers through the crossover in the subwoofer) when using ProMonitors. For more overall

bass output when using full range main speakers, run the main speakers full range by hooking them up directly to the amp. In many systems, if your speakers are true full range systems, you may find that you get a more satisfying sound by running the speakers full-range and crossing your subwoofer in fairly low (40-70 Hz). On the other hand, if you find that you are overdriving your main speakers, you will clearly be able to play your system louder by using the built-in high pass crossover for your main speakers.



The Advantages of Multiple Subwoofers

Definitive's ProSub subwoofers are engineered to be used singly or in pairs. With a single subwoofer, both left and right signals are sent to the subwoofer wherein they are combined via the electronic crossover into one composite signal. With two subwoofers, the left and right low frequency signals can be reproduced by their own individual subwoofers or two subwoofers can be just doubled up on the LFE channel with a Y connector. The use of one subwoofer achieves outstanding performance; however, the addition of a second subwoofer clearly offers the highest level of performance achievable for both movies and music. The use of stereo subwoofers smoothes out the peaks and dips which result from the eigenmodes in your room. Two subwoofers couple much better to the air

in your room (four times better) and of course offer double the power. **In addition, some state-of-the-art home theater installations have begun to use a separate subwoofer hooked up to the rear (surround) channels and we recommend this for the absolute ultimate in performance.**

Dual Subwoofer Connections

When hooking up a stereo pair of subwoofers, wiring is quite similar to traditional high level connections. Here, instead of running both speaker cables from your receiver or amplifier to the left and right high level terminals on the subwoofer, you will run the left channel to the left channel subwoofer and the right channel to the right channel subwoofer. Again, take care to make red to red (“+”) and black to black (“-”) terminal connections.

Don’t worry that on your left subwoofer the right channel terminals will be empty and that on the right channel subwoofer the left channel terminals will be empty—both channels are combined at the subwoofer’s input stage. There is a possibility that with this type of wiring you may need to increase your gain a little bit for proper balance.

A dual subwoofer system using low level connections is equally simple, just put a Y connector on your LFE output and run one cable to each subwoofer.

Critical Bass Management Settings

Your receiver or decoder has a bass management system which ABSOLUTELY must be set for you to get proper performance from your system. This is not something that is subtle in its importance. It is absolutely critical. In general if you are setting up a ProCinema System using our ProSubs, ProMonitors and ProCenters, follow these simple instructions:

- **If you are hooking up the sub with the low level LFE connection, set your receiver/decoder bass management to “Sub – Yes” and set left main, right main, center, left rear and right rear to “Small.”**
- **If you have a choice of crossover frequency, choose the highest one available.**
- **If you use a speaker level connection where you run the speaker wire from the receiver to the sub and then from the sub to the left and right mains, set “Sub – No,” left main and right main to “Large,” and center, left and right rear to “Small.”**
- **Also make sure you properly set the channel balance as outlined in your receiver/decoder manual. There is also more detailed information in your ProMonitor manual.**

Operating Controls

Your Definitive Technology ProSub subwoofer is equipped with a full complement of operating controls to ensure complete flexibility and maximum performance in any installation. Most of them basically are the “set and forget” type, although occasionally certain controls will require minor adjustments.

Gain Control

On the back panel of your subwoofer is a gain (volume) control. This control is used to raise or lower the output level of your subwoofer in relation to the other speakers in your system.

Low Pass Filter

Your subwoofer’s back panel features a continuously variable low pass filter. This filter is continuously variable between 40 and 150 Hz. This low pass filter control is used to obtain the optimum transition between the subwoofer and your main speakers. This control should be set by ear for best performance in your room. Set it to where it sounds best to you. If you are running your main speakers full range, we would generally recommend setting the low pass filter fairly low (40-70 Hz). If you are connecting your ProSub using the the LFE in, turn the low pass filter all the way up in order to get optimal impedance matching. **When using the ProSub with Definitive ProMonitors, please consult the instruction manual section “Using the ProSub with Definitive ProMonitors.”**

Powering Up Your Subwoofer

Your subwoofer contains a built-in, active powered subwoofer section as well as an electronic crossover and so each subwoofer must be plugged into an electrical socket of the appropriate voltage (as indicated on the back of your unit) using the plug on the end of the black cord attached to the electronics module on the back of the loudspeaker. The subwoofer has a special circuit which automatically turns the powered subwoofer section on when a signal is fed to the loudspeaker and does not require an on-off switch. The red LED on the back panel will light up when a signal is sensed and the amplifier turns on. It will automatically turn off a little while after the signal is discontinued.

