TOA

Digital Mixer Amplifier<br>A-3500D Series




The A-3500D series is a PA amplifier with emergency and priority paging, equipped with 3 MIC/LINE inputs, 1 MIC input, 1 AUX (music source) input, and 2-channel speaker zone selectors. It is ideal for paging announcements and background music applications in supermarkets, schools, offices, and factories.

## " Cost-effective Amplifier

The A-3500D series is an entry-level amplifier that has the minimum functions required for daily operations. With the right selection of rated output for an installation location, you will have even more cost-effective public address system.

## " Audience Never Miss Important Notifications

Prioritized audio input mutes other audio signals using either control signal or audio detection as a trigger. The audience will hear intelligible voice announcements or other important notifications.


## " Perfect Choice For Retail Tenants

A-3500D amplifier can be a local amplifier integrated with a building-wide voice alarm system. As the amplifier receives the emergency signal, which can automatically override the local sound, emergency messages will be delivered at the maximum level regardless of master output volume settings.

## Application Example



School


Office


Factory


A-3500D front


A-3500D rear

## P-3548D Power Amplifier



P-3548D front

$>$ TOA class D amplifiers for maximum efficiency
$>4$ selection of power amplifier output (60W, 120W, 240W and 480W)
$>3 \mathrm{mic} /$ line selectable inputs, 1 mic input and 1 auxiliary input
> 2-channel speaker zone selector
$>$ Switchable 100V line or low impedance speaker output
$>$ Capable of emergency and pritority broadcasting by using either control signal or audio detection as a trigger
$>$ TOA class D amplifier for maximum efficiency
> 480 W output power
$>$ Supplied with 1 line input
$>$ Switchable 100 V line or low impedance speaker output
$>$ Can be used as a stand-alone amplifier or as a booster amplifier for the optional A-3600D/A-3500D series
> Capable of remote power ON/OFF and emergency broadcasting connected with optional A-3600D/A-3500D series

