VocoPro®
THE SINGERS ULTIMATE CHOICE

DA-3700

Digital Karaoke Mixing Amplifier with Key Control

OWNER’S MANUAL
Specifications

VocoPro DA-3700
Digital Karaoke Mixing Amplifier with Key Control

Maximum Output
120W + 120W at 4-Ohm
100W + 100W at 8-Ohm

S/N ratio
65dB (mic on) 70dB (mic off)

THD
<0.5%

Frequency Response
20Hz-20KHz

Noise Level
<10mV

Tone Balance Control
±12dB

Balance Input
±1.5dB

Split Level
>35dB

Mic Sensitivity
<30mV

Mic Frequency Sound
100Hz ~ 2.5kHz

MIC Tone
Treble
±10dB
Bass
±10dB

Supply Voltage
110V-220V

Features

• 9-step Digital Key Control
• 2 Unbalanced 1/4” Microphone Inputs with +20dB Gain Pad, Volume, Balance, Echo and 3-Way EQ Controls on each Channel
• 2 Switchable RCA A/V Inputs for Source Players (DVD, CD+G, VCD, etc)
• 3 RCA Audio Outputs (Record, Line and Microphone) for Output to Recording Devices, Amplifiers and Mixers
• 2 RCA Video Inputs/Output for Video Connection to a TV or Monitor Device
• Effect Loop for Integration of Outboard Effect Units
• Master Volume, Balance and Low/Mid/High Frequency Controls for input source music
• Master Lo/Hi frequency, Repeat and Delay Echo controls
• Master Microphone volume control
• Remote Key Control input
• 2-Way Binding Post Speaker Outputs
• Remote Control
• 10V-220V Compatible
• Dimensions: 16” [W] x 14” [D] x 55” [H]
Getting connected

CD/DVD player connection
You can simultaneously connect up to two CD/DVD players to the DA-3700PRO's switchable A/V channels. Using the DA-3700PRO's remote or front panel, you can easily switch between channel A and Channel B.

Audio
Connect the stereo [L/R] RCA cables from the Output of your CD/DVD player to the VCD/CD (INPUT A) or the DVD (INPUT B) L/R inputs on the rear panel of the DA-3700PRO.

Video
Connect the video RCA cable from the Video Output of your CD/DVD player to the VIDEO INPUT on the rear panel of the DA-3700PRO.

TV/Display device connection
The DA-3700 has two video inputs and two video outputs. Video inputs A and B correspond to the two input channels. The video that is being input into VIDEO input A will only play when input channel A is active. Likewise, the video that is being input into VIDEO input B can only be viewed if input channel B is active.

Both Video Outputs send the same picture simultaneously to two different TVs or display devices.

Connect the Video RCA cable from the VIDEO output on the DA-3700PRO to the Video Input on your TV or display device.

NOTE: Switch between Inputs A and B either by using the A/B buttons on the DA-3700PRO’s remote or on the front panel.
Amplifier, mixer and external sound system connections

Music and Vocals
The DA-3700PRO's LINE OUT (RCA) jacks can be used to connect to a second power amplifier, an external sound system or mixing device. **Note:** The DA-3700 offers optimum performance when used as an amp for home sound systems and smaller performance systems and speakers. See our VP Series power amplifiers for more professional applications at VocoPro.com or your nearest VocoPro dealer.

Use L/R RCA audio cables to connect to an amplifier, mixer or other external sound system. Connect from the L/R LINE OUTPUT on the DA-3700PRO to the L/R audio input on your amp, mixer or sound system.

Outputting Vocals Independently
You can output vocals independently from the DA-3700PRO into a mixer from the L/R RCA MIC Outputs. Connect the L/R RCA cable from the MIC OUTPUT to an Audio Input on your mixer.

