

IF 4160 MANUAL

The Ultimate
In Pain Relief

IF 4160 is the
latest in electronic pain
management technology



FULLY PORTABLE

RECHARGEABLE

SIX PRESET TREATMENT MODES

PO Box 2359
Mansfield BC
4122 Qld

www.painmt.com.au
info@painmt.com.au
Mobile 0423943378
Fax 07 3398 8458

PMT
Pain Management
Technologies

V.1

ABN 52357115035

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Attention

PMT advises that the purchaser of the IF 4160 should not treat or demonstrate this unit to any other person or individual unless they are a Registered Medical Practitioner.

PMT further advises it will not accept any responsibility for any damages or injury caused by the use of this machine.

Introducing IF 4160

The IF 4160 is a rechargeable battery operated interferential therapy device, which generates symmetrical sinusoidal outputs. The user can adjust the output intensity to 15 steps, and the output may be delivered to the user in either 4-pads (pole) or 2-pads (pole) treatment mode. In 2-pad treatment mode, two sine waves are superimposed inside the device to form a new amplitude-modulated waveform. In 4-pad treatment mode, two sine waves having slightly different frequencies are simultaneously delivered to the user via 2 separate pairs of electrodes. The IF 4160 has all together 6 different treatment programs, in addition the device has a timer for setting the desired treatment period.

What is Interferential?

Interferential uses electric pulses to stimulate the nerves in order to relieve pain using the Pain Gate theory. It can be likened to TENS however operating at a higher frequency, approximately 4000 Hz. This higher frequency significantly lowers your skin resistance which allows penetration deep into the tissue and nerves whilst the sensation remains at a comfortable level. Interferential is safe and unlike most drugs has no known side effects.

Contents of Pack

1. The IF4160 Interferential.
2. Mains power pack.
3. 2 lead wires.
4. 1 pack of 4 square pads or 1 single square pad.
5. Storage pouch.
6. Instruction Booklet.

Instructions on use of IF 4160

Charging the IF 4160

The IF 4160 is delivered partially charged, and CANNOT be used until the unit is fully charged.

1. Unpack the supplied plug pack and straighten the cord.
2. Push the jack (on the opposite end to the plug pack) into the socket on the unit marked DC 9V. It is important to firmly push the jack in to ensure proper connection.
3. Plug the power pack into the 240 volt mains wall socket and turn the switch on.
4. A yellow LED light on the front of the unit should begin to flash, if it does not, check that you have pushed the jack fully into the machine. The LED will continue to flash until the unit is fully charged. Once fully charged the LED will extinguish. The unit is now fully charged and ready for use.
5. Switch off the charger from the wall socket and remove the Jack socket from the machine.
6. The unit takes around 8 hours to fully recharge, it is recommended after a treatment the unit is placed on the charger to recharge. The unit cannot be over charged as it will switch off automatically when fully recharged.
7. When the battery is low, the low battery indicator on the LCD screen will flash for 30 seconds before the unit automatically switches off.

Setting Up

To prepare the IF 4160 please follow instructions listed below

1. Remove all parts from wrapping and unravel all leads.
2. Push the white plastic rectangular lead connectors into the channel sockets (Ch1 & Ch2) located at the rear base of the unit. These connectors due to their shape will only push in one way.
3. Remove the pad or pads from their sealed plastic bag, but do not peel the pads from their lining.
4. Connect each pad to the rounded connectors on the lead wires, there is a red and white connector but neither are important at this stage.

The IF 4160 is now ready for use.

USING THE IF 4160


1. Display the controls by opening the lid.
2. Press the On/Off switch and release. The yellow LED light will illuminate indicating that the unit is switched on.
3. The unit automatically defaults back to programme 1 when switched on. The opening setting will have a frequency of 2Hz and the unit will be in 4 Pole mode.
4. Press and release the Level button until a feeling through the pads similar to pins and needles is felt. The unit is set at this stage at 2Hz, so the feeling will be rather thumpy. It is suggested that the frequency is increased through the full range to 160Hz to see which level feels the most comfortable.

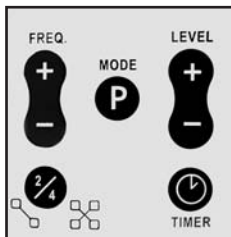
We recommend that you select 110Hz for a reasonable length of time as this frequency has proven to be especially beneficial. The sensation will become less thumpy and softer as the frequency rises.

