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LAWRENCE KANSAS

LA GRANGE TEXAS

**CA-70**

**INSTALLATION GUIDE**

**&**

**OPERATING MANUAL**



## **Table of Contents:**

**Page1 - High Voltage warnings and considerations**

**Page2 - Package Contents**

**Page2 - Changing Transformers**

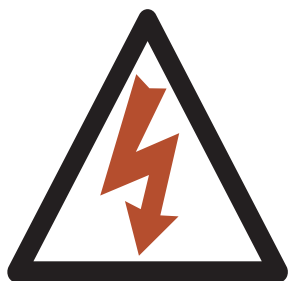
**Page3 - Controls Description**

**Page4 - Circuit Block Diagram**

**Page4 - Module Illustration**

**Page5 - Maintenance**

**Page6 - Warranty Information**



# **WARNING!**

## **HIGH VOLTAGES PRESENT!**

**FOR YOUR PERSONAL SAFETY, PLEASE READ THIS OPERATING MANUAL THOROUGHLY BEFORE USING THIS PIECE OF EQUIPMENT.**

**Please note the following:**

**->Be aware that the 10pin cinch sockets at the rear of the PS6 tray back block are live at 275V whenever the unit is powered on. Don't place hands, or anything else on unused tray slots, or near cinch connectors when in use.**

**->Never plug in a CA-70 module while the PS6 Power Supply is on.**

**->Never operate a CA-70 module without the protective cage covering the circuit board assembly.**

**->Never swap transformers on a CA-70 module while the PS6 Power Supply is on.**

**->This unit must be installed in such a manner that operator access to the Main AC plug is maintained and accessible. To reduce risk of electric shock, it is essential that the unit is powered off and/or disconnected from Main AC power before any installation or maintenance procedures begin.**

**->This equipment is not to be mounted in an area prone to excessive vibration (like a drum riser or sub cabinet) or high SPL sound levels. Doing so could introduce unwanted artifacts and can damage the unit.**

**->This equipment is not intended for use in hazardous environments. It must be used and stored in studio conditions, such that the ambient relative humidity does not exceed 80%, nor is the temperature to be allowed to drop to a level which would cause excessive moisture buildup in the unit.**

**->Please insure that adequate ventilation is provided and that the PSU chassis and any installed PS6 MODULE ventilation slots are not obstructed. When rack mounting this equipment in a tightly sealed space, a small fan may be required to provide sufficient airflow.**

**->In the event that this unit has been dropped or has suffered any impact damage, an electrical safety test must be carried out by a qualified technician or shipped back to Coil Audio LLC for service before reconnection to the Main AC power. Please do not attempt to service the unit yourself.**

## INSPECT PACKAGE CONTENTS

All CA-70 modules are carefully packed for shipment to insure a safe arrival. However, if there is any damage, contact Coil Audio immediately and keep any and all shipping materials for use during any possible damage claims with the shipper.

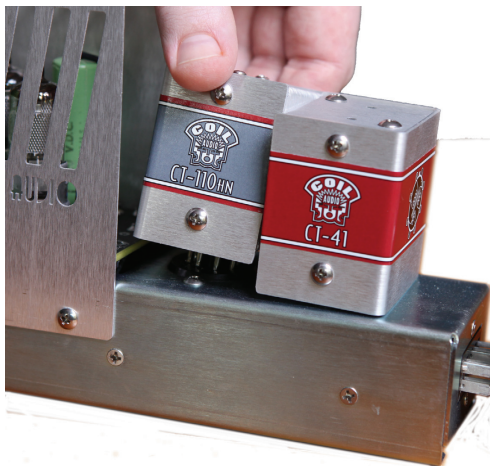
Included in the Package are:

- (1) CA-70 module
- (1) 1-3 input/output transformers depending on order
- (1) Guide Bracket hardware set for PS-6 Tray that includes:
  - (4) GUIDE BRACKET plates (two short/two long)
  - (4) 3/8" #6-32 Stainless Steel Screws w/Lock-Nuts
  - (2) Fender Washers
  - (2) Module Thumbscrews

## GUIDE BRACKETS MUST BE INSTALLED BEFORE INSTALLING MODULES IN THE RACK TRAY

For guide bracket and module installation please see Pages 3-4 of the "PS6 Rack and Power Installation and Operating Manual"

