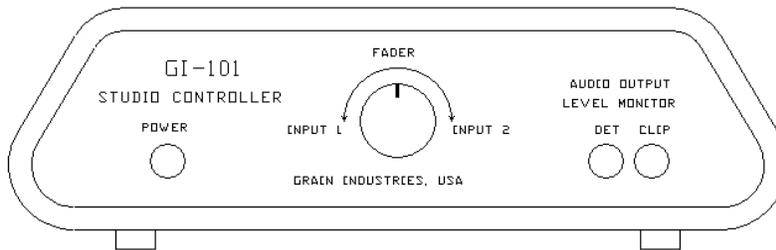


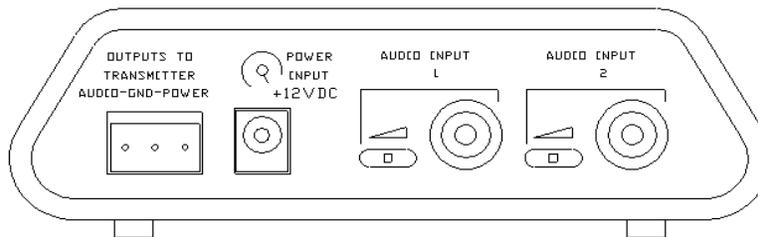
**MODEL GI-101
STUDIO CONTROLLER**

Made in USA

OPERATOR'S MANUAL



Front View



Rear View

Introduction

The Grain Industries model GI-101 Studio Controller is the ideal solution for installing and operating the GI-100 AM transmitter. It provides the interconnects required for connecting transmitter to the power supply and multiple audio sources; and provides constant monitoring of both power and audio levels. In addition, it provides a Fader control to smoothly transition between two alternate audio sources.

Equipment Supplied

Studio Controller box (5.7" wide x 6" long x 1.7" high)

Power Supply with cord for transmitter and Studio Controller
(120 VAC input, 12 VDC output with barrel connector 5.5mm OD, 2.5mm ID, center contact is positive)

Screw lock connector for fastening wires from transmitter to Studio Controller (shipped installed in rear panel)

Installation

After the transmitter unit is properly installed following the instructions and precautions in the transmitter's Operator's Manual, connect the cable from the transmitter to the screw lock connector. The positions of the three wires are marked on the rear panel of the Studio Controller and are (from left to right): Audio Input, Common Ground, and +12 VDC Power. The ground is the shield wire from the transmitter cable and the darker colored of the two wire is power and the lighter colored is the audio, in accordance with the installation instructions for the transmitter. Plug the connector into the mating connector on the rear panel of the Studio Controller.

Plug the barrel connector of the power supply into the Power jack on the rear panel of the Studio Controller. Plug the power supply into an AC outlet. The yellow indicator on the front panel of the Studio Controller is illuminated, indicating that the system has power.

On the rear of the Studio Controller, put the Input 1 and Input 2 volume control switches in the far left position. Each switch has three positions, and the left-most position puts the volume in its lowest setting.

Connect a mono audio source to the Input 1 RCA jack on the rear of the Studio Controller. If there are problems doing this, refer to the section on Audio Adapters and Cables. Turn the Fader control fully CCW (in the direction towards the Input 1 marking). Adjust the volume of the audio source such that the green audio Detect (DET) indicator illuminates. It is not required that the indicator be illuminated continuously, as the level of most audio sources rises and falls. At intervals between peaks, it is normal for the DET indicator to be off. On the other hand, if the level is set too high, the red audio high level (CLIP) indicator will illuminate. The level should be set so that the CLIP indicator never illuminates. If the audio source cannot be set high enough to illuminate the DET indicator, move the volume switch on the rear to the middle position. In rare instances (for example with a microphone input), it may be necessary to move the volume switch to the far right position to get enough level to illuminate the DET indicator.

Tune an AM radio to the frequency that the transmitter is set for. The audio should be clear and undistorted.

