



MEFE
MITCHELL ENGINEERING
FOOD EQUIPMENT PTY LTD

Instruction and Maintenance Manual



Animal Immobiliser

Large Stock—CAT 44IL

Small Stock—CAT 44IS

Revision 1

Mitchell Engineering Food Equipment is focused on developing unique solutions for the animal husbandry industry. Our goal is to develop and bring to market, durable and easy to operate units that improve the working environment not only for animals but for the people that continuously work with them.

About

This is the latest model Animal Immobiliser, re-engineered and produced by Mitchell Engineering which now comes as a rechargeable unit. When batteries become flat simply recharge via the USB charging cable. This invaluable tool improves safety and efficiency and reduces stress for any procedure involving the handling of Stock Animals. A secondary function of the unit is Electrical Stimulation on slaughtered animals to improve meat quality.

How Does it Work?

The immobiliser delivers an electronic impulse that interferes with the animal's natural nervous system, causing the animal to become immobile for the duration that the pulse is applied. This immobilisation ensures the safety of both handler and animal, allowing the required procedure to be carried out as efficiently as possible. The effects of the immobiliser are temporary and immediately reversed when removed. The immobiliser is to be used for the sole purpose of immobilisation for short periods of time and is NOT an anaesthetic. When required the immobiliser should be used alongside pain relief measures.. It can be safely used on virtually any animal including Cattle, Horses, Camels, Pigs and Sheep, and is safe to use on pregnant animals. The unit can be used on any age or size of animal and is only restricted by the physical ability to easily inset the probe.

Intended Uses as Immobiliser

Castration	Dehorning	Branding (fire and freeze)	Foot trimming
Nose ringing	Clipping & Grooming	Ear Marking	Difficult Birthing
Mastitis Treatment	Vaccination	Milking	Home Kill
	Slaughter	Bolus Tagging	

Intended Uses as Stimulation

- Stunning
- Bleeding
- Shackling during slaughter
- Lamb and Beef hanging lowers PH improving meat quality
- Euthanasia / emergency slaughter

Benefits

- **Vets** - immobilise animal during any procedure to increase efficiency and safety. Overcome the disadvantages of anaesthesia.
- **Abattoirs** - safely immobilise animal during stunning and shackling and after slaughter.
 - Assisting with bleed and lengthen stun to bleed time
 - During the hanging process lowering meat PH - improving meat quality
- **Stockmen** - reduce handling, stress and accidents.
 - Reduce stress for both animals and operators.
 - Improve efficiency by reducing procedure time.
 - Simple to use - hands-free after placement.
- Waterproof unit is hygienic and safe to use in all environments.

Safety

Please note this tool is **NOT** an anaesthetic measure and should not be used as a pain relief tool. The unit is **NOT** intended for and should never be used on humans. Do not open any parts of the instrument.

Opening the sealed screws next to the dial will cause your warranty for the instrument to expire. If not functioning as intended please return the unit for servicing.

Instruction — CAT 44IL and CAT 44IS

NOTE: The unit should be switched OFF during insertion and removal.

To turn on: Turn dial clockwise until the switch clicks - the green power light will illuminate and the orange light will flash. Continue turning clockwise to increase impulse.

To turn off: Turn dial anti-clockwise until the switch clicks and the green power light turns off.

NOTE: The orange light will flash and the green light will be constant when the unit is on and producing a current. Immobilisation is in progress when the green light is flashing slowly and stimulation is in progress when the green light is double flashing (flashing speed increases—generally just past halfway on the dial).

Cleaning: The unit is waterproof and can be sterilised. Standard cleaning may be done using a damp cloth and mild detergent.

Recharging: To charge the unit, plug the USB port into a power source which supplies 5V 1amp (wall plug, computer, car etc.).

Please note: Do Not turn the unit on whilst charging, this can damage the unit. No light indicator turns on when the unit is charging or fully charged, however charging is still working. Allow the unit to charge overnight (around 10-12 hours) to return to full battery.

NOTE: The aluminium probe on this unit does not unscrew and is completely sealed. **DO NOT** try to disassemble unit.

Operation — Immobilisation

The animal should be standing in a holding pen and/or be able to lean sideways, to reduce instances of vestibular disorders or side steps.

Raise the tail of the animal and insert the immobiliser into the anus. Once the unit has been inserted, THEN switch the unit on and **slowly** increase the impulse gradually while angling the tool, until a reaction in the animal is apparent. True immobilisation is usually difficult to establish, as when immobilised correctly the animal is simply unable to move. There will be very little visual sign when used on a calm and unmoving animal but in such cases it is suggested to increase the power until muscle tensing is noticed.