5. It is suggested that you use Programme 1 initially for at least 30 minutes to allow sufficient time for the treatment to take effect.
6. For more detailed treatment plans, see **Suggested Treatment Protocols** beginning page 18 of this manual.

CONTROLS

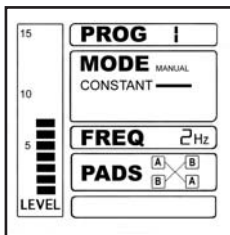
There are only 6 buttons

1. On/Off button 
2. FREQ. + / -
(Manual Modes only).
Up and down from 2Hz to 160Hz.
3. MODE (P)
Changes the programme from 1 through to 6 and then back to 1.
4. LEVEL +/-
Adjusts the level of intensity that the unit emits. There are 15 levels of intensity. This button controls both Channels and sets them at the same level of intensity.
5. 2/4
(Pole/Pad Option)
Press and release to switch the unit from 2 pole mode to 4 pole mode and back again as required.
6. TIMER
The unit can be set to automatically switch off after 15, 30, 45 & 60 minute sessions, or it can be left to run continuously.



LCD SCREEN

The LCD screen is viewed by lifting the lid. It indicates all the various settings based on how you have set the controls.



PROGRAMME MODE DESCRIPTION

Programme 1: (Constant Mode)

2 -160Hz Adjustable

2 to 20Hz adjustable in steps of 2bps

20 to 80Hz adjustable in steps of 5bps

80 to 160Hz adjustable in steps of 10bps

Programme 2: (Sweep Mode 1; $6 \wedge 6$)

The resulting beat frequency changes gradually from 2 to 10Hz in 6 seconds, and then back in another 6 seconds, total cycle time is 12 seconds.

Programme 3: (Sweep Mode 2; $10 \wedge 10$)

The resulting beat frequency changes gradually from 2 to 100Hz in 10 seconds, and then back in another 10 seconds, total cycle time is 20 seconds.

Programme 4: (Sweep Mode 3; $6 \wedge 6$)

The resulting beat frequency changes gradually from the set value to +200% of it in 6 seconds, and then back in another 6 seconds, total cycle time is 12 seconds. The selectable beat frequency ranges between 5 K 80Hz with steps of 5Hz.

Programme 5: (Abrupt Mode 1; 1P1)

The resulting beat frequency changes abruptly between the set value and +200% of it every 1 second. The total cycle repeats every 2 seconds. The selectable beat frequency ranges between 5 to 80Hz with steps of 5Hz.

Programme 6: (Abrupt Mode 2; 6P6)

The resulting beat frequency changes abruptly between the set value and +200% of it every 6 second. The total cycle repeats every 12 seconds. The selectable beat frequency ranges between 5 to 80Hz with steps of 5Hz.

PROGRAMMES

The unit has 6 different treatment modes available some are manual, while others are automatic.

The unit always defaults to Programme 1 when you first switch the unit on.

Although most people will prefer Programme 1, it is advisable to try all other programmes to determine which one offers the individual the best treatment option.

The lower frequencies will feel (Thumpy) and the higher frequencies will feel (Tingly).

It is advisable to try each programme or combination of programmes for 30 minutes to offer the best effect.

Programme Number	Programme Type	Description of Output
1	Constant Manual	The Frequency can be set anywhere between 2Hz and 160Hz.
2	Sweep Auto	The Frequency will automatically Sweep from 2Hz to 10Hz then 2Hz repeatedly every 12 seconds
3	Sweep Auto	The Frequency will automatically Sweep from 2Hz to 100Hz then 2Hz repeatedly every 20 seconds
4	Sweep Manual	Manually set the base frequency up to 80Hz. The unit will sweep to double the frequency and back repeatedly every 20 seconds.
5	Abrupt Manual	Abrupt offers a massage sensation as the frequency cycles every two seconds. Manually set the base frequency up to 80Hz and the unit will double that setting every 1 second and back repeatedly.
6	Abrupt Manual	Exactly the same as mode 5 except the frequency cycles every twelve seconds. Manually set the base frequency up to 80Hz and the unit will double that setting every 6 seconds, 6 seconds down and back repeatedly. Feels like a slow massage.

