



DEPARTMENT OF THE NAVY
NAVAL SURFACE WARFARE CENTER
CARDEROCK DIVISION

NAVAL SHIP SYSTEMS
ENGINEERING STATION
PHILADELPHIA, PA 19112-5083

IN REPLY REFER TO

9072
Ser 954/1115

OCT 18 2010

RuggedCom, Incorporated
300 Applewood Cres., Unit #1
Concord, Ontario,
Canada, L4K 5C7
Attn: Roger Moore, Yuri Luskind

Subj: SHOCK TEST APPROVAL FOR RUGGEDBACKBONE WITH
RUGGEDENCLOSURE MODEL NUMBER MX5000RE

- Ref: (a) NAVSEAINST 9072.1A, Shock Hardening of Surface Ships;
dated November 21, 1989
(b) MIL-S-901D; Military Specification, Shock Tests, H.I. (High Impact)
Shipboard Machinery, Equipment, and Systems; Requirements for;
dated March 17, 1989
(c) Data Item Description (DID) Number DI-ENVR-80708; Data Item
Description, Shock Test Report, dated November 21, 1988
(d) Operational Requirement Confirmation Email from Code 965 ISEA,
Ryan Brenner, dated May 4, 2010
(e) NSWCCD Code 954 Test Report Number NSWCCD-954-STR-019
"Lightweight Shock Test Report for the RuggedBackbone with
RuggedEnclosure Model MX5000RE", dated March 10, 2010

Encl: (1) NSWCCD Code 669 Memorandum 9072 Serial number 669/148.D3526, dated
August 25, 2010, providing shock approval with Shock Test Acceptance Information
Forms (Figure 19 of MIL-S-901D)

1. This letter is submitted in accordance with references (a) through (c) as notification of
successful shock test qualification and approval of the RuggedBackbone with RuggedEnclosure.
The Principal Unit (PU) is listed below with more details in enclosure (1), MIL-S-901D Shock
Approval Memorandum, by NSWCCD Code 669.

Equipment:	RuggedBackbone with RuggedEnclosure
Manufacturer:	RuggedCom
Model Number:	MX5000RE
Drawing Number:	17-87-0001-001 Revision A01

2. The Code 965 In-Service Engineering Agent (ISEA) has approved the Grade A requirements
for this test as per reference (d), stating that the test was run in accordance with the actual
shipboard operational application.

3. Reference (e) provides the technical information required by references (a) through
(c) for providing shock test qualification requirements to the subject principal unit.

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4. The principal unit listed above is shock approved for Grade-A, Class I, Hull and Deck Mounted , Type A, unrestricted orientation for installation aboard AD, AE, AFS, AGF, AO, AOE, AOR, AR, ARS, AS, ASR, ATF, CG, CV, CVN, DD, DDG, FFG, LCC, LHA, LHD, LPD, LPH, LSD, LST, MCM, MHC, ATS class ships. The shock test acceptance information has been entered into the Navy Shock Data Base (NSDB) and is forwarded herein as enclosure (1).

5. The appropriate shock qualification note, referencing this letter, shall be added to the equipment drawing in accordance with reference (b). This note shall also state "Any change to this drawing or lower tier drawing requires review and approval to maintain shock certification".

6. NSWCCD Code 954 technical point of contact in this matter is Drew Napolitan, Code 954 and can be contacted at (215) 897-8429 or Email: drew.napolitan@navy.mil

R. PHILIPP
By direction

Copy to:
RuggedCom (Alex Zeng)
NSWCCD codes 954 (D. Napolitan, L. Nguyen, T. Borawski), 965 (R. Brenner),
669 (R. Young), 669 (DAATS), 669 (NSDB)

Writer/Typist: T. Borawski, 954, X8871, 12 Oct 10

9072
Ser 669/148.D3526

AUG 25 2010

MEMORANDUM

From: 669 (R. Young)
To: 965 (R. Brenner)

Subj: AD, AE, AFS, AGF, AO, AOE, AOR, AR, ARS, AS, ASR, ATF, CG, CV, CVN,
DD, DDG, FFG, LCC, LHA, LHD, LPD, LPH, LSD, LST, MCM, MHC, ATS
CLASS SHIPS: RECOMMENDATION OF SHOCK QUALIFICATION
APPROVAL FOR THE RUGGEDBACKBONE WITH RUGGEDENCLOSURE
MODEL NUMBER MX5000RE

- Ref: (a) NSWCCD Code 954 (T. Borawski) Memorandum Request for MIL-S-901D Shock Qualification Approval of the RuggedBackbone with RuggedEnclosure Model MX5000RE of 14 May 10
(b) NSWCCD Code 954 Test Report # NSWCCD-954-STR-019 "Light Weight Shock Test Report for the RuggedBackbone with RuggedEnclosure Model MX5000RE" of 10 Mar 2010
(c) MIL-S-901D; Military Specification, Shock Tests, H.I. (High Impact) Shipboard Machinery, Equipment, and Systems; Requirements For
(d) DID No. DI-ENVR-80708; Data Item Description, Shock Test Report
(e) NAVSEAINST 9072.1A, Shock Hardening of Surface Ships
(f) NSWCCD Code 965 ((R. Brenner) Phoncon ISEA Shock Qualification Approval Concurrence of 29 Jul 10

Encl: (1) Shock Test Acceptance Information Sheet (Fig. 19) – RuggedBackbone with RuggedEnclosure Model MX5000RE (NSDB File/Form No.: 31607/34507)

1. Reference (a) submitted reference (b) to the Naval Surface Warfare Center, Carderock Division (NSWCCD) Code 669 for review and requested shock qualification in accordance with reference (c) for the following equipment:.

