

## 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.	PWO365815	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.	JHNELM041	Distict	KOTA TINGGI
BE Category	Electrocardiographs, Multichannel	WO Assigned to	ktgbme3
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	Mo
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<b>BE Third Party Calibration / Statutory Certification Details</b>			
Company Name	NA	Cal / Cert Date	NA
Contact Number	NA	Cal / Cert Expiry Date	NA
<b>Action Taken</b>		Manufacturer: EDAN	
<input checked="" type="checkbox"/> PM / RT job done as per checklist. Unit tested functioning good & ready to use.		Model: SE-301	
<input type="checkbox"/> Corrective Maintenance / <input type="checkbox"/> Breakdown		Serial No:	
BE Sticker Availability: <input checked="" type="checkbox"/> Yes / <input type="checkbox"/> NA			
Remarks:			

<b>Schedule Maintenance Execution Details</b>				
SI No	QMS Engineer / Technician Name	Date	Start Time	End Time
Mo	SAFWAN	10/7/2018	14 <sup>00</sup>	14 <sup>30</sup>

Customer Remarks	Mo
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Engineer / Technician Signature	Customer Signature
Name	Name
Date	Designation
	Date
	Seal

MOHAMAD SAFWAN BIN ROSLAN  
Biomedical Technician  
Quantum Medical Solution Sdn. Bhd  
10/7/18

NORHASMAH BINTI BAHRUN  
Jururawat Kesihatan U29  
KK Sungai Rengit  
10/7/18

For Internal Use

MUHD RAMADHAN KAMAR JAYA  
Biomedical Engineer  
Technical Service Department  
Quantum Medical Solutions Sdn. Bhd.  
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First Verification

QMS Circle Incharge

Final Verification

QMS State Incharge



# KEMENTERIAN KESIHATAN MALAYSIA

## MEET Planned Preventive Maintenance Checklist Electrocardiographs, Multichannel

BE CODE : 11-411

CHECKLIST NO: CL-063-  
000 REV.000

### PART 1 ASSET DETAILS

WORK ORDER NO ▶ PW0365815  
ASSET NO ▶ JHNELM041  
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	TEESA 0010 / 3218071	24/8/18
<input checked="" type="checkbox"/> ECG SIMULATOR	TEESA 0186 / 3233028	12/10/18

### 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 3 for

WORK ORDER NO ▶ PA0365815

## PART 6 QUANTITATIVE TASKS

Tick (✓) where appropriate

[illegible]





# KEMENTERIAN KESIHATAN MALAYSIA

MEET Planned Preventive Maintenance Checklist  
Electrocardiographs, Multichannel

BE CODE 11-411

CHECKLIST NO: CL-063-000  
REV.000

WORK ORDER NO ▶ PW0365815

## 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 ▶

MD

NEXT PPM DATE ▶

July 2019

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

COMPLETED BY:

DATE: 16/7/19

MOHAMAD SAFWAN BIN ROSLAN

Biomedical Technician

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 & 02:05pm  
 JOB Name :

## DUT Information

Equipment Number : JHNELM041  
 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

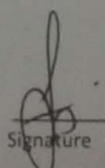
Standard : IEC60601-1-2nd Ed  
 Pause before Power O NO  
 Power OFF delay: 0  
 Test Mode: AUTO  
 Multi PE Test: NO  
 Multi Resstore: WORST/LAST  
 Reverse Polarity: YES  
 Classification: I

## 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