NIVIQURE

NIVIQURE 4-CHANNEL BIO-FEEDBACK SYSTEM

Model NIVIQURE-B4BF

NIVIQURE-B4BF Model: *Niviqure B4BF Bio-Feedback system is a compact unit designed to record up to 4-channel Bio-electrical potentials.*

(The above image is only representative)

1. *ECG (with 1024 samples per second per channel data acquisition for HRV – Heart Rate Variability studies; for irregular heart beat studies / warnings).*
2. *Pulse (waveform and pulse rate studies)*
3. *Respiration analysis (Chest Belt type)*
4. *Respiration analysis (Nasal type)*
5. *EMG analysis*
6. *EEG analysis*
7. *GSR studies*
8. *Phono-cardiograph analysis*
9. *Blood Pressure studies*
10. *SPO2 studies*
11. *Body temperature studies*

(The 4-channel system will be customised for any 4 parameters)

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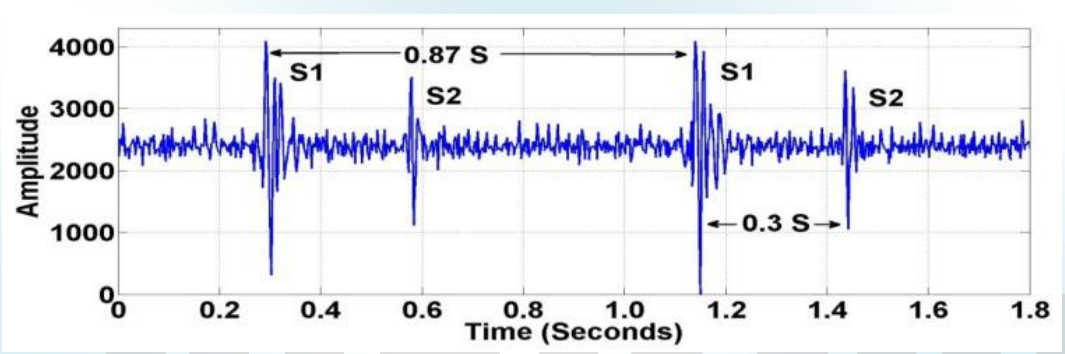
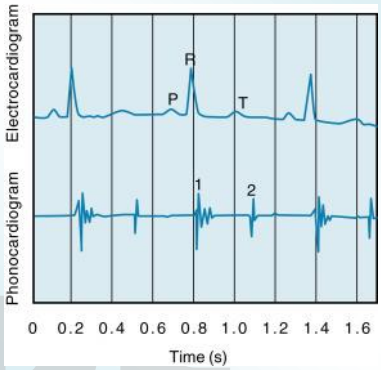
Technical Specification

- Number of channels selectable: 2 or 4 channels.
- Frequency band: 0.5 to 40 Hz.
- Optimal Zoom (Y-axis), Time (X-axis), digital filters provided..
- Sampling rate set to 1000 samples per second per channel.
- The couplers and the required transducers are interface able with the Main Unit.
- Data saving / retrieval is possible in any of the following modes:
  - On-line data display.
  - Off-line data acquisition.
- **Can be used with computer and / or Android Smartphone Tablet / phone.**





(Representative image of phono-cardiograph. For illustration only)

When sampled at normal viewing rate (125 s/s):

- Low pass filter settings: 0.08 to 40 Hz → taking into account Nyquist criteria;
- High pass filter settings: 15 to 40 Hz → taking into account Nyquist criteria;
- Notch filter (50 Hz) → not applicable for this lowest sampling rate.
- **For sampling rate > 125 s/s → High Pass / Low Pass / Notch filter settings are applicable for offline saved data (SD card saved data analysis with PC).**
- Lowest setting of Low Pass Filter is preset by Hardware → 0.05 Hz.
- Higher end value of HP / LP is restricted through sampling rate and DSP algorithm.

- Sampling rate: 1000 samples per second per channel during storage in micro-SD card. 125 samples per second for viewing online screen.
- Micro-SD card storage memory: 2 Gb.

Designed, developed and manufactured in India.

In view of continuous upgrades the actual model may vary from the pictures and specifications shown in this brochure.

An ISO 13485:2016 certified company

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Visualizing Auscultation

The Phonocardiogram is a representation of sounds that contains information to help clinicians to arrive at a better diagnosis. This information can be very useful in diagnosing heart and lung sounds.

Normal Heart Sounds

Normal first heart sound (S1) and second heart sound (S2) are clearly seen. S1 and S2 can be identified by examining the length of systole and diastole. Systolic phase is always shorter than the diastolic phase in any given cardiac cycle. Hence, the S1 is followed by S2 after a shorter systolic phase and S2 is followed by S1 after a relatively longer diastolic phase. Due to the absence of any murmurs, the systolic and diastolic phases of the cardiac cycle are free of energy signals.

Grade II Early Systolic Murmur

Grade III Holosystolic Murmur

Grade II Mid Diastolic Murmur

Extra Sounds, S3:

Extra Sounds, S4:

Normal Lung Sounds:

Wheezing

Prolonged Expiration

(Information from public domain Internet)