



Cathy Green <viamed.cathy.green@gmail.com>

Fwd: TOF stimulus fading

1 message

Steve Hardaker <viamed.steve.hardaker@gmail.com>

27 August 2021 at 11:01

To: michael.green@viamed.co.uk

Cc: Cathy Green <cathy.green@viamed.co.uk>

Hi Michael,

Please see email below, he is happy to take the Microstim back unrepaired. It would have been better if we could have supplied a replacement repair but that's the way it goes.

Steve

----- Forwarded message -----

From: **LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST)** <davidlloyd1@nhs.net>

Date: Thu, 26 Aug 2021 at 16:17

Subject: RE: TOF stimulus fading

To: Steve Hardaker <viamed.steve.hardaker@gmail.com>

Hi Steve,

Thank you for carrying out these tests. I can only think we've an issue, or setting error, with the oscilloscope we used.

Could you return this device back to me, unrepaired.

Thanks again Steve.

Regards

David

David Lloyd RCT

Technical Practitioner of Specialist Services

EBME Dept | Southport District General Hospital

T 01704 704188 | E davidlloyd1@nhs.net

Southport & Ormskirk Hospital 
NHS Trust

From: Steve Hardaker <viamed.steve.hardaker@gmail.com>
Sent: 24 August 2021 15:29
To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>
Cc: michael.green@viamed.co.uk; Cathy Green <cathy.green@viamed.co.uk>
Subject: Re: TOF stimulus fading

Hi David,

Re: Microstim DB3 s/n H0003122 on returns ref SRS67929

I've just got back from leave and caught up with our engineer on this. He has been doing extensive testing trying to replicate your observations but with only limited success: he does see some minor drop-off on a repeating 15-second TOF cycle but nothing in the region of the 20% or so output drop that you reported.

The device is an older unit, supplied in 2015, and whilst we can't see the magnitude of variation that you reported, the latest sub-assemblies that we have in stock are all newer and some components have been upgraded since the version that you sent in. Thorough testing of these stock sub-assemblies shows no drop-off at all on our test equipment.

We can send your unit back with no charge but you may continue to see this issue when you test it. It's a little puzzling, but as we cannot replicate it fully, the best option for you might be to accept a fixed cost repair and we keep your unit for further investigation. We can also do this for any other devices that you feel are no longer behaving as expected.

With a fixed-cost repair, we use a stock sub-assembly; effectively providing you an electronically new unit with the latest components for a cost of £45.00+VAT plus £10.00+VAT carriage. Do you want me to ask our Service Department to send a quotation for that or shall we send the original unit back unrepaid?

I look forward to hearing from you.

Regards,

Steve

Steve Hardaker
Technical Support Manager
Viamed Ltd.

Please note: I will be on annual leave from 10th August to 24th August. Emails will remain in my inbox but will not be read. I will respond upon my return. If your enquiry is urgent, please email info@viamed.co.uk

Website: www.viamed.co.uk
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On Mon, 16 Aug 2021 at 15:21, LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net> wrote:

Hi Kate,

Serial number H0003122

David Lloyd RCT

Technical Practitioner of Specialist Services

EBME Dept | Southport District General Hospital

T 01704 704188 | E davidlloyd1@nhs.net



From: Main Account <viamedinbox@gmail.com> **On Behalf Of** Kate Griffiths

Sent: 16 August 2021 14:53

To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>

Cc: steve.hardaker@vmsecure.me.uk

Subject: Re: TOF stimulus fading

Good afternoon David,

Thank you for your email.

Please could I request the serial number of the device you will be sending back? In the meantime, I will start processing a returns reference number for you and let you know.

Many thanks.

Kind regards

Kate Griffiths

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On Mon, 16 Aug 2021 at 14:47, Main Account <office@viamed.co.uk> wrote:

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From: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>

Date: Mon, 16 Aug 2021 at 14:45

Subject: RE: TOF stimulus fading

To: steve.hardaker@viamed.co.uk <steve.hardaker@viamed.co.uk>

Hi Steve,

I'll send one of our DB3's back to yourselves to verify it's function. Can you give me a returns reference?

I've been working at our other hospital for a few weeks, hence my late reply.

