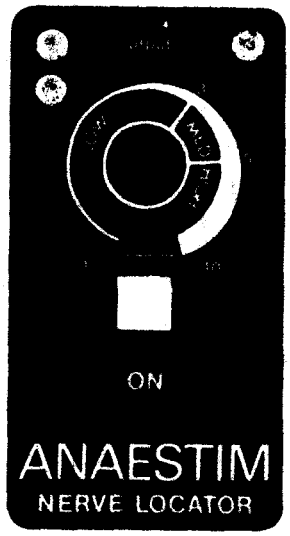
VIAMED

15 STATION ROAD, CROSS HILLS,
KEIGHLEY, WEST YORKSHIRE, BD20 7DT

Telephone: 0535 34542 / 36757

Data Sheet



ANAESTIM NERVE LOCATOR

The ease with which nerve blocks can be performed is greatly increased when the nerve is located with a low powered stimulator connected to the exploring needle.

The ANAESTIM is a purpose built stimulator with several novel features;

* Audible tone to indicate stimulation. Operates only when current is flowing.
* Output current adjustable up to safe maximum of 10 mA.
* Automatic compensation for changes in electrode impedance (constant current).
* Stimulation at one pulse/second. (pulse width 0.2ms.).
* Low battery indicator (green indicator replaced with red indicator when battery is exhausted).
* Compact size (approximately 102mm x 61mm x 26mm).

less painful.
→ 1 ms ok ??
to 1-5 ms
Switch variable ??

SUGGESTED USES.

* Local anaesthetic blockade of single nerves and nerve trunks.
* Nerve location during surgery, eg. facial nerve during parotid dissection.

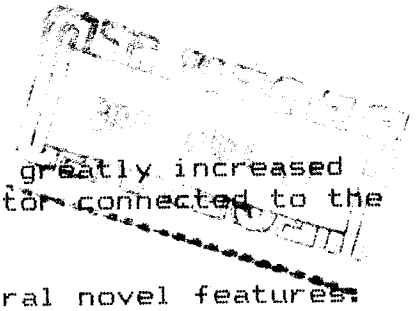
Autoclavable leads are supplied. An ordinary ECG type electrode is used for the indifferent connection. The active lead is supplied with a clip for attachment to an exploring needle. A special lead and probe are available for surgical use.

Insulated 23g, 60mm needles are available on request.

Supplied with lead, soft case and battery.

Proprietors: Vandagraph Ltd. Registration No. 129165 in Wales
Directors: J. S. Lamb G. G. Lamb Reg. Office 7, The Crofts, Farnhill

A-STIM



ANAESTIM NERVE LOCATOR.

The ease with which nerve blocks can be performed is greatly increased when the nerve is located with a low powered stimulator connected to the exploring needle.

The ANAESTIM is a purpose built stimulator with several novel features.

* Audible tone to indicate stimulation. Operates only when current is flowing.
* Output current adjustable up to a safe maximum of 10 mA.
* Automatic compensation for changes in electrode impedance (constant current).
* Stimulation at one pulse/second. (pulse width 0.2 ms.).
* Low battery indicator (green indicator replaced with red indicator when battery is exhausted).
* Compact size (approximately 102mm,61mm,26mm)

Suggested Uses.

* Local anaesthetic blockade of single nerves and nerve trunks.
* Nerve location during surgery, eg. facial nerve during parotid dissection.

Autoclavable leads are supplied. An ordinary ECG type electrode is used for the indifferent connection. The active lead is supplied with a clip for attachment to an exploring needle. A special lead and probe are available for surgical use.

Insulated 23g, 60mm needles are available on request.

Supplied with leads, soft case and battery.

THE ASTRASTIM

The Astrastim is a low power pulse generator which has been designed to aid the location of peripheral nerves during local or regional anaesthesia. The Astrastim is suitable for both sensory and mixed nerves, and can be used for nerve location in patients under anaesthesia provided that neuro-muscular blocking drugs have not been used.

Functional description

The Astrastim produces constant current pulses which, if transmitted to a peripheral nerve will lead to depolarisation and therefore stimulation of the nerve.

The duration of the pulses can be preset to 0.1, 0.2 or 0.5 milliseconds, at a frequency of 0.5, 0.66 or 1Hz.(30, 40 or 60 pulses/minute). The output current can be preset from 0 to 5mA.

Technique for use of the Astrastim

A) Conscious patients

1. The red lead of the Astrastim should be attached to a standard ECG monitoring electrode which should be positioned at a point remote from the site of the proposed local anaesthetic block.

2. The black lead should be attached to the needle to be used for the block, by means of the crocodile clip. (The Astrastim may be used with either insulated or uninsulated needles, which should be of as fine a gauge as practicable, and have a short bevel).

3. The power level should be set to minimum with the output control knob.

4. The stimulator should now be turned on with the switch on the left hand side of the unit. This switch has two "ON" positions. Sliding the switch backwards simply turns the unit on. Sliding the switch forward to the "ON/AUDIO" position activates circuitry which produces an audible bleep when current flows between the two electrodes. This bleep will only work when the needle has been inserted into the patient and serves as both an audible warning that stimulation is occurring, and as a disconnection alarm.

5. The needle can then be inserted into the patient until its tip is in the subcutaneous tissues. It should not be advanced further at this stage.

6. The power level is then gradually increased until the patient can report unequivocal perception of the electrical pulses. The output power should then be fixed at this level.

7. The needle is then slowly advanced towards the nerve until the patient reports pulse synchronous paraesthesiae in the distribution of the nerve or visible muscle twitching occurs in the appropriate territory. The needle tip will now lie within a millimetre or two of the nerve.

../2

8. The needle is fixed in this position and a 2ml test dose of local anaesthetic injected. The strength of the perceived stimulus, or the amplitude of the muscle twitch, generally increases noticably in the next few seconds and then fades over the next 10-20 seconds.

9. The full dose should then be injected, and the needle withdrawn. Typically the power output required is in the range of 1.5-4mA, although this varies considerably with individual patients and with different blocks.

B) Non-conscious patients

In this situation it is not possible to use patient reported paraesthesiae as a guide to nerve location, but muscle twitching provides a good alternative. The nerve chosen must however contain motor fibres for this technique to be used, and neuromuscular blocking agents will obviously block the responses to the Astrastim.

The stimulator is used in the same way as for conscious patients, but the output level can be set to maximum at the outset. When muscle twitching occurs the power level is reduced to that level that just produces twitching. The needle tip is then positioned to give maximal twitch amplitude which increases noticably if the nerve is touched or entered by the needle tip. The needle is then withdrawn slightly until the twitch amplitude just starts to fade. A 2ml test dose can then be given and results in a similar response to that described above. Any resistance to injection may indicate the needle tip lies within the nerve and the needle tip should be repositioned.

Choice of pulse length and frequency

For general nerve block the Astrastim should be set to deliver a pulse of 0.5mS duration at 1 second intervals. Shorter pulses may be more comfortable for some patients but this is an inconstant feature and must be left to a trial and error approach in any particular patient.

Dr. B.E. Smith
Consultant Anaesthetist
Alexandra Hospital
Redditch, Worcs.

ASTRASTIM Manufactured by:
Viamed
15 Station Road
Cross Hills
Keighley
West Yorkshire
BD20 7DT Tel: 0535 34542/36757