The first noticeable reaction of the animal is normally a tensing of the muscles in the hind legs, however this ‘tensing’ actually means that immobilisation has been passed and the muscles are now being stimulated. To avoid possible stressing of the animal decrease the power slightly until the muscles relax — immobilisation is now optimum. Adjustment of the probe position with slight increases in power is used to achieve the desired results. Continue adjusting the angle of the tool with **slight** increases/decreases of power.

If the desired result is not being achieved push aside any manure that could be preventing contact, slowly pushing the unit in and out until optimum depth is achieved.

The angle of the tool will also concentrate the effect towards particular parts of the animal.

NOTE: The presence of manure in the rectum and variations in individual anatomy will impact the immobilisation effect. If the animal has no reaction at low power, continue angling the tool to push aside any manure, before **slowly** increasing the power level and carefully observing the reaction.

Switch off the instrument **before** removing the probe—this prevents the animal from being frightened and reacting defensively. Clean and sterilize the probe before and after use and before use on another animals.

Operation — Stimulation

The animal should be hanging upside down after slaughter. Insert the immobiliser into the anus and THEN switch the unit on. Continue to turn the dial past immobilisation (green light flashing slowly) to stimulation (green light double flashing) until you see the muscles contract and tense. For the best results apply during and after bleeding.

Stimulation is beneficial to the slaughter process by tensing the muscles of the animal and subsequently releasing lactic acids. These lactic acids tenderize the meat and also delay Rigor mortis (post-mortem muscle stiffening).

FAQ's

How does it work? The Immobiliser is powered by internal batteries. It is designed to immobilise an animal through the combination of a variable current and probe placement, utilising the animal's natural nervous system to control the muscles and nerves. The Immobiliser probe is placed in the animal's anus and the gentle electrical signal is controlled via the dial. As the electrical current is increased the animal will be increasingly immobilised until the entire animal is calm and completely immobile. The unit is designed so that heart and lung functions are not affected. The unit does NOT require veterinary supervision.

Is the Immobiliser safe for animals? Yes, our Immobiliser is safe for animals. Animals' heart rates have been measured as being completely steady during use, in contrast to stress related peaks experienced without the Immobiliser.

Are there any risks when using on pregnant animals? The Immobiliser has been used and tested on pregnant cows with no negative side effects. The results are far better than anaesthesia as the Immobiliser does not affect blood chemistry and also reduces stress.

How long a session can the Immobiliser be used for? The Immobiliser should only be used for as long as is absolutely necessary, however the effects of electric rectal probe nerve stimulation are temporary and completely reversible.

Is there a standard setting for all animals? No - all animals are different and internal nerve structure varies. Weight, muscle mass and water content are also factors. Probe location also plays a role and varies from animal to animal. For this reason the operator should pay careful attention to the onset of the immobilisation effect when inserting, turning on, and adjusting the impulse of the instrument.

If you find you are not achieving immobilisation, consider dipping the probe in water to add moisture before use, or flushing the passage with water before inserting. (water only! Other moisture methods may further hinder immobilisation.)

Can the device be used to immobilize the front of the animal only? How do you control what part of the animal is to be immobilized? Yes. Probe insertion depth and angle will control specific parts of the animal. Not all animals are alike so small adjustments and careful observation will be required. When inserted the Immobiliser can be angled to effect various parts of the animal, including the front, the sides or the entire animal.

How robust is the product? The Immobiliser is designed and engineered for real world working conditions associated with animal husbandry. The electronic components are sealed and encased in a steel protective shell and the probes outer case is made of aluminium. The battery is safely protected with the electronics inside the steel casing. The unit is waterproof and may be sterilized.

What can I do to assist my final meat quality? This device can be used for both immobilisation, and stimulation. Immobilisation before slaughter, will reduce the stress on the animal, and stimulation after slaughter will greatly assist in maximising eating quality potential.

Every animal has energy contained in its muscles in the form of glycogen, once the animal has passed, this muscle glycogen is converted to lactic acid, which causes the PH to fall. If there is not enough glycogen available in the animal at the time of slaughter, insufficient lactic acid will be produced and the PH will remain high, resulting in dark tough meat.

Once the animal has been slaughtered, you can insert the immobiliser into either the mouth or the rectum of the animal, and turn the dial all the way up to stimulating, you will be able see the animals muscles contract and tense, this stimulation releases lactic acids, allowing for the meats PH to lower. This will result in a deliciously tender meat.