



Omnisound[®] 3000 Pro

THERAPEUTIC ULTRASOUND SYSTEM

P R O D U C T S P E C I F I C A T I O N S

OMNISOUND[®] 3000 Pro Therapeutic Ultrasound System with Patented Delta T Temperature Dose Control

PRODUCT HIGHLIGHTS

With a range of unparalleled features, the Omnisound[®] 3000 Pro represents ACP's "next generation" ultrasound technology. Building on the clinical reputation of the well established Omnisound[®] line, the 3000 Pro now offers a protocol driven operational menu, integrated numbered treatment procedure process, and a treatment counter that tracks all treatments by protocol.

- Used extensively in university studies and is supported by numerous research articles
- Evidence-based technology and protocols
- Patented Delta T Temperature Dose Control technology provides reproducible dosage for treatment consistency and clinician efficiency
- Uniform beam with lowest BNR and PAMBNR in the industry for uniform heating and patient comfort
- Patented transducer workstation with 360° rotating head and pushbutton controls on the handle
- Treats targeted surface and deep tissue with 3 or 1 MHz options through the same head to address a broader range of conditions and therapy settings
- Pulsed and Continuous Modes in subthermal and thermal applications offer greater treatment flexibility
- High output power; 9W - 3MHz, 12W - 1MHz
- Easy-to-read screen provides a full library of assist functions for ease of operation and clinician training
- System supports combination therapy option with ACP's Omnistim[®] 500 electrical stimulation device



*Revolutionizing
Rehabilitation*

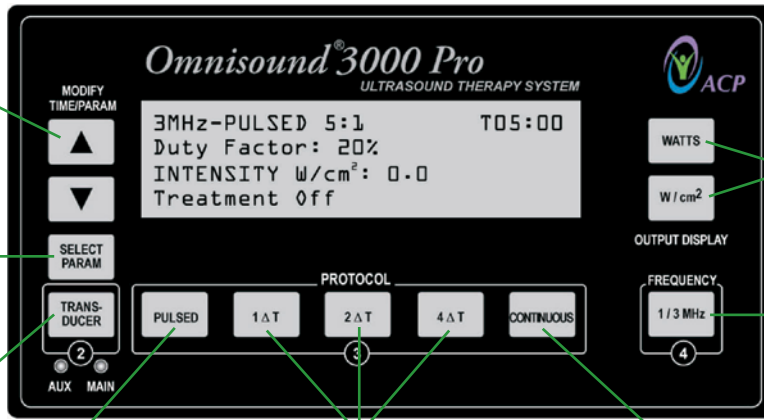
CONTROLS AND FUNCTIONS

MODIFY TIME/PARAMETER buttons are used to increase treatment time in 1 min intervals or decrease time in 30 sec intervals.

Timer may be adjusted during operation. The up/down arrows are also used to modify other selected parameters.

SELECT PARAMETER button is used to select the appropriate coupling medium

Selects the transducer to be used for treatment (Main or Aux)



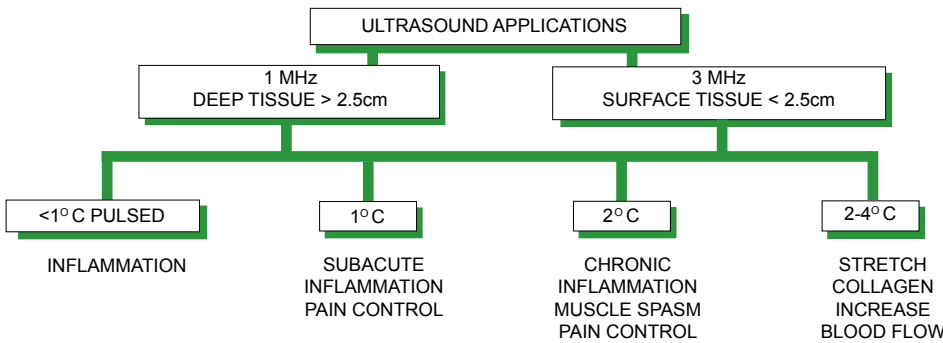
Pressing this button changes the display to show output in Watts or Watts/cm²

FREQUENCY button used to select 1MHz for deep tissue penetration or 3MHz for superficial tissue penetration during treatment