If desired, connect a second audio source to the Input 2 RCA jack on the rear of the Studio Controller. Turn the Fader control fully CW (in the direction towards the Input 2 marking). Adjust the volume of the audio source as was done for Input 1. The Fader control can be used to make soft transitions between the two audio sources.

Operation

Once the Studio Controller has been installed, operation is as simple as using the Fader control to switch between audio sources. The POWER, DET and CLIP indicators should be monitored to insure that the transmitter is ON and that the audio level is within the proper limits. Monitoring of the actual transmitted signal by using a radio is also suggested, but the speaker of the radio should never be placed where an open microphone might pick it up and cause unpleasant feedback.

Audio Adapters and Cables

The Studio Controller is equipped with RCA audio jacks for its audio inputs. This has been an industry standard for many years, but there are other common audio connectors as well. The audio source that you have may not have an RCA output. While it is impossible to anticipate all of the possible combinations, adapters are readily available to make connections to almost any audio source.

One thing to keep in mind is that AM transmitters do not process stereo signals and if you have a stereo source, you must have an adapter that combines the two stereo channels into a single mono channel for the Studio Controller. In some cases, you may find that it is easier to use two adapters than to try to find a single adapter that will fit your needs.

If your audio source does not have an output cable, you may need that as well. In some cases, the cable may have different connectors on each end, so that it will serve as an adapter as well as a cable. A good audio supply center (audiogear.com, for example) will most likely have suitable equipment to meet your needs. Be sure to find out the type of connector that your audio source has, and whether it is mono or stereo. If you need a cable, determine what length you need. From that, you need to cable and adapt as required to the RCA jack on the rear of the Studio Controller. If you are using different audio sources (for example a CD player and a microphone), you will need different cables/adapters for the two sources.

Following is a sample listing of possible scenarios and solutions using readily available equipment. If you have a situation for which you cannot find a solution, contact support@grainind.com.

All of the connections in the listing are made using a combination of four adapters and three cables (In common usage, a Plug is often referred to as male and a Jack as female):

- #1 Adapter Cable, 2 RCA Jacks to 1 RCA Plug (combiner)
- #2 Adapter Cable, 1/4" Stereo Jack to 2 RCA Plugs
- #3 Adapter, Stereo Mini Jack to 1/4" Stereo Plug
- #4 Adapter, Stereo Mini Jack to Stereo Mico Plug
- #5 Extension Cable, Mini Plug to Mini Plug
- #6 Extension Cable, 1/4" Stereo Jack to 1/4" Stereo Jack
- #7 Extension Cable, RCA Plug to RCA Plug

Audio Source	to	Adapter	to	Cable	to	Adapter(s)
1/4" Stereo Jack		none		#6		#2 to #1
1/4" Stereo Plug		none		none		#2 to #1
1/4" Mono Jack		none		#6		#2 (note 1)
1/4" Mono Plug		none		none		#2 (note 1)
Mini Stereo Jack		none		#5		#3 to #2 to #1
Mini Stereo Plug		none		none		#3 to #2 to #1
Mini Mono Jack		none		#5		#3 to #2 (note 1)
Mini Mono Plug		none		none		#3 to #2 (note 1)
Micro Stereo Jack		#4		#5		#3 to #2 to #1
RCA Mono Jack		none		7#		none
RCA Mono Plug		none		none		none
RCA Stereo Jacks (2)		none		#7 (2 req'd)		#1 (note 2)
RCA Stereo Plugs (2)		none		none		#1(note 2)

Note 1: When using adapter #2 from a Mono source, only the RCA plug for the TIP should be used. The RING plug is left unused.

Note 2: If using a Stereo source as the **only** input to the Studio Controller, you can use Input 1 and Input 2 on the Studio Controller as the two inputs without using any adapters. When this is done, the Fader is used as a balance control for the two stereo channels and should normally be left in the center detent position.