Procedure I – Functional Shock

i Objective

Designed to represent a shock condition typical of that in operational use. The following conditions are taken directly from Table 516.4 Mil-STD-810E.

ii Test Conditions

Min Peak Value (g's)	Duration (mS)	Qty	Conditions
40G	11	Min 2 samples	To be operational. Repeat 3 times for each axis.

iii Analysis of Results

- Perform Visual and Functional checks before testing sample.
- Scope plots of Transient shock using appropriate accelerometer.
- Unit should not glitch or fail during or after each test.
- No mechanical failure / functional non-conformance of product.

iv Results

Product Code – NV322GDM
Serial Number – 8052700038

- Unit was taken directly from production line. Unit was compliant with production standards.
- Unit was tested to above procedure, refer to Appendix A for results
- No mechanical damage or functional failure was observed

Product Code – NV322GDM
Serial Number – 8052700037

- Unit was taken directly from production line. Unit was compliant with production standards.
- Unit was tested to above procedure, refer to Appendix A for results
- No mechanical damage or functional failure was observed

TEST RESULT - PASS

Procedure IV – Transit Drop

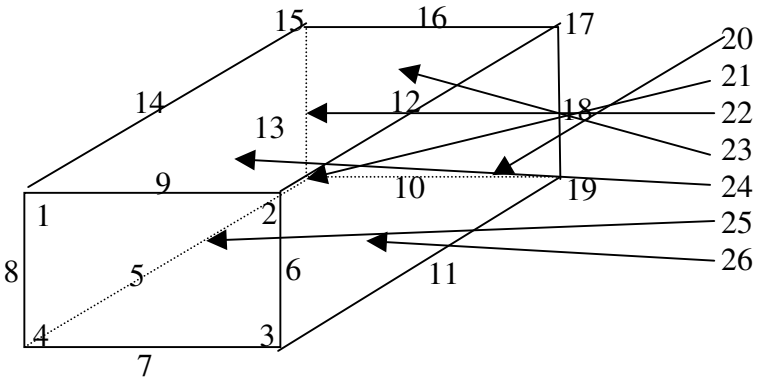
v Objective

Designed to determine the structural and functional integrity of the unit in its packaged condition. The packaged condition in this case is a single unit packed in an outer cardboard box filled with foam squiggles.

vi Test Conditions

Using table 516.4 – II, the product should be dropped according to the following:

- Drop height = 122cm
- Total Drops = 26.
- Sample size = 5 max.
- Each corner/edge/ face to be tested = 26.



Use the following table and the diagram above to complete the drop sequence.

Sample No	Serial Number	Surface No
1	8052700036	1
1	8052700036	3
1	8052700036	26
1	8052700036	13
1	8052700036	23
1	8052700036	2
1	8052700036	4
1	8052700036	10
1	8052700036	24
2	8052700035	16
2	8052700035	9
2	8052700035	7
2	8052700035	18
2	8052700035	22
2	8052700035	15
2	8052700035	20

2	8052700035	14
3	8052700034	12
3	8052700034	11
3	8052700034	25
3	8052700034	17
3	8052700034	19
3	8052700034	21
3	8052700034	5
3	8052700034	6
3	8052700034	8

vii Analysis of Results

- Conduct visual and functional tests on each sample prior start.
- Document impact results (photos) for each sample.
- No mechanical failure / functional non-conformance of product.

viii Results

Sample 1
Product Code – NV322GDM
Serial Number – 8052700036

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

Sample 2
Product Code – NV322GDM
Serial Number – 8052700035

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

Sample 1
Product Code – NV322GDM
Serial Number – 8052700034

- Unit was taken directly from production line. Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

TEST RESULT - PASS

Procedure VI – Bench Handling

ix Objective

Designed to test the ability of the product to withstand typical bench manual handling during operational / servicing use.

x Test Conditions

- Use a test bench with a thickness of at least 4.25cm
- With unit switched off.
- With the unit sat on its normal side (i.e. with label facing upwards).
- Lift one end of the unit to 100mm above surface of the bench.
- Repeat drop 4 times in total.

xi Analysis of Results

- Conduct visual and functional tests on each sample prior start.
- No mechanical failure / functional non-conformance of product.
- Document the results.

xii Results

Product Code - NV322GDM
Serial Number - 8052700034

- Unit was taken directly from production line (post transit drop Procedure IV). Unit was compliant with production standards.
- No visible damage to UUT box.
- No visible damage or audible noise of assembly
- Unit PASSED final test

TEST RESULT - PASS

APPENDIX A – PROCEDURE I RESULTS

CLIENT: Lambda UK
Kingsley Avenue
Ilfracombe
Devon
EX34 8ES

CERTIFICATE NUMBER SJ200006-001 Issue 1

PROJECT NUMBER SJ200006/DHG

CLIENT'S ORDER NUMBER 967850, dated 3 October 2005

INCOMING RELEASE NOTE Not released. Delivered on Advice Note 12562

DATE OF RECEIPT 10 October 2005

TEST ITEM(S) Power Supply Units:

NUMBER OF ITEMS TESTED

Type No.	Product Code	Serial Nos.	
NV-350	NV322GDM	8052700037	8052700038
2-off NV-175, 2-off			

TEST SPECIFICATION / ISSUE MIL-STD-810E

DATE OF TEST 28 October 2005

TEST(S) APPLIED Shock Test (Functional) to MIL-STD-810E, Method 516.4 Procedure I under the following conditions:

Shock type:	Terminal peak saw-tooth
Shock test levels:	Peak value: 40g
Duration:	11ms
Number of shocks:	3 in each direction of each of the three major orthogonal axes (18 in total)
Mounting:	Units attached to a sub base-plate using built-in bolt locations
Function tests:	The output voltages and currents for each unit to be checked on completion of shocks in each test axis

RESULT(S) OF TEST No damage to any of the test samples was observed. See Continuation Page for tabulated results of test measurements

Approved by ..... Date . . . 17th November 2005

R Harris
Authorised Signatory

TEST HOUSE CERTIFICATE SJ200006-001 Issue 1 CONTINUATION PAGE

RESULT(S) OF TEST

NV 322GDM S/N 8052700038	CH1		CH2		CH3	
	V	A	V	A	V	A
Pre-Test	23.36	8	14.21	13	14.77	5
Post 6 Shocks	23.31	8	14.26	13	14.76	5
Post 12 Shocks	23.34	8	14.21	13	14.78	5
Post 18 Shocks	23.38	8	14.22	13	14.78	5

NV 322GDM S/N 8052700037	CH1		CH2		CH3	
	V	A	V	A	V	A
Pre-Test	23.99	8	15.1	13	15.12	5
Post 6 Shocks	23.42	8	14.21	13	14.75	5
Post 12 Shocks	23.45	8	14.17	13	14.76	5
Post 18 Shocks	23.44	8	14.21	13	14.76	5