

SERVICE MANUAL



STEREO PREAMPLIFIER GFP-710

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INTRODUCTION

This service manual is intended to assist trained and qualified technical personnel in verifying the performance of, adjusting, and repairing the ADCOM GFP-710 preamplifier. The procedures described here are not intended for persons unfamiliar with the appropriate safety and test procedures.



WARNING



THERE ARE POTENTIALLY LETHAL VOLTAGES WITHIN THE GFP-710 PREAMPLIFIER WHICH WILL BE ACCESSIBLE ONCE ITS TOP COVER IS REMOVED. **DO NOT ATTEMPT FAMILIARIZATION, INSPECTION, OR ANY PROCEDURE WHATSOEVER UNLESS YOU HAVE DISCONNECTED THE GFP-710 FROM THE WALL AC OUTLET OR OTHER SOURCE OF AC POWER AND THE POWER-SUPPLY CAPACITORS ARE COMPLETELY DISCHARGED.** THESE INSTRUCTIONS ARE PROVIDED FOR USE ONLY BY COMPETENT TECHNICAL PERSONNEL. **DO NOT UNDERTAKE ANY SERVICE PROCEDURES IN THE GFP-710 UNLESS YOU ARE TECHNICALLY QUALIFIED TO DO SO.**

MAIN PCB**AF78115****SCHEMATIC
LOCATION****ADCOM PART NUMBER****DESCRIPTION**

JK101	22001400	4P GOLD RCA JACK	
JK105	22001400	4P GOLD RCA JACK	
JK102-104	22001090	4P RCA JACK	
DN101	22001050	5P DIN JACK	
VR1	35001030	Balance Pot	
VR3,VR4	35001010	Bass, Treble Pot	
C903,C904	12002230	Capacitor Ceramic	0.01uF 500V
C918	12002230	Capacitor Ceramic	0.01uF 500V
C101	12002010	Capacitor Ceramic	0.047uF 50V
C103	12002010	Capacitor Ceramic	0.047uF 50V
C108,C109	12002010	Capacitor Ceramic	0.047uF 50V
C111	12002010	Capacitor Ceramic	0.047uF 50V
C106,C107	12002150	Capacitor Ceramic	22pF 50V
C301,C302	12005240	Capacitor Elec	.33uF 50V
C911	12005010	Capacitor Elec	1000uF 25V
C914,C915	12005010	Capacitor Elec	1000uF 25V
C901	12005070	Capacitor Elec	1000uF 35V
C110	12005020	Capacitor Elec	100uF 25V
C104,C105	12005100	Capacitor Elec	10uF 50V
C112	12005100	Capacitor Elec	10uF 50V
C205,C206	12005030	Capacitor Elec	2200uF 16V
C217,C218	12005050	Capacitor Elec	470uF 35V
C303,C304	12005050	Capacitor Elec	470uF 35V
C407,C408	12005050	Capacitor Elec	470uF 35V
C912,C913	12005050	Capacitor Elec	470uF 35V
C907,C908	12005000	Capacitor Elec	6800uF 50V
C902	12005130	Capacitor Elec	220uF 25V
C215,C216	12001625	Capacitor Layer	.68uF 50V
C405,C406	12001625	Capacitor Layer	.68uF 50V
C909,C910	12001015	Capacitor Layer	0.33uF 50V
C203,C204	12001010	Capacitor M.P.	4.7uF 100V
C511, C512	12001010	Capacitor M.P.	4.7uF 100V
C102	12001080	Capacitor Mylar	.22uF 50V
C507-C510	12004020	Capacitor P.P.	0.0047uF 50V
C501-C504	12004030	Capacitor P.P.	0.056uF 50V
C201,C202	12004050	Capacitor P.P.	100pF 100V
C207,C208	12003305	Capacitor P.P.	10pF 100V
C211, C212	12003710	Capacitor P.P.	150pF 63V
C209,C210	12003295	Capacitor P.P.	33pF 63V
C213,C214	12003300	Capacitor P.P.	47pF 63V
C601,C602	12001515	Capacitor Poly	100pF 160V
C505,C506	12001535	Capacitor Poly	47pF 160V
C403,C404	12001535	Capacitor Poly	47pF 16V
C401,C402	12003165	Capacitor Styrol	33pF 125V
X101	44000710	Ceramic Resonator	
D901-908	16004003	Diode	1N4003
D101-108	16004148	Diode	1N4148
D911	16004148	Diode	1N4148

