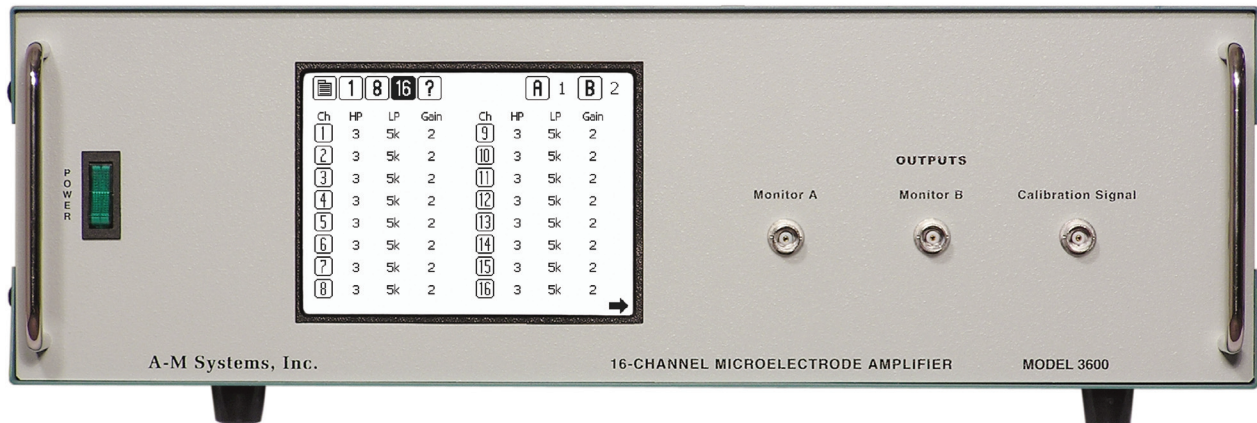


## Model 3600

# 16-Channel Extracellular AC Amplifier with Headstage



The Model 3600 16-Channel Extracellular Amplifier with Headstage is intended for extracellular recording and/or stimulating with high impedance metal microelectrodes. Designed primarily for use in high-density recordings of neuronal action potentials studies, it is also quite capable in a variety of research or teaching applications such as nerve, muscle (EMG), EEG, EKG, and ERG recordings.

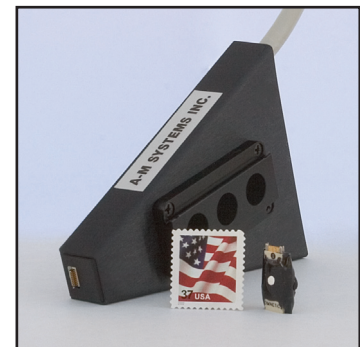
The Model 3600 has 16 independent channels, a front panel touch screen, computer control capabilities, and a built-in calibrator. In addition, users can quickly monitor on an external oscilloscope the activity on any two channels. Each channel of the Model 3600 can be referenced to ground or a 17th reference electrode. Gain, high-pass, low-pass, and line frequency (notch) filtering are completely independent for every channel. All channel settings can be accessed via the easy-to-use front panel touch screen interface or via an application loaded on a Windows-based computer (*see reverse for additional details*).

Two different headstages are available. One is a microminiature headstage that can make simultaneous pseudo-differential recordings from 16 channels, and is smaller than a dime! The other can stimulate and record to any combination of the 16 channels. In addition, the Stim/Rec headstage has a convenient dovetail to mount to common micromanipulators.

Common applications for the Model 3600 16-Channel Extracellular Amplifier with Headstage include, but are not limited to:

- Single Cell Action Potentials
- Waveform Sorting
- Evoked Potentials
- Multiple-Unit Recordings
- Long-term Potentiation
- EEG / EMG / EKG / ERG recordings

The Model 3600 16-Channel Extracellular Amplifier with Headstage is designed for research grade recording quality; its straightforward interface also makes it ideal for teaching applications.



