QUALITY CONTROL CHECKLIST

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MODEL NF-2000 NAVIGATION UNITS

NaviFloor Robotics, Inc.

Document ID: QC-NF2000-REV4

Effective Date: January 15, 2024

1. PURPOSE AND SCOPE

1. This Quality Control Checklist ("Checklist") establishes the mandato

2. This Checklist applies to all Units manufactured at NaviFloor faciliti

2. HARDWARE INSPECTION

1. Primary Components Verification

-

[ ] LiDAR sensor assembly (Model LS-420X) properly mounted

-

[ ] Depth-sensing array calibrated to 0.1mm tolerance

-

[ ] Terrain mapping processor (TMP-2000) installed with thermal paste

-

[ ] All mounting screws torqued to 2.5 Nm 0.2 Nm

-

[ ] Shock absorption dampeners properly seated

2. Connection Verification

-

[ ] Primary power connections secured and strain-relieved

-

[ ] Data interface cables properly seated and locked

-

[ ] Ground connections measuring <0.1 resistance

-

[ ] Shielding integrity verified via EMI test

-

[ ] Waterproof connectors properly sealed (IP65 rating)

3. FIRMWARE AND SOFTWARE VERIFICATION

1. Firmware Installation

[ ] NaviCore(TM) firmware version 4.2.1 or later installed

-

[ ] Boot sequence completed without errors

-

[ ] Cryptographic signatures verified

-

[ ] Configuration parameters set to factory defaults

-

[ ] System logs clear of critical errors

2. Calibration Procedures

-

[ ] Surface detection calibration completed

-

[ ] Inertial measurement unit (IMU) calibrated

-

[ ] LiDAR alignment verified within 0.5 tolerance

-

[ ] Depth sensor array calibrated across full range

-

[ ] Multi-surface recognition patterns validated

4. FUNCTIONAL TESTING

1. Power Systems

-

[ ] Input voltage tolerance test (18-36V DC)

-

[ ] Power consumption within spec (<45W nominal)

[ ] Thermal performance test (2 hours at full load)

-

[ ] Brown-out protection verification

-

[ ] Emergency shutdown functionality

2. Navigation Performance

-

[ ] Static accuracy test (5mm @ 20m range)

-

[ ] Dynamic tracking test (up to 2m/s velocity)

-

[ ] Multi-surface transition detection

-

[ ] Obstacle avoidance verification

-

[ ] Path planning algorithm validation

5. ENVIRONMENTAL TESTING

1. Environmental Chamber Testing

-

[ ] Temperature cycle (0 C to 50 C)

-

[ ] Humidity exposure (95% RH non-condensing)

-

[ ] Vibration test (5-500Hz sweep)

-

[ ] EMI/EMC compliance verification

[ ] Dust ingress protection validation

6. QUALITY ASSURANCE DOCUMENTATION

1. Required Documentation

-

[ ] Serial number recorded: _____

-

[ ] Manufacturing date: _____

-

[ ] Test operator ID: _____

-

[ ] Calibration certificate generated

-

[ ] Test results uploaded to QMS database

2. Non-Conformance Recording

-

[ ] Any deviations documented

-

[ ] Corrective actions noted

-

[ ] Engineering review if required

-

[ ] Disposition decision recorded

-

[ ] Final acceptance status

7. CERTIFICATION AND RELEASE

1. The undersigned certify that all tests and inspections have been pe

2. This Unit is:

-

[ ] APPROVED for release

-

[ ] REJECTED (see NCR #_____)

-

[ ] PENDING engineering review

Quality Control Inspector:

Name: _

Signature: _

Date: _

Engineering Approval (if required):

Name: _

Signature: _

Date: _

8. LEGAL NOTICES

1. This document contains confidential and proprietary information of

2. All testing procedures and specifications referenced herein are prot

3. Compliance with this checklist does not supersede any applicable r

Document Control:

Version: 4.0

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Approved By: Dr. Elena Kovacs, Chief Research Officer

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