SCHEMATIC**ADCOM PART NUMBER****DESCRIPTION**

LOCATION

D915-D917	16004148	Diode	1N4148
D909,D910	16005550	Diode	J555
D912	16002222	Diode	LM329DZ
IC102	21007100	IC	0AD 87C750
IC105,IC106	21008000	IC	LT-1028CN8
IC601	21004556	IC	NJM4556D
IC901	21007900	IC	NJM7805FA
IC903	21007815	IC	NJM7815FA
IC902	21007915	IC	NJM7915FA
IC107-IC110	21000604	IC	OPA604AP
IC103	21007457	IC	TC74HC573N
IC104	21007404	IC	TC74HCU04AP
JK106,JK107	22001570	IR REPEATER JACK	
RY101-109	28000711	RELAY	
RY902	28001120	RELAY	
RY901	28001140	RELAY	
R001,R002	27003010	Resistor	10 1/2W
R135,R136	27003010	Resistor	10 1/2W
R145	27003115	Resistor MOF 5%	150 1W
R609,R610	27002210	Resistor Roed	49.9
R137	27004590	Resistor Roed	82.5
R411,R412	27002010	Resistor Roed	100
R517,R518	27002010	Resistor Roed	100
R108,R109	27004380	Resistor Roed	150
R138-R144	27004380	Resistor Roed	150
R203,R204	27002120	Resistor Roed	261
R906	27002140	Resistor Roed	332
R215,R216	27002170	Resistor Roed	475
R309,R310	27002170	Resistor Roed	475
R401,R402	27002170	Resistor Roed	475
R205,R206	27002190	Resistor Roed	499
R107	27002025	Resistor Roed	1.5K
R133	27002025	Resistor Roed	1.5K
R307,R308	27002040	Resistor Roed	100K
R103	27002030	Resistor Roed	10K
R111	27002030	Resistor Roed	10K
R128,R129	27002030	Resistor Roed	10K
R131	27002030	Resistor Roed	10K
R605,R606	27002030	Resistor Roed	10K
R903	27002030	Resistor Roed	10K
R403,R404	27002060	Resistor Roed	10M
R902	27002260	Resistor Roed	12.7K
R603,R604	27002280	Resistor Roed	15K
R207,R208	27004290	Resistor Roed	18K
R117-R120	27002020	Resistor Roed	1K
R134	27002020	Resistor Roed	1K
R303,R304	27002020	Resistor Roed	1K
R507-R512	27002020	Resistor Roed	1K
R301,R302	27002050	Resistor Roed	1M
R101,R102	27002095	Resistor Roed	2.2K

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
R104	27002095	Resistor Roed	2.2K
R413,R414	27002095	Resistor Roed	2.2K
R405,R406	27002710	Resistor Roed	2.49K
R217	27002340	Resistor Roed	2.4K
R209,R210	27002080	Resistor Roed	215K
R132	27002100	Resistor Roed	22K
R407,408	27002100	Resistor Roed	22K
R513,R514	27002100	Resistor Roed	22K
R607,R608	27002130	Resistor Roed	27K
R112	27001570	Resistor Roed	2K
R901	27002290	Resistor Roed	3.9K
R105,R106	27002410	Resistor Roed	4.75K
R114-R116	27002410	Resistor Roed	4.75K
R904,R905	27002200	Resistor Roed	4.9K
R110	27002180	Resistor Roed	47.5K
R130	27002180	Resistor Roed	47.5K
R201,R202	27002180	Resistor Roed	47.5K
R519,R520	27002180	Resistor Roed	47.5K
R501-R506	27002230	Resistor Roed	6.81K
R601,R602	27002230	Resistor Roed	6.81K
R305,R306	27002240	Resistor Roed	7.5K
R515,R516	27002240	Resistor Roed	7.5K
R113	27002370	Resistor Roed	8.25K
R211,R212	27002250	Resistor Roed	82.5K
C905,C906	12001510	Spark Killer	
SW2	37000711	Tone/Mono/Tape switch	
Q107	33001345	Transistor	2SA1345-AC
Q101,Q102	33006080	Transistor	2SA608KF
Q904	33006080	Transistor	2SA608KF
Q108	33009840	Transistor	2SA984KE
Q110	33009840	Transistor	2SA984KE
Q106	33007640	Transistor	2SB764E/F
Q109	33002274	Transistor	2SC2274E/F
Q111	33002274	Transistor	2SC2274E/F
Q907	33002274	Transistor	2SC2274E/F
Q112-Q118	33003399	Transistor	2SC3399-AC
Q103	33005360	Transistor	2SC536KF
Q105	33005360	Transistor	2SC536KF
Q903	33005360	Transistor	2SC536KF
Q906	33005360	Transistor	2SC536KF
Q901	33001100	Transistor	TIP110
Q902	33001150	Transistor	TIP115
VR2	35000710	Volume Pot	