Thanks

Dave

David Lloyd RCT

Technical Practitioner of Specialist Services

EBME Dept | Southport District General Hospital

T 01704 704188 | E davidlloyd1@nhs.net



From: Main Account <viamedinbox@gmail.com> **On Behalf Of** Steve Hardaker
Sent: 05 August 2021 17:50
To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>
Subject: Re: TOF stimulus fading

Hi Dave,

I have spoken to our Technical Director and he has asked if you want to send it back to us to look at? This will allow us to test it side by side with a reference device to determine the extent of the drop-off and compare it with what we would expect to see on a new unit.

So that I can determine the age, can you give me the serial number? If it turns out that the drop-off is caused by degradation, we can offer you a fixed cost repair for just £45.00+VAT, which will basically be a new board at just the labour cost.

If you want to return it, please let me know and I will issue a returns reference and instructions on where to send it.

Regards,
Steve

Steve Hardaker
Technical Support Manager
Viamed Ltd.

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On Mon, 2 Aug 2021 at 12:22, LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net> wrote:

Hi Steve,

The variation in stimulus amplitude was verified in our workshop using an oscilloscope. An interval of at least 15 – 20 seconds was used. Is this amplitude variation normal, or something which needs correcting?

Thanks

Dave

David Lloyd RCT

Technical Practitioner of Specialist Services

EBME Dept | Southport District General Hospital

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From: Main Account <viamedinbox@gmail.com> **On Behalf Of** Steve Hardaker
Sent: 02 August 2021 11:59
To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>
Subject: Re: TOF stimulus fading

Hi Dave,

The TOF 3D device that we now supply as a successor to the Microstim has a lock-out for TOF stimulation of 15 seconds. I'm not clinically trained and don't know how frequently the anaesthetist would wish to apply

TOF, but if the Microstim delivers a stable and repeatable stimulus at 15 second intervals, it would match this latest specification.

Is this something that you can test if you still have the device in the workshop?

Regards,
Steve

Steve Hardaker
Technical Support Manager
Viamed Ltd.

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On Fri, 30 Jul 2021 at 14:49, LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net> wrote:

Hi Steve,

I've now tested a few of the DB3's leaving 10 second intervals, and there's no amplitude fade within each TOF activation. But I have found a variation of amplitude from one TOF to another. For example, one TOF will all be 800mV, and the next TOF 600Mv. The amplitude control dial is not being adjusted or even touched.

Regards

Dave

David Lloyd RCT
Technical Practitioner of Specialist Services

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From: Main Account <viamedinbox@gmail.com> **On Behalf Of** Steve Hardaker

Sent: 30 July 2021 10:11

To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>

Subject: Re: TOF stimulus fading

Hi Dave,

I've had a look into this and all clinical papers that I have found indicate that TOF should not be applied clinically in intervals of 10s, which was the design brief for the original Microstim.

As you have found, the device needs a couple of seconds to 'recover' electronically before a further stimulus can accurately be delivered, which under normal clinical operating conditions would never be noticed. As we alluded to yesterday: you can always trust an engineer to find a way of making something fail! :-)

Can you check it at 10s and see whether any reduced output is observed?

Regards,
Steve

Steve Hardaker
Technical Support Manager
Viamed Ltd.

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On Fri, 30 Jul 2021 at 09:12, LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net> wrote:

Morning Steve,

I replaced the battery yesterday and still found stimulation amplitude fading. Though this did seem to happen when the TOF button was pressed within 1 – 2 seconds from the previous press, so likely happening because of this short space of time.

Thanks for your help.

Regards

Dave

David Lloyd RCT

Technical Practitioner of Specialist Services

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From: Main Account <viamedinbox@gmail.com> **On Behalf Of** Steve Hardaker

Sent: 29 July 2021 18:37

To: LLOYD, David (SOUTHPORT AND ORMSKIRK HOSPITAL NHS TRUST) <davidlloyd1@nhs.net>

Subject: TOF stimulus fading

Hi Dave,

I've had a look into our records for the Microstim and it appears that the question of TOF fade has been raised before a few years ago.

We asked the consultant who designed the original Microstim and his response was to try allowing more time between button-presses to see whether this makes a difference.

The effect may be more pronounced if the battery is low or if a non-alkaline battery is used as the battery may struggle with repeatedly handling the current demand.

Again this suggests trying a new battery and not repeatedly delivering stimulus, as this is not how the device would be used in practice. I hope this helps.

Regards,

Steve Hardaker
Technical Support Manager
Viamed Ltd.

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