Revision date: 17-Aug-17

Apgar Timer Calibration Procedure VM3COP47.06

This procedure is designed to test the timing accuracy of a Viamed Apgar timer (part number 0310100).

Introduction

The Apgar timer is a battery powered digital timer with preset audible timing indications, designed to assist with the Apgar scoring of neonates at birth.

With preset audible indications at 1, 5 and 10-minute intervals, a large display and sturdy construction, the Apgar Timer is ideally suited to the Delivery Suite environment.

Procedure

This procedure tests the timing clock of the Apgar timer.

A Certificate of Calibration is not issued with each new Apgar timer, however, if a customer may require a certificate as part of their ISO procedures, then one can be produced. On a periodic basis customers may wish for a Certificate of Calibration to be reissued, i.e. annually. In such a situation the Apgar timer may be returned to Viamed for testing, using service part number 0340015(Apgar labour).

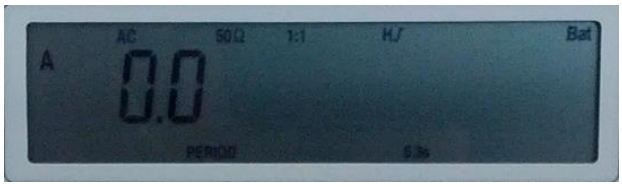
NOTE: The readings of each Apgar timer are measured by calibrated test equipment, which in turn has calibration traceable to UKAS calibration standards.

Test equipment: **CE0185**
TF930 3 GHz Counter,
manufactured by Thurlby Thandar Instruments (Aim TTi).

The Counter can be powered by mains or by the internal rechargeable battery.

To switch on press the **Operate** button. Once switched on change settings:
From **FREQUENCY** to **PERIOD**, by pressing the **PERIOD** button.
From **IMPEDANCE 1 MΩ** to **IMPEDANCE 50Ω,** press the button to toggle between each setting.

If not already done so, then attached an oscilloscope test probe to the input as shown, ensure that the attenuation on the test probe is set to **X1** and not to **X100**.



NOTE: Before proceeding with the testing ensure that you use an ESD wrist strap.

Open up the V1000 under test, insert batteries, switch on, select auto function. It is a good idea to set the V1000 intensity output to maximum, so that output can be clearly heard.

Attach test probe across connections pin 1 (gnd) & 5 (signal) as below.

If measured value is not displayed it may be necessary to slightly adjust the DC THRESHOLD/AC COUPLED OFFSET.

Example shows reading at 120 bpm, i.e. target value 500.00 ms.

Displayed measured reading to record = 499.42 ms.

Ignoring the 30 bpm setting, record the period values (to 2 d.p.) on the test sheet (copy attached, **Z drive/V1000 Calibration Certificates/V1000 Certificate of Calibration template without 30bpm**) and save in **Z drive/V1000 Calibration Certificates/Issued Certificates**, with file name adding the Apgar timer serial number and the test date as follows:

Apgar timer for xxxxxxxxxx YYYY-MM-DD

On the test sheet record:
Certificate number (obtain from DL)
Serial number
Name
Date (format example: **16th April 2015**)

Once the form has been completed, print onto Viamed letter headed paper, and over stamp the signature with the circular 'Viamed' blue ink stamp.

The Apgar timer can now be reassembled.

Test the unit functions correctly using the operating instructions found in the user manual.