



## PHILIPPINE GENERAL HOSPITAL

The National University Hospital  
University of the Philippines Manila  
Taft Avenue, Manila

PHIC-Accredited Health Care Provider  
ISO 9001:2008 Certified

### PROJECT TERMS OF REFERENCE

**PROJECT: REGULAR MONTHLY PREVENTIVE MAINTENANCE of PGH BOSCH  
PLENA VOICE ALARM & PUBLIC ADDRESS SYSTEM**

**LOCATION: Telephone & Paging Section, Public Assistance & Auxiliary Services, PGH**

#### **INTRODUCTION:**

In 2009, the Philippine General Hospital (PGH) installed a new **Bosch Plena Voice Alarm & Public Address System** that would be operationally integrated to deliver vital intra- and inter-office communication in the hospital. This is located at the PABX Room, Telephone & Paging Section Office, Ground Floor, Administration Building, Philippine General Hospital. Its previous regular monthly preventive maintenance expired this September of 2021. It is very vital for the new system to comply with its requirements with regards to preventive and corrective maintenance to ensure optimum voice alarm and public address system services and to prolong the life span of the system equipment & peripherals.

The specifications of the IP-PBX Equipment are as follows:

#### **I. VOICE ALARM & PUBLIC ADDRESS SYSTEM SPECIFICATION: (With PGH Property No. 09P-2412)**

##### **➤ Bosch Plena Voice Alarm System**

##### **▪ MAIN EQUIPMENT**

- ✓ 1 unit Plena Voice Alarm System Controller
- ✓ 10 units Plena Voice Alarm System Router
- ✓ 6 units Booster Amplifier 240W
- ✓ 4 units Booster Amplifier 480W
- ✓ 1 unit DVD/CD/MP3/Tuner
- ✓ 1-unit 24V Charger DC Power Supply

##### **▪ CONTROL AREA DESKTOP CALL STATION**

- ✓ 1 unit Plena Voice Alarm Call station
- ✓ 10 units Plena Voice Alarm System Call Station Keypad

##### **▪ PAGING STATIONS**

- ✓ 6 units Plena Voice Alarm Call station
- ✓ 60 units Plena Voice Alarm System Call Station Keypad

##### **▪ AUDIO INPUTS**

- ✓ 1 unit Universal Pre-Amp (4 inputs)

##### **▪ SPEAKER and ACCESSORIES**

- ✓ 400 units Ceiling Speaker 6W
- ✓ 400 units Metal Fire Dome
- ✓ 45 units Volume Control 36W

#### **II. SCOPE OF WORK AND RESPONSIBILITIES:**

- A. The **contractor** shall provide qualified technicians with right tools and equipment to conduct the required preventive maintenance on the agreed schedule. The **CONTRACTOR** shall likewise impart to the Communications Equipment Operators the proper approach to operation, maintenance, troubleshooting techniques and overall management. A written copy should be provided to the **PHILIPPINE GENERAL HOSPITAL (PGH)** for reference purposes.

- B. The **CONTRACTOR** agrees to provide Hardware & Software Maintenance for Bosch Plena Voice Alarm & Public Address System monthly or by arrangement with **PGH**, in which the schedule depends on the availability of the system and consist of on-site visits or consultation including the presentation and/or review of typical and encountered problems and recommend solution and/or sources of action. Major repair and general cleaning of equipment shall be done every quarter.
- C. The maintenance service is performed to keep the equipment in or restore the equipment to good remedial maintenance and diagnostic service from the **CONTRACTOR**. Every service made by the **CONTRACTOR** shall be witnessed by the representatives (PABX Technicians of OETS & TPS Section Head &/or Team Leader on duty of PAAS). This service shall be in the form of an on-site visit which shall include the following services:
1. On monthly basis a general inspection of the equipment and its associated/attached ancillaries including a check on the environment conditions prevailing in the equipment room (involving electrical power, air conditioning and humidity control).
  2. Performs a complete systems diagnostic engineering.
  3. Checking and cleaning of the air vents located at the top and bottom of the cabinet for unrestricted air passage.
  4. Report and recommend potential problems or trouble found during the preventive maintenance and/or courses of action for the correction of the situation.
  5. All Preventive Maintenance procedures aside from those specified herein shall comply with the requirements.
  6. Cleaning material which will be used for conducting preventive maintenance should be provided by the **CONTRACTOR**.
- D. Corrective Maintenance Service – In addition to the maintenance service, the **CONTRACTOR** shall perform 24/7 on site support in case of emergency or total system shut down on on-call basis (hereinafter called “Emergency Call Service”) maintenance and repair service to correct or repair any malfunctioning in or failure of the equipment, and its sub-equipment. The **CONTRACTOR** agrees to respond to a request for assistance within **two (2) hours during office hours** and within **four (4) hours after office time** after receiving **Philippine General Hospital (PGH)** request for “Emergency Call Service”. Assured a 24/7 technical support emergency service availability.

