ISOBE5600 Calibration Kit

Specifications

ISOBE5600 CALIBRATION KIT

Scope

The ISOBE5600 calibration kit enables the user to perform a full calibration or just a verification of the ISOBE5600 isolated probe system.

The ISOBE5600 calibration kit consists of the calibration/verification software, a manual, USB-IEEE converter, a fixture kit and a ceramic trimmer.

Using this calibration kit, the proper calibration equipment and calibration fixtures enable easy, fast and on-site self calibration of the ISOBE5600 isolated probe system. This reduces downtime significantly by preventing shipping the system and saves costs by doing internal calibration rather than paying for external service.

The calibration software not only calibrates and tests published specs, but also automatically or semi automatically adjusts the system back to the best accuracy possible.

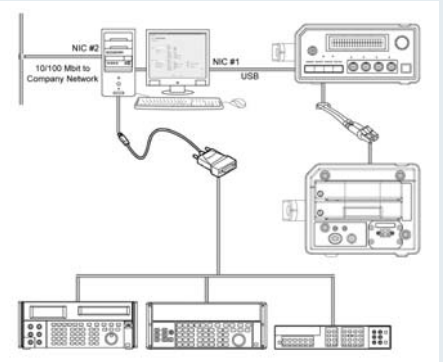
For users who only want to verify the system still meets specs but don't want to change anything, the Verification software does the job and is included in the package as well.

Thus, the investment in ISOBE5600 is secured and the best possible specs are always handy when needed.

Calibration equipment needed

Beyond the calibration kit itself, the following calibration equipment is needed in order to perform a calibration or verification:

- Fluke 5700 A (LF-Generator)
- Fluke 5820 A (HF-Generator)
- HP 3458 A (Multi-Meter)



Calibration system setup as described in the manual showing all the needed calibration equipment and how to wire it up.

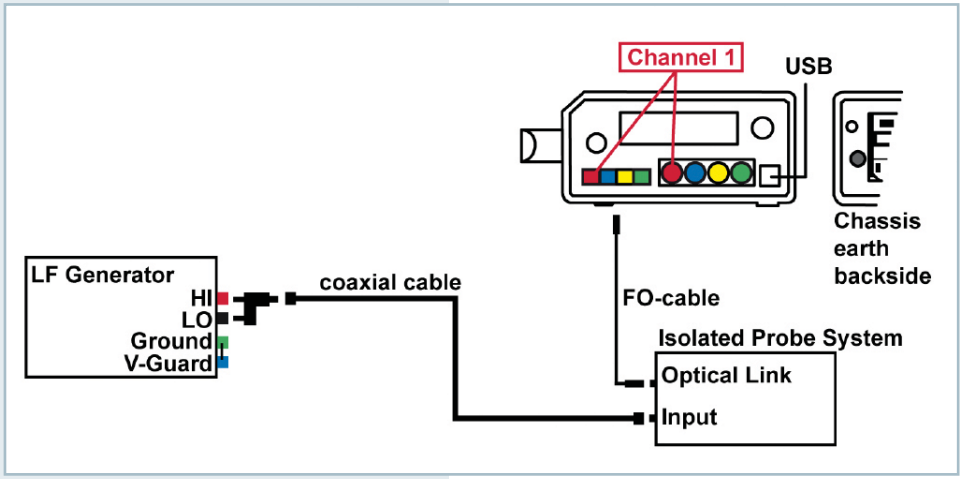
Calibration fixtures

As calibration voltages range from mV to tens of V and go up to MHz, the proper input connections are essential to get repeatable, reliable results.

Therefore, a special fixture kit for the ISOBE5600 is also delivered with the calibration kit.

This fixture kit contains cables, adapters and termination resistors to ensure a proper connection between the calibrator and the ISOBE5600.

The calibration software refers to the fixtures and gives on-line help on how to use them and how to wire it up properly.



Typical wiring diagram as shown in the calibration software to ensure proper wiring.

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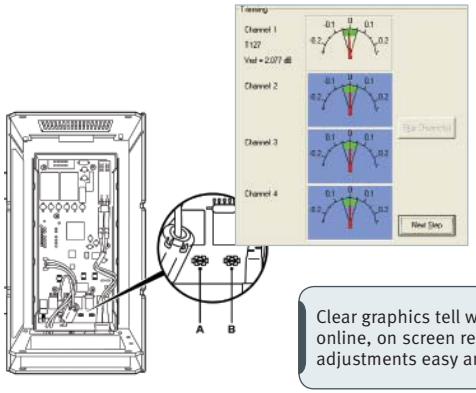
The calibration process

The complete verification process is fully automated and delivers PASS / FAIL information with the press of a button.

The same applies to most of the calibration process, where electronic intelligence is used to retain the best performance possible. Most of this is fully automated and no user interaction is needed to restore the modules to the best accuracy achievable.

Only in the rare case that AC bandwidth could be improved is the use of manual user interaction needed. Then the manual and the software itself help guide you through the needed steps. Exact process description and direct readouts make even manual procedures easy to work with.



