PHILIPPINE HEART CENTER
East Avenue, Quezon City

# SUPPLEMENTAL BID BULLETIN No. 048-2024

**SUBJECT** : Revised Technical Specifications of the Project

**PROJECT** : **1 Lot EP Recording System with Stimulator - ITB No. 044.24**

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To ensure that the transactions are comparatively advantageous to the interests of the PHC, the originally pre-issued bidding documents as mentioned above, revised technical specifications is hereby introduced.

- **Attached - Revised Technical Specifications - Annex "A"**

This Supplemental Bid Bulletin is hereby supersedes the original parameters as stated therein. All other requirements previously stated on the bid documents must be complied.

Please be guided accordingly.

**Approved**. Done this 28th day of May 2024, BAC Office, PHC.

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**Annex "A"**

**EQUIPMENT SPECIFICATIONS FOR 1 LOT OF EP RECORDING SYSTEM WITH STIMULATOR**

## 1. GENERAL CONSIDERATIONS

1.1. The system must be compatible with Philippine Heart Center's 3D mapping system (CARTO-3)
1.2. Must be portable and mobile

## 2. SYSTEM ARCHITECTURE

2.1. User-defined procedural lists
2.2. Automated workflow that can change label, scale and measure in a single command
2.3. Documentation/report generation based on Microsoft® Word/ PDF
2.4. Multi-parameter Patient Data Module for dedicated real-time data acquisition
2.5. Ability to save full-disclosure data to the network hard disk and backup external storage
2.6. Built-in interactive reporting with point-and-click data manipulation enabled

## 3. SYSTEM FEATURES

3.1. Compatible and able to integrate with existing PHC systems / electronic medical records
3.2. Seamless compatibility with 3-dimensional mapping system (CARTO 3) and cryoablation
3.3. Full control of individual channels with HOT Keys for functions such as gain and clip
3.4. Signal morphology comparison by displaying saved arrhythmias on the real-time screen
    3.4.1. Capability for pace mapping
3.5. Adjustable automatic measurements
3.6. Multi-leg calipers
3.7. Real-time mapping and trigger
3.8. Provided with activation times analysis
3.9. Capability to annotate and acquire snapshots
3.10. Should have pre-programmed protocols for entire procedures.
3.11. Should have the ability to create and save customized templates for set-ups/protocols
    3.11.1. Different protocol for different type of cases
    3.11.2. Can switch study configuration between users
3.12. Should allow the user to change signal parameters, including gain and sweep speed, by a single key operation as well as with a mouse. Signals should be turned on and off with a simple keystroke or single command.
3.13. Sweep speeds should include 5, 10, 25, 50, 100, 200, 400, or user-entered value.
3.14. User interactive.
3.15. Dual real-time display
3.16. Graphical user. The real-time, review, and event log should be always viewable simultaneously.
3.17. Fiberoptic connections
3.18. Customizable forms and fields.
3.19. Should provide pre-defined formats for study reports and provide a means to customize these report formats. Microsoft Word Reporting.

## 4. DISPLAY / OPERATING / COMPUTER SYSTEM

4.1. Widescreen TFT-LCD monitor, minimum of 24" inches, at least 2 monitors
4.2. Resolution of at least 1920 x 1200
4.3. OS: Windows 10 or later
4.4. CPU: At least 12 CPU Cores
4.5. Chipset: Intel C612 or better
4.6. Memory: Minimum 8 GB
4.7. Graphics Card:
    4.7.1. PCI Express Graphics Slot
    4.7.2. Video Output Connectors
    4.7.3. Display Port,
    4.7.4. Supported Adapter
    4.7.5. Display Port-to-DVI adapters
4.8. Operating Voltage: 220v ± 10%, 60hz

## 5. ACQUISITION MODULE

5.1. Should offer an integrated signal acquisition monitoring including:
    5.1.1. HR,
    5.1.2. SpO2
    5.1.3. Pleth Waveform
    5.1.4. NIBP
    5.1.5. IBP
    5.1.6 TDCO
5.2. Sixty-four (64) True bipolar channel amplifiers should be available
5.3. Support up to 224 Catheter Inputs without losing any other signal such as:
    5.3.1. NIBP
    5.3.2. ECG
5.4. Total recording channel of at least 128 channels.
5.5. Catheter input modules allowing faster configuration, at least 7 cardiac input modules.
5.6. Intracardiac channels of at least 108 channels
5.7. Intracardiac channels with High Pass Filter and Low Pass Filter ranging from:
    5.7.1. High Pass Filter: DC, 0.05Hz, 0.5 Hz, 5.0 Hz, 30 Hz and 100 Hz
    5.7.2. Low Pass Filter: 150 Hz, 500 Hz, 1000 Hz
5.8. 12-lead ECG inputs of:
    5.8.1. High Pass Filter: 0.05Hz, 0.5Hz, 5.0Hz
    5.8.2. Low Pass Filter: 40Hz, 100Hz
    5.8.3. Gain: 50 – 10,000
5.9. Connect to at least 4 stimulator inputs

## 6. AMPLIFIER

6.1. 60 to 120 Unipolar Catheter Input Channels
6.2. Power: 220v + 10%, 60hz
6.3. Patient Connections: ECG, 1 – 4 invasive pressure connections
6.4. Common mode rejection ratio

## 7. CARDIAC STIMULATOR

7.1. Four (4) channel pacing with individual simultaneous control over each channel
7.2. Four (4) ECG sense sources: Ext ECG-1 & 2, and pacing catheter tip 1 & 2
7.3. Capable of generating constant current stimulation pulses with amplitudes of 0.1 mA to 25 mA, duration of 0.5 ms to 10 ms and with maximum voltage of at least 25V
7.4. Beat-by-beat estimated pace impedance
7.5. Pre-set or customizable stimulation protocols
7.6. Threshold testing
7.7. Sinus Node Recovery
7.8. Overdrive Pacing
7.9. Decremental Pacing
7.10. Refractory Study
7.11. Arrhythmia Induction
7.12. Wenckebach
7.13. Burst Pacing
7.14. High frequency stimulation
7.15. At least 6 extrastimuli
7.16. Emergency pacing function

## 8. POWER SUPPLY

8.1. Power input to be 220V AC, 60Hz fitted with PHC electrical outlet.
8.2. Resettable over-current breaker shall be fitted for protection.

## 9. STANDARDS, SAFETY AND TRAINING

9.1. Bidder / Supplier should have ISO 9001:2015 certificate of Quality Management Standard
9.2. Should be:
    9.2.1. FDA
    9.2.2. CE, UL or BIS approved product

9.3. Comprehensive technical training for PHC BIOMED and end-user
9.4. Electrical safety conforms to standards for electrical safety IEC-6060-1 General Requirements (Or Equivalent International standard).
9.5. Comprehensive warranty for 5 years on parts and services with free quarterly PMS for 5 years.

**10. DOCUMENTATION**

10.1. User/Technical/Maintenance manuals to be supplied in English upon delivery.
10.2. Certificate of calibration and inspection
10.3. List of important spare parts, accessories and PMS kit with their part number and costing.
10.4. List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service/technical manual
10.5 Must submit a certificate of Exclusive Distributorship or Authorized Distributorship in the Philippines
10.6 Delivery period from 60 calendar days be extended to 120 calendar days

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