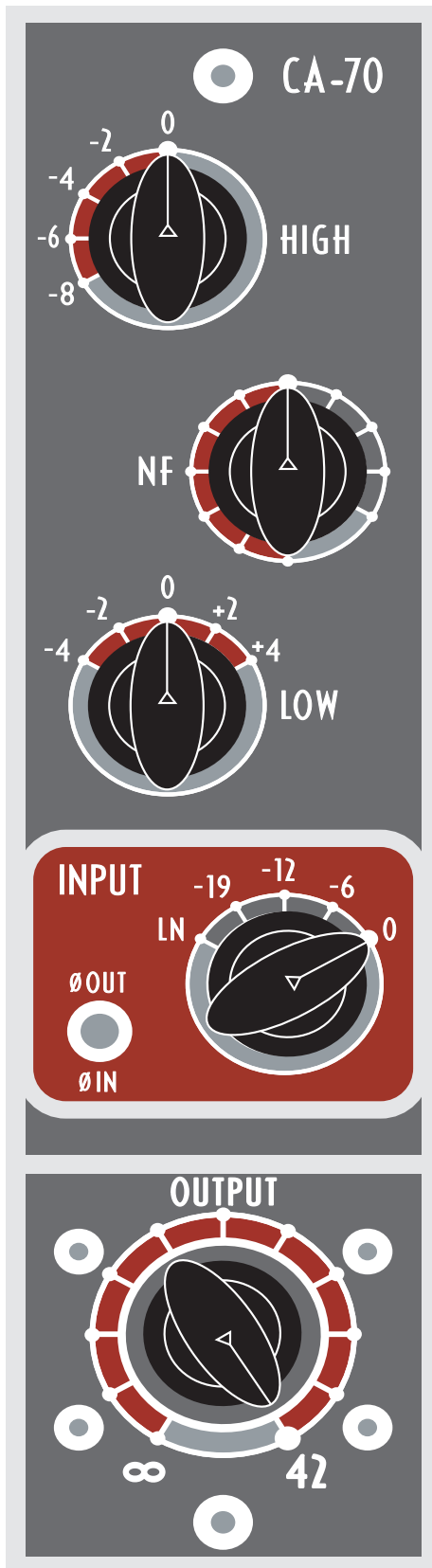
## CHANGING TRANSFORMERS



Before inserting modules into the rack tray, make sure both your input and output transformers are firmly seated into the module body. Never plug or unplug transformers while the module is plugged in and powered on.

Each octal plug has a guide pin to ensure proper orientation, refer to the adjacent picture for placement. The front octal socket is for the input transformer (such as CT-110 or CT-100HN). The rear octal is for the output transformer (CT-41).

# CONTROLS DESCRIPTION:



## **NF:** Stock position is **12:00**

The NF control varies the amount of Negative Feedback present in the circuit. Counter-clockwise brightens and moves the sound forward while raising harmonics and sensitivity. Turning it clockwise increases negative feedback, producing a darker tone with a smooth, dampened harmonic structure.

## **HIGH:** Stock position is **0** or **12:00**

The -HI+ tilt switch interacts directly with the NF, transitioning from the natural openness of the tubes to a gentle filtering of upper frequencies. The "0" position removes all filtering, while the "-" positions add a gentle broadcast type hi frequency roll off.

## **LOW:** Stock position is **0** or **12:00**

The -LOW+ tilt knob boosts and cuts lower frequencies in the Negative Feedback Loop, dimensionally boosting and moving the low end from front to back in the soundstage. Most effective when the NF knob is between 11:00 and 5:00. The more Negative Feedback, the more reactive.

