

Audio Frequency Amplifier
Model AM-1965F/AIC (Andrea P/N A81-78)
Model AM-4346/AIC-25 (Andrea P/N A81-86)



Model AM1965F/AIC

**THIS UNIT IS USED ON THE
FOLLOWING AIRCRAFT:**

- F-117
- F-16
- C-130
- KC-135
- C-5
- B-52

GENERAL CHARACTERISTICS

Mean Time Between Failure.....	3000 hrs.
Size.....	4 1/4" W x 1 13/32" H x 3 3/32" D
Weight.....	0.97 lbs. Max.
Environmental.....	Class 3 per MIL-E-5400
Temperature:	
Continuous Operation.....	-54° C to +95° C
Intermittent Operation.....	+95° C to +150° C
Storage.....	-62° C to +150° C
Input Voltage.....	27.5 VDC (17-29 V)
Input Power.....	5.7 W max.
Magnetic Susceptibility to a 2 gauss field.....	0.01 V max. @ 400 cycles
Gain @ 1 KHz.....	74 +/- 5 dB
Frequency Range.....	300 to 6000 Hz
Input Source Impedance.....	500 ohms
Output Load Impedance.....	9.5 ohms
Power Output.....	1.0 W
Distortion.....	5% @ 1.0 W output
Internal Noise.....	2.0 mV Max.
Noise with 3V, ripple on 27.5 VDC line.....	3.0 mV @ 400 Hz to 6000 Hz

DESCRIPTION AND USE

The Andrea Model A81-78, Audio Frequency Amplifier is a solid state, one-watt power amplifier with exceptional reliability.

The amplifier can be used to drive an 8 ohm headset or speaker or as a low noise, high gain preamplifier in any voice frequency system. The A81-78 also contains an optional Automatic Gain Control circuit, which can be used to prevent overloading, or distortion of the signal.

The A81-78 and its companion unit, Andrea Model A81-77, form a pair of listen and talk amplifiers, which have logged many hours of reliable service in a variety of aircraft and ground, based communication systems.

C46-5386 Rev C

INTERFACE DESCRIPTION

Audio Amplifiers

- AM-4346 / AIC-25 (Andrea A81-86)
- AM-1965F / AIC (Andrea A81-78)

Unit Connector

- Vishay / Dale SMP20-14-027 or equivalent
- 14 pins

<u>Pin</u>	<u>Name</u>	<u>Description / Comments</u>
A	Input Low	<ul style="list-style-type: none">• Input Audio return
B		<ul style="list-style-type: none">• Reserved for chassis ground in some applications
C	Input High	<ul style="list-style-type: none">• Input Audio• 0.5 mV to 24 mV, typical input range• Input impedance > 500 Ohms• Expected source impedance 150 Ohms• The input is transformer isolated.
D	Battery ground	<ul style="list-style-type: none">• DC Power return
E	Speaker High	<ul style="list-style-type: none">• High impedance Audio Output to LS-184A()/AIC-10 Speaker (Andrea A61-9)• Output voltage 8 dB higher than headset output• Expected load impedance 1K Ohm• The speaker output is transformer isolated
F		<ul style="list-style-type: none">• Reserved for chassis ground in some applications
H	Headset High	<ul style="list-style-type: none">• Headset audio output to low impedance headset (Rated load impedance 9.5 Ohms)• 3 V rms for 1 Watt rated output to rated load impedance• The headset output is transformer isolated
K	Speaker Low	<ul style="list-style-type: none">• Speaker output return
J	Headset Low	<ul style="list-style-type: none">• Headset output audio return
L	27.5 VDC Power Input	<ul style="list-style-type: none">• Normal Input range 17 to 29 VDC• Input current maximum 207 mA @ 28 VDC
M	Call Line Control	<ul style="list-style-type: none">• With this line open (or not connected) AGC limiting is OFF.• 17 VDC to 29 VDC powers AGC circuitry to limit output to approximately 1 watt (low distortion, rated output)
R	Internal Connection	<ul style="list-style-type: none">• DO NOT USE