Application


| Specifications | A-3506D | A-3512D | A-3524D | A-3548D | P-3548D |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Power Source | 100 to 240 V AC, $50 / 60 \mathrm{~Hz}$ |  |  |  | 220 to 240 V AC, $50 / 60 \mathrm{~Hz}$ |
| Rated Output | 60W | 120 W | 240 W | 480 W |  |
| Power Consumption | 96 W (rated output), 40 W (based on EN62368) | 171 W (rated output), 48 W (based on EN62368) | 314 W (rated output), 70 W (based on EN62368) | 601 W (rated output), 113 W (based on EN62368) |  |
| Current Consumption | 200 mA or less (when power switch is OFF) |  |  |  |  |
| Frequency Response | 50 Hz to $20 \mathrm{kHz} \pm 3 \mathrm{~dB}$ (1/8 rated output) |  |  |  |  |
| Distortion | $1 \%$ or less at 1 kHz , rated power (20 kHz LPF (AUX-0025)) |  |  |  |  |
| Tone Control | Bass: $\pm 10 \mathrm{~dB}$ at 100 Hz <br> Treble: $\pm 10 \mathrm{~dB}$ at 10 kHz |  |  |  |  |
| Signal to Noise Ratio | 88 dB or more (Master volume: min) 76 dB or more (Master volume: max) 55 dB or more (INPUT 1 to 4) 72 dB or more (INPUT 5) (A-weighted) |  |  |  | 90 dB or more (Master volume: min.) 76 dB or more (Master volume: max.) (A-weighted) |
| Audio Input | INPUT 1, 2: -60 dB* (MIC)/-20 dB* (LINE) selectable, $600 \Omega$, electronically-balanced, removable terminal block ( $3.81 \mathrm{~mm}, 5$ pins)/ $\varnothing 6.3 \mathrm{~mm}$ phone jack (3P) <br> Note: MIC inputs are equipped with phantom power ( 24 V DC, ON/OFF switchable) <br> INPUT 3: -60 dB*, $600 \Omega$, electronically-balanced, $\varnothing 6.3 \mathrm{~mm}$ phone jack (3P) <br> UT 4: -60 dB* (MIC)/-20 dB* (LINE) selectable, $600 \Omega$, electronically-balanced, $\varnothing 6.3 \mathrm{~mm}$ phone jack (3P) INPUT 5: -20 dB*, $10 \mathrm{k} \Omega$, unbalanced, RCA pin jack $\times 2$ <br> PWR AMP IN: $0 \mathrm{~dB}^{\star}, 600 \Omega$, unbalanced, RCA pin jack |  |  |  | LINE IN: $0 \mathrm{~dB}^{*} /-20 \mathrm{~dB}^{*}$ switchable, $600 \Omega$, transformer balances, RCA pin jack $\times 2$ SPEAKER LINE IN: $40 \mathrm{~dB}{ }^{*}$ ( 100 V line), $65 \mathrm{k} \Omega$, transformer balanced, removable terminal block (3P) |
| Audio Output | SPEAKER OUT: <br> Low impedance ( 8 to $16 \Omega$ )/High impedance (DIRECT, ZONE 1/ ZONE 2: $100 \mathrm{~V} /$ total $170 \Omega$ ) (ZONE 1/ZONE 2 is selectable, Max. 60 W per output), Removable terminal block ( 5.00 $\mathrm{mm}, 6$ pins) | SPEAKER OUT: <br> Low impedance ( 4 to $16 \Omega$ )/ High impedance (DIRECT, ZONE 1/ZONE 2: $100 \mathrm{~V} /$ total $83 \Omega$ ) (ZONE 1/ZONE 2 is selectable, Max. 120 W per output), Removable terminal block (5.00 mm, 6 pins) | SPEAKER OUT: <br> Low impedance ( 4 to $16 \Omega$ )/ High impedance (DIRECT, ZONE 1/ZONE 2: $100 \mathrm{~V} /$ total $42 \Omega$ ) (ZONE 1/ZONE 2 is selectable, Max. 240 W per output), Removable terminal block (5.00 mm, 6 pins) | SPEAKER OUT: <br> Low impedance ( 4 to $16 \Omega$ )/ High impedance (DIRECT, ZONE 1/ZONE 2: $100 \mathrm{~V} /$ total $21 \Omega$ ) (ZONE 1/ZONE 2 is selectable, Max. 480 W per output), Removable terminal block (5.00 mm, 6 pins) | SPEAKER OUT: <br> Low impedance ( 4 to $16 \Omega$ )/ <br> High impedance(21 $\Omega$ ), <br> Removable terminal block(3 pins) |