External speaker connection
You can connect directly to speakers using either MDP (banana plug) speaker cables or standard speaker wires. Be sure to correctly match the polarities (+/-). Connect speakers rated no lower than 4-Ohms to the DA-3700 Pro. Please do not try to connect more than one speaker per channel, as the load may exceed the amplifiers handling capacity, causing it to overload.

If using standard speaker wire, unscrew each plastic bind until you are able to see an interior hole for speaker wire (this is easier to locate when viewing from a side angle). Slide the speaker wires into the slots and tighten the plastic binds to tighten them in place. Be sure there is no insulation on the speaker wire preventing conductivity.
Vocals

The MIC INSERT jacks on the rear panel allow you to loop the vocals through an effects unit. **NOTE:** In order to do this you must have a 1/4" Y adapter cable (not included) for each microphone line. Connect the single end of the Y cable into the MIC INSERT jack. Connect one side of the double end into the input on the effects device and the other end into the output of the effects device. **NOTE:** If the Y cable is plugged into the DA-3700PRO but the double ends are not connected to the IN and OUT of a device, there will be no sound. So if you are not using effects, be sure the Y cable is unplugged.

Effects Loop connections

Source Music (Music from a DVD or CD player)

By using the built-in Effects Loop you can add effects such as a professional Digital Key Controller to the source player’s music without compromising the quality of the original signal. To use the effects loop connect an RCA cable from the DA-3700PRO’s EFFECTS LOOP L or R OUT jack to the effects unit input. Then connect an RCA cable from the effects unit output, into the DA-3700’s L or R IN jack. **NOTE:** If you are not using the Effects Loop, be sure the LOOP BARS are re-connected. Without these, there will be no sound.

Vocals

Using a mic cable with a 1/4" end, connect the mic to either of the DA-3700PRO’s microphone inputs.

A mic with Remote Key Control

Connect the Remote Key Control cable into the KEY CONTROLLER jack on the rear panel of the DA-3700PRO.
1. **MICROPHONE INPUT jacks** - Connect your microphones to these inputs with 1/4” cables.
2. **-20dB GAIN pads** - Press pad to an inward position to decrease the microphone output’s gain by -20db. Release pad to its outer position to have the microphone output revert back to NORMAL volume.
3. **PEAK LED indicators** - The PEAK LED indicates when the input level is too high.
4. **VOL. control** - This control increases and decreases the VOLUME level for the MIC channels. Turn clockwise to increase MIC VOLUME and counter-clockwise to decrease the MIC VOLUME.
5. **BAL. control** - Use this control to fade the microphone output between the left and right channels. When the balance control is directly centered, equal sound comes out of both the left and right channels giving you perfect stereo sound.
6. **ECHO control** - This control increases/decreases the amount of ECHO applied to the MIC channels. Turn clockwise to increase ECHO and counter-clockwise to decrease ECHO.
7. **LOW. control** - This control increases/decreases the amount of LOW (bass) frequency response applied to the MIC channels. Turn clockwise to increase the LOW frequency response and counter-clockwise to decrease the LOW frequency response.
8. **MID. control** - This control increases/decreases the amount of MID-RANGE frequency response applied to the MIC channels. Turn clockwise to increase the MID-RANGE frequency response and counter-clockwise to decrease the MID-RANGE frequency response.
9. **HIGH. control** - This control increases/decreases the amount of HIGH (treble) frequency response applied to the MIC channels. Turn clockwise to increase the HIGH frequency response and counter-clockwise to decrease the HIGH frequency response.
10. **DIGITAL KEY CONTROL** - Use these buttons to raise or lower the musical key of your source music (CD/DVD player). The LEDs indicate where the current key of the music is.
    - b - Lowers the key of the music
    - 7 - Restores the music back to its original (natural) key
    - # - Raises the key of the music
11. **INPUT SELECTOR buttons** - Use these buttons to toggle between the two available input channels A and B.
11. **ST/MO (Stereo/Mono)** - Use this button to switch between the two echo output modes, STEREO and MONO.

