



# ATLAS Stim Headbox

Stimulate while recording continuously from 64 channels of intracranial electrodes and can record neural activity occurring as little as 200 $\mu$ S after stimulation.

## Channels

64 electrodes and 8 references

## Patient Safety

- Voltage and current limits
- 20 micro Coulomb per phase charge limit
- Zero charge balanced differential current check

## Nihon Kohden Connectors Option:

NK A (80 pin) and B/C/D (68 pin)  
Mini Junction Box Tethers  
(31-06011-0077)

## Touchproof Connectors Option:

74 1.5mm Touchproof  
(31-0601-0089)

## Natus Connectors Option:

High Density 68 pin connectors  
(31-0601-0132)



### Current Mode Stimulation Characteristics:

Current Range	Max Current	Compliance Voltage	Output Resolution	Thevenin Impedance
I <sub>mode</sub> 200 $\mu$ A	+/-200 $\mu$ A	+/-12.5 V	2 $\mu$ A	1.6 G $\Omega$
I <sub>mode</sub> 10 mA	+/- 10 mA	+/-12.5 V	0.1 mA	32 M $\Omega$

### Voltage Mode Stimulation Characteristics:

V Mode	Max Current	Output Resolution	Series Resistance
V <sub>mode</sub> 200 $\mu$ A	+/-200 $\mu$ A	0.1 V	50 k $\Omega$
V <sub>mode</sub> 10 mA	+/- 10 mA	0.1 V	1 k $\Omega$

## Recording Input Noise

- Unity gain buffering, Analog
- Bandwidth: DC – 8 kHz
- Noise: <3.2 $\mu$ V<sub>rms</sub> (1Hz-8kHz) typ.
- Active Input Range:  $\pm$ 132mV, DC Coupled
- CMRR > 89dB

## Ethernet Data Connection

Fiber Optic

## Size and Weight

76mm x 172mm x 187mm; 1.2 kg

## Max Output Duration

Limited to 10 seconds, with a maximum of 32 concurrent channels, can be looped

## Waveforms

Defined by 40 kHz 16 bit. Arbitrary, user defined by .WAV file

## Stim Current and Voltage Sampling Rate

40 kHz by 18 bit A/Ds

## Stimulation Output Sampling Rate


40 kHz

## Current and Voltage Monitoring Sampling Rate

40 kHz

## Max Simultaneous Stim Channels

32 (software limited for safety)

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