



Preventive report

maintenance

TRINITY®



TRINITY®

CONTACT



Please contact your
KOELIS referent



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FOR 6720_V1.0_EN

1 AIM OF THE DOCUMENT

This report* is to be filled throughout the preventive maintenance visit. It should be filled and signed by KOELIS or by the authorised person by KOELIS who performs the preventive maintenance visit.

*The §4 has to be filled and a reproduction should be given to the customer and the KOELIS referent (see Note 2 p.10).

2 INFORMATIONS

2.1 NECESSARY MATERIAL

Material	
Phantom ATS 539	
Phantom CIRS 053L	
Allen key set European ISO	Used for: <ul style="list-style-type: none">- The screen screws (key 3 mm)- The cables holder screws (key 4 mm)- The probe holder (key 2.5 mm)
Allen key set American UNC	Used for: <ul style="list-style-type: none">- The screen holder arm, to adjust the weight compensation of the screen holder arm and the push bracket (key 1/8)- The mouse holder arm (key 1/8)
I6720: Preventive maintenance instruction TRINITY®	
Metal rod (diameter: 2 mm)	
USB key	

2.2 INFORMATION

The following information are valid for all tests:

- In case of a KO test, perform the adequate corrective or preventive action or note the action to do. All possible preventive/corrective are:
 - o Order from KOELIS a new piece or new label
 - o Fix the screw
 - o Adjust the hardness of the rotation of a component
 - o Adjust the weight compensation of the screen holder arm
 - o Plug and tighten cables
 - o Put cables into the cables holder
 - o Adjust the cables tension
 - o Send back a component to KOELIS for reconditioning
 - o Adjust the setting of the screen (colours)

To do before the visit:

- Table tests should be duplicate according to the number of installed probes (§4.4, p.8).
- All the system and probes should be available for the visit.
- Have the reference picture for the ultrasound probe in printed version or numerical version.
- Check that a biomedical engineer from the customer site is available for the visit.