Used to select the PULSED output modes: Pulsed at 5, 10, 20, 25, 33, or 50%

These buttons select Delta T mode (either 1ΔT, 2ΔT, or 4ΔT)

Used to select 100% Duty Factor for CONTINUOUS Ultrasound output



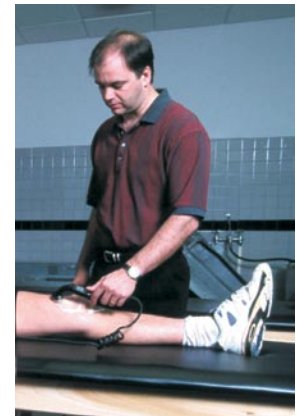
CLINICAL APPLICATIONS

Primary Patient Applications

- Reduce Muscle Spasms & Tone
- Increase Circulation
- Reduce Joint Stiffness & Contractures
- Decrease Inflammation
- Provide Pain Management

Healthcare Settings

- Inpatient / Outpatient
- Post-Acute Care
- Skilled Nursing Facilities
- Sports Medicine
- Assisted Living Facilities
- Orthopedic



OMNISOUND® 3000 Pro . . . Revolutionizing Rehabilitation

TECHNOLOGY HIGHLIGHTS AND FEATURES

Patented Transducer Workstation

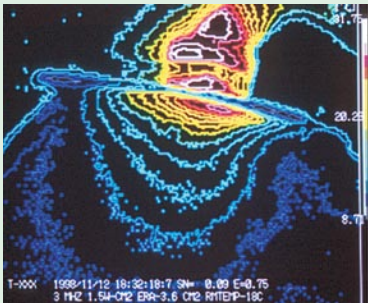
The Omnisound® 3000 Pro system uses a patented transducer workstation including 2 and 5cm² transducers with full 360° rotation. This unique design provides ease-of-use for therapists and improved application of ultrasound therapy when treating hard-to-reach sites. Device controls including output power, frequency and Delta T mode selection are conveniently located on the transducer handle for easy adjustment without interruption of treatment. The durable stainless steel head is fully waterproof for underwater applications and easily accommodates combination therapy with a simple-to-use electrotherapy interface jack.



An Industry Breakthrough in Beam Quality

The Omnisound® 3000 Pro's state-of-the-art crystal technology and advanced electronics produce an exceptionally uniform, low BNR ultrasonic beam for improved patient comfort and safety. Through extensive clinical review, Accelerated Care Plus has established that it is actually the amount of energy produced at peak BNR intensity, not just the BNR itself that affects patient tolerance to the beam. As a result of this discovery, ACP has been able to avoid the uncomfortable ultrasound application often associated with high BNR crystals, while maintaining optimal power output and patient comfort.

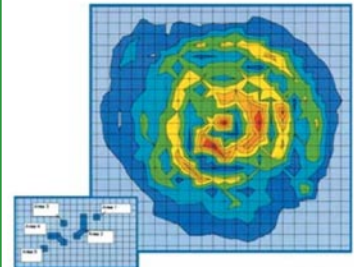
As indicated in the adjacent diagrams, the 3000 Pro's transducer with a BNR of 2.38:1 has a maximum beam "hot spot" of .2cm². Typical competitive transducers produce a .8cm² hot spot. With a smaller hot spot, thermal shock and related periosteal heating is significantly reduced to improve patient comfort and tolerance.



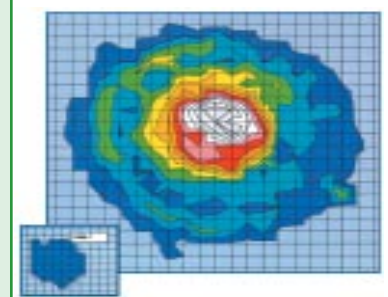
Uniformity of heating in tissue with a 3000 Pro transducer

Because patient tolerance is affected by the amount of heat produced by ultrasonic energy at the hot spot (PAMBNR), effective treatment may be inhibited by high levels of local periosteal heating which prevents clinicians from reaching appropriate thermal dosage as patient discomfort increases. In particular this inhibits effective treatment with many geriatric patients and others sensitized due to pain and inflammation. As a result of ACP's extensive research in this area, the Omnisound® 3000 Pro offers superior transducer technology for improved patient comfort, safety and outcomes.