INPUT SELECTOR PCB TX70615

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION
S2-S8	37001050	Key Sw w/LED

R121-R127	27002360	Resistor Roed	562
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IR RECIEVER PCB TX706524

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
C101	12005020	Capacitor Elec	100uF 25V
IC101	21000710	Remote Reciever	

POWER SWITCH PCB TX706534

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
JK108	22001030	Head Phone Jack	
S1	37000710	Power Switch	

VOLUME LED PCB TX706544

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
D401	16004266	LED Volume	LTL-4266N

POWER CONNECTION PCB TX706554

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
	12001605	Varistor	TNR12G241K-BM
	12001615	Varistor	TNR12G431K-BY,BE

OTHERS

SCHEMATIC LOCATION	ADCOM PART NUMBER	DESCRIPTION	
	25001060	AC Inlet	
	25001010	AC Outlet	
	15001120	AC POWER CORD	
	13001050	Bottom Plate	
	11001180	Button w/ hole	
	11001130	Button w/o hole	
	13001020	Foot	
	12000712	Front Chassis	
	13000710	Front Panel	
	19000100	FUSE	1A 250V
	20003200	Fuse Holder	
	23001070	Volume Knob	
	23001000	Bass/Treble/Bal knob	
	11001155	Power Button	
	24000710	Power Transformer	
	13000711	Printed Rear Chassis	
	13000713	Side Chassis	
	13003032	Side Chassis (R)	
	11001170	Tact Button Connector	

11001160
13001040

Tact Button Connector
Top Cover

GFP-710 VOLTAGE CONVERSION

115V TO 230V

1. The multivoltage GFP-710 units have a detachable power cord and no rear panel AC outlets.
2. Unplug the unit and remove the top cover.
3. On the AC primary board mounted at the far left of the unit, unsolder the jumper at the 115V position and move it to the 230V position. Also, check the MOV position and type. Figure 1.
4. Change the rear panel fuse from 1A/250V to 500mA/250V. Also, remove the 1A/250V sticker above the fuse holder so the 500mA/250V panel writing is visible.
5. Remove the 120V sticker at the far left of the rear panel so the 220-240V writing is visible.
6. Replace top cover and test unit.