FREQUENCY DESCRIPTION

Different frequencies have the following effects:

- 2Hz:** This frequency stimulates the production of endorphins and results in longer term pain relief and some local anaesthesia.
- 10Hz:** This frequency has a beneficial effect on the immune system and tends to make patients wakeful yet relaxed.
- 110Hz:** Around this frequency certain areas of the brain are stimulated which will result in short term pain relief.
- 1-100Hz:** This frequency sweep will reduce inflammation.
- 45-90Hz:** This frequency sweep will depress the sympathetic nervous system so allowing increased activity of the parasympathetic system, and increase the blood supply.

PADS

Pad Placement:

Warning: Always ensure the unit is switched off before placing pads or removing pads from the body to avoid finger discomfort.

The positioning of the pads is important but not as vital as with standard interferential units.

Place two or four pads around the treatment area. Refer to charts and photographs on the following pages, which show positioning in respect of various parts of the body.

In the following photographs, the two lead wires labeled L1 come from the channel outlet labeled Ch1 on the unit, and the two lead wires labeled L2 come from the channel outlet labeled Ch2 on the unit.

On the IF 4160 the red and white colours on the lead ends have no significance except to avoid confusion when placing pads.

To attach the self adhesive pads to the body simply peel the pads off the plastic liner by lifting from any corner, not by the lead wire. DO NOT throw away the liners, they are required for storing the pads when not in use.

DO NOT switch on the unit until all the pads are on the body.

Pad Removal:

After unit has been switched off simply remove each pad individually and return to the liner. The pads can be reused many times and it is recommended to follow pad manufacturers instructions on cleaning and proper care of the pads to prolong pad life span.

Replacement Pads are available from PMT

2 or 4 POLE/PAD TREATMENT

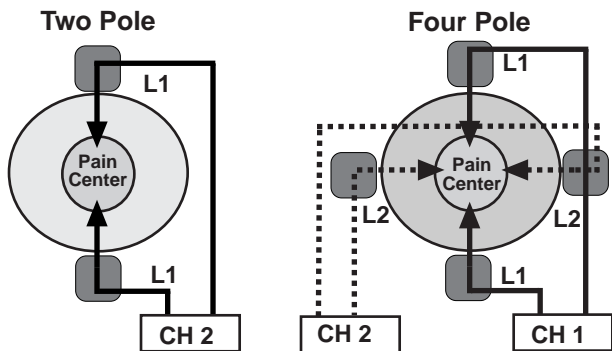
Note: 2 or 4 pole/pad settings has nothing to do with the number of pads in use, rather it is used to select the TYPE of electrical signal that is emitted through the pads.

The 2 or 4 pole/pad treatment option is a special feature of interferential therapy.

2 pole: When a programme is in the 2 pole mode, it means that the interferential electrical signal is between the two pads of the same channel (i.e. the same lead wire Ch1 red to Ch1 white). In 2 pole mode the user can choose to use on one or both channels. The channels can be used at different sites.

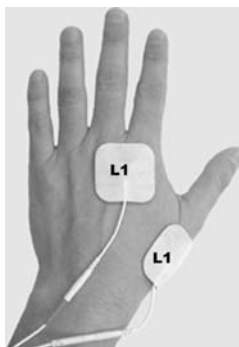
4 pole: When a programme is in the 4 pole mode it means that the interferential electrical signal is created by the interaction of the signals from all four pads. Only one site can be treated, and the pads must be arranged so that the signal between L1/L1 crosses the signal between L2/L2 over the area to be treated. This setting feels stronger and is of benefit for treating one injury site.

Diagrams below show the pad placement positions using either 2 or 4 pad mode. Depending on the treatment site you will need to select the best pad set-up to suite the area to be treated.

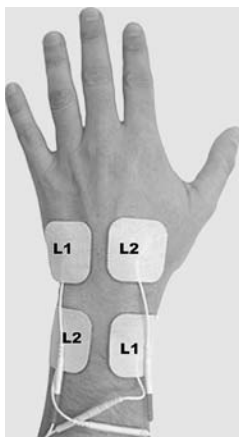


PAD PLACEMENT (Photographic Examples)

