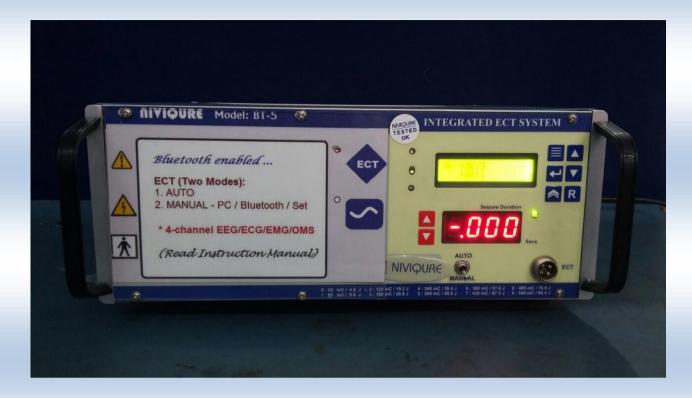
### **NIVIQURE ECT MACHINE (Model BT-5)**



NIVIQUEE ECT system produces pulsed, constant current, bipolar, electronically controlled electrical charge (milli-coulombs) for BEST THERAPEUTIC EFFECT. This ensures JUST ADEQUATE ELECTRICAL DOSAGE required for least side effects like memory impairment, post-ECT confusion, etc. SAFETY of medical attendants and other Electromedical / electronics apparatus in contact with the patient at the time of ECT administration are ensured by thorough isolation and unique design.

The machine can be operated either in 'AUTO' mode (wherein the dosage automatically upgrades in case of sub-shocks) or in 'MANUAL' mode (wherein individual parameters – Pulse amplitude, pulse width, pulse frequency and duration  $\rightarrow$  in other words, electrical charge (in mC / Joules) can be set through Android Smartphone.

#### **NIVIQURE MEDITECH PVT. LTD.**

(ISO 13485:2003 and ISO 2001:2008 certified company)
311/2, 10<sup>th</sup> 'E' Main, 1<sup>st</sup> Block, Jayanagar, Bangalore – 560011, India
Tel: (080) 26567079 E-mail: info@niviqure.com
Website: http://www.niviqure.com

| Specification |                                     |                               |                                 |
|---------------|-------------------------------------|-------------------------------|---------------------------------|
| Output        | Constant current<br>Pulse amplitude | AUTO MODE<br>with Android App | 800 ma<br>4 to 1020 ma          |
|               | Pulse width                         | AUTO MODE<br>with Android App | 1.5 ms<br>0.5 to 4 ms           |
|               | Frequency                           | AUTO MODE<br>with Android App | 125 PPS<br>10 to 200 PPS        |
|               | Duration                            | AUTO MODE<br>with Android App | 0.4 to 3.6 Sec<br>0.1 to 20 Sec |
|               | Charge                              | AUTO MODE<br>with Android App | 60 to 540 mC<br>Variable        |
|               | Pulse waveform                      |                               | Bidirectional                   |

# NIVIQURE ECT Configurator Android App

| Input              | Ac: 230V, + / - 10%, 50 Hz                |  |
|--------------------|---|--|
|                    | Trigger: Remote on<br>hand-held electrode |  |
|                    |   |  |
| Built-in<br>safety | Timer Control                             |  |
|                    | Opto-Isolation from computer              |  |
|                    | Transformer Isolation                     |  |
|                    | Relay Isolation                           |  |
|                    | Audio and visual indication               |  |
|                    | Dimensions                                |  |
| Mechanical         | Weight                                    |  |
|                    | Casing                                    |  |



290 x 250 x 80 mm Approx. 5 Kgs. Plastic (The dimensions and weights are without cables and accessories).

# **NIVIQURE MOBILE ECT CONFIGURATOR**

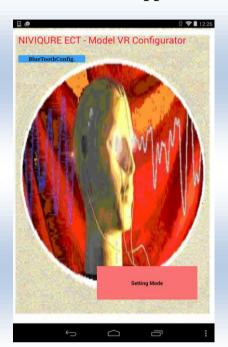
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NIVIQURE Mobile ECT Configurator is a Bluetooth Module and Android based interfacing system for configuring ECT parameters like pulse amplitude, pulse width, pulse frequency and duration to set the ECT dosage automatically on the 'Niviqure ECT machine, Model VR'. The design is fool-proof to ensure that the machine can be operated only by the paired smart phone / Tablet (No multiple control is possible). The Android APP can easily be installed into any Android based smart-phone / Tablet.

#### What does the App do?



- Quick Dosage calculation --- Based on NIMHANS
   Corellation & Regression analysis (Regression coefficient ~
   81%). This is primarily meant for first-time machine
   setting for normal Bi-lateral ECT electrode placement.
   Subsequent dosage setting is supra-threshold or as decided
   based on earlier patient behavior.
- 2. The App also permits to select three quick options of dosage setting:
  - a) 30 mC step;
  - b) 60 mC step;
  - c) 100 mC step;
  - d) Doubline dosage level

(in case of sub-shock: inadequacy of seizure duration (defined as < 20 seconds).

3. Based on Niviqure experience, the Option (a) is sufficient. However, some clinical users prefer option (b) for quicker and fast treatment from clinical use. Option (c) is

recommended mainly for BI-FRONTAL ECT electrode placement. Options (a) and (b) suits BI-TEMPORAL ECT electrode placement administration. Some ECT practitioners internationally, suggest doubling of dosage in case of sub-shock. Option (d) provides this feature.

- 4. Some practitioners prefer to set the individual parameters (Pulse Amplitude, Pulse width, Frequency and Duration) and prefer to define dosage in Joules. This conversion is made available in the App. This choice is for users who have are used to other makes.
- 5. App provides intelligent interface with Niviqure ECT system. On release of 'TREAT' button on the ECT machine, the Seizure duration is automatically shown on the Android phone. A decision is taken if sub-shock occurs (seizure duration is less than 20 seconds on release of TREAT switch) and the dosage automatically upgrades to preset selection. If the seizure duration is more than 20 seconds, the machine is 'locked' conveying that the ECT procedure is satisfactory. If attempts are made to give repeated ECT treatment, the APP locks up after 5 attempts.

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## **Disclaimers:**

#### **Disclaimers**

- This module has not been tested and certified for EMI / EMC Regulatory requirements.
- This module may not be a substitute for regular CE Certified ECG machines used for critical medical diagnostics or interpretation.

# NIVIQURE ...

Electronics for Health.

Data is stored internally in the Android module. You may transfer by email ....

 Bluetooth link may not be efficient and loss free; ensure that your system works satisfactorily at your work place.

# ECT Configurator Android App



This App uses both internal and external Storage space on your Android. It activates Bluetooth connectivity.

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