

Instruction Manual

AP-411
Lip Sync Corrector

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1.0 INTRODUCTION

Thanks for purchasing this AP-411 Lip Sync Corrector from the AV Toolbox division of tvONE. The AP-411 is a compact device used to correct audio/video timing mismatches that result in the loss of synchronization of the two components of A/V program content. Since this problem is virtually always caused by the program's video component arriving after the audio component, the AP-411 Lip Sync Corrector provides up to 300 milliseconds of delay for the audio component to restore A/V synchronization to the program material. AV Toolbox offers a wide range of video, audio and multimedia products.

1.1 Liability Statement

Every effort has been made to ensure that this product is free of errors. tvONE cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

tvONE reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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1.2 Features

The AP-411 Lip Sync Corrector has many features that enable it to perform in a superior manner. Among those features you will find:

- Re-synchronizes program audio to video
- Synchronizes both R & L Stereo channels
- Samples audio spectrum at a 48kHz rate
- S/N = >80dB
- Crosstalk = <-70dB
- THD - N = <0.01%
- Automatically maintains unity gain
- Simple installation
- Low Power Consumption

2.0 SPECIFICATIONS:

| | |
|--|--|
| Audio Inputs | |
| Stereo Audio (R/L) | 1x via 2x RCA Connectors |
| Audio Outputs | |
| Stereo Audio (R/L) | 1x via 2x RCA Connectors |
| Performance | |
| Audio Input Level Audio Output Level S/N, Crosstalk, THD+N Audio Sample Rate Audio Bandwidth | (L/R) 2Vrms max (L/R) 2Vrms max >80dB, <-70dB, <0.01% 48kHz 20Hz to 20 KHz |
| Warranty | |
| Limited Warranty | 1 Year Parts and Labor |
| Mechanical | |
| Size (H-W-D) Weight (Net) | 22 x 42 x 40.5mm (0.86 x 1.65 x 1.6") 32g (1.12 oz.) |
| Environmental | |
| Operating Temperature Operating Humidity | 0° to +40°C (+32° to +104°F) 10% to 90%, Non-condensing |
| Storage Temperature Storage Humidity | -20° to +60°C (-4° to +140°F) 10% to 90%, Non-condensing |
| Power Requirement | |
| External Power Supply | 1x 5VDC@1A |
| Regulatory Approvals | |
| Transmitter/Receiver Units | FCC, CE, RoHS |
| Power Supply | UL, CUL, CE, PSE, GS, RoHS |
| Accessories Included | |
| 1x AC Power Adapter | US, UK or Euro |
| 1x 3' Stereo Audio – RCA 1x Operations Manual | |

3.0 PACKAGE CONTENTS

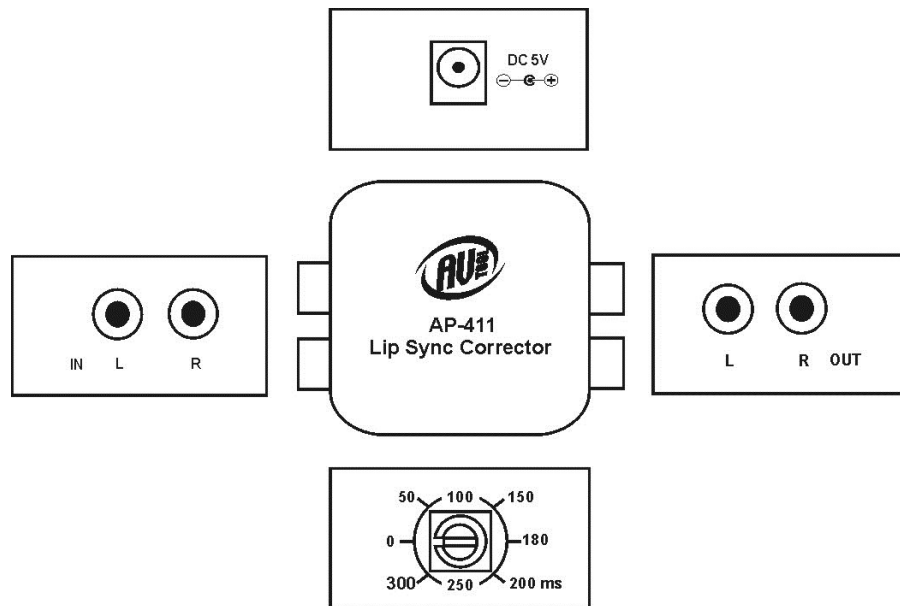
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x AP-411 Lip Sync Corrector
- 1x AC Adapter
- 1x Stereo Audio Cable
- 1x Operation Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or AV Toolbox immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

4.0 CONNECTING THE HARDWARE

Please study the panel drawings below and become familiar with the Signal Input, Output and Delay Adjustment control locations.



Connect audio inputs from the source equipment to the R and L RCA connectors on the AP-411. Next, connect the AP-411's R and L outputs to the destination equipment.

Connect the AC adapter to the AP-411 and then to a working AC power socket.

Lastly, turn on both the source equipment and the destination equipment.

Note: There is no power switch on the AP-411. It will begin to function as soon as power is applied and program content is present.

5.0 OPERATING THE UNIT

When the program content appears, adjust the delay switch as required to restore audio/video lip sync. Other than connecting power, connecting the cables to the source and destination equipment and adjusting the audio delay component, there is no operator intervention required.

6.0 TROUBLESHOOTING

In the event that the unit appears to be non-functional, make certain that the AC power outlet is active for the source and destination equipment as well as the AP-411. Next, substitute each cable in use with a known good cable to remove that variable.

Note: It is strongly recommended that you use premium cables in order to achieve maximum distance cable runs and the best performance possible.

After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting AV Toolbox. Should the dealer's technical personnel be unable to assist you, contact AV Toolbox via the tvONE support website: **<http://tvone.crmdesk.com>**. Create a technical support request on the site and our support team will respond within a short period of time.

7.0 LIMITED WARRANTY

LIMITED WARRANTY – AV Toolbox warrants the original purchaser that the equipment it manufactures will be free from defects in materials and workmanship for a period of one year from the date of purchase. Should this product, in AV Toolbox's opinion, prove defective within this warranty period, AV Toolbox, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of AV Toolbox. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from AV Toolbox and return the product to a location designated by AV Toolbox, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to one year from the date of purchase. AV Toolbox assumes no liability to distributors, dealers or end-users for any loss of use, revenue or profit.

AV Toolbox makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of AV Toolbox with respect to any defective products will be limited to the repair or replacement of such products. In no event shall AV Toolbox be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0 REGULATORY COMPLIANCE

The AP-411 product has been tested for compliance with the appropriate FCC and CE rules and regulations. The power adaptor/supply has been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, regulations and/or guidelines. This product and power adapter are RoHS compliant.

9.0 CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact tvONE at the appropriate location shown below.

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