The ProSub has a special circuit which automatically turns the powered subwoofer section on when a signal is fed to the loudspeaker and does not require an on/off switch. We suggest plugging the ProSub into a circuit which is on all the time and not into a switched outlet. When the ProSub is plugged into a circuit and receives AC current, initially you will hear a relatively loud pop which is completely normal as the system first activates itself to stand-by mode. Then, when a program signal is fed to the speaker it will fully activate itself with a lower level pop which is normal. If you unplug the speaker or turn off the AC current going to it,

current going to it will reactivate itself with a pop when AC current is restored, which is normal.

Please note that after the cessation of a signal, it may take up to an hour for the amplifier to actually turn off from active to standby mode. In some instances, because of RF presence in your area, the red LEDs may not turn off. However, this is nothing to be concerned about as the amplifiers draw almost no power when they are idling.

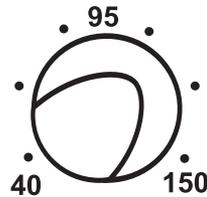
Using the ProSub with Definitive ProMonitors

When using the ProSub with Definitive ProMonitors, please consult your ProMonitor instruction manual for specific information regarding hookup, wiring and placement.

Setting the Level and Crossover Frequency When Using the ProSub with ProMonitors

When you have the ProMonitors wired to the speaker level outputs on your ProSub, the following are our suggestions for starting settings on your controls. Remember, these are just approximate settings and we suggest experimenting to determine the best-sounding settings for your particular set-up.

1. Set the variable low pass crossover control on the back of the ProSub to approximately 2 o'clock. Please note that the exact frequency will depend on many factors including specific positions of the speakers in the room, so you might experiment with a slightly higher or lower setting to achieve ideal blending between the sub and the satellites for your particular set-up. Listen to a wide variety of music to determine the correct setting for this in your system.



2. Set the subwoofer level control to 12 o'clock. Please note that the exact level depends on many factors including your room size, position of the speakers, etc. as well as your personal listening taste, so you might experiment with the subwoofer level while listening to a wide variety of music until you achieve the ideal setting for your system.



Troubleshooting

If you experience any difficulties with your subwoofer, try the suggestions described below. If you are still having problems, please consult your Definitive Technology Authorized Dealer for assistance.

1. Make sure all your system interconnects and power cords are solidly in their place.
2. Should you experience any level of ground hum or noise, try plugging the subwoofer into the same circuit as your amplifier. Please note that some cable TV hookups induce hum into the whole system and require a special isolation device. Please consult your dealer.
3. The system is provided with sophisticated internal protection circuitry. If for some reason the protection circuitry is tripped, please turn down your system's volume and wait five minutes before trying the system again. If the amplifier should overheat, the system will turn itself off until the amplifier cools and resets.
4. Check to be sure that your power cord has not been damaged.
5. Check that no foreign objects or liquid has entered the cabinet.
6. If you cannot get your subwoofer to turn on or if no sound comes out and you're sure the system is set up properly, please bring the subwoofer to your Definitive Technology Authorized Dealer for assistance.

Technical Assistance

It is our pleasure to offer assistance if you have any questions regarding your ProSub or its set-up. Please contact your nearest Definitive Technology dealer or contact us directly at 410-363-7148.

Visit us at www.definitivetech.com

* Dolby Pro-Logic, AC-3 and Dolby Digital are Registered Trademarks of Dolby Laboratories Licensing Corporation.

Service

Service and warranty work on your Definitive loudspeakers will normally be performed by your local Definitive Technology dealer. If, however, you wish to return the speaker to us, please contact us first, describing the problem and requesting authorization as well as the location of the nearest factory service center. **Please note that the address given in this booklet is the address of our offices only. Under no circumstances should loudspeakers be shipped to our offices or returned without contacting us first and obtaining return authorization.**

Definitive Technology Offices
11433 Cronridge Drive, Suite K
Owings Mills, Maryland 21117
Phone: 410-363-7148

ProSub Specifications

ProSub 1000

Outer Dimensions: 12" W x 17.9" W x 14.4" H
Frequency Response: 18 Hz – 150 kHz
Driver Complement: One 10" woofer with polymer cone coupled to one 10" infrasonic radiator
Amplifier: 300-Watts RMS
Speaker Level High-Pass Filter: 6 db/octave (80 Hz)
Low-Level Low-Pass Filter: 24 db/octave continuously variable (40 Hz – 150 Hz) plus unfiltered LFE direct-coupled input
Fuse Size: 3.2 amp 250 volt slow-blow Littlefuse 313 type for the 110 volt version, and 2 amp 250 volt slow-blow BEL 5ET type for the 240 volt version.

