

## ATA-2021B High Voltage Amplifier

- Single Channel
- Bandwidth (-3dB): DC~1 MHz
- Maximum Output Voltage: 200Vp-p
- Maximum Output Current: 500mA<sub>p</sub>
- The output voltage rail is adjustable in three levels.
- The DC bias voltage is adjustable in three levels.
- Operating Voltage: AC110~240V, 50/60Hz



### INTRODUCTION

The ATA-2021B is a Single-channel high-voltage amplifier capable of amplifying both AC and DC signals. The maximum output voltage is 200 Vp-p, with the output voltage range adjustable according to the output rail. The DC bias voltage can be adjusted in three levels, with continuous variation allowing a maximum output of  $\pm 160V$ , enabling the generation of asymmetric signals to drive high-voltage loads. The input and output impedance can be switched between two levels. The voltage gain is digitally adjustable, with parameters automatically saved. The device features program control functionality, offering simple and convenient operation. It can be used with signal generators for seamless signal amplification. The wide-range power supply accommodates different regional power standards worldwide.

### LCD PANEL DISPLAY

The ATA-2021B features an LCD screen for dynamic display of device status and parameters. Prompts in different colors make human - machine interaction more efficient, and the operation interface is clear at a glance, simple and easy to understand.

### VOLTAGE GAIN

The voltage gain is digitally adjustable from x0 to x60, with two modes: coarse adjustment (1 step) and fine adjustment (0.1 step). Combined with the LCD panel display, it enables quick and precise adjustment to the desired voltage value.

### MONITORING PORTS

**20mV/V Monitor:** The monitoring port voltage is 1/50 of the output port voltage. The monitoring port uses a BNC connector, allowing direct connection to an oscilloscope for real-time monitoring of the output voltage.

**2V/A Monitor:** The monitoring port voltage is 2 times the output current. The monitoring port uses a BNC connector and can be directly connected to an oscilloscope for real-time monitoring of the output current.

### OUTPUT

The output uses banana sockets, with a maximum output voltage of 200 Vp-p and a maximum output current of 500 mA<sub>p</sub>.

The output voltage rail can be adjusted across three levels.

## Specifications

|                                  |                                                            |
|----------------------------------|------------------------------------------------------------|
| Model                            | ATA-2021B                                                  |
| Number of Channel                | 1                                                          |
| Output Type                      | Single-ended Output                                        |
| Bandwidth (-3 dB)                | DC~1MHz                                                    |
| Maximum Output Voltage           | 200Vp-p ( $\pm 100$ Vp)                                    |
| Output voltage range             | Range1:+40V~-160V   Range2:+100V~-100V   Range3:+160V~-40V |
| Maximum Output Current           | 250mA <sub>p</sub> (DC~50Hz)   500mA <sub>p</sub> (>50Hz)  |
| Maximum Output Power             | 50Wp                                                       |
| Fuse                             | 5A/250V                                                    |
| Voltage Gain                     | x0~60 (0.1step/1step)                                      |
| Load RL Upper Limit              | $\geq 395\Omega$ (DC~50 Hz) $\geq 195\Omega$ (>50Hz)       |
| DC Bias Adjustment               | $\pm 160$ V (0.1V step/1V step)                            |
| DC Bias Adjustment Voltage Range | Range1:+40V~-160V   Range2:+100V~-100V   Range3:+160V~-40V |
| Output Impedance                 | 5 $\Omega$ / 50 $\Omega$                                   |
| Slew Rate                        | $\geq 445$ V/ $\mu$ s                                      |
| Input Impedance                  | 50 $\Omega$ / 10k $\Omega$                                 |
| Voltage Monitoring               | 20mV/V( $\pm 5\%$ @Output,FS)                              |
| Current Monitoring               | 2V/A( $\pm 5\%$ @Output,FS)                                |
| Input Amplitude                  | 0~10Vp-p MAX                                               |
| Output Voltage Error             | $\leq \pm 3\%$ FS @ 1 kHz                                  |
| Total Harmonic Distortion (THD)  | $\leq 0.1\%$ @1kHz, 100Vp-p                                |
| Output Voltage Drift             | $\leq \pm 0.1$ V                                           |
| Signal-to-Noise Ratio            | $\geq 80$ dB                                               |
| Output Interface                 | 4mm Banana socket                                          |
| Protection                       | Over Current Protection                                    |
| Signal Ground                    | Connected to chassis and power line ground                 |

## Others

|                       |                                |
|-----------------------|--------------------------------|
| Power Supply Voltage  | AC110~240V, 50/60Hz            |
| Operating Temperature | 0°C ~ 45°C                     |
| Storage Temperature   | -20°C ~ 50°C                   |
| Working Humidity      | $\leq 80\%$ RH, non-condensing |
| Warranty              | 1 year                         |
| Dimensions            | 330*149*398mm (W*H*D)          |

## Ordering Information

|             |                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model       | ATA-2021B Single Channel High Voltage Amplifier                                                                                                                                                        |
| Accessories | Power cable*1, BNC cable*3, red-black output cable*1 set, USB cable*1, fuse*1, user manual, usage guide, product qualification certificate, calibration certificate, and packing list (one copy each). |
| Contact Us  | +86-29-88865020                                                                                                                                                                                        |

