

# Ultrasound Technologies Pocket Doppler Range



The **UltraTec PD1v** is a small, lightweight, high sensitivity pocket vascular doppler. Its vascular pencil probes are ideal for use by a general practitioner or vascular specialist for routine vascular examinations.

Vascular flow signals are easily located using the lightweight narrow beam pencil probe while internal signal processing minimises noise artefacts. The flow signal is also available to the user via the built-in loudspeaker or optional headset with output level controlled by rotary volume control. A chart recorder output is provided for the printing of non-directional waveforms.

The unit is powered by a standard 9V battery.

#### PD1v additional features

- Lightweight unit with pencil probe
- 8MHz probes
- 8MHz flat probe available
- Velocity output

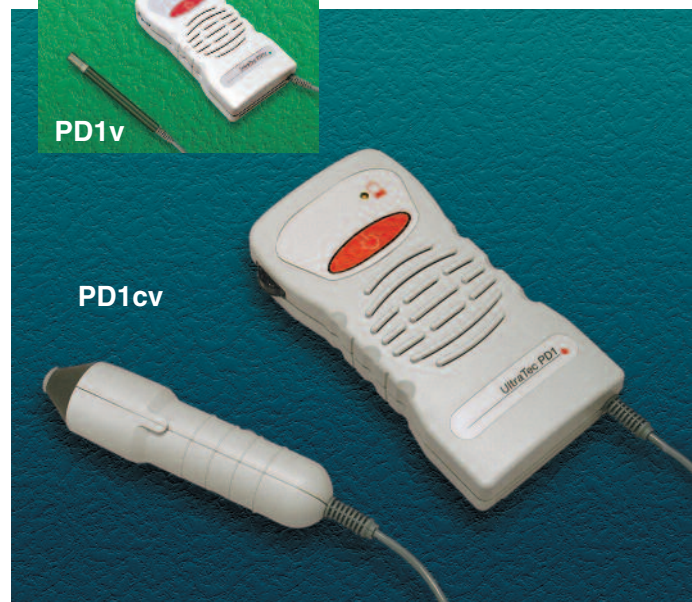
The **UltraTec PD1cv** is a lower cost vascular doppler alternative to the **PD1v**, it uses high sensitivity fixed frequency probes of the type used on the **PD1combi** doppler.

There is an option of fixed 5MHz or 8MHz probes to cover most common arterial and venous applications. Vascular signals are provided via the built-in loudspeaker and optional headset, unlike the **PD1v** the **PD1cv** does not provide for a velocity output.

#### optional flat probe



PD1v



PD1cv

#### Ultrasound

Frequency (PD1/1+ /dwr)	2MHz continuous wave
Frequency (PD1combi /v/cv)	5 or 8MHz continuous wave**
Probe	2 crystal narrow beam
Output power	<15mW/cm <sup>2</sup> SATA
Audio response	300Hz – 1KHz
Fetal heart rate (PD1+ /dwr)	Multipoint real time autocorrelator

#### Unit Controls

Keys	1 Key (for unit on/off)
Controls	Rotary volume
Indicators (PD1/combi /v/cv)	Yellow battery low LED
Indicators (PD1+ /dwr)	3 digit FHR LCD display / FHR pulse icon / Battery Low icon

#### Power Supply

Battery	MNI604 (PP3) 9V Alkaline Manganese
Expected battery life (PD1/combi /v/cv)	>9 hours
Expected battery life (PD1+ /dwr)	>6 hours

#### Outputs

Headset	Audio output to optional headset
Serials (PD1+ /dwr)	RS232 interface to optional UltraTrace
	2 PC software
Recorder (PD1v)	Voltage output proportional to velocity of flow

#### Enclosure

Material	ABS
Size	150mm by 75mm
Weight	295g typically including probe

#### Safety

Classification	Class I Type B - IEC 60601-1
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#### Specification applies to all units unless otherwise indicated

\*\* The **PD1cv** is supplied with a fixed probe – the frequency must be specified at the time of ordering.

Specification subject to change without notice

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**PD1v & PD1cv**  
vascular pocket dopplers

Technical Specification

# PD1

fetal pocket doppler

All of the **UltraTec PD1** range of pocket dopplers are small, lightweight and supplied with a range of high sensitivity probes for obstetric and vascular applications.

Each doppler shares the following common features:

- **Lightweight unit and probe**
- **Easy clean unit and probe**
- **High quality surface mount electronics for high reliability**
- **Powered by standard 9v battery**
- **Rechargeable batteries available as an option**
- **Battery saver system**
- **3 year warranty**

The **UltraTec PD1** is a small, lightweight, high sensitivity pocket doppler. Its 2MHz fetal doppler probe is ideal for use by general practitioners or midwives for routine antenatal fetal detection.

Fetal signals are easily located using the lightweight narrow beam probe while internal signal processing minimises noise artefacts.

Audio fetal heart signals are available to the user via the built-in loudspeaker or optional headset, with output level controlled by rotary volume control.

The unit is powered by a standard 9V battery, which provides over 9 hours of use.



# PD1+ & PD1dwr

fetal pocket dopplers

The **UltraTec PD1+** extends the features of the **PD1** while still providing a small lightweight unit, it includes built-in fetal heart rate processing.

Fetal heart rate (FHR) information is displayed on a large LCD display whilst internal digital signal processing minimises the noise artefacts. FHR traces can be produced by connecting the built-in serial output to the optional UltraTrace 2 PC compatible software.

### PD1+ additional features

- **Built-in FHR correlation software**
- **Large LCD FHR display**
- **RS232 connection**
- **Microprocessor controlled battery saver system**

The **UltraTec PD1dwr** is an extension of the **PD1+** to provide General Practitioners or Midwives with a product suitable for use in "water birth" applications.

A waterproof probe allows fetal signals to be located easily under water while the audio and fetal heart rate data are available to the user in the normal way.

### PD1dwr additional features

As **PD1+** but with the following additional functions

- **Water proof probe for use in "water births"**
- **Allows complete immersion of probe for fetal assessment**
- **Water resistant audio unit for longer life**



# PD1 & PD1+combi

obstetrics & vascular doppler

The **UltraTec PD1combi** is a multi-purpose doppler with plug-in probes for use in general practice and health centres with disciplines covering antenatal, general vascular and chiropody.

A range of probes are available from the 2MHz for fetal heart detection to the 5 and 8MHz for vascular applications. All the probes are high sensitivity allowing for the early detection of the fetus from around the 10th week of gestation with the 2MHz probe, to the detection of the smallest blood flows with the 8MHz probe.

### PD1combi additional features

- **Interchangeable plug-in probes**
- **2MHz fetal probe option**
- **5MHz and 8MHz vascular probe option**
- **High reliability probe connector**

The **UltraTec PD1+ combi** combines the advanced operation of the **PD1+** for fetal heart detection applications with the possibility of interchangeable probes for other disciplines.

With the 2 or 3 MHz probe connected, fetal heart rate can be heard from the built in speaker and displayed on the large LCD display.

As with the **PD1+** it is possible to connect the Doppler to PC software to record FHR waveforms.

By using the 5 or 8 MHz probes the **PD1+ combi** becomes a perfectly normal high sensitivity unidirectional vascular Doppler.

### PD1+ combi additional features

- **Optional Interchangeable probes**
- **2 or 3 MHz Fetal probe**
- **5 or 8 MHz vascular probe**
- **High reliability probe connector**