ACP Transducer



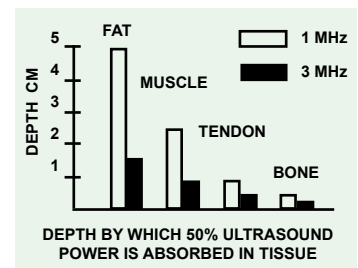
Hot spot size PAMBNR = .2cm²
ACP's smaller transducer head "hot spot" supports more comfortable application of ultrasound therapy with a lower risk of burns



Hot spot size PAMBNR = .8cm²
The larger transducer "hot spots" associated with many devices can cause patient discomfort and burns

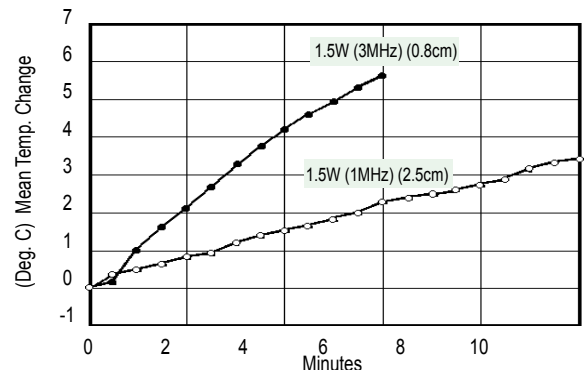
Multi Frequency with High Output Power

With the flexibility of both 3 and 1 MHz output levels, the Omnisound® 3000 Pro provides effective treatment for surface tissues (3MHz < 2.5cm) or deep tissues (1MHz > 2.5cm). The high output power at both 3 and 1 MHz combined with the system's high beam quality and low BNR's promote fast uniform heating at surface or deep tissue depths for maximum clinical efficacy and flexibility.