Hand

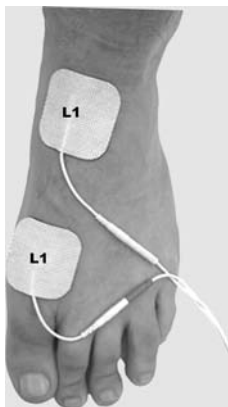


2 Pad Mode



4 Pad Mode

Foot

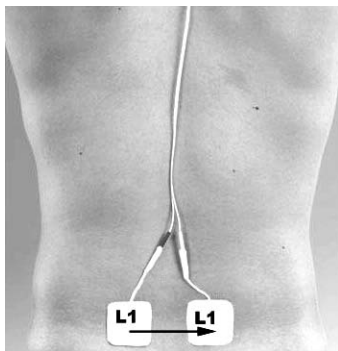


2 Pad Mode

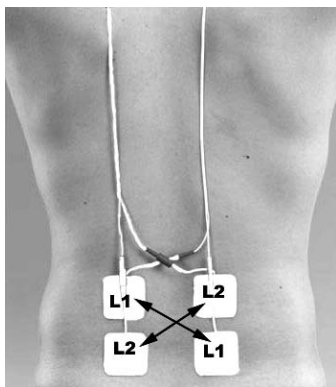


4 Pad Mode

LOWER BACK

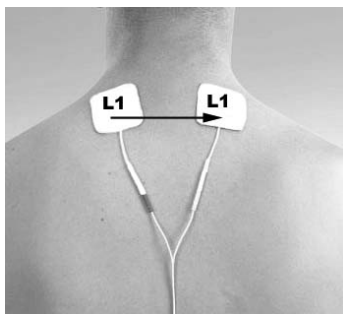


2 Pad Mode

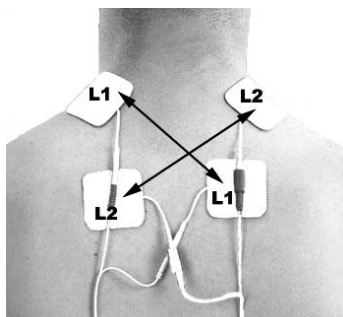


4 Pad Mode

NECK

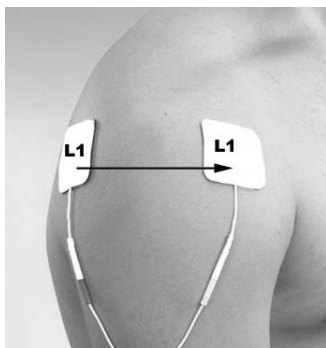


2 Pad Mode

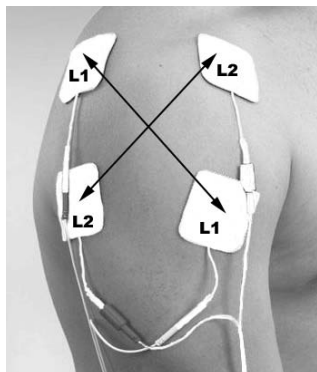


4 Pad Mode

SHOULDER

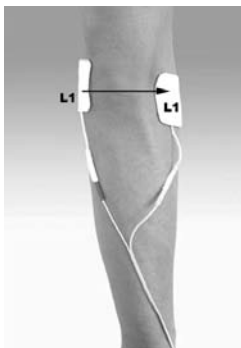


2 Pad Mode

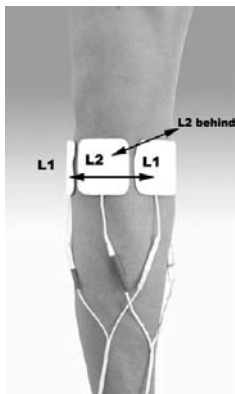


4 Pad Mode

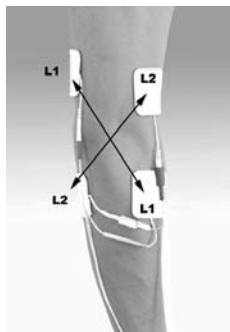
ELBOW



2 Pad Mode

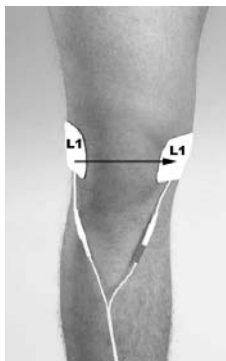


4 Pad (Alternative)

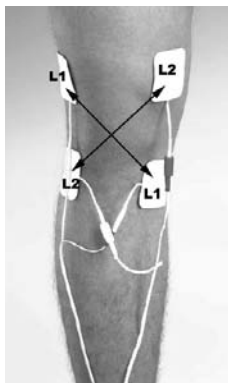


4 Pad Mode

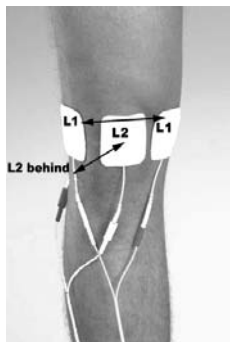
KNEE



2 Pad Mode



4 Pad Mode



4 Pad (Alternative)

SUGGESTED TREATMENT PROTOCOLS

NOTE: The following protocols are derived from previously published literature available on the internet and from clinical advice derived from practical experience.

