

INSTALLATION MANUAL

TAU/88

Audio Amplifier

Please Note:

THIS AMPLIFIER MUST BE INSTALLED by a properly certificated and authorized person in accordance with the Federal Aviation Regulations, Part 43. No responsibility for improper installation of this unit is either implied or assumed by the manufacturer. Units shown to be installed in violation of the FARs will not be covered by the warranty and will remove any and all responsibility from the manufacturer for such equipment.

Products bearing the trademark "GENAVE" or the trade name "GENERAL AVIATION ELECTRONICS, INC." have been fabricated by skillful technicians, under the strictest quality control conditions, using the finest materials and component parts available. When properly adjusted and competently operated according to factory specifications and instructions, General Aviation Electronics Inc. unconditionally guarantees and warrants all parts and bench service labor for one (1) full year from the date of the original installation. This warranty shall not apply to malfunction, which in the opinion of General Aviation Electronics, Inc. is the result of abusive use, accident, willful destruction, improper or unauthorized repair or installation. All service under this warranty must be performed by an Authorized Genave Distributor, or by returning the unit or units, freight pre-paid, to the factory at Indianapolis, Indiana. GENERAL AWATTON ELECTRONICS, INC. By Elmore W. Rice, III, President

SPECIFICATIONS

GENERAL:

WEIGHT: SIZE: 1.0 lbs. Remote Amplifier

Remote Amplifier: 3¼" wide X 2" high X 4 5/8" long (5½" incl.

mounting flanges)

INPUT POWER:

14 VDC, .02 A (Min) 1.5 A (Max) 28 VDC, .04 A (Min) .93 A (Max)

NUMBER OF IC's:

NUMBER OF TRANSISTORS: 5 all silicon

AMPLIFIER:

FREQUENCY (3 db pts): LOW LEVEL SENSITIVITY: 200-3000 Hz 1.0 V rms

HIGH LEVEL SENSITIVITY: AUDIO OUTPUT:

5 W into 4 ohms 10 W @ 14 V, 16 W @ 28 V

NUMBER OF INPUTS:

6 Low Level 2 High Level

INPUT ISOLATION:

-50 db

INPUT IMPEDANCE:

Low Level: 680 ohms

High Level: 4 ohms

OUTPUT IMPEDANCE:

3-6 ohms

Proper Installation Will Assure Quality

The unit you are installing is a high quality, rugged, complex piece of electronic equipment. It has been manufactured under rigid quality control and has been fully tested and operated at high temperatures to stabilize the component parts.

Proper installation of the unit into your customer's aircraft is essential to complete the quality assurance program under which the unit was manufactured.

Unpacking

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CAREFULLY REMOVE the unit and its mounting accessories from the shipping container by removing the staples from the top of the carton and lifting the contents straight out. The carton should be saved until the installation is complete in the event that damage is discovered or return of the unit is necessary for some reason. Any damage due to shipping should be reported and a claim filed as soon as possible with the shipping company. (If it is necessary to re-ship, use our container which is specifically designed for that purpose.)

Pre-Installation Check

VISUALLY INSPECT the unit for any obvious external damage, such as dents, loose wires, etc. Any damage not related to shipping should be reported to General Aviation Electronics, Inc., 4141 Kingman Drive, Indianapolis, Indiana (46226), Area Code 317–546-1111, as soon as possible.

Damage due to shipping should be reported to and a claim should be filed promptly with the transportation company.

All units are shipped in perfect operating condition. However, a pre-installation electrical test may be performed to assure that the unit has suffered no internal damage during shipment. For a detailed test procedure, refer to the Maintenance Section of the Service Manual. DO NOT ATTEMPT to bench test the unit without proper equipment as specified in the Service Manual.