**Corrective Maintenance Services are categorized along the following stages:**

1. Fault detection may be determined either by self-monitoring circuitry generating an alarm, a code on the maintenance display, an output on the main controller or by customer complaint or input.
2. The technical assistance is either performed via maintenance phone and/or remote maintenance function; or emergency on-site visit to determine the cause of the problem and resolving it.
3. Fault Diagnosis and Isolation – By using system indicators and diagnostic routines, faults can be traced and isolated to replaceable apparatus. Faults which are not isolated by the system indicators and diagnostic routines are isolated through given test procedures.
4. Fault Repair – consists of replacing the defective apparatus with a known good one. When fault has been cleared, a series of tests is performed to ensure that the system is operating satisfactorily.
5. Provision of necessary and testing materials and consumable components.
6. Follow-up Advisory Orientation and/or Workshop to the affected customer personnel on the problem situation and make recommendation about the courses of action that will prevent or minimize corrective maintenance efforts.

E. Minimum Voice Alarm & Public Address System configuration upon PGH written request of scheduled announcement/s request, speaker relocation and activation.

F. PREVENTIVE MAINTENANCE SERVICE

1. FOR HARDWARE

- i. General cleaning of Bosch Plena Voice Alarm & Public Address System and Peripheral Equipment.
- ii. Monthly inventory of the total number of active and functioning speakers and equipment.
- iii. Checking of the temperature of the Bosch Plena Voice Alarm & Public Address System by ensuring that the cooling fans installed on top of the racks are all working.
- iv. Maintenance cleaning of Bosch Plena Voice Alarm & Public Address System components.
- v. Checking, testing and repair of all installed speakers which are subdivided into 55 zones.
- vi. Check for cross connection per zone.
- vii. Testing and troubleshooting problems of all zones output from panel board.
- viii. Testing and troubleshooting problems of all zones volume controls and output.
- ix. Testing and basic troubleshooting problems of power supply for normal operations.
- x. Testing and troubleshooting problem of all speakers' functionality, visibility and audibility.
- xi. Verify, check and correct labelling of wires of the Voice Alarm & Public Address System panel termination.
- xii. Checking of all zones interconnecting screws in the panel board.
- xiii. Cleaning of speakers reachable by seven (7) feet ladder.
- xiv. Checking, testing and repair of nine (9) "INTERNAL" XLR wiring.
- xv. Tracing the layout cable for damage speaker cable per zone.
- xvi. Continuity testing of four hundred (400) speakers subdivided into fifty-five (55) zones.
- xvii. Checking & troubleshooting problem of all routers switch relays.
- xxviii. Checking & troubleshooting problem of cables for speakers and panel board.
- xix. Checking & troubleshooting problem of all speakers per area using BGM signal.
- xx. Checking & troubleshooting problem of the main System controller connections.
- xxi. Internal testing & troubleshooting problem of equipment, amplifiers and call stations.
- xxii. Checking & troubleshooting problem of all the termination and connection on the equipment area.
- xxiii. Put proper insulation on open wiring.
- xxiv. Check, test & troubleshooting problem of call button.
- xxv. After confirming that all speakers are working per floor using BGM signal, Voice Alarm & Public Address System signal must also be triggered to check the output and verify if all call station assigned button is correct.

2. FOR SOFTWARE

- i. Configuration of software system and integration of newly installed zones to existing Bosch Plena Voice Alarm & Public Address System.
- ii. Checking and testing of the physical condition of main controllers' amplifier closed-bay racks.
- iii. Checking and troubleshooting of Bosch Plena Voice Alarm & Public Address System alarms indicated in the main controller.
- iv. Testing and troubleshooting problems of all zones output for paging and background music.
- v. Adjustment of loudspeaker volume output power level depending on user's preference.

- vi. Reprogram of Bosch Plena Voice Alarm & Public Address System controller of all zones and routers.