ProSub 800

Outer Dimensions: 10.3" W x 15.8" W x 12.9" H
Frequency Response: 20 Hz – 150 kHz
Driver Complement: One 8" woofer with polymer cone coupled to one 8" infrasonic radiator
Amplifier: 300-Watts RMS
Speaker Level High-Pass Filter: 6 db/octave (80 Hz)
Low-Level Low-Pass Filter: 24 db/octave continuously variable (40 Hz – 150 Hz) plus unfiltered LFE direct-coupled input
Fuse Size: 3.2 amp 250 volt slow-blow Littlefuse 313 type for the 110 volt version, and 2 amp 250 volt slow-blow BEL 5ET type for the 240 volt version.

Specifications subject to change

LIMITED USA WARRANTY

5-YEARS FOR DRIVERS AND CABINETS, 3-YEARS FOR ELECTRONIC COMPONENTS

DEI Sales Co., dba Definitive Technology (herein "Definitive") warrants to the original retail purchaser only that this Definitive loudspeaker product (the "Product") will be free from defects in material and workmanship for a period of five (5) years covering the drivers and cabinets, and three (3) years for the electronic components from the date of the original purchase from a Definitive Authorized Dealer. If the Product is defective in material or workmanship, Definitive or its Authorized Dealer will, at its option, repair or replace the warranted product at no additional charge, except as set forth below. All replaced parts and Product(s) become the property of Definitive. Product that is repaired or replaced under this warranty will be returned to you, within a reasonable time, freight collect. This warranty is non-transferrable and is automatically void if the original purchaser sells or otherwise transfers the Product to any other party.

This Warranty does not include service or parts to repair damage caused by accident, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage in excess of the rated maximum of the unit, cosmetic appearance of cabinetry not directly attributable to defects in material or workmanship. This warranty does not cover the elimination of externally generated static or noise, or the correction of antenna problems or weak reception. This warranty does not cover labor costs or damage to the Product caused by installation or removal of the Product. Definitive Technology makes no warranty with respect to its products purchased from dealers or outlets other than Definitive Technology Authorized Dealer.

THE WARRANTY IS AUTOMATICALLY VOID IF:

- 1) The product has been damaged, altered in any way, mishandled during transportation, or tampered with.*
- 2) The product is damaged due to accident, fire, flood, unreasonable use, misuse, abuse, customer applied cleaners, failure to observe manufacturers warnings, neglect or related events.*
- 3) Repair or modification of the Product has not been made or authorized by Definitive Technology.*
- 4) The product has been improperly installed or used.*

Product must be returned (insured and prepaid), together with the original dated proof of purchase to the Authorized Dealer from whom the Product was purchased, or to the nearest Definitive factory service center. Product must be shipped in the original shipping container or its equivalent. Definitive is not responsible or liable for loss or damage to Product in transit.

THIS LIMITED WARRANTY IS THE ONLY EXPRESS WARRANTY THAT APPLIES TO YOUR PRODUCT. DEFINITIVE NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH YOUR PRODUCT OR THIS WARRANTY. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS, IMPLIED, WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY EXCLUDED AND DISCLAIMED TO THE MAXIMUM EXTENT ALLOWED BY LAW. ALL IMPLIED WARRANTIES ON PRODUCT ARE LIMITED TO THE DURATION OF THIS EXPRESSED WARRANTY. DEFINITIVE HAS NO LIABILITY FOR ACTS OF THIRD PARTIES. DEFINITIVE'S LIABILITY, WHETHER BASED ON CONTRACT, TORT, STRICT LIABILITY, OR ANY OTHER THEORY, SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT FOR WHICH A CLAIM HAS BEEN MADE. UNDER NO CIRCUMSTANCE WILL DEFINITIVE BEAR ANY LIABILITY FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. THE CONSUMER AGREES AND CONSENTS THAT ALL DISPUTES BETWEEN THE CONSUMER AND DEFINITIVE SHALL BE RESOLVED IN ACCORDANCE WITH CALIFORNIA LAWS IN SAN DIEGO COUNTY, CALIFORNIA. DEFINITIVE RESERVES THE RIGHT TO MODIFY THIS WARRANTY STATEMENT AT ANY TIME.

Some states do not allow the exclusion or limitation of consequential or incidental damages, or implied warranties, so the above limitations 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.

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This product complies with the essential requirements of
EMC directives 89/336/EEC and 73/23/EEC (inclusive of
93/68/EEC) and carries the CE mark accordingly.