12. **MASTER ECHO VOLUME control** – This control increases/decreases the MASTER VOLUME LEVEL of the ECHO effect available to the MIC 1, 2-3 channels. Turn clockwise to increase MASTER ECHO VOLUME and counter-clockwise to decrease the MASTER ECHO VOLUME.

13. **ECHO LO. control** – This control increases/decreases the amount of LOW frequency response applied during the ECHO effect application. Turn clockwise to increase the LOW frequency response, and counter-clockwise to decrease the LOW frequency response.

14. **ECHO HI. control** – This control increases/decreases the amount of HIGH frequency response applied during the ECHO effect application. Turn clockwise to increase the HIGH frequency response, and counter-clockwise to decrease the HIGH frequency response.

15. **ECHO RPT. control** – REPEAT adjusts the interval repetition of the echo effect. As more REPEAT is applied to the ECHO effect, more echo intervals will occur prior to fading out. Turn clockwise to increase the REPEAT level and counter-clockwise to decrease the REPEAT level.

16. **ECHO DEL. control** – DELAY adjusts the total beginning and ending length of each echo interval. As more DELAY is applied to the ECHO effect, each ECHO interval will become longer in time. Turn clockwise to increase the DELAY level and counter-clockwise to decrease the DELAY level.

17. **MUSIC VOL. control** – This control increases/decreases the MUSIC VOLUME level(s) from INPUT SOURCES that are connected to the CD/DVD channels. Turn clockwise to increase MUSIC VOLUME and counter-clockwise to decrease the MUSIC VOLUME.

18. **MUSIC BALANCE control** - Use this control to fade the music output between the left and right channels. When the balance control is directly centered, equal sound comes out of both the left and right channels giving you perfect stereo sound.

19. **MUSIC LOW. control** – This control increases/decreases the amount of LOW [bass] frequency response applied to the audio output of INPUT SOURCES connected to the CD/DVD channels. Turn clockwise to increase the LOW frequency response and counter-clockwise to decrease the LOW frequency response.

20. **MUSIC MID. control** – This control increases/decreases the amount of MID-RANGE frequency response applied to the audio output of INPUT SOURCES connected to the CD/DVD channels. Turn clockwise to increase the MID-RANGE frequency response and counter-clockwise to decrease the MID-RANGE frequency response.

21. **MUSIC HIGH. control** – This control increases/decreases the amount of HIGH frequency response applied to the audio output of INPUT SOURCES connected to the CD/DVD channels. Turn clockwise to increase the HIGH frequency response and counter-clockwise to decrease the HIGH frequency response.

22. **MIC MASTER VOLUME control** - Use this to control the overall volume of both microphone channels. Turn clockwise to increase the master microphone volume and counter-clockwise to decrease the master microphone volume.

23. **MUSIC MASTER VOLUME control** - Use this to control the overall volume of the music from the CD/DVD player that is input into the DA-3700PRO.

24. **POWER button** – This button turns the DA-3700PRO ON and OFF.
1. **VOLTAGE SELECTOR switch** - This selector toggles between 110-120V and 220-240V power settings. **NOTE:** Please ensure this toggle is set to the correct position, matching the receiving AC outlets power supply before plugging it in and operating it. Doing so may cause severe damage to the unit and void your product warranty.

2. **FUSE terminal** - This terminal houses the DA-3700PRO’s main system FUSE. **NOTE:** If fuse replacement is necessary, only replace with the same type and rating of fuse.

3. **AC IN terminal** - Connect AC MAINS POWER CORD from the wall outlet to this terminal.

4. **SPEAKER BINDING posts (MDP)** - Connect appropriate speaker cables from these SPEAKER OUTPUT jacks to the INPUT jacks located on your speakers. Standard speaker wire or speaker cables equipped with MDP (banana) plugs can be used with the DA-3600 Pro’s SPEAKER BINDING posts. **NOTE:** To use standard speaker wire, unscrew the plastic color-coded (red-black) binds until you can access the wire holes located on the inner-sides of the binds and slide the wire leads into them. Fasten them down by re-tightening the binds.

