

AMPEX

MODEL 3761

**OPERATION AND
MAINTENANCE MANUAL**

INSTRUCTION MANUAL
FOR
AMPEX FOUR CHANNEL MIXER #3761

The Ampex #3761 Four Channel Mixer has been designed to mix four low impedance microphone input sources to feed the microphone input of Ampex Model 402 and 403 Magnetic Tape Recorders. With a special adaptor power cable, the mixer will work directly into Models 400, 400A, 401 and 401A.

SPECIFICATIONS

Input: Four low level microphone inputs, incorporating high level mixing, are provided. Each input is equipped with an individual input transformer which is factory strapped for an input impedance of 250 ohms nonterminating. Each input can be strapped to accommodate input impedances from 50 to 600 ohms.

Output: An output impedance of 250 ohms is normally provided to feed the 250 ohm input on Ampex Series 400 Recorders. The output transformer may be restrapped for any impedance from 50 to 600 ohms, if desired.

Gain: 8 db with mixer controls set for maximum gain.

Frequency Response: ± 1 db., 50 to 15,000 cycles.

Noise: At least 68 db below signal for an input of -50 dbm. This represents a noise equivalent to an input signal of -118 dbm.

Distortion: Less than .2% rms total harmonic on a 400 cycle tone for input levels of -50 dbm or less.

Controls: Four high quality potentiometers operate in the high level mixing circuit to provide smooth quiet mixing action. Sufficient space is provided for installation in the field of 20 step attenuators where desired.

Tubes: Four low microphonic type 5879 vacuum tubes are used and operate as triode amplifiers with all heaters dc operated. This provides the lowest possible noise level and will accommodate high output microphones without overload.

Power Requirements: 300 milliamperes at 12.6 volts DC. 10 milliamperes at 300 to 400 volts, DC, well filtered. Normally obtained from power supply assembly used on Series 400 Magnetic Tape Recorders.

Dimensions: For rack mounting - standard 19" wide panel - commercial notching - 7 inches high.

Weight: 18 pounds.

INSTALLATION WITH AMPEX MODEL 402

AND 403 TAPE RECORDERS

I. POWER

Connect the Mixer Power Cable to the connector labeled "Power Supply" J408S on the Recorder Electronic Chassis. Connect the Recorder Power Supply Cable to the Mixer Power Supply Connector J107S.

II. OUTPUT

Connect the Output Cable from the Mixer Output J105P to the Recorder Input J401S. Place the Input Transfer Switch on the Recorder in the "Mic" position.

III. INPUTS

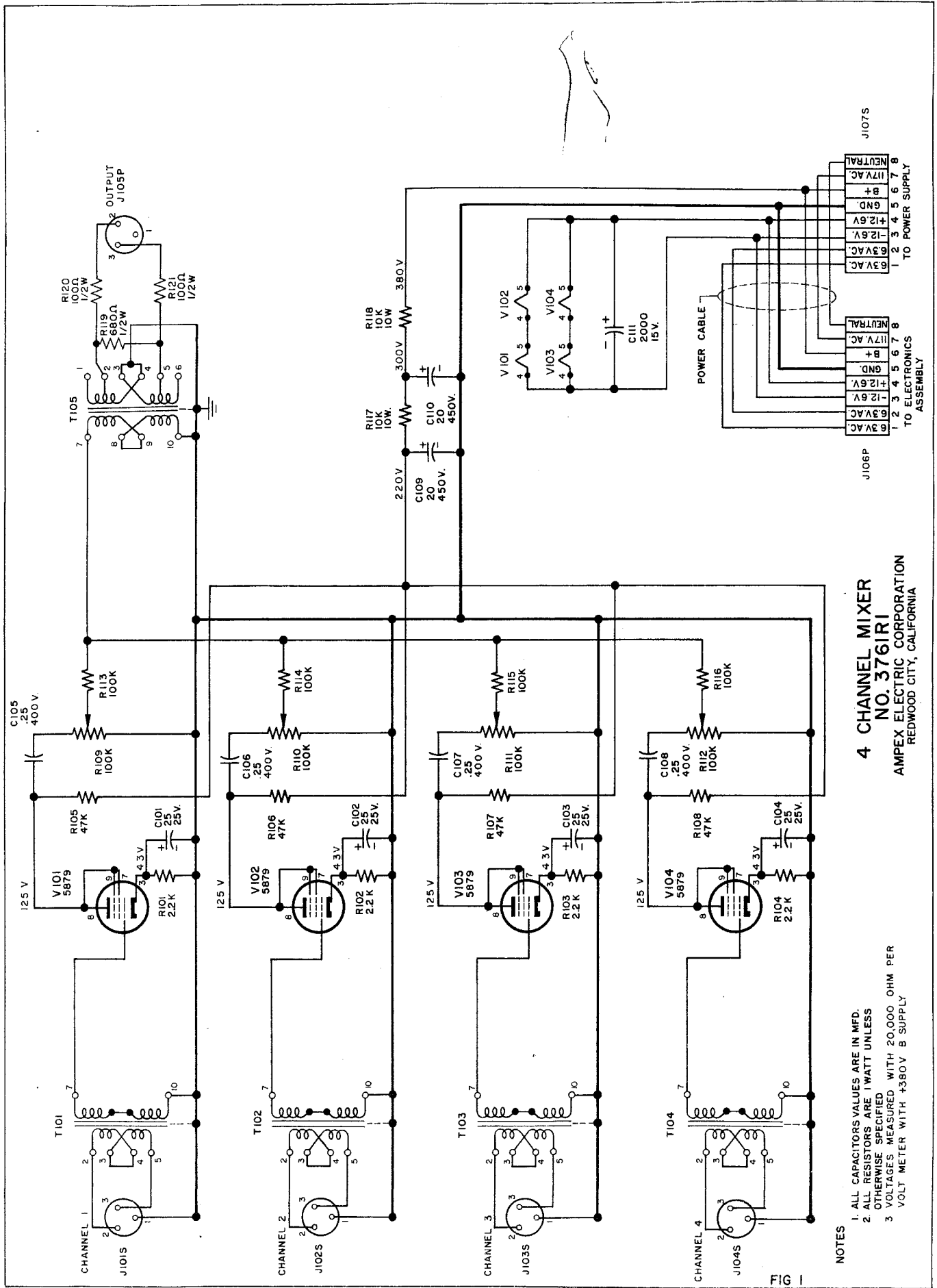
The four microphone inputs are normally strapped for 200 to 250 ohm source impedance. For other impedances refer to the schematic diagram. Pins 2 and 3 on the Input Connectors are the microphone line in. The microphone cable shield should be connected to Pin 1. Certain types of microphones may require resistive loading. In such case, the recommended termination should be wired across the Input Connectors and the transformers strapped for the proper impedance.

