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Operation Manual

Essential Seating Feedback Unit

DataQ Unit

2019

Please use this Operation Manual in conjunction with
the USB stick provided by nCounters for DataQ.

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Control Unit Specifications

Rated power source	9v DC
Format	Battery
Max current consumption	39mA
Dimensions (L x W x H)	12.55cm x 7cm x 2.4cm 4.94 in x 2.75 in x 0.94 in
Weight (without battery)	116g

Before you start

- When storing or using this device, do not allow it to come into contact with liquids or intense heat. This may damage the unit and its accessories. Smoke and overheating could result from contact with liquids.
- This device is **not** single use and is for commercial use only.

Indications and Intended Use

The Essential Seating Feedback Unit gives immediate audio visual feedback on seating posture and seated weight shift for clients with an Acquired Brain Injury.

DataQ Unit with software has been pre-configured to accept, record and save data from the Essential Seating Feedback Unit.

Essential Seating Feedback Unit with DataQ Unit

Includes the following items:

Carry case with foam inserts
Operation Manual
Essential Seating Control Unit
Seating Pad
Headphone (Mono)
DataQ Unit
USB stick with DATAQ software and nCounters manuals and training videos
Red cable for connecting control unit to DataQ Unit

Warranty

- This unit comes with a 12 month warranty on parts from date of purchase.
- Wherever possible a replacement unit will be provided while your unit is being repaired

Returns / Repairs Policy

Any item for return or repair must have a return number given by nCounters attached to it.

The item should be sent to:

nCounters
PO BOX 2336
KEW VICTORIA 3101
AUSTRALIA

Care of the Control Unit

Installing the battery

- Remove the back panel of the enclosure and insert the battery with the plus (+) and minus (-) poles pointing in the designated direction.
- **Use one 9 Volt (PP3) battery. A rechargeable 9V battery maybe used.**
- Remove the battery if the control unit will not be used for a month or longer.
- If the battery is incorrectly replaced, the control unit will not function.
- In the event of battery leakage, wipe the control unit completely clean and install a new battery.

Cleaning

- All surfaces of this system are non-porous and should be cleaned between each client, using a disinfectant wipe

Operating the control unit

What's what?



Figure 1
Control Unit Front Panel

NB THERE IS NO AUDIO FEEDBACK WHEN CLIENT IS IN THE TARGET RANGE

1. **ON / OFF switch**

2. **UPPER LIMIT**

Dial to be used by therapist to establish upper limit of target range

3. **OUTPUT for DataQ Unit**

Socket for plug of red cable to transfer data from control unit to DataQ Unit (Figure 2)

See Accessories for DataQ

DataQ
socket



Figure 2
DataQ Output Socket

4. **Headphone Socket (Mono)**

5. **Volume Control**

For either headphone or speaker.

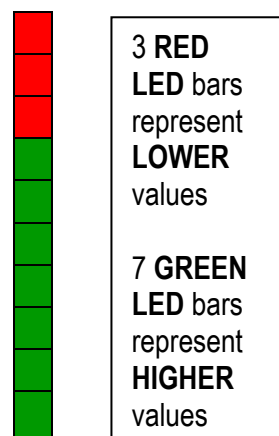
NB Audio feedback by either headphone or speaker

6. **Low Battery LED**

Battery needs to be *immediately* replaced or recharged when LED comes "on"

7. **Speaker**

8. **10 LED BAR DISPLAY**



9. **INPUT socket**

For seating pad plug

10. **LOWER LIMIT**

Dial to be used by therapist to establish lower limit of target range

Using Control Unit and Seating Pad

Before turning on the control unit:

Insert seating pad plug into the input socket (9) and push it in as far as it can go (Figure 3). Usually a double “push”, is required to ensure that the sensor plug is inserted fully into the input socket.



Figure 3

Position Client on Seating Pad

Now position the seating pad under either buttock, ensuring the 'X' is covered. Place the client in the correct seating position.

Turn on control unit using the side toggle switch. One of the green or red LEDs will come on.