Unless otherwise indicated, they are not the results of controlled peer reviewed research, and should be treated as general guidance only.

Interferential therapy should not be commenced before the cause of the problem has been properly diagnosed by a medical practitioner.

Spondylitis (AS)

(Reference : B Savage, Interferential therapy)

Application

Relieving the persistent aching of Ankylosing Spondylitis. Interferential therapy must be combined with exercises which encourage extension, performed either before or some hours after the treatment.

Pain is reduced and range of movement improved.

Settings

	1st half of treatment	2nd half of treatment
Program	1	3
Frequency	130 Hz	1-100 Hz
Timer	15 min	15 min
Level	Maximum Comfort	Just below contraction

Treatment Duration:

Treatment is given three times per week for a month, followed by a rest of two or three weeks. Most spondylitic patients require treatment two or three times a year.

Post-Operative Pain, Swelling, Range of Motion of the Knee

(G. J. JARIT ET AL. 18 Clin J Sport Med, Vol. 13, No. 1, 2003)

Application: Chondroplasty / Menisectomy

Aims of Treatment: Reduce pain / Reduce edema / Increase range of motion.

Electrode Position: Across the joint.

Settings

	1st half of treatment	2nd half of treatment
Program	2	4
Frequency	2-10 Hz	80 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

3 times daily for 7-9 weeks.

Back Pain

Application: Non-surgical approach in conjunction with other therapies. Post-op procedures.

Aims of Treatment: Reduce pain and increase blood flow.

Electrode Position: Current should cross so that most of the stimulation is felt in the area of pain.

Settings

	1st half of treatment	2nd half of treatment
Program	4	4
Frequency	70 Hz	10 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

Combined (30) minute treatment three times daily.
Suggested treatment period: one to three months.

Treatment of Recent Injuries - Relief of Pain

Application:

Immediate treatment and relief from pain is important because pain produces spasm. However it must not be forgotten that spasm may be protective and its removal may leave the injured structure open to repetition of the original injury.

Therefore when spasm has been relieved, support must be given with either a bandage or strapping to prevent uncontrolled or excessive range of movement.

During treatment if a single point of pain can be located, a strong dose may be given to anaesthetise the entire area, this may not be possible during the first treatment. Try and use the maximum current level that can be tolerated for three minutes.

Aims of Treatment;

Reduce pain.

Electrode Position:

4 pole/pad method; Two electrodes are placed immediately above and two below so that the currents cross at the site of injury.

Settings

	1st half of treatment	2nd half of treatment
Program	1	4
Frequency	130 Hz	70 Hz
Timer	15 min	15 min
Level	Prickling sensation	Prickling sensation

Treatment Duration:

To produce the most rapid and satisfactory result, start treatment as soon as possible. Daily treatment is given until the pain does not return significantly between treatments, then dropped to alternate days.

After treatment avoid prolonged exercise for at least an hour. The longer the period of rest between treatment and exercise, the longer the freedom from pain will last.

Treatment of Recent Injuries - Reduction of Bruising and Swelling

Application:

Reduction of swelling.

Removal of bruising.

Minimum delay is important because if bruising is left too long they can lead to the formation of adhesions and impairment of function. Since no passive congestion is produced by interferential therapy it is possible to institute treatment immediately after injury without risk of increased bleeding.

If the skin is broken care must be taken to avoid introducing any infection.

Settings

	1st half of treatment	2nd half of treatment
Program	1	3
Frequency	130 Hz	1-100 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort (Small contractions)

Treatment duration:

The colour of the bruise will be seen to change from the first treatment, though deep and extensive bruising or a haematoma may take several weeks to disperse.

Rheumatic Conditions

(Reference: B Savage, Interferential therapy)

Application:

Interferential therapy can be used effectively in the acute and chronic stages of rheumatoid arthritis, osteoarthritis and spondylitis.

