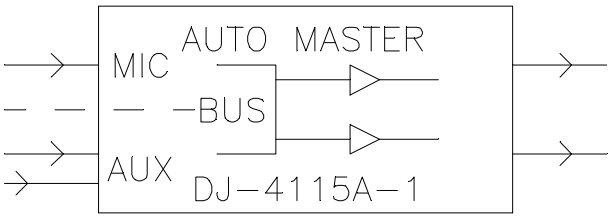
IRP®
Professional Sound Products

SYSTEM 41®

Voice-Matic® Master
DJ-4115A-1

DESCRIPTION

DESIGN SYMBOL



The DJ-4115A-1 Master Module mixes into two outputs the audio signals from one or more DJ-4114A Voice-Matic microphone input modules. Two auxiliary line level inputs with remote VCA level/mute control are also provided. The main sound reinforcement output includes a stepless NOM attenuator and a remote VCA level/mute control. The auxiliary output provides a programmable mix of gated and ungated system inputs for broadcast or recording feeds and includes a remote VCA level/mute control. The auxiliary mic/line input has a bypass mute function for paging applications and can be configured to either or both outputs. A linking interface provides a method of combining mixer control signals for room combining applications.

FEATURES

- Smooth Continuous NOM Gain Control
- Electronically Balanced Main and Auxiliary Outputs
- Two Electronically Balanced Auxiliary Line Inputs
- Transformer Balanced Auxiliary Mic/Line Input with the following:
  - Studio Grade Bifilar Center Tapped Transformer
  - Jumper Selectable 15 Volt Phantom Power
  - 100 Hz High-Pass Filter (Bypassable)
  - Buffered Pre-Amplifier Output
  - Remote Input Switch (-100dB) Typical @ 1 kHz
- Remote VCA Level Control of Each Aux Input with 48dB Control Range (-100dB Mute)
- Remote VCA Level Control of Main and Auxiliary Outputs with 48dB Control Range (-100dB Mute)
- Remote Page/Mute Control With Auxiliary Mic/Line Input Override
- Master Voice-Matic/Standard Mode Selection via Local and/or Remote Switching
- Built In Linking Interface for Room Combining Applications
- Pin Jumper Selection of All Configuration Settings
- Removable Screw Clamp Style Input and Output Connectors
- Signal Present LED Indicator

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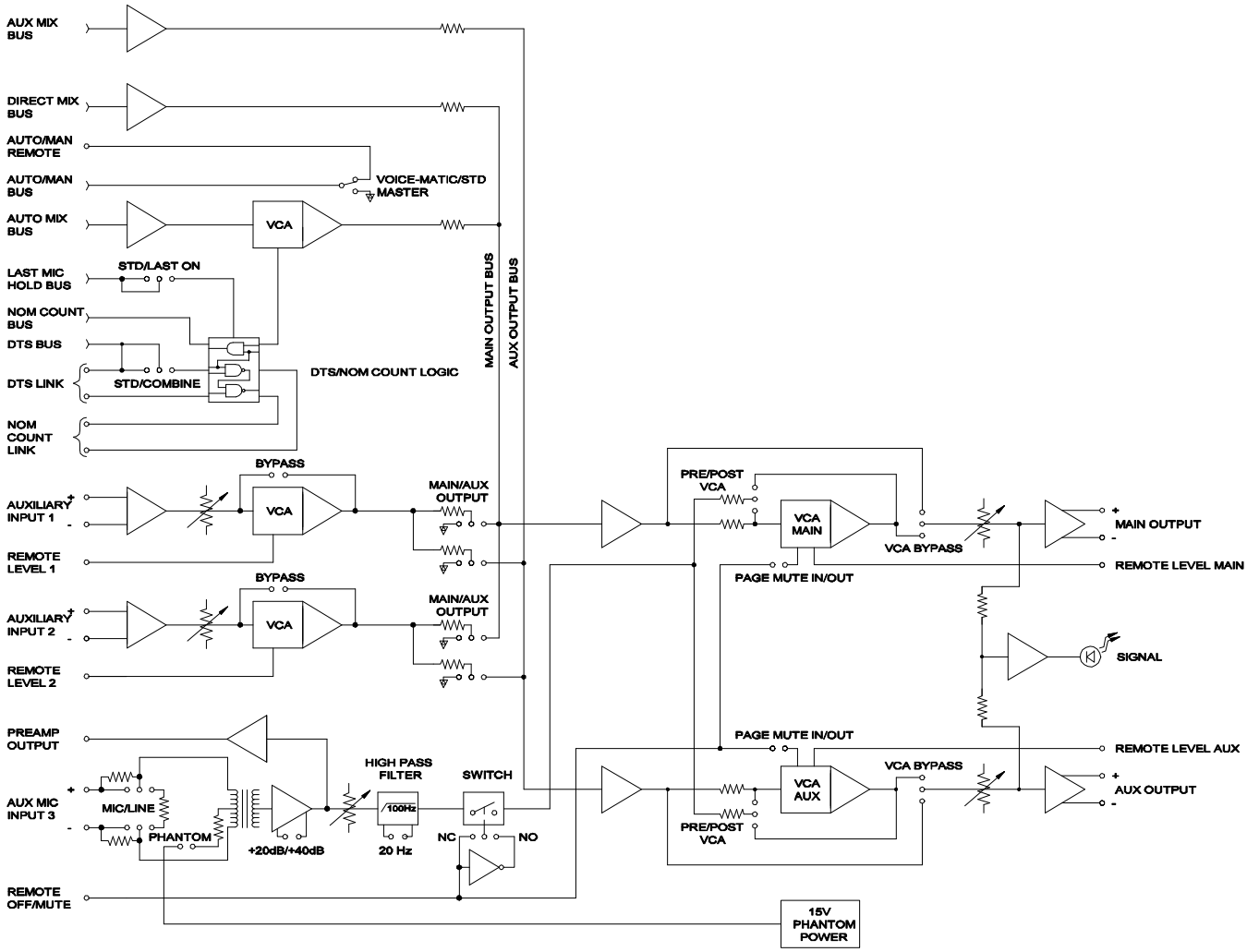
FUNCTIONAL DIAGRAM