Set Volume

Turn the volume control (5) dial in a clockwise direction so the speaker can be heard or alternatively plug in the headphone (6) and adjust volume until it is comfortable for the client. The initial set up may be completed with the headphone plugged in, as the therapist will also be able to hear the sound from the client's headphone.

Set Target Range

The therapist needs to set the correct upper and lower limits. Make sure the two dials are in the following default positions:

- Upper limit dial (2) fully clockwise (maximum position)
- Lower limit dial (10) fully anti-clockwise (minimum position).

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Firstly establish lower limit. So turn this dial (10) clockwise until you hear a sound from the speaker. Back off this dial a *little* (by turning anti-clockwise) if you want the device to detect small movements in weight shift or back off this dial more if you want to reduce the sensitivity.

NB By turning the lower limit dial anti-clockwise you are reducing the lower limit.

Now establish upper limit by turning this dial (2) anticlockwise, until you hear a sound from the speaker. Back off this dial a little (by turning clockwise) if you want the device to detect small movements in weight shift or back off this dial more if you want to reduce the sensitivity.

In summary, when the client's weight on the seating pad 'X' is between the lower and upper limit values, the client will hear no sound. If the weight shift is outside these two limits then the client will receive feedback. The sound changes and increases in pitch the further away the client gets from the target range.

Before using the headphones turn the volume control back to minimum then slowly increase until the sound is comfortable for the client.

DataQ Unit - What's what?



Figure 4

11. **DataQ Unit**
12. **INPUT Socket**
Socket for plug of red cable to connect Essential Seating Control Unit to DataQ Unit for transfer of data
13. **OUTPUT of data to computer**
USB cable (fixed) for transfer of data to from DataQ Unit to PC



USB cable has been designed NOT to be removed from DataQ Unit.

How to use the DataQ Unit

Follow these steps:

For installing DataQ software on your PC

Go to <https://www.dataq.com/products/di-1100/>

Click on software tab.

“Download”, WinDaq Software.

Then click “Download now”, button.

A DataQ exe file will be downloaded.

This file can also be found on your USB stick, if you have trouble connecting to DataQ.

Double click on this then select “**Next**”.

You are asked to select which components should be installed.

Select the first box i.e. DI-145 then “Next”, then “Next”, then “Next” then “Install”.

Wait for your DataQ version to be installed.

Click “Finish”

DataQ data acquisition:

Plug DataQ USB cable into spare outlet on your PC.

Plug red lead into the output socket of your nCounters Essential Seating, Essential Angle Sensor or Force Cane and the other end to your input socket of DataQ.

Turn on whatever nCounters device you are interfacing with DataQ.

To start your DataQ session:

Click on “*Hardware Manager*” icon found in DataQ Instrumentation folder. This will find your DataQ device.

Then click “*Start Windaq*” button.

Go to “*File*”, at top of screen and select “*Open Reference File*”. Select nCounters1 in the “*Reference Files*”, folder of your USB drive.

Then click on File and click Save default setup.

From now on every time you start up DATAQ your ncounters1 SETUP file will automatically appear.

This file will display your upper limit (RHS), lower limit (LHS) and signal from your sensor in Real Time.

To record your data

To start recording go to file and click “record”.

Name your file and the time you want to record for - then press OK.

By going to File you can stop recording at any time.

When you close the file you are returned to the SETUP file for doing another recording.

DataQ – Playback and record to Excel

In your DataQ folder that you downloaded you will find application file WINDAQ Waveform Browser.

Double click to activate the browser. You will use this software to look at your recorded files. Choose one then, scroll along the bottom of the screen to see all the file. To see the actual values and do further analysis.

To see what further you can do for analysing your data using DataQ see the sample DataQ files that you downloaded.

Summary-getting data into Excel – from your recorded file.

1. Click - File> Export to Excel
2. Click on Green arrow - New workbook in Excel will open with all your data.
3. Choose your graph from Insert menu (Recommend 2D line graph)

Problems?

Please do not hesitate to contact nCounters via email at: support@ncountersonline.com or via our enquiry page ncountersonline.com