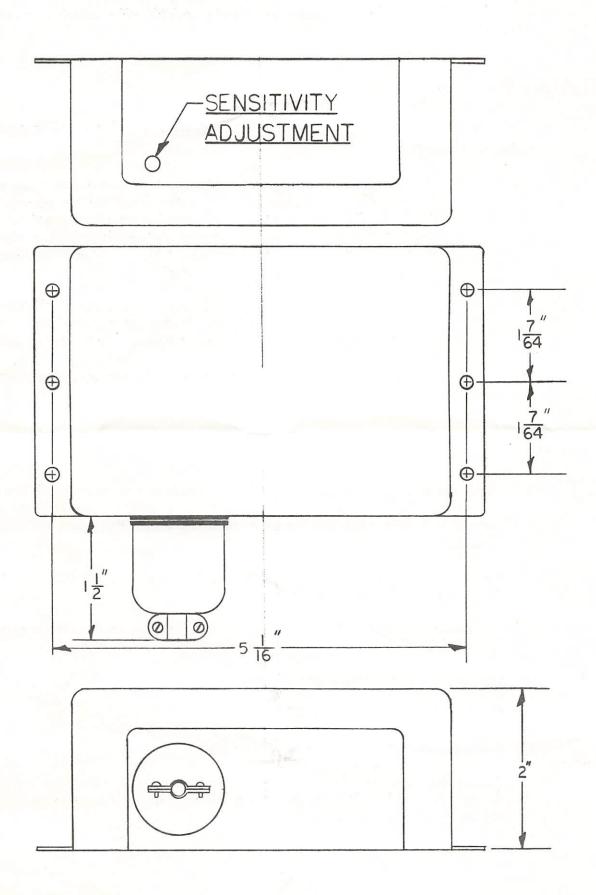
Installation Planning

THE LOCATION of the Unit in the aircraft should be carefully selected with due consideration to the following:

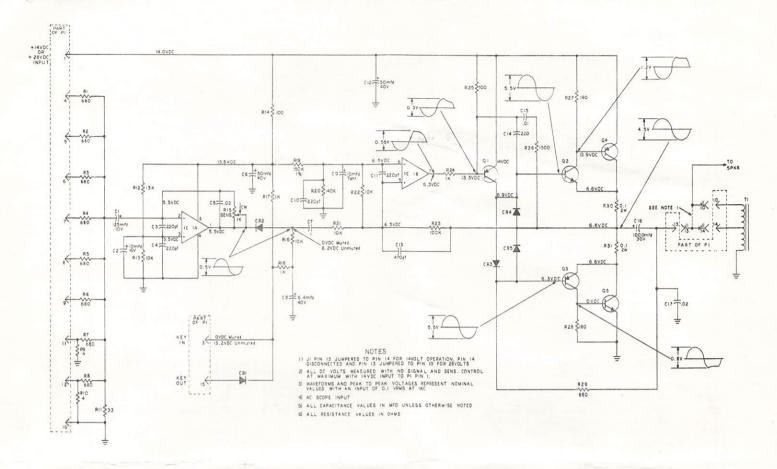
- The unit generates only a very small amount of heat and, as such, does not require any type of cooling. However, the unit must NOT be mounted directly above a vacuum tube device or any other equipments that generate a large amount of heat unless such equipments have cooling provisions installed to keep the heat generated therein from coming in contact with other equipments mounted in close proximity to them.
 - MOUNTING THE UNIT DIRECTLY OVER UNCOOLED VACCUM TUBE EQUIPMENT OR IN THE HOT AIR BLAST OF ANY DEVICE, INCLUDING CABIN HEATERS, WILL AUTOMATICALLY VOID THE WARRANTY.
- 2. The placement of the unit should be such that all controls are easily accessible.

Installation

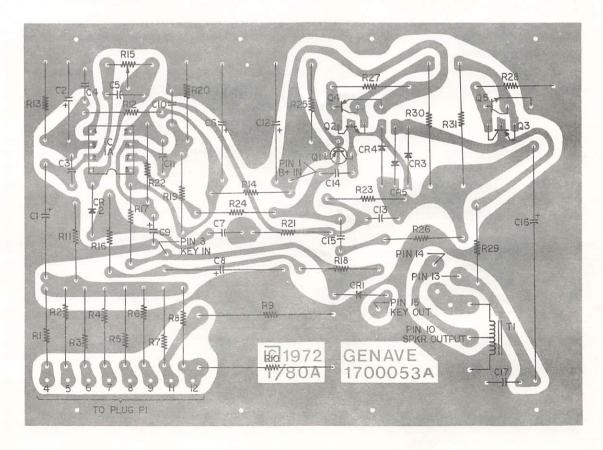
- 1. Install the amplifier in the aircraft using a minimum of two mounting holes in opposite sides of the unit. Use the amplifier itself for a template, and drill the selected holes with a 5/32" drill. Use the #8-32 hardware supplied to attach the unit to the aircraft.
- 2. Fabricate the power and signal cable using the connector socket supplied. A wiring diagram is shown in Figure 2.
- 3. Connect the wires just fabricated to the appropriate points in the aircraft's electronic system. Mechanically secure the cables at appropriate support points.
- 4. Connect the cables to the amplifier.
- 5. Update appropriate logs and papers of the aircraft.
- 6. Fill in the necessary information required by the warranty card.
- 7. Be sure the remainder of the warranty card is filled in by your customer and returned to the Factory. The Warranty Card must be completed and returned to Genave for the warranty to be in effect.



