



INTRACEL

INTRACEL ELECTROPORATION
& BIOCHEMISTRY EQUIPMENT
BY **ABBOTSBURY**

TSS20 Programmable Square Wave Electroporator



Used For:

- In Ovo
- In Vitro
- In Vivo (non-Human)
- Pure Research
- Chick Embryo
- Zebra Fish

Designed to give maximum flexibility in developing and repeating low voltage electroporation protocols.

The **TSS20** Ovodyne is a square wave pulse generator with features specifically designed for use as an in ovo electroporator. These include the ability to deliver single or a pre-programmed number of pulses with an accurately defined duration and space between pulses. The microprocessor controlled circuit sampling at 4MHz gives precise control of output pulses. The unit delivers a clean square wave with a voltage setting resolution of 0.1v.

Key Features

- Easy to program, clear display, audible confirmation of each operation including successful completion of pulse train.
- Built in facility to measure impedance of target.
- Simple memory function retains last setting after power off.
- Fast mode gives instant pulse output and does not require reset between operations.
- Remote operation by optional hand-switch or foot-switch.
- Proven technology - 15 years in service.
- Robust, reliable, dedicated to the task.
- Accessories - hand-switch, foot-switch, polarity reverser & electrode holders.
- **NEW** Polarity Reverser
- **NEW** Wireless triggering option.
- **NEW** Protocol database - sign up and access or add your own.

www.intracel.co.uk



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Specification

There are 4 key parameters controlled by the TSS20 Electroporator

- Voltage level
- Number of Pulses
- Pulse Width
- Pulse Interval

These are set directly from the front panel of the instrument using the up and down arrow keys.

Available Accessories:

- Silver, Tungsten & Platinum Electrodes
- Footswitch
- Hand switch
- Annual Calibration

Voltage Range	0.1 - 99.9v
Voltage resolution	0.1v
Voltage Accuracy	0.5% of set value
Number of pulses	1 - 999
Pulse Width	1 - 999ms
Pulse Width Resolution	1ms
Space (Interval between pulses)	10 - 9990ms
Space Resolution	10ms
Resistance Measurement	0 - 10k Ohms
Resistance Accuracy	Better than 2%
Output	4mm Sockets Isolated from mains (3Kv).
Input	IEC Mains connector 120 volts 50/60 Hz Or 230 volts 50/60 Hz External Fuse 1 Amp
Size	80 x 235 x 222mm (HxWxD)
Weight	2.5Kg

The **TSS20** Ovodyne may be used for higher current (1000mA) electroporation when coupled to the **EP21** Current Amplifier.



EP21 Slave Unit

Designed to give maximum flexibility in developing and repeating low voltage electroporation protocols at higher current levels

EP21 Specification

Voltage	1 - 100v	Mimics TSS20
Current	1000mA max	Open Loop
Pulses	1 - 999	Mimics Tss20