Equipment: RuggedBackbone with RuggedEnclosure
Manufacturer: RuggedCom
Model: MX5000RE
Drawing #: 17-87-0001-001 Rev A01

ENCLOSURE(1)

Subj: AD, AE, AFS, AGF, AO, AOE, AOR, AR, ARS, AS, ASR, ATF, CG, CV, CVN, DD, DDG, FFG, LCC, LHA, LHD, LPD, LPH, LSD, LST, MCM, MHC, ATS CLASS SHIPS: RECOMMENDATION OF SHOCK QUALIFICATION APPROVAL FOR THE RUGGEDBACKBONE WITH RUGGEDENCLOSURE MODEL NUMBER MX5000RE

2. NSWCCD Code 669 and the PARM (NSWCCD Code 965) have reviewed reference (b) in accordance with references (c), (d), and (e). In accordance with reference (e), and documented in reference (f), NSWCCD Code 669 and NSWCCD Code 965 (PARM) recommend approval of the equipment identified above in paragraph 1 for Grade A, Class I, Hull and Deck mounted, Type A, unrestricted orientation for installation on AD, AE, AFS, AGF, AO, AOE, AOR, AR, ARS, AS, ASR, ATF, CG, CV, CVN, DD, DDG, FFG, LCC, LHA, LHD, LPD, LPH, LSD, LST, MCM, MHC, ATS Class ships only. Enclosure (1) provides additional information concerning this shock qualification approval.

3. NSWCCD Code 965 ACTION:

- a. The appropriate shock qualification note shall be added to the above drawings in accordance with paragraph 3.3.1.1 of reference (c). This note shall also state: "Any change to this drawing or lower tier drawing requires review and approval to maintain shock qualification."
- b. In accordance with enclosures (3) and (4) of reference (e), the PARM or individual having signature authority shall issue a letter documenting the Navy's acceptance or rejection for shock qualification to the contractor or agency that submitted the shock qualification approval request.
- c. The PARM or individual having signature authority is responsible for the entry of the principal unit into Navy Shock Data Base (NSDB). NSWCCD Code 669 has initiated this entry into NSDB, and requests the PARM or individual having signature authority review and complete all omitted information in the NSDB file, sign the Shock Test Acceptance Form and attach the completed form to the final approval letter, per reference (e). The NSDB can be accessed through <https://nsdb.navsses.navy.mil>. Ensure that a copy of the final approval letter is furnished to NSWCCD Code 669 for inclusion in the NSDB that documents your acceptance.

Subj: AD, AE, AFS, AGF, AO, AOE, AOR, AR, ARS, AS, ASR, ATF, CG, CV, CVN,
DD, DDG, FFG, LCC, LHA, LHD, LPD, LPH, LSD, LST, MCM, MHC, ATS
CLASS SHIPS: RECOMMENDATION OF SHOCK QUALIFICATION
APPROVAL FOR THE RUGGEDBACKBONE WITH RUGGEDENCLOSURE
MODEL NUMBER MX5000RE

4. The technical point of contact for shock related issues is NSWCCD Code 669 Rep
Robert Young, (215) 897-7187 or DNS 443-7187 or email robert.a.young3@navy.mil.
The NSWCCD Code 965 technical point of contact for equipment operation/functionality
related issues is Ryan Brenner, 215-897-8747.

Domenic A. Urzillo

D. Urzillo
By Direction

NAVSEAINST 9072.1A 24 Nov 89

File: 31607

Form: 34507

SHOCK TEST ACCEPTANCE INFORMATION

The Item identified below has met the requirements of MIL-S-901, based upon:

- Shock test of the item identified below
- Previous Shock test of an item similar to the item identified below
- Previous Shock test of an item identical to the item identified below

Item Nomenclature: Enclosure

Description: RuggedBackbone with RuggedEnclosure

CAGE/Manufacturer: 58XK6/RuggedCom

MPN:

Model: MX5000RE

Size/Capacity: 22.5"H x 29.38"W x 19.06"D

Drawing Number: 17-87-0001-001

Revision and Date: A01

Military Specification:

Ship: Multiple Ship Classes

Service:

Contract Number:

Shock Test Facility: NSWCCD SSES Code 954

Report Number: NSWCCD-954-STR-019

Previous Approval Reference:

Test Category: Lightweight Medium Weight Heavyweight

Equipment Class: I II III I/II

Shock Test Type: A B C

Shock Grade: A B

Mounting Location: Deck Hull Shell Wetted Surface

Shipboard Mounting Plane represented during shock test:

Base Front/Face Back Top Combination Other

Mounting orientation of item relative to ship's fore-and-aft axis (for medium weight and heavyweight test items only):
Unrestricted

Remarks/Approval Limitations:

Ryan Brenner NSWCCD Code 965

Authorized Signature	Approval Activity	Date
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Bruce Castelli NSWCCD Code 669

DAA Signature	DAA Activity	Date
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