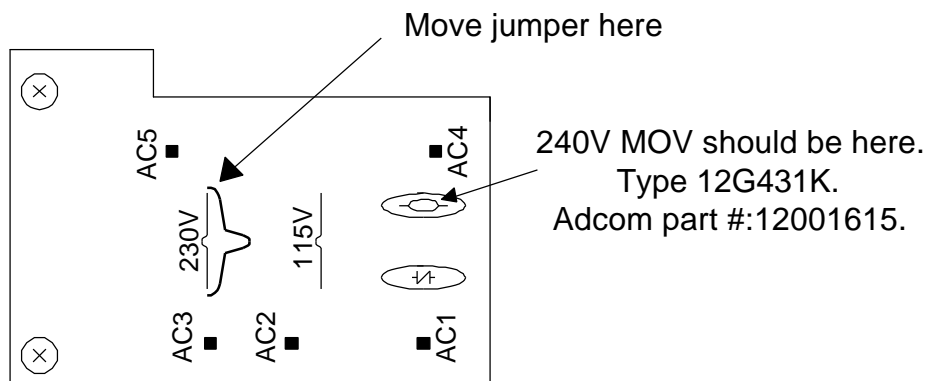


Figure 1: 220V Jumper position

230V TO 115V

1. The multivoltage GFP-710 units have a detachable power cord and no rear panel AC outlets.
2. Unplug the unit and remove the top cover.
3. On the AC primary board, mounted at the far left of the unit, unsolder the jumper at the 230V position and move it to the 115V position. Also, check the MOV position and type. Figure 2.
4. Change the rear panel fuse from 500mA/250V to 1A/250V. Also, place a 1A/250V sticker above the fuse holder to cover the 500mA 250V writing.
5. Place a 120V sticker at the far left of the rear panel to cover the 220-240V writing.
6. Replace top cover and test unit.

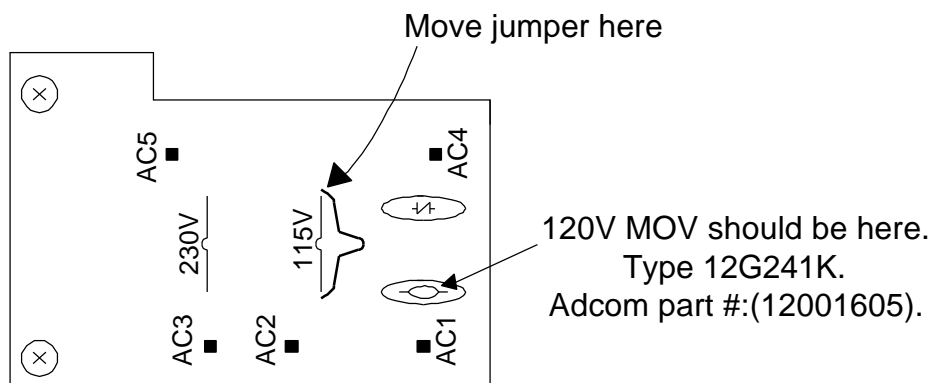


Figure 2: 120V Jumper position

GFP-710 SPECIFICATIONS

Output Impedance	
Bypass Output	100 ohms
Main outputs	100 ohms
Tape Out	475 ohms
Output Level (Rated)	
Bypass Output	2.0V
Main Outputs	2.0V
Output Level (Maximum)	
Bypass Output	≥ 10.0V
Main Outputs	≥ 10.0V
Frequency Response (+0.5 db)	
High Level	5Hz – 50KHz
Phono	5Hz – 50KHz
THD + Noise (@ Rated Output, 20Hz – 20KHz)	
High Level	0.005%
Phono	0.005%
IMD (SMPTE @ Rated Output)	
High Level	0.005%
Phono	0.005%
Signal-to-Noise (@ Rated Output, "A" Weighted)	
High Level	≥ 100 db
Phono	≥95 db
Input Impedance	
High Level	25K ohms
Phono	47.5K ohms
Input Sensitivity (@ Rated Output)	
High Level	205 mV
Phono	2.4mV
RIAA Accuracy (20Hz – 20KHz)	+/- 0.25 db
Tape Output THD + Noise (@ Rated Output, 20Hz – 20KHz)	0.005%
Tape Output IMD (SMPTE @ Rated Output)	0.005%
Tone Controls	
Bass (20Hz)	+/- 11.5 db
Phono (20KHz)	+/- 8.5 db
Crosstalk (1 KHz)	-80db
Seperation (1 KHz, @ Rated Output)	≥75db
Power Consumption	10 watts max
Power (Available in 230VAC on special order)	115VAC - 50/60Hz
Chassis Dimensions	3" (76mm) x 17" (432mm) x 11 3/8" (289mm)
Maximum Dimensions	3 1/4" (83mm) x 17" (432mm) x 12 8/16" (319mm)
Weight	12 lb. (5.5 kg)
Weight, Packed	15 lb. (6.8 kg)