AMBULATORY URODYNAMICS
using
The Cuillin Nanologger

Ambulatory Urodynamics – A Brief Overview

During conventional urodynamics the bladder is artificially filled quite quickly and pressures are recorded over a relatively short time with the aim of diagnosing the cause of the patient's symptoms. This typically takes around 30 to 60 minutes. However this is not always conclusive, or the investigation may not be successful for some reason, or it may not be suitable for a particular patient.

In ambulatory urodynamics however, the bladder fills by natural kidney function and the investigation typically takes between 2 and 4 hours. The aim is to try and replicate the symptoms under more "normal" circumstances. The basic principles are the same as conventional urodynamics, except that different catheters and transducers may be used. Everything is recorded on a battery operated, highly portable recorder that is worn by the patient. After catheters have been inserted, the patient is fully clothed and engages in near normal activity.

The Cuillin Nanologger

The Cuillin Nanologger is manufactured and designed in Britain, and Gaeltec (Gaeltec Devices Ltd) is British owned and run. In addition to recording abdominal and bladder pressures for basic ambulatory urodynamic investigation, it can record leak episodes and voiding flow rates.

The Cuillin uses a wireless link to a computer, stores data on a removable SD card and has a removable rechargeable battery. Hardware and software options are available for anorectal physiology, biofeedback and oesophageal manometry.

The name “The Cuillin” derives from a prominent mountain range on the Isle of Skye in Scotland.
In its basic configuration for ambulatory urodynamics, the Cuillin records two pressures: rectal and intravesical. There is a simple hand held button that the patient uses to mark urge episodes or other events. Pressure measurements can be made by using Gaeltec catheter tip transducers or by external water perfused transducers worn by the patient.

A flowmeter can be added. When the patient needs to void, a flowmeter is connected and the flow is added to the recording. This enables detrusor behaviour during voiding to be seen along with the flow pattern.

A leak channel can be added. This registers leak episodes via a pad that is worn by female patients. Additional channels can be added if required, but the above configurations are the most common.

Communication between the Cuillin recorder and a computer is by wireless link, and investigation data is transferred to the computer for analysis and printing either by wireless link, USB cable, or a removable SD card. Live data can be viewed on the computer via the wireless connection. While a patient study is in progress a recording up to that point can be saved and viewed.

The Cuillin is supplied with Windows® compatible software that includes a patient database.

**STANDARD CONFIGURATIONS**

A computer running Windows 7® or later is required. Computers and printers are not included.

<table>
<thead>
<tr>
<th>Part No</th>
<th>Configuration</th>
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<tbody>
<tr>
<td>CNU-2P</td>
<td>Cuillin Recorder with 2 x Pressure Channels. Includes: 1 x Event switch, Software CD, Wireless USB module, Spare rechargeable battery, 4Gb SD Card, Isolated USB Cable, Battery charger &amp; Carrying case</td>
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<tr>
<td>CNU-2PF</td>
<td>As CNU-2P with flowmeter and flow channel added.</td>
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<tr>
<td>CNU-2PL</td>
<td>As CNU-2P with leak channel added together with cable and pack of 5 pads</td>
</tr>
<tr>
<td>CNU-2PFL</td>
<td>As CNU-2P with flowmeter and leak channel (+Accessories) added</td>
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</tbody>
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Transducers are not included in the above configurations. We will need to know if Gaeltec catheters or water perfused transducers are to be used. Either can be supplied in order to provide a complete set-up. We will be happy to offer advice on this important choice.

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