3 DESCRIPTION OF TRINITY SYSTEM

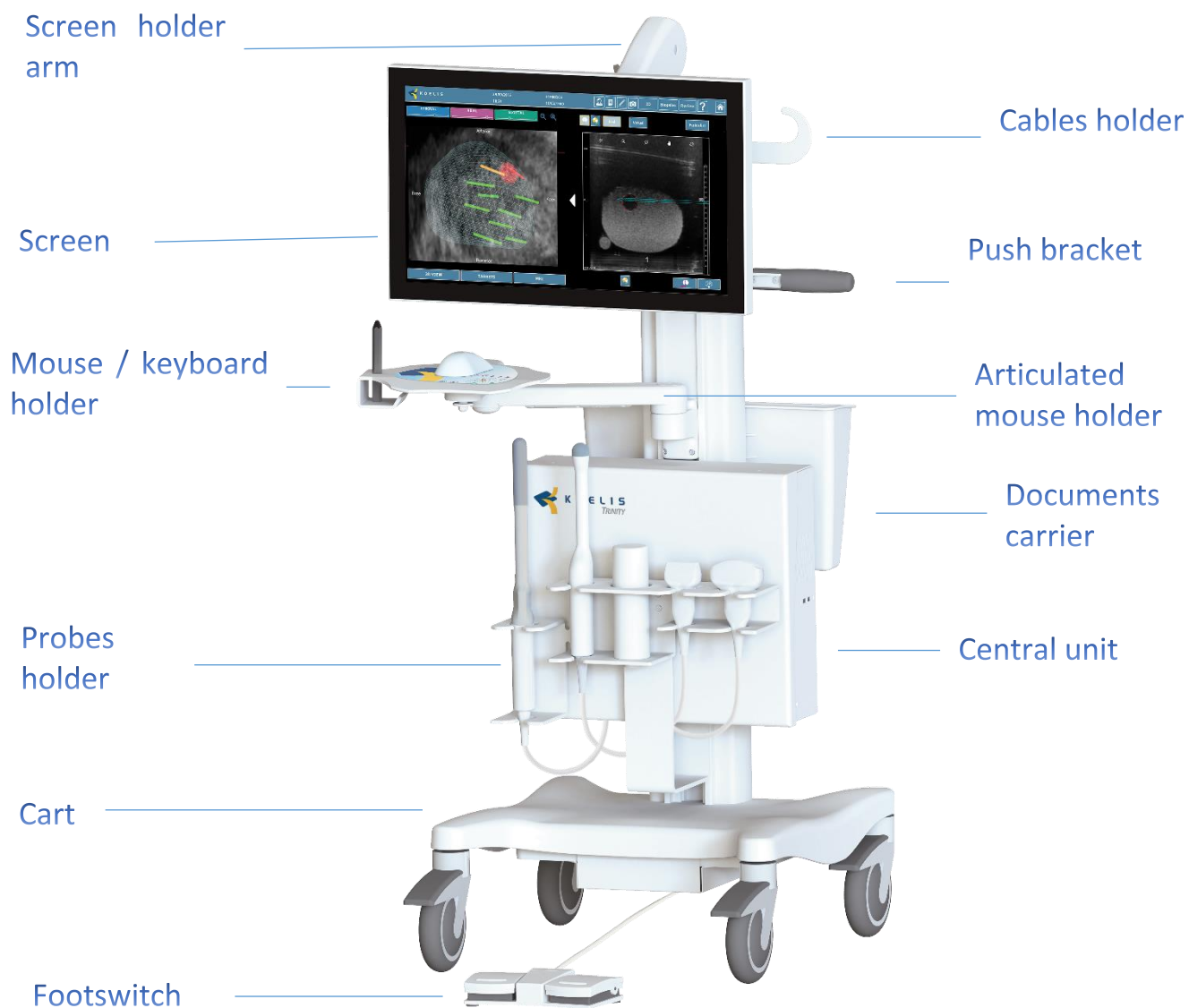


Figure 1: TRINITY® (Ref: KURO-3000-2) system description

4 REPORT OF PREVENTIVE MAINTENANCE'S VISIT

General information

Intervention site	
Department	
Establishment referent	Name: Mail: Phone number:
KOELIS referent	
Date of the installation	
Date	

System information

Trinity®	SN:
Software	Version:
Mouse	SN:
Footswitch	SN:
Keyboard	SN:

Ultrasound probe (linear, convex, end-fire, side-fire)

Probe	Reference:	SN:
Probe	Reference:	SN:
Probe	Reference:	SN:
Probe	Reference:	SN:
Probe	Reference:	SN:
Probe	Reference:	SN:
Probe	Reference:	SN:

Other

Phantom ATS 539	SN:
Phantom CIRS 053L	SN:

4.1 CART

4.1.1 Base and wheels	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: No locking up, wheels follow the movement of the cart.				
Test 4: The cart is stopped, good state of the brakes.				

4.1.2 Mouse holder arm	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: Good rotation and stability of the mouse holder arm.				
Test 4: The cable is in the cable hider.				

4.1.3 Screen holder arm	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: Good holding of the screen and easy positioning. No discomfort from cables.				
Test 3: Fluent movement of the screen and no discomfort from cables.				
Test 4: The screen doesn't go up or down without manual intervention.				
Test 5: The ground cable is present, connected and in good shape. There is no cables' stress.				

4.1.4 Mouse / keyboard holder	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: Good rotation of the mouse / keyboard holder.				
Test 3: The 3 screws are tightened.				

4.1.5 Probes holder	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The label is present and readable.				
Test 3: The 4 screws are tightened.				

4.1.6 Cables holder	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The 2 screws are tightened.				

4.1.7 Push bracket	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The 2 screws are tightened.				

4.1.8 Documents carrier	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				

Test 3: Good visual shape of the white plastic piece (no scratches, deformations, damages).				
Test 4: The documents carrier is clipped.				

4.2 ACCESSORY

4.2.1 Footswitch	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: The footswitch is operational.				

4.3 COMPUTING COMPONENT

4.3.1 Mouse	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The label is present and readable.				
Test 3: Left and right click and central bouton of the mouse wheel work.				
Test 4: Up and down button of the mouse wheel work.				

4.3.2 Keyboard	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 2: The label is present and readable.				
Test 3: The keyboard works.				

4.3.3 Screen and stylus	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages).				
Test 1 bis: The end of the stylus is not broken				
Test 2: The label is present and readable.				
Test 3: The picture is good (colours, shape). No dead pixel which affects the quality of the displayed picture. If necessary, reset the colours screen parameters: R:100; V:95; B:100.				
Test 4: The screen function (e.g.: luminosity, contrast) are accessible.				
Test 5: The touch function works.				

