

Form B03

Scheduled Maintenance Work Order



Quantum Medical Solutions sdn bhd
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Format Ref: - QMS/TSD-022 Rev.01

Work Order No.	PWO366021	Schedule Month	July 2018
Work Order Date	01/07/2018	Completed Date	10/7/2018
Clinic Name	Klinik Kesihatan Sungai Rengit	Clinic Code	JHR047
BE No.	JHR008628	Distict	KOTA TINGGI
BE Category	Electrocardiographs, Multichannel	WO Assigned to	ktg bme3
Ownership	<input checked="" type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input type="checkbox"/> New
BE Condition	<input checked="" type="checkbox"/> Active	<input type="checkbox"/> BER Proposed	
Work Order Type	<input checked="" type="checkbox"/> Preventive Maintenance (PM)	<input type="checkbox"/> Third Party Calibration (TPC)	
	<input type="checkbox"/> Routine Inspection (RI)	<input type="checkbox"/> Statutory Certification (SC)	

Reschedule Date	NA
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BE Third Party Calibration / Statutory Certification Details			
Company Name	N/A	Cal / Cert Date	N/A
Contact Number	N/A	Cal / Cert Expiry Date	N/A
Action Taken			
<input checked="" type="checkbox"/> PM / Job done as per checklist. Unit tested functioning good & ready to use.		Manufacturer: SUZUKEN	
<input type="checkbox"/> Corrective Maintenance / <input type="checkbox"/> Breakdown		Model: KENZ ECG 103	
BE Sticker Availability: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> NA		Serial No: 4210 - 4322	
Remarks:			

Schedule Maintenance Execution Details				
SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
ND	SAFWAN	10/7/2018	14 ⁰⁰	14 ³⁰

Customer Remarks	NA
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Engineer / Technician Signature	Customer Signature
Name	Name
Date	Designation
MOHAMAD SAFWAN BIN ROSLAN	NORHASMIA BINTI BAHRUN
Biomedical Technician	Jururawat Kesihatan U29
Quantum Medical Solution Sdn. Bhd	KK Sungai Rengit
10/7/18	Date
	Seal
	10/7/18

For Internal Use

MUHD RAMADAN TAMAR JAYA
Biomedical Engineer
Technical Service Department

First Verification
QMS Circle Incharge
Quantum Medical Solutions Sdn. Bhd.
Tel: +60 12-396 1697

Final Verification
QMS State Incharge



KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist Electrocardiographs, Multichannel

CHECKLIST NO: CL-063-
000 REV.000

BE CODE: 11-411

PART 1 ASSET DETAILS

WORK ORDER NO ▶ PWO 366021 ASSET NO ▶ JHR008628
MANUFACTURER ▶ SUZUKEN MODEL ▶ KEN2 EC4103
FREQUENCY ▶ 3 MONTHLY () 6 MONTHLY () 12 MONTHLY (✓) PPM HOURS ▶ 1.00

PART 2 SPECIAL PRECAUTION

If there is evidence of body fluid contamination, submit the device for cleaning and decontamination before inspecting it.
Wear appropriate Personnel Protection Equipment (PPE) during work.
Wear grounded electrostatic wristband when handling PCB or electronic components.
Refer to the safety procedure for additional precautions and guidance as per manufacturer guidelines.
Make sure the test equipment used are duly calibrated.

PART 3 TEST APPARATUS

Tick (✓) where appropriate

DESCRIPTION	ASSET NO / SERIAL NO	CALIBRATION DUE ON
<input type="checkbox"/> ELECTRICAL SAFETY ANALYZER	3218071	24/8/2018
<input checked="" type="checkbox"/> ECG SIMULATOR	2 FESA 0186 - 3233028	12/16/18

PART 4 QUALITATIVE TASKS

Tick (✓) where appropriate

	PASS	FAIL	NA		PASS	FAIL	NA
1. Chassis - verify physical integrity, cleanliness and condition	(✓)	()	()	8. Fittings/ Connectors - check all fittings/connectors	(✓)	()	()
2. Mount/ Fasteners - verify physical integrity	(✓)	()	()	9. Controls/ Switches/ Keypad - verify proper operation of controls	(✓)	()	()
3. Casters/Brakes - if mounted, verify physical integrity	(✓)	()	()	10. Indicators/ Displays - verify proper illumination and operation	(✓)	()	()
4. Power Cord - verify proper insulation and integrity	(✓)	()	()	11. Alarm/ Audible Signal - verify operation	(✓)	()	()
5. Strain Relief - verify physical integrity at both ends of line cord	(✓)	()	()	12. Printer - Verify operation and condition	(✓)	()	()
6. Leads/ Electrodes - Verify integrity and condition	(✓)	()	()	13. Keypad - Verify operation and condition	()	()	(✓)
7. Circuit Breaker/ Fuse - verify integrity of external circuit breaker and/or rating of external fuse	(✓)	()	()				