Acute phase: (Joints are red, and swollen)

Aims of Treatment:

Relief of pain.

Decrease of inflammation.

Increase of range of movement.

Settings

	1st treatment
Program	1
Frequency	130 Hz
Timer	15 min (gradually increase to 30 minutes)
Level	Maximum comfort (tingling sensation)

Treatment Duration:

The relief may be short lived at first, but treatment is repeated daily and freedom from pain should increase with each treatment.

Chronic Phase

Aims of Treatment:

Relief of pain.

Decrease of inflammation.

Increase of range of movement.

Settings

	1st half of treatment	2nd half of treatment
Program	1	4
Frequency	130 Hz	50 Hz
Timer	15 min	15 min
Level	Comfortable intensity (tingling sensation)	Maximum comfort (no contractions)

Treatment Duration:

The relief may be short lived at first, but treatment is repeated daily and freedom from pain should increase with each treatment.

Osteoarthritis of the Hip Joint

(Reference: B Savage, Interferential therapy)

Aims of Treatment:

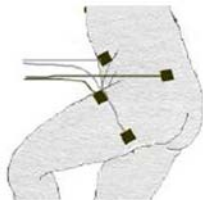
Reduce pain
Increase blood flow

Electrode Position:

4 pole mode (**illustrated**).

Current should cross so that most of the stimulation is felt in the area of pain.

Placement adjustments may be made to allow for surgical site, density of tissues, underlying nerve position, etc.



Settings

	1st half of treatment	2nd half of treatment
Program	1	3
Frequency	130 Hz	1-100 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

Treatment is given two or three times a week for 12 treatments.

Daily treatment is not necessary, but once a week is ineffective.

After 12 treatments the patient should cease treatment for a month to prevent overtiredness.

After treatment the patient should rest for at least 15 minutes, preferably longer, and undertake no severe exercises for at least an hour. The longer the rest period, the longer the relief of pain will last.

If an exercise class is to be undertaken this must precede, not follow, treatment.

Immediately after treatment the patient has less pain and the range of movement is increased.

This may last only a short time at first but is more prolonged after each treatment.

Osteoarthritis of the Knee Joint

Application:

Non-surgical approach in conjunction with other therapies.
Post-op procedures.

Aims of Treatment:

Reduce pain.
Increase blood flow.

Electrode Position:

With the knee joint, some patients find that 2 Pole treatment is more effective than 4 Pole. One pad is placed over the most painful area and the other directly opposite directing the current straight through the joint. The patient usually reports that the current is picking out the painful spot if he does not, the electrode is moved until he does. The increased pain dies away after a few minutes and relief continues after treatment.

Settings

	1st half of treatment	2nd half of treatment
Program	1	3
Frequency	130 Hz	1-100 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

Some patients, even in the chronic stage, find relief from the constant current but when sweep is introduced find their pain increases. In this case a whole treatment, using constant current for 30 minutes should be used. A good result will be obtained but more slowly over time.

Epicondylitis (Tennis & Golfer's Elbow) Ankle Surgery (Post Op), Carpal Tunnel

Application: Post-op procedures.
Non-surgical approach in conjunction with other therapies.

Aims of Treatment: Reduce pain and increase blood flow.

Electrode position:

Current should cross so that most of the stimulation is felt in the area of pain.

Placement adjustments may be made to allow for surgical site, density of tissues, underlying nerve position, etc.

Settings

	1st half of treatment	2nd half of treatment
Program	4	5
Frequency	70 Hz	5 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

Combined (30) minute treatment three times daily.
Suggested treatment period: one to three months.

Ankle Injuries, Plantar Faciitis

Application: Non-surgical approach in conjunction with other therapies. Inversion, eversion and lateral rotation injuries. Sprains/strains and contusions / Tenosynovitis.

Aims of Treatment: Reduce pain and increase blood flow.

Electrode Position:

Current should cross so that most of the stimulation is felt in the area of pain.

Settings

	1st half of treatment	2nd half of treatment
Program	2	4
Frequency	2-10 Hz	80 Hz
Timer	15 min	15 min
Level	Maximum comfort	Maximum comfort

Treatment Duration:

Combined (30) minute treatment three times daily.
Suggested treatment period: one to three months.

SAFETY INFORMATION

Precautions

Interferential stimulators can adversely affect the operation of demand type cardiac pacemakers, and should not be used without consulting your cardiologist.