Schematic



Parts/Track Map



TAU/88 Parts List

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
		CAPACITORS			RESISTORS (Cont'd)
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13	1540023 1540014 1520034 1520034 1520053 1540019 1520055 1540012 1550004 1520034 1520034 1540019	Electrolytic, 125 mfd, 10V Electrolytic, 10 mfd, 16V Y5E Disc, 220 pfd. Y5E Disc, 220 pfd. M25 Disc, .02 mfd. Electrolytic, 50 mfd, 40V Disc, .1 mfd, +80-20 Electrolytic, 6.4 mfd, 40V Tantalum, 10 mfd, 25V Y5E Disc, 220 pfd. Y5E Disc, 220 pfd. Electrolytic, 50 mfd, 40V Y5E Disc, 470 pfd.	R23 R24 R25 R26 R27 R28 R29 R30 R31	4700049 4700025 4700013 4700027 4700016 4700016 4700023 4740000 4740000	100K, 1/2W, 10% 1K, 1/2W, 10% 100 ohm, 1/2W, 10% 1.5K, 1/2W, 10% 180 ohm, 1/2W, 10% 180 ohm, 1/2W, 10% 680 ohm, 1/2W, 10% 6.1 ohm, 2W, 10% .1 ohm, 2W, 10% Unassigned IC's
C14 C15 C16	1520034 1520051 1540038	Y5E Disc, 220 prd. Y5U Disc, .01 mfd. Electrolytic, 1000 mfd, 30V	IC1	3130012	Dual OP-AMP, N5558V TRANSISTORS
C17 C18 R1	1520053 4700023	M25 Disc, .O2 mfd. Unassigned RESISTORS 680 ohm, 1/2W, 10%	Q1 Q2 Q3 Q4 Q5	4800016 4800018 4800022 4800011 4800014	Silicon, PNP, MPS-A55 Silicon, NPN, MPS-U01 Silicon, PNP, MPS-U51 Silicon, PNP, MJE-105 Silicon, NPN, SJE-5036
R2 R3 R4 R5 R6 R7 R9 R10	4700023 4700023 4700023 4700023 4700023 4700023 4740016	680 ohm, 1/2W, 10% 4 ohm, 5W, 10%, WW 4 ohm, 5W, 10%, WW	CR 1 CR2 CR3 CR4 CR5	4810013 4810017 4810017 4810017 4810017	DIODES Silicon, Gen. Purpose, 100V, SD-1 Silicon, Hi. Speed Switch, FD1936
R11 R12 R13	4700008 4700039	33 ohm, 1/2W, 10% 15K, 1/2W, 10%	T1	5600034	TRANSFORMER Audio Output
R14 R15 R16	4700013 4760015 4700037	100 ohm, 1/2W, 10% Trimmer, 1K 10K, 1/2W, 10%		7000074	MISCELLANEOUS
R17 R18 R19 R20	4700025 4700025 4720014 4720013	1K, 1/2W, 10% 1K, 1/2W, 10% 150K, 1/4W, 10% 140K, 1/4W, 10%	J1 P1	2100011 2100014 2100018 2508052	Connector, 16 pin, Female Connector, 16 pin, Male Cover Chassis
R21 R22	4700037 4700037	10K, 1/2W, 10% 10K, 1/2W, 10%		2500281 2504271	Cover Heatsink (2-used)

Wiring Diagram

PHONE

PHONE

PHONE

OFF•