|  | REC OUT: $0 \mathrm{~dB}^{*}, 600 \Omega$, unbalanced, RCA pin jack |  |  |  | - |
|  | LINE OUT $1,2: 0 \mathrm{~dB}^{*}, 600 \Omega$, unbalanced, RCA pin jack (Interlock with zone selection is possible) |  |  |  | LINE OUT: 0 dB *, $600 \Omega$, unbalanced, RCA pin jack $\times 2$ |
| Control Input | 2 channels, no-voltage make contact input, open voltage: 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block ( $3.81 \mathrm{~mm}, 5$ pins) ZONE CONTROL IN: No-voltage make contact input, open voltage : 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block ( $3.81 \mathrm{~mm}, 4$ pins) |  |  |  | POWER REMOTE IN: <br> No-voltage make contact input, open voltage: 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block (4 pins), EMERGENCY IN: Novoltage make contact input, open voltage: 35 V DC or less, removable terminal block (4 pins) |
| Control Output | POWER REMOTE OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( $3.50 \mathrm{~mm}, 4$ pins) EMERGENCY OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( $3.50 \mathrm{~mm}, 4$ pins) ZONE CONTROL OUT: Open collector output (polarized), withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( $3.81 \mathrm{~mm}, 4$ pins) |  |  |  | POWER REMOTE OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( 3.50 mm, 4 pins), EMERGENCY OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( 3.50 mm, 4 pins) |
| Indicators | 5-point LED level meter, Power indicator, Priority broadcast indicator, Emergency broadcast indicator, Thermal protection indicator, Over current protection indicator, Zone 2 indicator |  |  |  | 5-point LED output level meter, <br> Power indicator, Emergency <br> indicator, Thermal protection <br> indicator, Over current protection <br> indicator |
| Operating Temperature | -10 to $+40^{\circ} \mathrm{C}\left(14\right.$ to $\left.104^{\circ} \mathrm{F}\right)$ |  |  |  |  |
| Operating Humidity | $85 \%$ RH or less (no condensation) |  |  |  |  |
| Finish | Panel: ABS resin, black <br> Case: Surface-treated steel plate, black, paint |  |  |  |  |
| Dimensions | 420 (M) $\times 96.1$ (H) $\times 313.1$ (D) mm or 16,54" $\times 3.78{ }^{\prime \prime} \times 12.33^{\prime \prime}$ |  |  |  |  |
| Weight | $4.9 \mathrm{~kg}(10.08 \mathrm{lb})$ |  |  | $5.1 \mathrm{~kg}(11.24 \mathrm{lb})$ | $5 \mathrm{~kg}(11.02 \mathrm{lb})$ |
| Accessories | Power cord ( $2 \mathrm{~m}(6.56 \mathrm{ft})) \times 1$, Audio input removable terminal plug ( $3.81 \mathrm{~mm}, 5$ pins) $\times 2$, Control I/O removable terminal plug ( $3.81 \mathrm{~mm}, 4$ pins) $\times 2$, Remote control removable terminal plug ( $3.50 \mathrm{~mm}, 4$ pins) $\times 1$, Speaker out removable terminal plug ( $5.00 \mathrm{~mm}, 6$ pins) $\times 1$, Volume control cover $\times 4$ |  |  |  | Power cord ( $2 \mathrm{~m}(6.56 \mathrm{ft})) \times 1$, Audio input removable terminal plug ( $5 \mathrm{~mm}, 2$ pins) $\times 1$, Control I/O removable terminal plug ( $3.5 \mathrm{~mm}, 4$ pins) $\times 2$, Speaker out removable terminal plug ( $5 \mathrm{~mm}, 3$ pins) $\times 1$, Volume control cover $\times 1$ |
| Optional products | Rack mounting bracket: MB-25B, Perforated panel: PF-013B |  |  |  |  |
| * $0 \mathrm{~dB}=1 \mathrm{~V}$ |  |  |  |  |  |