Patients with known heart disease without a physician's prior evaluation of risk.

Patients suffering epilepsy/seizure disorder. Consult medical practitioner for advice prior to use.

Patients with blood disorders or using blood thinning medication.

Do not stimulate over the eyes or carotid sinus nerves (front of neck).

Do not use interferential stimulators for undiagnosed pain syndromes until the source of the pain has been established by a medical practitioner.

Do not place electrodes in a manner that causes current to flow transcerebrally (through the head).

Do not use if you have implanted surgical stainless steel.

SAFETY INFORMATION CONTINUES

Use of electrodes and accessories

Electrodes used with the device should have a surface area no smaller than 110 mm².

Note: The smaller the size of the electrode used, the greater the intensity of stimulation at the electrode site, which increases the possibility of skin irritation in the area.

Only PMT authorised electrodes and accessories are approved for use with this device.

If you have any questions, please contact your dealer or distributor.

Adverse Reactions

It is possible to have an allergic reaction to tape or gel.

Skin irritation or electrode burn may also be possible if too high a level of stimulation is used.

Warnings

Safety of an interferential stimulator for use during pregnancy has not been established.

Electronic equipment such as ECG monitors and ECG alarms may not operate properly when an interferential stimulator is in use.

Using this device in proximity to any object that produces an electromagnetic current such as a microwave oven or cellular telephone could affect the performance of the device.

The user must keep the device out of the reach of children.

An Interferential stimulator is for external use only.

Do not use while operating machinery or driving.

Turn the stimulator off before applying or removing electrodes.

Isolated cases of skin irritation may occur at the site of electrode placement following long-term application.

IMPORTANT INFORMATION

Guidelines for optimal performance:

Avoid damaging the unit by dropping it or using it roughly.
Do not immerse the unit in any cleaning solution or liquid.
The unit should be wiped clean periodically using a dry cloth.
Replace pads if they are worn or damaged.

Checking the system performance or malfunction:

If your system does not seem to be operating properly;
Check that the lead wire is properly attached to the main unit;
Check whether the electrodes are firmly attached to the pins of the lead wire;
Check that the lead wire is not damaged or broken at any point along the wire;
Check that the batteries are not flat.

Battery safety:

To prevent injury or burns, do not allow metal objects to contact or short circuit the battery terminals.
Do not immerse the battery in water, or dispose of the battery in a fire.

IMPORTANT. Only use the AC adaptor supplied together with the device. Use of other adaptors may compromise safety.

Device Failures

In case of failures during the operation of the unit, please do not attempt to repair damaged devices yourself. In case of further inquiries, always state the exact type of your device (as indicated at the back of the device).

Only the manufacturer and suppliers authorized by the manufacturer are entitled to repair the device.

Return the units to PMT, PO Box 2359 Mansfield BC 4122 Qld.

Servicing

The unit should only be serviced by qualified personnel. The device may require calibration and safety testing on a yearly basis to comply with any special standards or codes of practice.

For technical Information or inquiries on the product, contact PMT.

Limitation of Liability

PMT, suppliers and resellers accept no liability for any damages arising from the use of, or inability to use the product including but not limited to indirect, incidental or consequential damages to the maximum extent permitted by Law.

In any event, PMT entire liability shall not exceed the purchase price of the product, with the sole exception of death or personal injury caused by the negligence of PMT but only to the extent law prohibits the limitation of damages in such cases. The purchaser indemnifies PMT from all claims arising from third parties.

PMT will not be held liable for any loss resulting from incorrect Information provided by its personnel, errors or omissions in this manual and other documentation.

By using the product the purchaser agrees to be bound by these terms, otherwise purchasers should return the product unused within 14 days of receipt requesting a refund.

If the purchaser has used the machine and has been supplied with this manual and other documentation upon purchase, then the purchaser is bound by these terms and no refund will be given.

Date of Manufacture

The first two numbers of the serial number printed on the rear of the unit correspond to the year of manufacture. For example, a unit with serial number FD08 0000 1 was manufactured in 2008.

Guarantee

PMT guarantees the IF 4160, its carry case, lead wires, electrodes and battery are free from defects in workmanship or materials at time of delivery.

CARE AND CLEANING

The case is made of ABS plastic and can be cleaned with isopropyl alcohol.

Stubborn stains and spots can be removed with a cleaning agent.

