

SKENAR DEVICES – A SUMMARY

General Modus Operandi

The basic mode of operation of a typical Skenar device is to deliver a “dosage” of electrical stimulation impulses to the body via an in-built and/or remote electrodes in direct contact with the skin surface. These impulses have been tailored to mimic the electrical discharges of the nervous system, in order to elicit the organism’s response with optimum efficiency and minimum disruption to cell function, depending upon the unique requirements of the presenting pain disease dynamics (or lack of same). The action is aimed at both the “fast” pain blocking A-fibres and the “slow” pain producing and peptide generating C-fibres.

The signal stream, comprising waveform, signal strength (*voltage and current*) and frequency, can be varied in a number of ways, either by pre-section by the operator or automatically by the control circuitry of the device. The “dosage” can be delivered automatically or overridden at the discretion of the operator, with guidance from visual indicators – which may be either numeric or colour-coded LED displays, or both.

The basic signal component is a bipolar pulse, consisting of a negative square-wave followed by a positive saw-tooth, starting and finishing at zero and lasting for a few microseconds. A number of these pulses may be packaged into a discrete burst (*intensity*) which itself may be repeated at a fixed default frequency (*DF*). The individual pulses in these bursts (*intensity more than 1*) can themselves be spaced out (*Z=10*/close together, to *80*/wide apart) to give a concentrated (deep) or diffuse (shallow) penetration, depending on local body density or depth of pain location.

Alternatively, a single pulse (*intensity=1*) may be pre-selected to a pulse repeat rate (*PRP*) over a set frequency range (say *F=15-351Hz*). The signal may also be “modulated” (*Mod=1,2,3,4,5:1*) either by altering the ratio of “time-on” to “time-off” or by changing the pulse waveform by selecting one of a series of set damping factors (*Dmpf = Sk 1,2,3,4,5*). These “modulations” can either be applied individually or together.

There is also the possibility of automatically cycling both the pulse repeat rate (*PRP*) over a set frequency range (*FM – say from 30 to 180Hz over 8 seconds*) and the waveform damping factor (*Dmpf = Var*). These cyclical modes can again be invoked either individually or together.

The purpose of all these variants is to make available to the operator a comprehensive arsenal with which to stimulate both acute and chronic conditions and prevent the body from adapting to the signal before there has been time to generate sufficient neuropeptides (endorphins etc.) to relieve pain and create an enhanced environment for the organism to bring into play its own healing pharmacy to move towards homeostasis.

The power output can be set by the operator to be detectable but comfortable for the patient. It can also be adjusted during application should this be required. The maximum current output is 70mA and the peak voltage is 180v, derived from an internal battery (rechargeable externally or “off the shelf”). A further level of chaos is introduced by a random variation of the pulse amplitude from zero to the chosen comfort *such that no two impulses are the same*). This discourages adaptation in the organism. A feedback mechanism is provided by the constant monitoring of skin impedance, which will change with time and “dosage” delivered. Integration of these values permits calculation and display of rate of change (of current flow) and coefficient of waveform in relation to the starting point.

Skenar devices adhere to the concept that the minimum dosage required to effect change is the most appropriate. This is furthered by emphasis on increase of information rather than energy content, thus minimising the triggering of body retaliation and adaption mechanisms.