

Form B03

Scheduled Maintenance Work Order



Quantum Medical Solutions sdn bhd
transcending boundaries, transforming life

Format Ref: - QMS/TSD-022 Rev.01

Work Order No.	PWO371511	Schedule Month	June 2018
Work Order Date	01/06/2018	Completed Date	24-06-2018
Clinic Name	Klinik Kesihatan Pesta / Kampung Ken.	Clinic Code	JHR015
BE No.	JHNELM004	Distict	BATU PAHAT
BE Category	Electrocardiographs, Multichannel	WO Assigned to	MUHD SHAZRUL
Ownership	<input type="checkbox"/> Existing Equipment	<input type="checkbox"/> Purchase	<input checked="" 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	
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BE Third Party Calibration / Statutory Certification Details

Company Name	NA	Cal / Cert Date	NA
Contact Number		Cal / Cert Expiry Date	

Action Taken

☒ PM / RI job done as per checklist. Unit tested functioning good & ready to use.

Manufacturer :

☐ Corrective Maintenance / ☐ Breakdown

Modal :

BE Sticker Availability : ☐ Yes / ☒ NA

Serial No :

Remarks:

Schedule Maintenance Execution Details

SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
	MUHD SHAZRUL	24-06-2018	13:05	13:05

Customer Remarks

Engineer / Technician Signature Name Date 24/06/2018 QUANTUM MEDICAL SOLUTION MUHAMMAD SHAZRUL BIN MOHD SAMSURI BIOMEDICAL TECHNICIAN	Customer Signature Name Designation Date Seal NUR HAZIRAH NEEZY ABDULLAH (No. Pendaftaran Penuh: 54451) Jururawat U29 KK Kampung Kenangan Date On 24/6/18
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For Internal Use

RAZILA MISKAN

First Verification
 QMS Circle Incharge

Biomedical Engineer (Circle In-Charge)
 Quantum Medical Solutions Sdn. Bhd.

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 37511 ASSET NO ▶ JHPFLM 004
MANUFACTURER ▶ EDAN MODEL ▶ SE-301
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 checked="" type="checkbox"/> ELECTRICAL SAFETY ANALYZER	3226906	9/10/2018
<input checked="" type="checkbox"/> ECG SIMULATOR (EST)	3226906	9/10/2018

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



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WORK ORDER NO ►

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

NA

Reference:

☐ CORRECTIVE MAINTENANCE REQUIRED

☒ FUNCTIONING

☐ NOT FUNCTIONING

WORK ORDER NO ►

NA

NEXT PPM DATE ►

JUN 19

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

COMPLETED BY: MUHD SHAZRUL

DATE: 24-06-2018

Test Setup

Operator ID :
 Calibration Tech : DINA
 Calibration Date : 9/10/2017
 Firmware Version : 2.08.01
 Serial Number : 3226906
 Date & Time : 06/24/2018 & 12:10
 JOB Name :

DUT Information

Equipment Number : JHNELM004
 Serial Number :
 Manufacturer : EDAN
 Model : SE-301
 Location : KK BATU PAHAT
 Other :

Template Information

Template Name : JHNELM004
 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

ECG B 10

ESA615 Test Results

Test Name	Value	High Limits	Low Limits	Status
Protective Earth Resistance	0.19 Ohm	0.2 -		P
Insulation Resistance				P
Mains to Protective Earth	999 MOhn -	-		P
Mains to Non-Earth Accessible Conductive Par	999 MOhn -	-		P
Mains to Applied Parts	999 MOhn -	-		P
Applied Parts to Non-Earth Accessible Conduct	999 MOhn -	-		P
Mains Voltage				P
Live to Neutral	247.0 V -	-		P
Neutral to Earth	1.3 V -	-		P
Live to Earth	246.7 V -	-		P
Equipment Current	0.0 A -	-		P
Earth Leakage Current				P
Normal Condition	357 uA-OP	500 -		P
Open Neutral	561 uA-OP	1000 -		P

	Open Neutral- Reversed Mains	565 uA-OP	1000 -	P
	Normal Condition- Reversed Mains	357 uA-OP	500 -	P
Enclosure	Leakage Current			P
	Normal Condition	0.1 uA-OPI	100 -	P
	Open Earth	356 uA-OP	500 -	P
	Open Neutral	0.1 uA-OPI	500 -	P
	Open Neutral- Reversed Mains	0.2 uA-OPI	500 -	P
	Normal Condition- Reversed Mains	0.1 uA-OPI	100 -	P
	Open Earth- Reversed Mains	356 uA-OP	500 -	P
Patient	Leakage Current			P
	Normal Condition			P
	ECG	0.4 uA-OPI	100 -	P
	Open Earth			P
	ECG	0.5 uA-OPI	500 -	P
	Open Neutral			P
	ECG	0.6 uA-OPI	500 -	P
	Open Neutral- Reversed Mains			P
	ECG	0.6 uA-OPI	500 -	P
	Normal Condition- Reversed Mains			P
	ECG	0.4 uA-OPI	100 -	P
	Open Earth- Reversed Mains			P
	ECG	0.5 uA-OPI	500 -	P


Signature