Do not submerge this device in any liquid or use excessive cleaning liquid when cleaning the surface area.

Clean leads with isopropyl alcohol if transferred between users.

This unit is classified as non-critical with regard to infection risk. However if non-critical items are grossly soiled with blood or other body fluids, follow your local hospital instructions on HIV-related sterilization and disinfection.

Expected battery life is about 2 years of regular use. When the battery ceases to hold its charge, return the unit to your dealer for battery replacement.

Circuit diagrams, parts lists and test instructions are available on request by appropriately qualified technical personnel. However, there are no user-serviceable components

IF4160 TECHNICAL SPECIFICATIONS

Channel	Dual, Isolated Between Channels
Pulse Intensity	Adjustable, 0-33mA (maximum) across a 500ohms load on each channel.
Carrier Frequency	4000Hz (with $\pm 1\%$ tolerance) fixed on Channel 1
Beat Frequency	2-160 Hz Adjustable
Pulse Duration	125 bps Maximum
Waveform	Symmetrical Balanced Sine Wave
Treatment Timer	Continuous, 15, 30, 45, 60 Minutes
Auto Power Off	If the output is continually kept at zero for 5 minutes, the device will then be automatically shut down.
Low Battery Detection	4.0V \pm 0.1V
Power Source	The device uses 4 x 1.2V Rechargeable NiMH batteries, with a 9V mains power pack. (Remarks. The device cannot be operated during recharge).
Display	The LCD panel displays the Program Modes (i.e. Constant, Sweep or Abrupt), Output Intensity, Beat Frequency, Treatment Time, Low-Battery and Treatment Type (2 or 4 Pad Treatment). During recharge of batteries, an animated battery symbol will be displayed on the LCD.
Output Configuration	4-Pole Treatment Conventional Interferential Current Therapy (IFC) with Channel 1 delivering a fixed 4kHz sine wave, while output of Channel 2 can be varied between 4002Hz and 4160Hz. 2-Pole Treatment Pre-modulated Interferential Current Therapy (IFC) in which both Channel 1 and 2 will simultaneously deliver an amplitude-modulated output with beat frequency selectable between 2 and 160bps.
Dimension	120(L) x 70(W) x 34.5(H)
Weight	Approx, 250 grams.
Tolerance	All electrical specifications are subjected with a $\pm 10\%$ tolerance unless other specified.
Environmental Conditions	0C to 35C ambient. 20 to 65% RH.
Operating, Storage & Transport Conditions	0C to 55C ambient. 10 to 90% RH. No special moisture protection

COMPANY DETAILS

Company: Pain Management Technologies PMT

Government Registration Numbers:
ABN 52357115035

Address: P O Box 2359
Mansfield BC
4122 Qld

Tele: 0423 943 378
Fax: 07 3398 8458

Website: www.painmt.com.au

E-mail: info@painmt.com.au

Therapeutic Goods Administration (TGA) Number: 160037

Warranty Information

PMT warrants the IF 4160 from defects in workmanship and material for a term of 1 year from date of invoice. If a fault develops, return the unit to PMT or their agent, together with a copy of your invoice and details of the problem. Proof of purchase must be established.

If on delivery of the unit the carry case, lead wires, electrodes and batteries are found to be defective, return the item to PMT or their agent immediately, together with a copy of your invoice and details of the problem. Please note that these items are replaceable at cost.

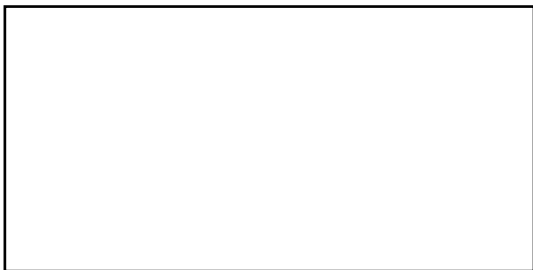
This warranty does not apply to any product which has been damaged due to misuse, or that was repaired or altered other than by the manufacturer.

NOTE: The Warranty is invalid if incorrect batteries have been fitted in the unit or if the unit has been immersed in liquid, maltreated or tampered with. Leads, electrodes and batteries, are not covered by Warranty.

NOTES

LOCAL DEALER OR AGENT DETAILS

AGENTS STAMP

A large, empty rectangular box with a black border, positioned below the 'AGENTS STAMP' label. It is intended for an agent to place their stamp or signature.