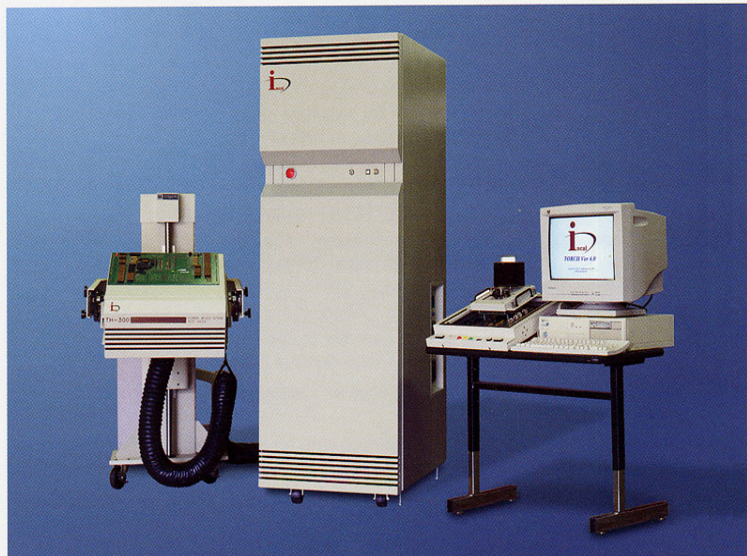
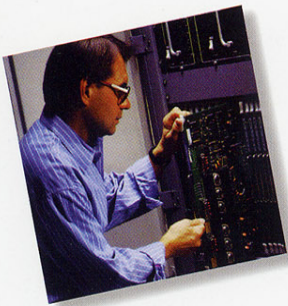




# Power/Mixed Signal Testing is Easy and Inexpensive with Incal i947X Systems

Check-out the technology that has economically tested more motor drivers, disk controllers, switches, voltage regulators, power supply controllers, analog switches, op-amps and comparators, than any system in the world.



Incal's i947X test system family reduces your cost-of-test and speeds up your time-to-market by integrating a wide variety of fully synchronized, power/mixed signal instruments. Modular design allows test engineers to readily configure systems to meet specific requirements. Standard test instruments and subsystems have replaced customized loadboards, optimizing performance, technical integrity and quality, while reducing development time and initial equipment costs. Efficient on-line or off-line menu driven software shortens the learning curve for developers and operators.

## Features

- Modular design
- Mixed signal capability
- Readily configurable
- High level programming language
- Cost effective
- Y2K compliant software
- Assured test integrity
- Field proven - over 400 installed
- Production ready

## Benefits

- Allows custom changes
- Tests a wide range of devices
- Allows rapid testing changeover
- Reduces time-to-market
- Allows competitive pricing
- Conserves real estate
- Accurate test results
- User confidence
- Instant productivity

## System Specifications

### Main Frame

<b>Calibration Standard:</b>	All instruments calibrated to the NIST traceable system board.
<b>Voltage Measurement:</b>	Ten ranges between $\pm 1.0V$ and $\pm 1000.0V$ , 16 bit resolution.
<b>Cross Point Matrix Cards:</b>	Twelve instrument inputs to a maximum of 32 device channel output ( $\pm 1000V \pm 2A$ ). Isolation resistance $> 10^9$ ohm.
<b>VI-204M:</b>	Single channel, four quadrant source, six voltage ranges between $\pm 1.0V$ and $\pm 50.0V$ , eight current ranges between $\pm 200nA$ and $\pm 2.0A$ , force and measure with 16 bit resolution.
<b>VI-404:</b>	Quad channel, four quadrant source, seven voltage ranges between $\pm 1.0V$ and $\pm 100V$ ( $\pm 65V$ max. output), eight current ranges between $\pm 200nA$ and $\pm 500mA$ , force and measure with 16 bit resolution.
<b>VI-1500:</b>	Single channel, four quadrant source, five voltage ranges between $\pm 100V$ and $\pm 1500V$ , six current ranges between $\pm 2\mu A$ and $\pm 200mA$ , force and measure with 16 bit resolution.
<b>Pulsed High Current:</b>	Floating four quadrant source, five voltage ranges between $\pm 1.0V$ and $\pm 20V$ , four current ranges between $\pm 2.0A$ and $\pm 100A$ , force and measure with 12 bit resolution (unit mounted at test head).
<b>Time Measurement:</b>	Single-shot time measurement between 1.0nsec and 429 seconds with 200psec resolution. This card requires some additional interface circuitry to most DUTs.
<b>Arbitrary Waveform Generator:</b>	0.1Hz to 2MHz code rate, max. frequency is 500kHz sine wave with 4 points. Memory depth of $32K \times 16$ bit.
<b>Handler/Prober Interface:</b>	Provides digital signals for interfacing to a wafer prober or device handler.
<b>Test Head Relay Control:</b>	Provides 16 or 32 open collector relay drivers at each test head. A parallel 16 or 32 bit TTL level I/O bus is also included.

### TH-300 Test Head

Max. 32 device channels.

#### Instrument Cards

Max. 14 instrument cards per test head.

#### Op Amp Loop:

Four maximum cards per test head for quad op-amp solutions, four VOS ranges between  $\pm 100\mu V$  and  $\pm 100mV$ , four IB ranges between  $\pm 100pA$  and  $\pm 100nA$ . Applications loadboard offers AVO, PSRR (DC), CMRR (DC). Op Amp Noise and Distortion measurement is made at 1Khz and is integrated with the Op Amp solution.

#### Time Measurement:

Start and stop signals are chosen between 16 inputs, with programmable thresholds and input ranges of  $\pm 5V$  and  $\pm 50V$ . TMU is required.

#### High Voltage Picoammeter:

Quad channel, four quadrant source, with  $\pm 15V$  and  $\pm 150V$  ranges ( $\pm 110V$  max. output), eight current ranges between  $\pm 1nA$  and  $\pm 10mA$ . Eight boards max. per test head.

#### High Current Test Module:

Source up to 800 Amps at 20V, pulsed for 1.0 millisecond with 8 bit force and measure resolution.

#### Power Digital:

10 MHz rates, 32 I/O pins per test head, 128K vector and error memory per pin, Drive/Receive between  $-5V$  and  $+20V$ .

#### Waveform Digitizer:

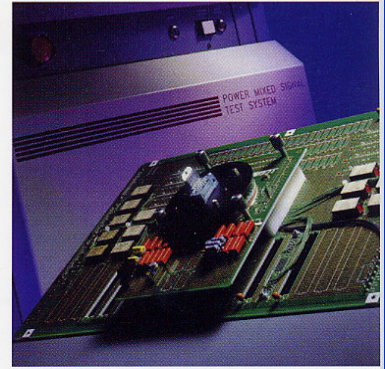
Sampling at 10 Megasamples/sec with 128K memory, five ranges between  $\pm 100mV$  and  $\pm 1000V$ , floatable to  $\pm 1000V$ .

### TH-200 Test Head

Max. 16 device channels, low cost production solution.

#### Time Measurement:

A pin driver ( $-5V$  to  $+15V$ ) and start and stop signals are configured, with programmable thresholds. TMU is required.



### Incal Technology, Inc.

1477 N. Mipitas Blvd.  
Milpitas, CA 95035  
Tel: 408.262.3017  
Fax: 408.262.4244  
www.incal.com  
email: sales@incal.com