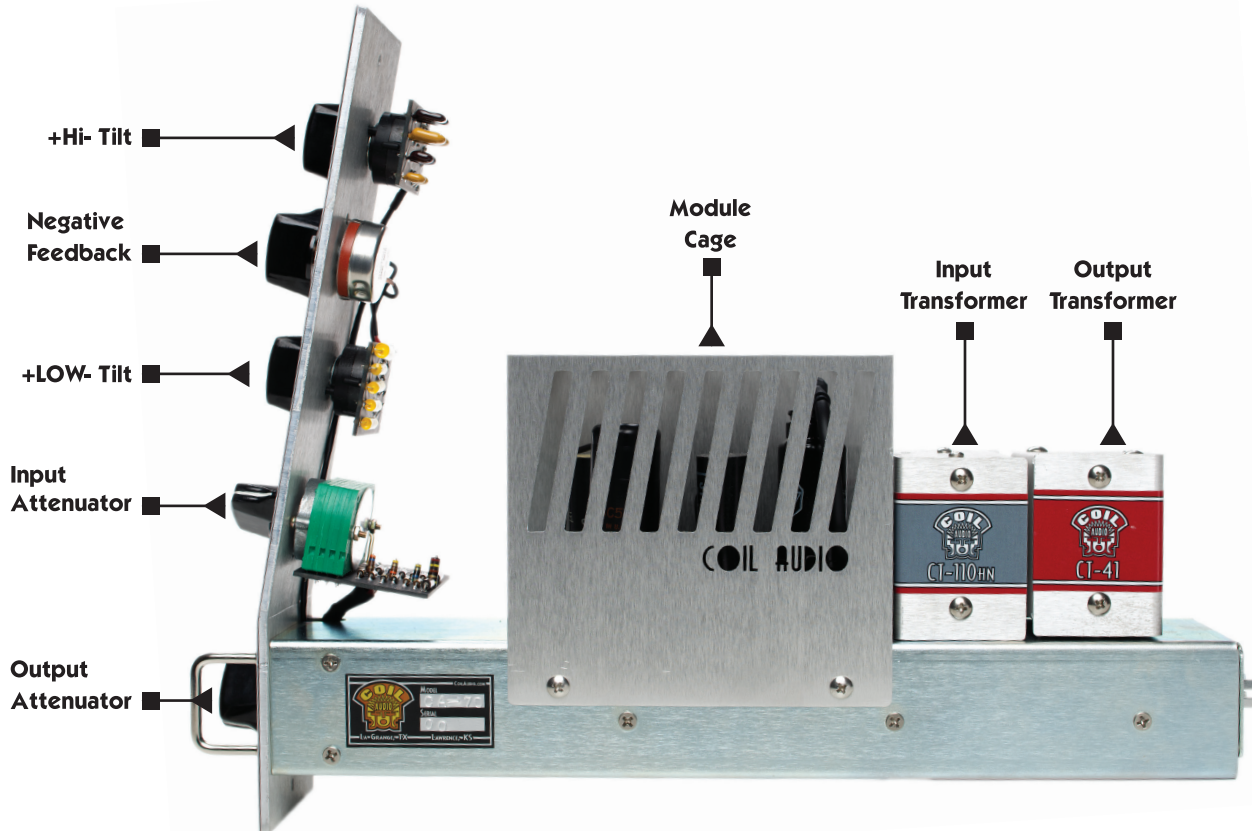
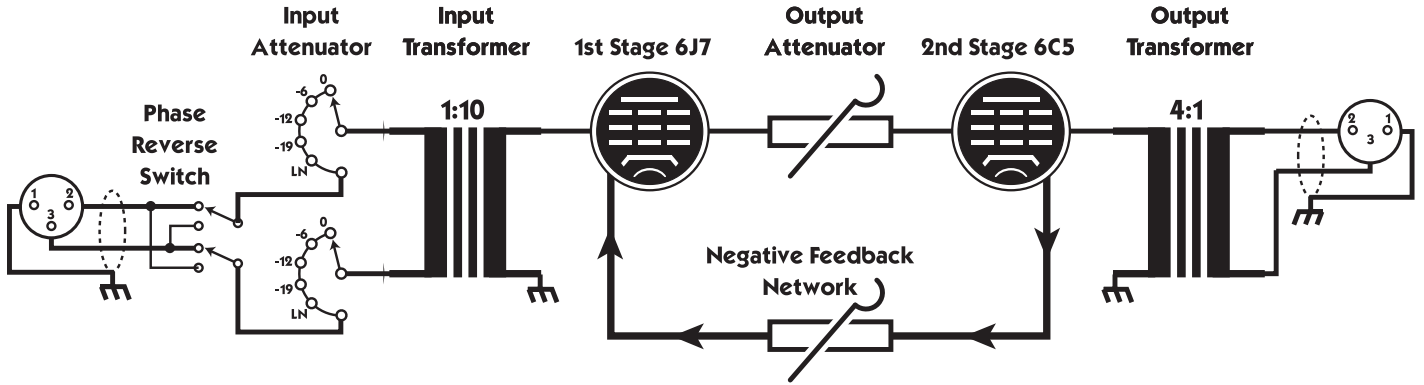
## **INPUT:** Stock position is **0**

