



TECHNICAL BULLETIN #3

AS OF AUGUST 1, 2008

GLM-100E, CM-311E CM-311AE, CM-312E, CM-312AE

CONNECTIONS FOR WIRELESS MICROPHONE APPLICATIONS

For more help, contact one of these technical support numbers:

Crown	800-342-6939
AKG	800-878-7571
Audio-Technica	330-686-2600
Beyerdynamic	800-293-4463
Comtek	800-496-3463
Electro-Voice	877-863-4168
HM Electronics	800-848-4468
Lectrosonics	800-821-1121
Lightspeed	800-732-8999
Nady	510-652-2411
Paso	800-231-3034
Peavey	877-732-8391
Samson	800-3-SAMSON
Shure	847-600-8440
Sony	866-766-9272
Telex	800-553-5992
TOA	800-733-4750
Vega	800-877-1771



H A Harman International Company

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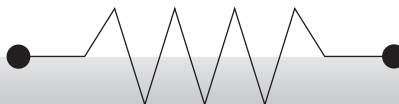
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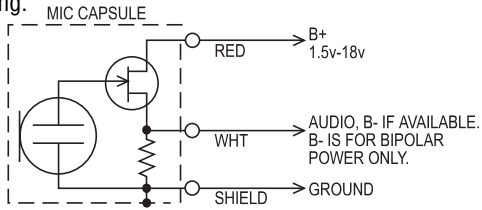
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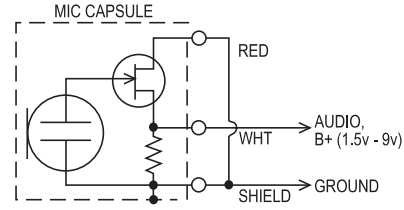


CONNECTIONS TO GLM-100E

You can connect the GLM-100E for unipolar or bipolar powering. With unipolar powering (B+ and ground), the GLM can handle up to 120 dB SPL without distortion. With bipolar powering (B+ and B- relative to ground), the GLM can handle up to 150 dB SPL. Not all transmitters provide bipolar powering.



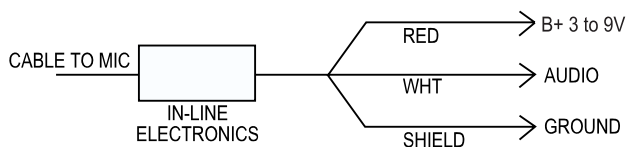
GLM-100E WIRING, 3-WIRE POWER



GLM-100E WIRING, 2-WIRE POWER

MODEL	CONNECTOR	PINS	MODEL	CONNECTOR	PINS
AKG WMS40 (PT40) WMS400 (PT400) WMS4000 (PT4000)	TA3F	1-shield 2-white 3-red	Samson ST-2	Hard wired	1 and 2-shield 3-red (B+) 4-white (audio)
Audio-Technica ATW, T31, T35, T27, WT-15, T51, T75, ATW T21	Hirose HR10-7P-4S 4 pin DIN	1 and 2-shield 3-white 4-red case-shield 1-white 3-red	Samson CT-3	Hard wired	1-red (B+) 2-white (audio) 3 and 4-shield
Beyerdynamic TS-170, TSP, TS-600 TS-190, TS-900 (UHF)	Lemo FG331 4-pin binder conn. #711	1-shield 2-red 3-white 2-shield 3-white 4-red	Sennheiser SK-2012	Sennheiser/ B&K microdot Lemos	Ground-shield and white Center-red 2-red 3-white and shield shell-shield
Comtek M72, M72-B	750 mono mini, 851 micro mini, Switchcraft TA4F,	1-shield 2-white 3-red Lemo 4-pin	Shure L-11, SC1, LX1, U-1 (UHF), T-1 UT-1, UC-1	Switchcraft TA4F Lemo 4-pin	1-shield 2-red 3 and 4-white 1-white 2-red 4-shield 3-jumper to pin 1
Electro-Voice MB2000A, MB2500	Switchcraft TA4F	1-red 3-white 4-shield	Sony WRT-28, WRT-820A	SMC-9	1-red 2-white 3 and 4-shield
HME TX-425, TX-550, TX-822	Switchcraft TA4F	1-shield 2-white 3-red	Telex WT-55, WT-60, WT-80, WT-150, WT-450	Switchcraft TA4F or Lemo 4-pin	1-shield 2-white 3-red
Lectrosonics M185, UM190, UM195, M187, UM200	Switchcraft TA5F	1 and 4-shield 2-red 3-white	TOA WM-340U, WM-370	Mini phone plug	Tip-red, Sleeve-shield and white To prevent capsule damage from static sparks, solder a 3.3K resistor between white and tip.
Lightspeed Technologies BP Series	Hirose HR10-7P-4S	1-shield 3-white 4-red	Vega	Lemo 4-pin F.O. 304 NYL U/3.2	1-white 2-red 4-shield
Nady All models	Switchcraft TA3F	1-shield 2-red 3-white	If RFI is a problem, solder a 560 pF cap. between pins 1 and 4.	Switchcraft TA4F	1-red 3-white 4-shield
Paso MA-23, MA-27		Switchcraft TA3F 1-shield 2-white and red 3-jumper to pin 1	X-wire	TA3F	1-shield 2-white 3-red
Peavey BPX	Switchcraft TA3F	1-red 2-shield and white			
Samson TX-3, UT-5, UT-4, BT-3, CT-2	Hirose HR10-7P-6S	1-red 2-white 6-shield			