### III. OTHER PROVISIONS OF SERVICE AGREEMENT

1. Provide free trouble shooting, assessment and servicing for encountered Bosch Plena Voice Alarm & Public Address System problems.
2. Assured fast reaction time for Bosch Plena Voice Alarm & Public Address System encountered problems.
3. Technical advising to guarantee smooth and reliable voice alarm & public address system operations.
4. Provide and submit to end-user the Preventive Maintenance Service Report and tagging of stickers to equipment every preventive maintenance schedules. All the Preventive & Corrective Maintenance Report must duly acknowledge and signed by the end-user.

### IV. VOICE ALARM & PUBLIC ADDRESS SYSTEM EQUIPMENT MODIFICATION

The **CONTRACTOR** may perform modifications, conversions of updates to ensure operational reliability and safety of the equipment, in cases where in an upgrade or major modification which would require materials, parts or other components involving costs. **CONTRACTOR** shall inform and provide **PGH** the corresponding implications prior to the activity via formal quotations which would be for the **PGH** approval.

### V. SCHEDULE OF MAINTENANCE OR REPAIR SERVICE

The **CONTRACTOR** will provide the maintenance and/or repair services twenty-four hours a day, seven days a week (24x7). The contractor will provide a monthly Preventive Maintenance Report duly signed by the Contractor and attested by the end-user shall be required for every payment.

The **CONTRACTOR** shall submit a complete / detailed preventive maintenance report of every equipment covered by this Agreement. The schedule for preventive maintenance services is hereto attached as Annex "A".

### VI. EMERGENCY CALL SERVICES

The **CONTRACTOR** shall render 24-hours, 7-days a week Emergency Service in case of critical and serious problem relating to the operation of the system availability. The goal of Emergency Service is to always maintain the availability of the system or to recover from system failure as soon as possible.

The hotline of the **CONTRACTOR** shall be always made available at the end-user. A hotline call number will be assigned from Monday to Sunday after 5:00 PM after office service call. A response time shall be within two (2) hours after receipt of telephone calls from the end-user.

### VIII. EFFECTIVITY OF MAINTENANCE SERVICES

Preventive Maintenance of the equipment will begin on the effectivity date of the Maintenance Agreement in accordance with Article II upon signing of (conformity) agreement and release of corresponding Preventive Maintenance Contract.

### IX. CONTRACT DURATION

This contract agreement shall be in effect for a period of one (1) year, commencing on \_\_\_\_\_ to \_\_\_\_\_ and subject to yearly renewal depending upon the services rendered of the existing contractor.

This contract is subject to renewal base on SATISFACTORY SERVICES rendered by the **CONTRACTOR**. A written notice of renewal shall be given at least two months in advance before the expiration of the contract. Prior to the issuances of first invoice related to renewal, both parties shall mutually agree as to any escalation of fees one month before the expiration of the contract and such agreement shall be put into writing.

The **PGH** reserves the right to terminate this contract agreement if the services rendered by the **CONTRACTOR** do not conform to the services indicated in the contract.

Monthly inspection and preventive maintenance services shall be scheduled jointly by the **PGH** and **CONTRACTOR**, and such schedule will form part of this contract.

**X. PREVENTIVE MAINTENANCE FEE**

The annual comprehensive hardware preventive maintenance and repair price/fee shall be Six Hundred Thousand Pesos (Php 600,000.00) inclusive of 12% Value Added Tax for the 1-lot of BOSCH PLENA Voice Alarm and Public Address System.

**PHILIPPINE GENERAL HOSPITAL** shall pay the **CONTRACTOR** in twelve (12) equal monthly instalments.

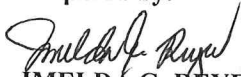
The monthly fee shall be paid within thirty (30) days upon submission of contractor's invoices and service report/s (original copy) after rendering preventive maintenance activities.

**XI. BIDDER QUALIFICATIONS:**

In addition to the standard bidder qualification requirements in R.A. 9184 or the Philippine Government Procurement Reform Law, prospective bidders must have the following:

1. The BIDDER must have installed base and rendering services with same equipment BOSCH PLENA in hospitals and/or government / private companies.
2. The BIDDER must have a spare parts and service equipment available during down time of the system.
3. The BIDDER must have at least 5 years in the industry. Assures customers that the vendors are well experienced and stable.
4. The BIDDER must be at a minimum PhilGEPS Accredited. Assures customers that the vendors comply to the most stringent government requirements and regulatory as a performing bidder and vendor.
5. The BIDDER must be PCAB Licensed. Assures customers that the vendors comply to the Philippine Government Regulatory on contracting disciplines.

Prepared by:

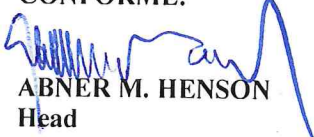


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NOV 09 2022