MIXER AMPLIFIER
DESCRIPTION
TOA's A-3500D Series is a PA amplifier equipped with 4 microphone inputs and 1 auxiliary inputs, and 2-channel zone selector. It employs a PFC circuit.
The A-3500D Series mixer amplifier is ideal for paging announcement and BGM applications in schools, offices, and super markets.

## SPECIFICATIONS

| Power Source | $100-240$ V AC, $50 / 60 \mathrm{~Hz}$ |
| :---: | :---: |
| Rated Output | 480 W |
| Power/Current Consumption | 601 W (rated output), 113 W (based on EN62368), 200 mA or less (when power switch is OFF) |
| Frequency Response | $50 \mathrm{~Hz}-20 \mathrm{kHz} \pm 3 \mathrm{~dB}$ (1/8 rated output) |
| Distortion | $1 \%$ or less at 1 kHz , rated power ( 20 kHz LPF (AUX-0025) |
| Tone Control | Bass: $\pm 10 \mathrm{~dB}$ at 100 Hz <br> Treble: $\pm 10 \mathrm{~dB}$ at 10 kHz |
| Signal to Noise Ratio | 88 dB or more (Master volume: min.) <br> 76 dB or more (Master volume: max.) <br> 55 dB or more (INPUT 1-4) <br> 72 dB or more (INPUT 5) <br> ( A -weighted) |
| Audio Input | INPUT 1, 2: $-60 \mathrm{~dB}(* 1)(\mathrm{MIC}) /-20 \mathrm{~dB}(* 1)$ (LINE) selectable, $600 \Omega$, electronically-balanced, <br> removable terminal block ( 5 pins)/ $/ 66.3 \mathrm{~mm}$ phone jack (3P) <br> Note: MIC inputs are equipped with phantom power ( 24 V DC, ON/OFF switchable). <br> INPUT 3: $-60 \mathrm{~dB}(* 1), 600 \Omega$, electronically-balanced, $\varnothing 6.3 \mathrm{~mm}$ phone jack (3P) <br> INPUT 4: $-60 \mathrm{~dB}(* 1)(\mathrm{MIC}) /-20 \mathrm{~dB}(* 1)$ (LINE) selectable, $600 \Omega$, electronically-balanced, $\varnothing 6.3 \mathrm{~mm}$ phone jack (3P) <br> INPUT 5: $-20 \mathrm{~dB}(* 1), 10 \mathrm{k} \Omega$, unbalanced, RCA pin jack $\times 2$ <br> PWR AMP IN: $0 \mathrm{~dB}(* 1), 600 \Omega$, unbalanced, RCA pin jack |
| Audio Output | SPEAKER OUT: Low impedance ( $4-16 \Omega$ )/ <br> High impedance (DIRECT, ZONE 1/ZONE 2: $100 \mathrm{~V} /$ total $21 \Omega$ ), <br> removable terminal block ( 6 pins) <br> (ZONE $1 / Z O N E 2$ is selectable, Max. 480 W per output) <br> REC OUT: $0 \mathrm{~dB}(* 1), 600 \Omega$, unbalanced, RCA pin jack <br> LINE OUT 1, 2: $0 \mathrm{~dB}(* 1), 600 \Omega$, unbalanced, RCA pin jack <br> (Interlock with zone selection is possible) |
| Control Input | 2 channels, no-voltage make contact input, open voltage: 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block ( 5 pins) ZONE CONTROL IN: No-voltage make contact input, open voltage: 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block ( 4 pins) |
| Control Output | POWER REMOTE OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( 4 pins) <br> EMERGENCY OUT: Open collector output, withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( 4 pins) ZONE CONTROL OUT: Open collector output (polarized), withstand voltage: 30 V DC or less, control current: 25 mA or less, removable terminal block ( 4 pins) |
| Indicators | 5-point LED output level meter, Power indicator LED, <br> Priority indicator LED, Emergency indicator LED, Thermal protection indicator LED, Over current protection indicator LED, Zone 1 indicator LED, Zone 2 indicator LED |
| Operating Temperature | $-10{ }^{\circ} \mathrm{C}$ to $+40{ }^{\circ} \mathrm{C}\left(14{ }^{\circ} \mathrm{F}\right.$ to $\left.104{ }^{\circ} \mathrm{F}\right)$ |
| Operating Humidity | 85 \%RH or less (no condensation) |
| Finish | Panel: ABS resin, black <br> Case: Surface-treated steel plate, black, paint |
| Dimensions | 420 (W) $\times 96.1$ (H) $\times 313.1$ (D) mm ( $\left.16.54^{\prime \prime} \times 3.78^{\prime \prime} \times 12.33^{\prime \prime}\right)$ |
| Weight | $5.1 \mathrm{~kg}(11.24 \mathrm{lb})$ |
| Accessory | Power cord ( $2 \mathrm{~m}(6.56 \mathrm{ft})$ ) $\cdots 1$, <br> Audio input removable terminal plug ( $3.81 \mathrm{~mm}, 5$ pins) $\cdots 2$, <br> Control I/O removable terminal plug ( $3.81 \mathrm{~mm}, 4$ pins) $\cdots 2$, <br> Remote control removable terminal plug ( $3.5 \mathrm{~mm}, 4 \mathrm{pins}$ ) $\cdots 1$, <br> Speaker out removable terminal plug ( $5 \mathrm{~mm}, 6$ pins) $\cdots 1$, Volume control cover $\cdots 4$ |
| Option | Rack mounting bracket: MB-25B Perforated panel: PF-013B |

(*1) $0 \mathrm{~dB}=1 \mathrm{~V}$

## VITOA <br> MIXER AMPLIFIER <br> A-3548D(1CE/2CE/4CE) <br> APPEARANCE

Rear View

$\underline{\underline{m o d e l}}$


4CE
model