CONNECTIONS TO CM-311AE, CM-312AE AND CM-312E



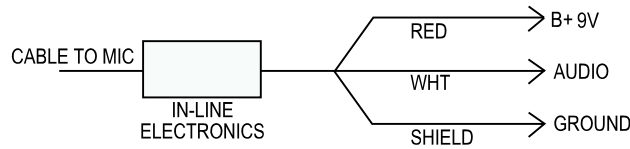
MODEL	CONNECTOR	PINS	MODEL	CONNECTOR	PINS
AKG WMS40 (PT40) WMS400 (PT400) WMS4000 (PT4000)	TA3F	1-shield 2-white 3-red	Samson TX-3, UT-4, BT-3, CT-2 UT-5	Hirose HR10-7P-6S Hirose HR10-7P-6S	1-red 4-white 6-shield 1-red 2-white 6-shield
Audio-Technica ATW T35, T27, WT-15 ATW T21 (now obsolete)	Hirose HR10-7P-4S 4 pin DIN	1 and 2-shield 3-white 4-red case-shield 1-white 3-red	ST-2 CT-3	No connector No connector	1 + 2-shield 3-red (B+) 4-white (audio) 1-red (B+) 2-white (audio) 3 + 4-shield
Beyerdynamic TS-170, TSP TS-600 TS-190, TS-900 (UHF)	Lemo FG331 4-pin binder conn. #711	1-shield 2-red 3-white 2-shield 3-white 4-red	Shure L-11, SC1, LX1, U-1 (UHF), T-1 U1L-VA	Switchcraft TA4F Lemo 4-pin UC1L	1-shield 2-red 3-white 4-jumper to pin 3 1-white 2-red 4-shield 3-jumper to pin 1
Comtek M-72, M72-B M-182, M-82	750 mono mini, 851 micro mini, Switchcraft TA4F	1-shield 2-white 3-red or TA3F, Lemo 4-pin	Sony WRT-820A WRT-805A	SMC-9 3.5 mm mini-plug	1-red +5V 2-white 4-shield T-white R-red +5V S-ground
Electro-Voice MB2000A MB2500 R100 R200	TA4F see Telex notes see Telex notes	1-red 3-white 4-shield. If RFI, use 200-560 pF capacitor between pins 3 and 4	Telex WT-55, WT-60, WT-80, WT-150, WT-450	Switchcraft TA4F or Lemo 4-pin	1-shield 2-white 3-red
HME All models	Switchcraft TA4F	1-shield 2-white 3-red	Vega	Lemo 4-pin F.O. 304 NYL U/3.2 Switchcraft TA4F	1-white 2-red 4-shield 1-red 3-white 4-shield
Lectrosonics M185, M187 UM190, UM195 UM200	Switchcraft TA5F	1-shield 2-red 3-white	X-wire	TA3F	1-shield 2-white 3-red
Lightspeed Technologies BP Series	Hirose HR10-7P-4S	1-shield 3-white 4-red			
Nady All models	Switchcraft TA3F	1-shield 2-red 3-white			

HME note: To increase bass and reduce treble at the expense of output level, solder a 6.8K resistor between pin 2 and its wire inside the transmitter.

CONNECTIONS TO CM-311E

The CM-311E works only on 9V.