Clear graphics tell what to do, while online, on screen readings make adjustments easy and accurate.

The verification

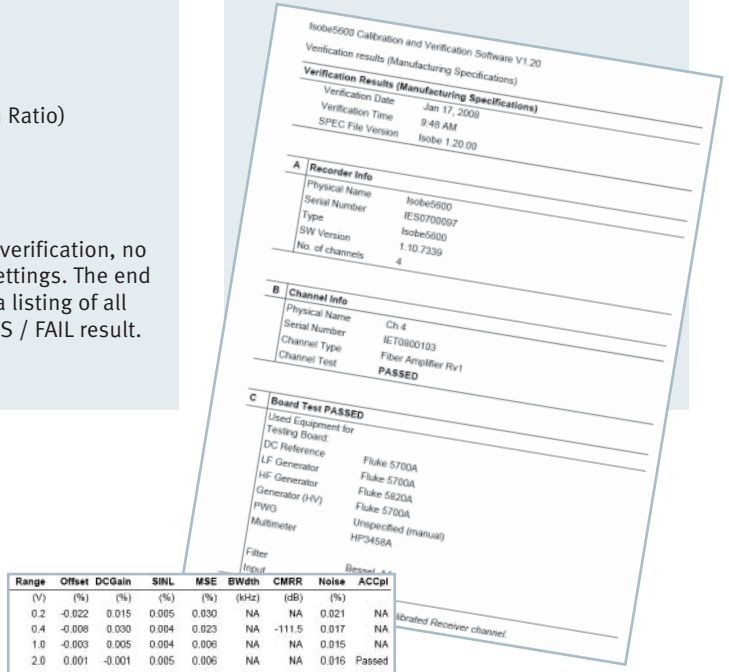
The verification process contains the following tests:

- DC Gain
- AC Coupling
- Bandwidth
- Noise
- CMRR
  (Common Mode Rejection Ratio)
- DC Output
- Output noise
- Output Resolution

During the fully automated verification, no changes are made to any settings. The end result of the verification is a listing of all findings and an overall PASS / FAIL result.

The calibration report printout

As an end result, the ISOBE5600 calibration software saves all the results in a RTF-Text file. From there it can be stored for later reference or printed out.


Isobe5600 Calibration and Verification Software V1.20
Verification results (Manufacturing Specifications)

Verification Results (Manufacturing Specifications)

Verification Date	Jan 17, 2008
Verification Time	9:48 AM
SPEC File Version	Isobe 1.20.00

A Recorder Info

Physical Name	Isobe5600
Serial Number	IES0700097
Type	Isobe5600
SW Version	1.10.7339
No. of channels	4

B Channel Info

Physical Name	Ch 4
Serial Number	IET0800103
Channel Type	Fiber Amplifier Rv1
Channel Test	PASSED

C Board Test PASSED

Used Equipment for Testing Board:

DC Reference	Fluke 5700A
LF Generator	Fluke 5700A
HF Generator	Fluke 5820A
Generator (HV)	Fluke 5700A
PWG	Unspecified (manual)
Multimeter	HP3458A
Filter	
Input	Bessel

ibrated Receiver channel.

Range	Offset	DCGain	SINL	MSE	BWdth	CMRR	Noise	ACCpl
(V)	(%)	(%)	(%)	(%)	(kHz)	(dB)	(%)	
0.2	-0.022	0.015	0.005	0.030	NA	NA	0.021	NA
0.4	-0.008	0.030	0.004	0.023	NA	-111.5	0.017	NA
1.0	-0.003	0.005	0.004	0.006	NA	NA	0.015	NA
2.0	0.001	-0.001	0.005	0.006	NA	NA	0.016	Passed
4.0	-0.001	0.010	0.004	0.005	10181.9	-107.0	0.018	NA
10.0	-0.001	-0.013	0.005	0.010	NA	NA	0.016	NA
20.0	0.001	-0.016	0.005	0.009	NA	NA	0.016	NA
40.0	0.000	-0.002	0.005	0.004	NA	-113.1	0.018	
100.0	0.002	-0.026	0.005	0.013	NA	NA	0.016	

The software delivers a full report with PASS / FAIL remark and detailed information per channel

Theory of operations

In the appendix, the manual explains each and every procedure the software uses to do the calibration and the verification in detail. Therefore, the user not only gets information if his system still meets specifications but also how it is measured.

This prevents a misunderstanding of the system's performance specifications, as each and every procedure to compute a certain specification is explained in detail

Please note that the calibration/verification does not include all available input ranges, as accuracy of some of them can be derived from others.

Deliverables

Standard deliverables of the ISOBE5600 calibration kit are:

- Manual
- Software CD
- NI USB-IEEE converter
- Fixture kit
- Ceramic adjuster tool

Please note that in order to use the ISOBE5600 calibration kit you also need the proper calibration equipment as listed on the front page.

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