Above the phase reverse switch, is a 5-position attenuation network of 'Balanced H-pads' that go between the XLR and input transformer. The first four positions are for 150 ohm microphone inputs and are 0, -6, -12, and -19 db. The final Line (LN) position is for bridging any balanced line level signal such as tape machines, daw outputs, other preamps, etc. This allows it to work as both a second-stage booster for other preamps and a summing/buss amp for program and mix material. Two amplifiers can also be chained together to create the multi-stage, high gain recording path of a vintage tube console.

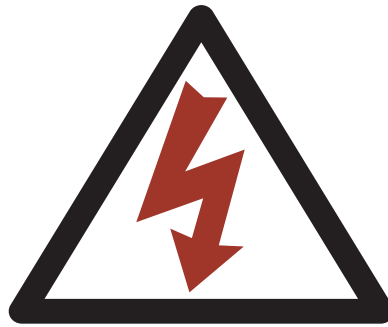
## **OUTPUT:** Stock position is **+42** or **5:00**

The OUTPUT control knob is placed between the 6J7 first stage and 6C5 second stage tubes. It sets the final level and offers further control of the two-stage gain structure.

# Two Stage Single Ended Parafeed Circuit Block Diagram



## **Maintenance:**



**TURN OFF POWER SUPPLY AND ALLOW MODULE TO COOL AND DISCHARGE CAPACITORS FOR AT LEAST TEN MINUTES BEFORE ATTEMPTING TO SERVICE OR REPLACE TUBES.**

**Tube Replacement: 1 x 6j7 / 6J7G / 6J7GT/ 1620  
1 x 6C5 / 6C5G / 6C5GT / VT-65**

To replace tubes, turn off power supply, and allow modules to cool down and discharge in the tray for at least ten minutes. Capacitors in the module can store high voltages if removed too quickly, and not allowed to discharge after power down.

After discharge, remove module and disconnect top cage from module base by removing the four screws on the side. Remove grid connection wire from the top of the 6J7 tube. Firmly grab tubes and pull straight up to remove them, taking care not to damage other components. When inserting new tubes be sure pins are straight and aligned before inserting into the tube socket. The socket should be a tight fit, some pressure is required to insert new tubes

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## **Warranty**

**For repair or service please contact us at: [support@coilaudio.com](mailto:support@coilaudio.com)**

**All Coil Audio products carry our 1-year limited warranty and are hand-built, assembled, and tested in the USA using UL-approved parts.**

### **Limited 1-Year Warranty**

**During the warranty period, Coil Audio will, at no additional charge, repair or replace defective parts with new parts. This warranty does not extend to any Coil Audio product that has been damaged or rendered defective as a result of accident, misuse, or abuse; by the use of parts not manufactured or supplied by Coil Audio; or by unauthorized modifications. NOS Vacuum tubes are exempt from the 1-year warranty, but are warranted for 30 days from date of purchase.**

**Except as expressly set forth in this Warranty, Coil Audio makes no other warranties, express or implied, including any implied warranty of merchantability and fitness for a particular purpose.**

### **Warranty & Non-Warranty Repair Service**

**If your Coil Audio product is in need of warranty service or repair, please contact us at [support@coilaudio.com](mailto:support@coilaudio.com). Please make sure to put the Serial Number(s) of the product(s) needing repair in the Subject field of the e-mail and leave a description of the issue with your unit(s). Coil Audio is not responsible for any shipping expenses to or from our repair facility.**

**If your Coil Audio product is no longer under warranty - a nominal flat bench fee that includes diagnostic and repair will be charged along with the price of any individual components replaced. If the issue is vacuum tube related we may contact you directly for resolution. At the owners discretion, replacement NOS Vacuum Tubes will be charged market value (depending on availability) or a New Model substitution can be made at the time of repair.**