If your transmitter supplies 9V at its connector, you can connect a CM-311E to your transmitter as described in the chart below.



NOTE:

To convert a CM-311 or CM-311A for wireless use, either cut the cable and add the CM-311AE EQ module or connect the beltpack XLR output to the transmitter input.

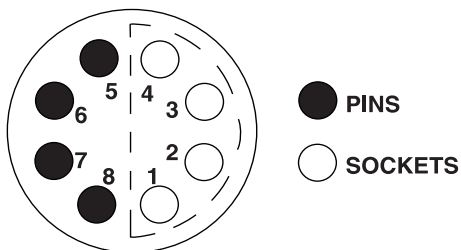
CM-311AE EQ module: shield = ground, white = audio, red = B+.

XLR: 1 + 3 = shield, 2 = audio (no B+ needed).

MODEL	CONNECTOR	PINS	MODEL	CONNECTOR	PINS
Audio-Technica ATW T35, T27	Hirose HR10-7P-4S	1and 2-shield 3-white 4-red. For T31 only, remove connection, connect pin 4 to battery +.	Nady All models	Switchcraft TA3F	1-shield 2-red. Remove connection, connect pin 2 to battery +. 3-white
ATW 1031	Hirose HR10-7P-4S	1-shield 3-white 4-red. Remove connection, connect pin 4 to battery +.	Samson TX-3, UT-4 BT-3, CT-2	Hirose HR10-7P-6S	1-red Remove connection, connect pin 1 to battery +. 4-white 6-shield
ATW T21	4 pin DIN	case-shield 1-white 3-red	UT-5	Hirose HR10-7P-6S	1-red 2-white 6-shield
Beyerdynamic	Lemo FG331	1-shield 2-red 3-white	ST-2	No connector	1 + 2-shield 3-red (B+) 4-white (audio)
TS-190, TS-900 (UHF)	4-pin binder conn. #711	2-shield 3-white 4-red. Remove connection, connect pin 4 to battery +.	CT-3	No connector	1-red (B+) 2-white (audio) 3 + 4-shield
Comtek M-72, M72-B M-182, M-82	750 mono mini, 851 micro mini, Switchcraft TA4F or TA3F, Lemo 4-pin	1-shield 2-white 3-red. Remove connection, connect pin 3 to battery +.	Shure L-11, SC1, LX1, U-1 (UHF), T-1	Switchcraft TA4F	1-shield 2-red. For Cm-311E only, contact Shure for 9V bias, mod. 3-white 4-jumper to pin 3
Electro-Voice MB2000A MB2500	TA4F	1-red 3-white 4-shield. 470 pF cap. bet. pins 3 and 4	Sony WRT-28, WRT-820A	SMC-9	CM-312E only: 1-red 2-white 3 and 4-shield or try 1-red, 3-white, 4-shield
HME All models	Switchcraft TA4F	1-shield 2-white 3-red HME note: To increase bass and reduce treble at the expense of output level, solder a 6.8K resistor between pin 2 and its wire inside the transmitter.	Telex WT-55, WT-60, WT-80, WT-150, WT-450	Switchcraft TA4F or Lemo 4-pin	1-shield 2-white 4-red
Lectrosonics M185, M187 UM190, UM195 UM200	Switchcraft TA5F	1-shield 2-red. Remove connection, connect pin 2 to battery +. 3-white	Vega	Lemo 4-pin F.O. 304 NYL U/3.2 Switchcraft TA4F	1-white 2-red 4-shield 1-red. Remove connection, connect pin 1 to battery +. 3-white 4-shield
Lightspeed Technologies BP Series	Hirose HR10-7P-4S	1-shield 3-white 4-red			

WIRING DIAGRAMS

Connecting Crown Microphones to a Micron Transmitter



**LEMO FFA2C308 MIC CABLE CONNECTOR
(VIEW FROM SOONNECTORLDERING SIDE OF C)**

MODEL	PINS
CM-10E	3 - yellow 6 - shield 4 - black Jumper between 5 & 6 4.7K between 8 & 3
CM-311AE	8 - red 3 - white 6 - shield Jumper between 5 & 6
CM-312AE	8 - red 3 - white 6 - shield Jumper between 5 & 6
GLM-100E	8 - red 3 - white 6 - shield Jumper between 5 & 6

Wiring CM-311AE, CM-312AE or GLM-100E to TA3F and TA4F Connectors

ALL VIEWS ARE INSIDE CABLE CONNECTOR