PARTS LIST

Reference Number	Description	Ampex Catalog Number
C101	25 MFD 25 V. Electrolytic Condenser	CO-59
C102	25 MFD 25 V. Electrolytic Condenser	CO-59
C103	25 MFD 25 V. Electrolytic Condenser	CO-59
C104	25 MFD 25 V. Electrolytic Condenser	CO-59
C105	.25 MFD 400 V. Oil Condenser	CO-41
C106	.25 MFD 400 V. Oil Condenser	CO-41
C107	.25 MFD 400 V. Oil Condenser	CO-41
C108	.25 MFD 400 V. Oil Condenser	CO-41
C109	20 MFD 450 V. Electrolytic Condenser	CO-57
C110	20 MFD 450 V. Electrolytic Condenser	CO-57
C111	2000 MFD 15 V. Electrolytic Condenser	CO-66
J101S	Input Connector Cannon XL-3-13	PL58S
J102S	Input Connector Cannon XL-3-13	PL58S
J103S	Input Connector Cannon XL-3-13	PL58S
J104S	Input Connector Cannon XL-3-13	PL58S
J105P	Output Connector Cannon XL-3-14	PL-4P
J106P	Power Connector Jones P-308-CCT-L	PL-103P
J107P	Power Connector Jones S-308-AB	PL-54S
R101	2,200 Ohm 1 Watt Composition Resistor	RE-7
R102	2,200 Ohm 1 Watt Composition Resistor	RE-7
R103	2,200 Ohm 1 Watt Composition Resistor	RE-7
R104	2,200 Ohm 1 Watt Composition Resistor	RE-7
R105	47,000 Ohm 1 Watt Composition Resistor	RE-22
R106	47,000 Ohm 1 Watt Composition Resistor	RE-22
R107	47,000 Ohm 1 Watt Composition Resistor	RE-22
R108	47,000 Ohm 1 Watt Composition Resistor	RE-22
R109	100,000 Ohm Potentiometer - Audio Taper	RE-227
R110	100,000 Ohm Potentiometer - Audio Taper	RE-227
R111	100,000 Ohm Potentiometer - Audio Taper	RE-227
R112	100,000 Ohm Potentiometer - Audio Taper	RE-227
R113	100,000 Ohm 1 Watt Composition Resistor	RE-26
R114	100,000 Ohm 1 Watt Composition Resistor	RE-26
R115	100,000 Ohm 1 Watt Composition Resistor	RE-26
R116	100,000 Ohm 1 Watt Composition Resistor	RE-26
R117	10,000 Ohm 10 Watt Wire Wound Resistor	RE-90
R118	10,000 Ohm 10 Watt Wire Wound Resistor	RE-90
T101	Input Transformer	1153
T102	Input Transformer	1153
T103	Input Transformer	1153
T104	Input Transformer	1153
T105	Output Transformer	1153

Reference Number	Description	Ampex Catalog Number
V101	5879 Vacuum Tube	TU-35
V102	5879 Vacuum Tube	TU-35
V103	5879 Vacuum Tube	TU-35
V104	5879 Vacuum Tube	TU-35
	Turret Socket	SO-27
	Tube Shield Base	SD-12
	Tube Shield	SD-13
	Shockmounts	SH-9
	1 3/4" Diameter Skirt Knob	KN-4
	Power Cable	2435
	Output Cable	4057

NOTE: ORDER PARTS BY AMPEX CATALOG NUMBER ONLY!



NOTES

1. ALL CAPACITOR VALUES ARE IN MFD.
2. ALL RESISTORS ARE 1/2 WATT UNLESS OTHERWISE SPECIFIED
3. VOLTAGES MEASURED WITH 20,000 OHM PER VOLT METER WITH +380V B SUPPLY

**4 CHANNEL MIXER
NO. 3761R1**
AMPEX ELECTRIC CORPORATION
REDWOOD CITY, CALIFORNIA

FIG 1
7-8-54

