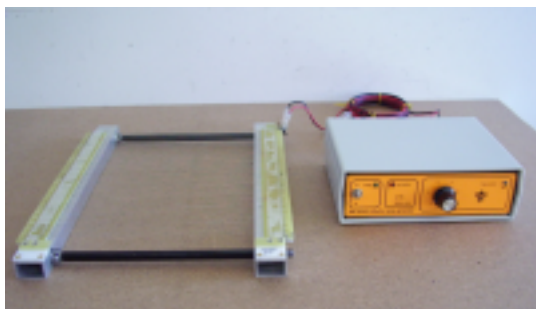


## [BVC-02 – Bee venom collector pulse generator.](#) [1]



[2]

### **The use of the bee venom**

The beneficial effect of the honeybee's (*Apis mellifera*) venom has been long known and proven in cardiovascular diseases, as well as good results have been achieved in the relief of the rheumatic pain. Indeed the latest research shows that a major component of the bee venom, called toxin mellittin is capable to destroy the AIDS virus. This is a major breakthrough in the medical sciences, as the existing products could only inhibit the viral multiplication of the virus. There are so many products on the market which are based on this very important matter, the bee venom. Another use of this matter could be the beauty industry (aesthetic surgery), where good results have been achieved to replace the Botulinum toxin. This could be next big profitable application which can increase the demand for bee venom.

The collection of the bee venom can be an additional income for an apiculture to the existing products like honey, pollen, wax and propolis. A 15-20 days old honey bee's poison sac contains 0,30 mg venom, so the gathering requires hard work, technology and equipment.

The start of the collection varies based on the country and continent. In Hungary the collection can be started in April when the fledging is intense and the temperature exceeds 20°C, and can be continued up to September depending on weather conditions.

### **The collection of the bee venom with BVC-02**

The required equipments are the following:

- Collection frame or collecting grid
- Pulse generator (BVC-02)
- Connecting wires
- 12V battery