4.3.4 Computer	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the component (no scratches, deformations, damages). All cables are plugged and the connectors show no degradation.				
Test 2: The labels are present and readable.				
Test 3: The label is present and shows no degradation.				
Test 4: All cables are plugged and well fixed.				
Test 5: The partition C is filled at 25%. The partition D is not filled over 1/5 per year from the installation (e.g.: 3/5 if the system is installed for 3 years).				<u>Partition C:</u> Space available: Total: <u>Partition D:</u> Space available: Total:

Include the report of the system information in appendix of the intervention report.

4.3.5 Connectivity	OK	KO	NA	Comments / Preventive or curative action
Test 1: The image is imported; the system is connected to the PACS.				See note 1 below:
Test 2: The patient data are imported on TRINITY®; the system is connected to the WORKLIST.				See note 1 below


Note 1: In case of a KO test:


- Check the Ethernet cable works
- From Maintenance account/Connectivity, test the ping and the check of the PACS, the Q/R and the WORKLIST of TRINITY®.
- Check the IP, the AETITLE and the PORT of the PACS, the Q/R and the WORKLIST filled out on TRINITY® are corrects.
- Contact the IT service of the site to check that:
 - o The Ethernet socket is working
 - o No fire-wall or antivirus forbid the access for TRINITY®
 - o They correctly typed the AE Title, the IP and the port of the TRINITY® device in their configuration managers
 - o TRINITY® is authorized to communicate with the site network

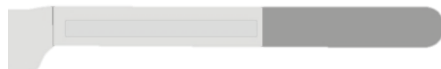
If the test is still KO, please contact your KOELIS referent.


4.4 ULTRASOUND PROBE

Include the taken pictures in appendix of the intervention report.

4.4.1 Linear probe (SN :.....)	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the probe, the connector and the pins (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: There is no dead-element or the number of dead-elements don't disturb the use of the probe.				Nb of dead-elements: Position: 
Test 4: The acquired picture has the same quality than the reference picture: Visibility of the edge and structure, no acoustical shadowing (homogeneous grey level along the probe), homogeneous contrast, resolution of the picture homogeneous.				

4.4.2 Convex probe (SN :.....)	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the probe, the connector and the pins (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: There is no dead-element or the number of dead-elements don't disturb the use of the probe.				Nb of dead-elements: Position: 
Test 4: The acquired picture has the same quality than the reference picture: Visibility of the edge and structure, no acoustical shadowing (homogeneous grey level along the probe), homogeneous contrast, resolution of the picture homogeneous.				

4.4.3 Side-fire probe (SN :.....)	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the probe, the connector and the pins (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: There is no dead-element or the number of dead-elements don't disturb the use of the probe.				Nb of dead-elements: Position: 
Test 4: The acquired picture has the same quality than the reference picture: Visibility of the edge and structure, no acoustical shadowing (homogeneous grey level along the probe), homogeneous contrast, resolution of the picture homogeneous.				
Test 5: Visually, the motor varies the ultrasound transducer in both extreme positions. The vibrations are homogeneous, no jolt is felt during the panorama.				
Test 6: The needle is not inclined on the picture. The motor is in zero position.				

4.4.4 End-fire probe (SN :.....)	OK	KO	NA	Comments / Preventive or curative action
Test 1: Good visual shape of the probe, the connector and the pins (no scratches, deformations, damages).				
Test 2: The labels are present and readable.				
Test 3: There is no dead-element or the number of dead-elements don't disturb the use of the probe.6				Nb dead-elements: Position: 
Test 4: The acquired picture has the same quality than the reference picture: Visibility of the edge and structure, no acoustical shadowing (homogeneous grey level along the probe), homogeneous contrast, resolution of the picture homogeneous.				
Test 5: Visually, the motor varies the ultrasound transducer in both extreme positions. The vibrations are homogeneous, no jolt is felt during the panorama.				
Test 6: The needle is not inclined on the picture. The motor is in zero position.				
Test 7: The fire line is calibrated.				

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Place:

On:/...../.....

KOELIS or authorized person by KOELIS:

Referring person of the establishment:

Note 2: After signature, reproductions, including appendix (ultrasound images, system information report), are given to the customer and the KOELIS referent.
Acquired videos for the test 3 of §4.4 should be given to the KOELIS referent.