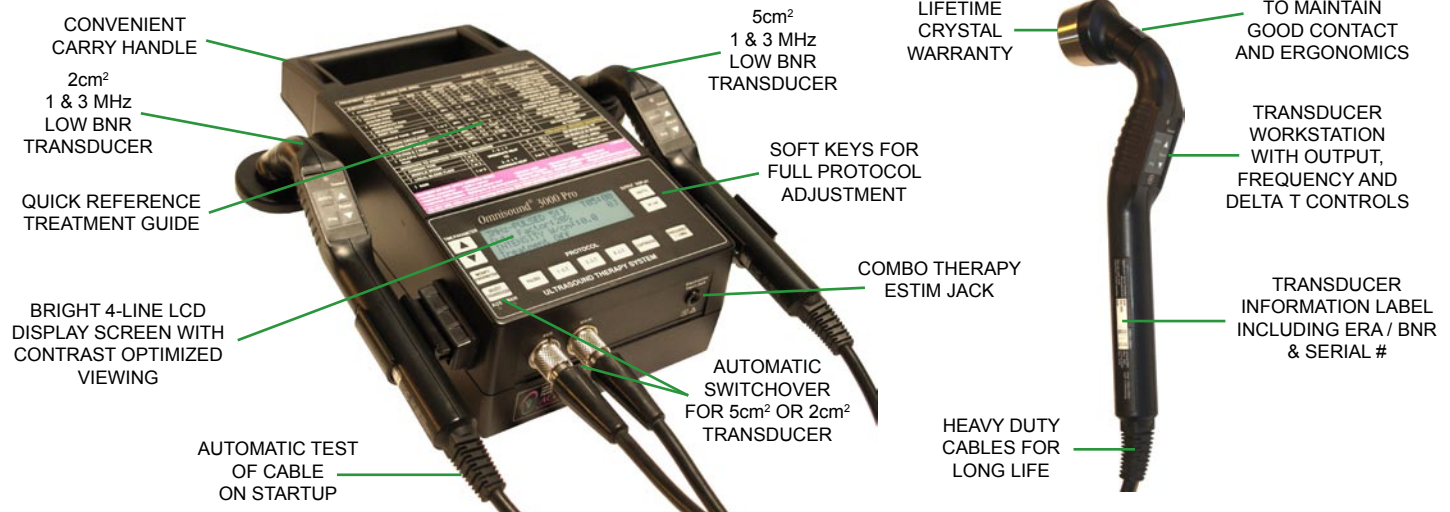


Patented Delta T Technology with Automatic Tissue Temperature Dose Control

The Omnisound® 3000 Pro is the only Ultrasound technology available featuring Delta T Temperature Dose Control. Clinicians simply select individual settings for "Mild" (1° C), "Moderate" (2° C) or "Vigorous" (4° C) for desired tissue temperatures. An integrated timer automatically adjusts treatment times to compliment the selected temperature mode. This technology enables Clinicians to reproduce treatment dosage without time consuming calculations. Published university studies consistently support this feature as a breakthrough in thermal dose calculation.



PRODUCT SPECIFICATIONS



OMNISOUND® 3000 Pro TECHNICAL SPECIFICATIONS

MODEL NUMBER: 1203000E

General:

Dimensions: 4" (10.2cm) H x 11.0" (27.9cm) W x 12.0" (30.5cm) D.

Generator Weight: 8.5 lbs (3.8 kg).

Operating Power: 100-240 volts AC 47/63 Hz, 50 watts.

Ultrasound Generator:

Frequency: 1 MHz ± 10% or 3MHz ± 10%.

Ultrasound Applicators:

Piezoelectric Disk: Lead Zirconate Titanate.

Frequency: 1MHz ± 10% and 3MHz ± 10%.

Frequency and Size	Effective Radiating Area	BNR Maximum	BNR [†] Nominal	Spatial Pattern
1MHz Small	1.5cm ² ± 50%	<5:1	1.6:1	Diverging
3MHz Small	1.5cm ² ± 50%	<5:1	3.4:1	Collimating
1MHz Medium	5.0cm ² ± 50%	<5:1	2.9:1	Collimating
3MHz Medium	5.0cm ² ± 50%	<5:1	3.2:1	Collimating

[†] ACP tests 100% of all transducers. Nominal data is the average BNR data used for FDA reporting purposes. Maximum BNR is the 'not to exceed' BNR value on any unit. The actual measured BNR and ERA for each transducer is displayed on the transducer label.

Spatial Pattern:

The applicators produce Diverging (1MHz small) or Collimating (3MHz small, 1 and 3MHz medium) cylindrical beams when measured at 5mm from the radiating surface with distilled, degassed water at 30°C with line voltages of ± 10% of rated value.

Energy Monitoring:

Total Joules of delivered energy is displayed continuously.

Delta T Temperature Calculation Mode:

The Delta T algorithm is based on total energy calculation required to increase tissue temperature 1, 2, or 4°C for an area at the surface tissue of 2 x ERA of the transducer. As the output intensity is increased the timer decreases automatically to arrive at the delivered dose. Cumulative dose is tracked and the treatment time adjusted based on the required remaining energy and the intensity selected. Algorithms are proprietary based on clinical data and the effects of variable dose and energy thresholds required to overcome tissue cooling. Based on the frequency selection and the couplant used the system compensates the total energy required to achieve the correct thermal increase. The temperature increase projected in the tissue is displayed in the Delta T mode of operation. Temperature projections are based on published clinical data in muscle of human subject clinical trials.

Output Frequency	2cm ² (small)	5cm ² (medium)	
1	0-3W	0-9W	Nominal
3	0-3W	0-6W	Power
1	0-2 W/cm ²	0-1.8 W/cm ²	Nominal ^{††}
3	0-2 W/cm ²	0-1.2 W/cm ²	Intensity

^{††} Actual intensity is calculated based on individual transducer Effective Radiating Area (ERA).

Coupling Monitor:

With all sizes and frequencies of transducers a thermal over-temperature alarm is provided which shuts off the ultrasound power if the head exceeds 116.6°F (47°C).

CAUTION: Federal Law restricts this device to sale by or on the order of a physician or other health care practitioner licensed by the state. The OMNISOUND® 3000 Pro complies with the ultrasound performance standard as set forth in 21 CFR 1050.10. OMNISOUND® systems comply with technical requirements of CFR 1050.1 part 18 subpart C of the F.C.C. regulations for ultrasound equipment. ACP reserves the right to change technical specifications and product availability without notice.

Patented in USA Nos.: 5,086,788 / 5,413,550

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