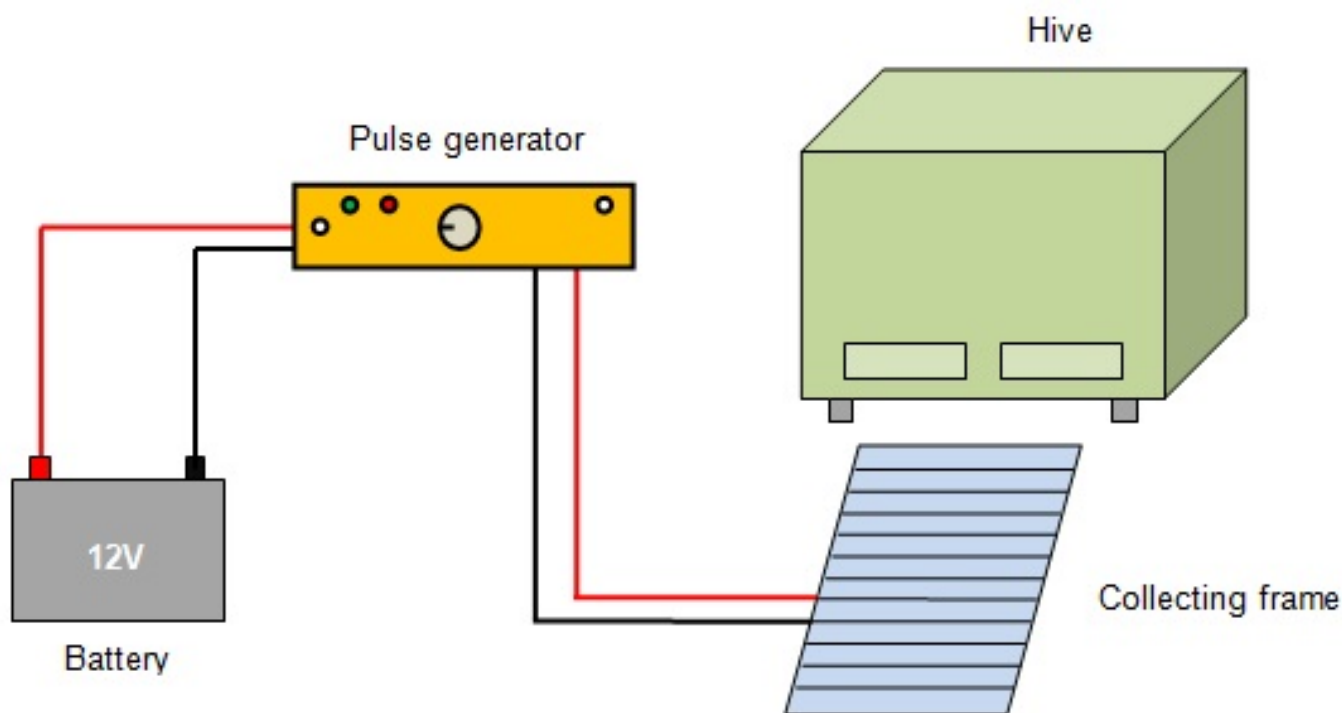


Figure 1. conceptual diagram

The one of the main components of the device is the collecting frame which can be placed inside or outside, at the entrance of the hive. This is nothing else than wire grid, (naked parallel wires) with surrounded insulation. This frame is fed with a special shape, amplitude and precise frequency pulses supplied by the generator. Under the wires there is a glass plate and a thin latex membrane, which is stretched on it's surface.

When the bee dumps on the frame wiring and electrical shock provokes it. The electrical stimulation of the bees will cause an attack against the collecting frame. The string of the bee will passes through the latex membrane and it's venom will be spilled on the glass plate. It is highly important to not tear the string of bee. Due to the flexibility of the latex membrane the string is not torn off also the poison sac remains intact, and the bee won't die. When a bee attacks the frame, then alarm pheromones will be emitted, which will raise a self defense instinct in the other bees. As a result of the alarm pheromones the frame will be filled by new bees.

Our standard collecting frame is made for external collection. Minor modifications can be made on the frame in order to collect with it inside of the hive. (e.g. adding bracket tabs on sides)

The collection period from each bee family is 5 hours including brakes. This is a cyclic operation, where the generator is operating for 30 minutes (switched on) and pause for 60 minutes (switched off). When a 5 hour cycle is completed, then the bee hive must to rest for 2 days. The cyle times and the rest after collection is important to keep the bees in a good, healthy condion. For a greater gathering, the collection have to be carried out on several bee colonies at the same time. Using more generators and frames the collection will be continuous.

The pulse repetition (intensity) of the generator is adjustable via the „Time sec” rotary knob on faceplate.

The pulse generator is able to drive more than one collecting frame at the same time. The generator is able to drive up to 8-10 parallel connected frames with the surface of 600cm<sup>2</sup> each. The collection frames must be connected parallel to the pulse generator output as shown on the figure below:

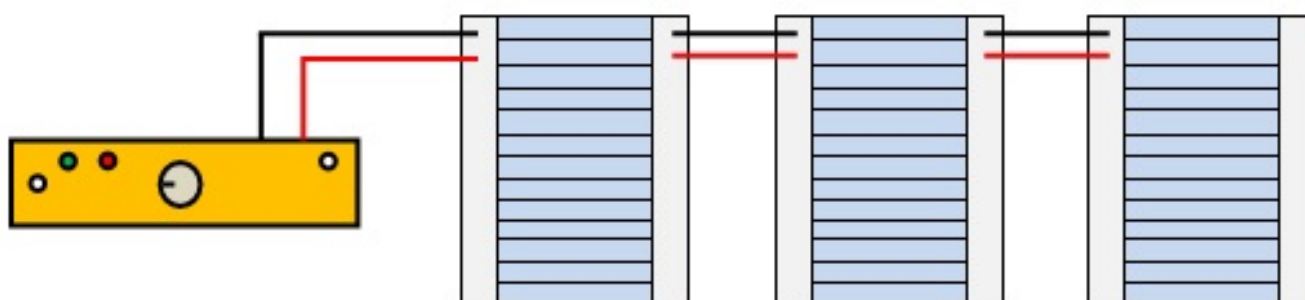


Figure 2. Frames connected parallel to pulse generator

## Pulse Generator Technical Data and feautres:

- Dimensions: 200 x 155 x 60 mm
- Enclosure material: plastic
- Weight: 0,6 Kg
- Operating voltage: 12V direct current
- Power consumption: 120 mA (0,12A)
- Output load: can drive up to 8-10 number of collection frames (dimension dependent).
- Battery status (indicates on low)
- Protection against reverse supply
- Output short circuit protection
- Operating temperature: avoid from direct sunlight, outdoor use between +10 and +40 °C

## Contact and Prices:

BVC-02 pulse generator with one collecting frame: **300 Euro / piece**

The collecting frame does not come with glass plate and latex membrane.

If you order more than one frame or generator, discounts may apply. International sellers and buyers are welcome, feel free to ask for a free quote.

If you have any queries regarding the product do not hesitate to contact us via the e-mail address below:

László Pintyucza

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**proelektronik@outlook.com**

## Pro-Elektronik BT.

### Telefon

+36/20-384-8190 (munkaidőben)

E-mail cím:

**proelektronik@outlook.com**

### Levél- és a TV–Szerviz címe

6237, KECEL, Sugár utca 53.

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