5. **REMOTE KEY CONTROL** - This 1/8” jack is for connecting a REMOTE KEY CONTROL cable. Remote Key Control allows you to make key changes at a distance from the Digital Key Controller on the DA-3700PRO.

6. **VOLUME RESET switch** - The master MIC and MIXIC volumes on the DA-3700 are programmed to reset back to zero every time the machine’s power is turned off. The VOLUME RESET switch allows you to turn this feature off. When this switch is in the ON position, the volume will reset whenever the machine is turned off and when in the OFF position, the volume will stay the same when the machine is turned off.

7. **MIC INSERT jacks** - These 1/4” jacks allow you to loop each microphone line through an effects unit. **NOTE:** In order to do this you will need a 1/4” Y cable (not included). See “Connecting to an effects system using the Effects Loop” instructions in the GETTING CONNECTED section of this manual for further instructions on running vocals through an effects loop.

8. **VIDEO INPUT (RCA) jacks** - Connect RCA-ended video cables from these jacks to the VIDEO OUT jacks on the device connected to your VCD/CD (Input A) or DVD (Input B) player.

9. **VIDEO OUTPUT (RCA) jacks** - Connect RCA-ended video cables from these jacks to the VIDEO IN on a TV or display device. These are not independent outputs; they both output the same video signal simultaneously.

10. **MIC OUTPUT jacks** - These jacks output the two mic channels without any music. Connect a paired RCA-ended patch cable from these jacks to the appropriate INPUT jacks on a mixer or vocal effects unit. **NOTE:** MIC OUTPUT from these jacks is dry. Echo effects will not be applied to this MIC OUTPUT, regardless of the current master and channel echo settings.

11. **REC OUTPUT jacks** - These jacks provide connection to recording and other external audio devices. Connect a paired RCA-ended patch cable from these jacks to appropriate INPUT jacks on the recording or other audio/video device.

12. **LINE OUTPUT jacks** - These jacks output both mic channels and source music together.

13. **AUDIO INPUT jacks** - Input audio from a VCD/CD or DVD player into either of these channels. The audio from channel A can only be heard when channel A is selected on the DA-3700PRO’s input selector and the audio from channel B can only be heard when channel B is selected on the DA-3700PRO’s input selector.

14. **EFFECTS LOOP jacks** - Use the EFFECTS LOOP jacks to connect an external effects unit, such as a key controller or EQ. After removing the LOOP-BARS, connect a patch cable from the OUTPUT jacks of your external effects unit to the EFFECT LOOP IN jacks. Connect a second patch cable from the INPUT jacks of your external effects unit to the EFFECT LOOP OUT jacks on the DA-3700PRO. **NOTE:** Do not discard the loop-bars. It is necessary for the loop-bars to be in place when there is no external effects unit being used.
1. **INPUT SELECTOR buttons** - Use these buttons to toggle between the two available input channels A and B.

2. **DIGITAL KEY CONTROL** - Use these buttons to raise or lower the musical key of your source music (CD/DVD player). The LEDs indicate where the current key of the music is.
   - b - Lowers the key of the music
   - # - Restores the music back to its original (natural) key
   - # - Raises the key of the music

3. **MIC MASTER VOLUME control** - Use this to control the overall volume of both microphone channels. Turn clockwise to increase the master microphone volume and counter-clockwise to decrease the master microphone volume.

4. **MUSIC MASTER VOLUME control** - Use this to control the overall volume of the music from the CD/DVD player that is input into the DA-3700PRO.
Basic operations

Switching between input channels

Use the A and B input buttons on the DA-3700PRO's front panel or remote control to switch between the two input channels.

Using Digital Key Control

Digital Key Control enables you to adjust the key of the source music (CD/DVD player) to fit the vocal range of the person who is singing. The key can be adjusted by using the key control buttons on the DA-3700's front panel, the remote control or from a Remote Key Control microphone.

