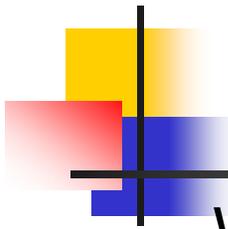


# Electro-Acupuncture

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Instructor: Yuxia Qiu



# Electrical Stimulator

- Waveform
- Frequency
- Intensity
- Specifications for model AWQ-104D
  - Pulse Shape: Biphasic Square Wave
  - Pulse width: 320 uS
  - Pulse rate (frequency): 1-100Hz (1) 10-999Hz (10)
  - Wave form: adjustable, dense-disperse, discontinuous
  - Output current (intensity): 0-18mA (Lo) 0-40mA(Hi)
  - Channel: 4
  - Digital Display
  - Point detector

Intensity controls/Output current:

4 knobs as there are 4 channels. (There are

Note that no frequency goes through the nee

Intensity knobs. After you set the waveform

very gradually and slowly. Couple this with

most of the time you leave this at Lo unles

This enhances the intensity level.

You want the pt to feel the sensation, but

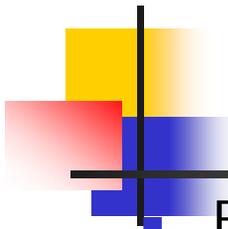
muscle jump before the pt actually senses.

If you want to change the waveform/freq, tu

change, turn intensity back up gradually.

Toggle button on machine

Frequency knobs (2 of



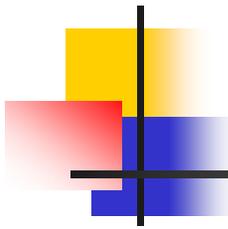
# Manipulation

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- Examination of electrical stimulator before treatment.
- Insert the needle (with metal handle) and get Qi sensation
- Turn all the knobs to zero
- Connect the electrical stimulator with needles.
- Turn power on.
- Adjust the stimulating waveforms and frequency
- Adjust the intensity to appropriate degree.  
Usually between the sensory threshold and pain threshold.
- If intensity “Hi-Lo” switch, or frequency “1-10” switch, or polarity need to be changed, the output intensity (and frequency sometime) should be turned down to zero.
- Retaining time: 15-20min
- Turn all the knobs to zero before turn off the power and take away the conducting wire.

Check back with patient  
have sensation. If not,

Sensation usually stronger at the negative end. Connect the negative end to the primary point. I.e., pain at LI 15 on right side and radiates downward. Connect the negative end at LI 15, connect positive end to ashi point. What if pain is both LI 15 and LI 11? Both will be primary points. Neg end at LI 15 for 15 min then LI 11 on negative for 15 minutes. How do you do this? Turn intensity to zero, flip the Polarity switch for the channel the wire is connected to, turn intensity back up.



## ■ Note:

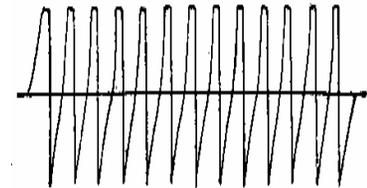
- 2 needles complete a circuit
  - If only one needle been used, connect the other conducting wire with wet gauze and place them on the skin near the needle.
- Connect negative end to primary point, positive end to secondary point
- Not too close between the two poles

Might get cross over connectivity, shortcircuit, too strong stimulation, etc. No standard guide, but minimum span of about 6 cun. Don't go too far either or stim won't be concentrated enough.

# Selection of the waveforms

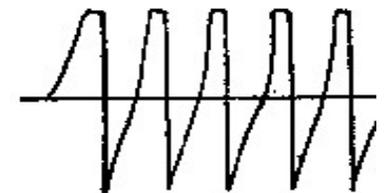
## ■ Dense wave (continuous)

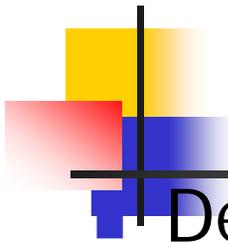
- High frequency: 50-100 pulses per second
- Function and indications:
  - Inhibit sensory nerves and motor nerves
  - Relieve pain, tranquilizing the mind, relieve spasm of the muscles and blood vessels



## ■ Disperse /Sparse wave (continuous)

- Low frequency: 2-5 pulses per second
- Function:  
Induce the contraction of muscles, and enhance the tension of muscle and ligament.
- Indication:  
paralysis, injury of muscle, ligament and joints.





## Dense-disperse/sparse wave

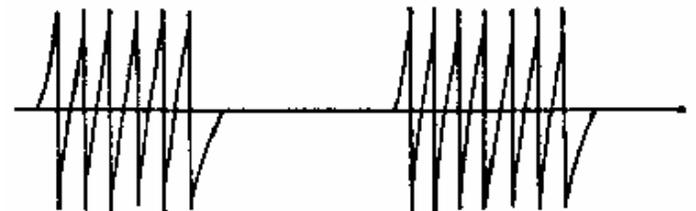


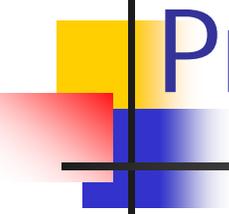
- Disperse wave and dense wave appear alternately, each last about 1.5 s. Prevent the body's adaptation
- Function:  
Relieve pain, improve metabolism, improve blood circulation, improve nourishment of tissues, eliminate inflammation
- Indication:  
Pain, trauma, sprain, arthritis, sciatica, facial paralysis, weakness of muscles, etc

## Discontinuous /Intermittent wave

- A wave appears on and off rhythmically.
- Function: Stimulate the muscles
- Indication: Paralysis.

Interval: 1.5s





# Precautions

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- The stimulation intensity should be turned up carefully and gradually to avoid the intensity increase suddenly and cause accident such as intense muscular contraction, bent needle, broken needle, etc.
- The stimulation intensity should never approach the level of pain. Intensity above minimum detection but below pain. No discomfort! Get good Qi sensation, then connect.
- When apply electro-acupuncture near spine and brain stem, the intensity should be mild.

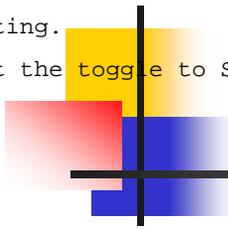
Like Du 16, GB 20, Jiaji points (0.5 cun to side of spine)

1+ connector on the back. Set the toggle in the upper left area to Loc (or APD).

of the stylus tool--metal cylinder.

ts to test electric/mag resistance on the ear. Resistance will give off a clicking sound like a geiger counter. Note the reactive poi  
tting.

et the toggle to Stim or EE. Use the intensity knob 1 to set stimulation level, touch the points and stim for desired time.

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- When applying electro-acupuncture on chest and back area in the region of the heart, do not connect points across two sides of the body to avoid the current passing through the heart.
  - No electro-acupuncture for patients with pacemaker or other electronic implants.
  - Use electro-acupuncture cautiously for patients have heart diseases, seizure, and pregnant women.
  - Use electro-acupuncture cautiously for patients who are aged or weak