*Stim/Rec Headstage (rear left) &  
Rec-Only Headstage (near right)*

- 16 amplifiers in one instrument
- Ten gain stages up to x20,000
- Eight high-pass filter settings
- Eight low-pass filter settings
- Notch filter for power line frequency
- Controlled via front-panel touch screen or free Windows-based program
- Easy access output monitors
- Can pass stimulation current to electrodes (*with Stim/Rec headstage*)
- Includes rack mount hardware
- 3-year warranty

# Model 3600

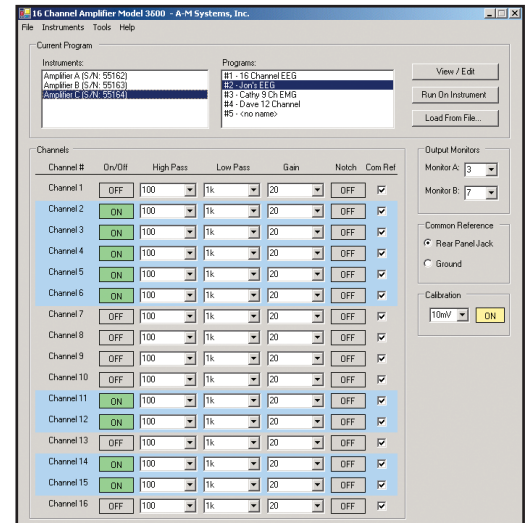
# 16-Channel Extracellular AC Amplifier with Headstage



## Software

In addition to the easy-to-use touchscreen interface on the Model 3600's front panel, the instrument can also be controlled by a free Windows-based application. This program controls all aspects of the amplifier, including channel settings and program names. It can read the current settings of the instrument, as well as load programs previously stored on the instrument or on the host computer. Multiple Model 3600's can be controlled by a single application. Note-logging capabilities are included, allowing researchers to make time-stamped notations about their experiment as they collect data.

*Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.*



## Specifications

Gain*	10, 20, 50, 100, 200, 500, 1000, 2000, 5000, 10000, 20000
High Pass Filter*	0.3, 1.0, 3.0, 10, 30, 100, 300, and 500 Hz; -40 dB / decade
Low Pass Filter*	0.1, 0.3, 0.5, 1.0, 3.0, 5.0, 10.0, and 20.0 kHz; -40 dB / decade
Notch Filter	>-35 dB at 50 or 60 Hz.
Noise	2.0 microvolt rms typical (10 Hz to 10,000 Hz)
Other Features	Controlled via computer, TTL, or front-panel touchscreen Two front panel output monitors 16 rear panel output BNCs (one per channel) and ganged output connector

\* Can customize these values for an additional fee. Contact A-M Systems or your distributor for information

## References

Lu H, et al. (2007) Synchronized delta oscillations correlate with the resting-state functional MRI signal. *PNAS* 104 (46): 18265-18269

Viggiano A., et al. (2010) Mastication overload causes an increase in O<sub>2</sub> - production into the subnucleus oralis of the spinal trigeminal nucleus *Neuroscience* 166(2):416-421

## Ordering Information

For use on 220 V / 50 Hz power systems: Product #960005 (Country-specific power cords are not supplied.)

For use on 110 V / 60 Hz power systems: Product #960000

One of the following headstages must be purchased for proper operation of the instrument:

Stimulating and Recording Headstage: Product #962000 and #962050 (Stim control cable)

Recording-Only Headstage: Product #961075 and #961050 (output cable)

Input Cable with individual leads: Product #963000

"Michigan-Probe" electrode adapter: Product #963200

All units include a product manual and rack mounts.

## Distributed By:

**A-M Systems**  
131 Business Park Loop  
PO Box 850  
Carlsborg, WA 98324  
USA

Toll-free: **800-426-1306 (USA)**  
Phone: **360-683-8300**  
FAX: **360-683-3525**  
E-Mail: **sales@a-msystems.com**  
Website: **www.a-msystems.com**