- \( \text{b} \) - lowers the key of the music
- \( \text{\#} \) - resets the key back to its original (natural) state
- \( \# \) - raises the key of the music
Balancing a Microphone Channel

When adjusting Mic levels, it is recommended to do so in this order:

1. First adjust the MIC VOLUME control to approximately 50%. [Shown on Fig. 1]
2. Then balance the LOW, MID and HIGH controls to approximately 40-60%. [Shown on Fig. 2]
3. Start background music with the MUSIC VOLUME set at approximately 50%. [Shown on Fig. 3]
4. Fine-tune each MIC CHANNEL as necessary till you get a clean balanced mix
5. Remember to compensate if the background music has striking volume changes. To do this, you can utilize the -20dB GAIN PAD. The -20dB Gain Pad toggles between a current volume level and reduced gain volume level. This control can be used to immediately go from one volume level to another by a quick push of the button.
6. Once all the settings are complete, do a complete song for complete balancing success.

Balancing the Music Channel

When adjusting the music levels follow the same procedure as seen above for Mic levels.

Balancing the Music with the Vocals

The DA-3700 Pro has MASTER, HIGH, MID and LOW controls for both the music and the microphone levels, which enables you to adjust your mix levels with precision, resulting in a professional-sounding mix. If you find that the music is too loud, simply adjust the MUSIC VOLUME control. Also, keep in mind that HIGH, MID and LOW levels also affect the overall “sound” and can be adjusted to correct sound balancing problems. Excessive high (treble) frequencies can lead to feedback, so be careful when adjusting them.
# Troubleshooting

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<th>SOLUTIONS</th>
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<td>No sound coming from selected music source</td>
<td>Input Selector is set incorrectly</td>
<td>Change Input Selector to the correct current playing source</td>
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<tr>
<td></td>
<td>Music Master Volume control is set to minimum</td>
<td>Raise Music Master Volume level to an appropriate level</td>
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<tr>
<td></td>
<td>The Effect Loop bars are either not inserted or inserted incorrectly; or the device connected to the Effect Loop is incorrectly working</td>
<td>Connect the Loop Bars horizontally (L-OUT to L-IN and R-OUT to R-IN); or reconnect the connected device as stated in the instruction manual</td>
</tr>
<tr>
<td></td>
<td>Speakers and Speaker Cables are either not connected, loose or malfunctioning</td>
<td>Check Speakers and Speaker Cable connections. Tighten or replace if necessary.</td>
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<tr>
<td></td>
<td>Source player is functioning incorrectly</td>
<td>Replace player and reset the DA-3700PRO’s power supply</td>
</tr>
<tr>
<td>There are no graphics on the screen.</td>
<td>Video cable(s) are not properly connected</td>
<td>Reconnect cables firmly to correct video jacks as stated in the instruction manual</td>
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<td></td>
<td>Disc medium is not a CDG</td>
<td>Insert a CDG for playback</td>
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<td>High pitched squealing occurs when using the microphone</td>
<td>Microphone is pointed to, or too close to speakers</td>
<td>Move microphone away from speakers</td>
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<tr>
<td></td>
<td>Treble level(s) are too high on microphone channel(s)</td>
<td>Turn down treble level(s) on microphone channel(s)</td>
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<tr>
<td>No microphone output is present</td>
<td>The microphone is not turned on</td>
<td>Turn on the microphone</td>
</tr>
<tr>
<td></td>
<td>The microphone cable is either loose or not functioning</td>
<td>Tighten or replace the microphone cable</td>
</tr>
<tr>
<td></td>
<td>The Microphone Volume for that channel is set to a minimum</td>
<td>Turn up the Microphone Volume for that channel</td>
</tr>
<tr>
<td></td>
<td>The microphone is not functioning correctly</td>
<td>Replace the microphone</td>
</tr>
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