PART 5 PREVENTIVE MAINTENANCE TASKS

Tick (✓) where appropriate

	DONE	NOT DONE **	NA		DONE	NOT DONE **	NA
1. Cleanliness - clean interior and exterior of the equipment	(✓)	()	()	4. Clean/Lubricate	(✓)	()	()
2. Clean leads & electrode	(✓)	()	()	a) Thermal head			
3. Battery - check and replace if necessary	(✓)	()	()	b) Paper empty sensor			
				c) Paper mark sensor			

Notes:

*For all parts, NA defined as NOT APPLICABLE

**If you have ticked 'NOT DONE', then input relevant remarks

***Choose whichever applicable. Please indicate in Part 8 for



KEMENTERIAN KESIHATAN MALAYSIA
MEET Planned Preventive Maintenance Checklist
Electrocardiographs, Multichannel
BE CODE 11-411

CHECKLIST NO: CL-063-000
REV.000

WORK ORDER NO ▶

PW0366021

PART 7 ELECTRICAL SAFETY TEST

ELECTRICAL SAFETY TEST, (attach report)
Tick (✓) where appropriate

Standard use:

☒ IEC 60601

☐ IEC 61010

☐ IEC 62353

Result:
☒ PASS

☐ FAIL

☐ NA

PART 8 NOTES

Reference:

☐ CORRECTIVE MAINTENANCE REQUIRED

☒ FUNCTIONING

☐ NOT FUNCTIONING

WORK ORDER NO ▶

MP

NEXT PPM DATE ▶

July 2014

PPM has been performed in accordance to the checklist and the equipment is functioning to the intended purpose.

COMPLETED BY:

MOHAMAD SAFWAN BIN ROSLAN

Biomedical Technician

DATE:

10/7/14
Quantum Medical Solution Sdn. Bhd

Test Setup

Operator ID :
 Calibration Tech : MOHANA
 Calibration Date : 08/24/2018
 Firmware Version : 2.08.01
 Serial Number : 3218071
 Date & Time : 07/10/2018 & 02:15pm
 JOB Name :

DUT Information

Equipment Number : JHR008628
 Serial Number :
 Manufacturer :
 Model :
 Location : KK SG RENGIT
 Other :

Template Information

Template Name : ECG
 Pause after Power ON NO
 Power ON delay: 2
 Test Speed: NORMAL
 Halt on Test Failure: YES
 Include Time: YES
 Insulation Resistance \ 500V
 Multi Enclosure Test : NO

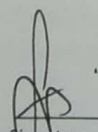
Standard : IEC60601-1-2nd Ed
 Pause before Power O NO
 Power OFF delay: 0
 Test Mode: AUTO
 Multi PE Test: NO
 Multi Resstore: WORST/LAST
 Reverse Polarity: YES
 Classification: I

PLC Configuration-Applied part setup

AP Name AP Type AP Num

ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.002 Ohn	0.2 -		P
Insulation Resistance				P
Mains to Protective Earth	999 MOhr -	-		P
Mains to Non-Earth Accessible Conductive Pa	999 MOhr -	-		P
Mains Voltage				P
Live to Neutral	235.4 V -	-		P
Neutral to Earth	4.4 V -	-		P
Live to Earth	235.8 V -	-		P
Equipment Current	0.0 A -	-		P
Earth Leakage Current				P
Normal Condition	336 uA-OF	500 -		P
Open Neutral	512 uA-OF	1000 -		P
Open Neutral- Reversed Mains	513 uA-OF	1000 -		P
Normal Condition- Reversed Mains	334 uA-OF	500 -		P
Enclosure Leakage Current				P
Normal Condition	0.2 uA-OP	100 -		P
Open Earth	335 uA-OF	500 -		P
Open Neutral	0.2 uA-OP	500 -		P
Open Neutral- Reversed Mains	0.2 uA-OP	500 -		P
Normal Condition- Reversed Mains	0.2 uA-OP	100 -		P
Open Earth- Reversed Mains	334 uA-OF	500 -		P


 Signature