SPECIFICATIONS

MAIN OUTPUT ..... Standard ***SYSTEM* 41** active balanced
- Maximum Output ..... +19dBV, unloaded
- Impedance ..... 200Ω for 600Ω or greater load
- Mix ..... Gated microphone signals, NOM level controlled, aux inputs selected by jumpers
- Connector ..... Two position pluggable terminal block

AUXILIARY OUTPUT ..... Standard ***SYSTEM* 41** active balanced
- Maximum Output ..... +19dBV, unloaded
- Impedance ..... 200Ω for 600Ω or greater load
- Mix ..... Jumper selected, microphones pre or post gate, aux inputs
- Connector ..... Two position pluggable terminal block

AUXILIARY INPUT #1 & #2 ..... Standard ***SYSTEM* 41** active balanced
- Impedance ..... 82kΩ balanced, 41kΩ unbalanced
- Maximum Input ..... +19dBV
- Gain ..... 0dB nominal, 20dB maximum
- Connector ..... Three position pluggable terminal block

AUXILIARY/MICROPHONE INPUT #3 ..... Transformer balanced and isolated
- Connector ..... Three position pluggable terminal block

Standard Mic Setting (Preamp Gain @ +40dB, 150Ω source)
- Input Impedance 1100Ω
- Maximum Input Level 1dBV
- Gain ..... +54dB nominal; +74dB maximum
- Frequency Response ..... +0dB, -0.5dB, 20 Hz - 20 kHz
- THD + Noise ..... < 0.1% at 0dBV output, 20 Hz - 20 kHz
- Equivalent input noise ..... < -127dBV
- Phantom Power ..... +15 VDC @ 10 mA maximum
- High-Pass Filter ..... -6.0dB/octave @ 100 Hz, jumper selectable

High Output Mic Setting (Preamp gain @ +20dB, 150Ω source)
- Input Impedance 1100Ω
- Maximum Input Level ..... -10dBV
- Gain ..... +33dB nominal; +53dB maximum
- Frequency Response ..... ±.5dB, 20 Hz - 20 kHz
- THD + Noise ..... < 0.05% at 0dBV output, 20 Hz - 20 kHz

Line Level Setting (Mic/Line jumpers in Line position and Preamp gain @ +20dB)
- Input Impedance 20.5kΩ
- Maximum Input Level ..... +20dBV
- Gain ..... +3dB nominal; +23dB maximum
- Frequency Response ..... ±0.5dB, 20 Hz - 20 kHz
- THD + Noise ..... < 0.05% at 0dBV output, 50 Hz - 20 kHz

PREAMP OUTPUT
- Gain
  - Standard Mic Setting ..... +40dB
  - High Output Mic Setting ..... +20dB
  - Line Level Setting ..... -10dB
- Impedance ..... 560Ω for high impedance load, single ended
- Maximum Output ..... +19dBV, unloaded
- Connector ..... Two position pluggable terminal block

REMOTE CONTROL
- Auxiliary Input Level ..... 48dB range, (-100dB mute) VCA 10kΩ linear taper potentiometer or 0-10 volt DC remote voltage source
- Main and Auxiliary Output Level ..... 48dB range, (-100dB mute) VCA 10kΩ linear taper potentiometer or 0-10 volt DC remote voltage source
- Page/Mute ..... -30dB (ducking), operate with open collector transistor logic or dry contact to ground, jumper selectable for main and/or auxiliary output

Connector ..... 9 pin female D-subminiature

LINKING INTERFACE (For Voice-Matic® Room Combining)

Connector ..... RJ-12 modular jack

CURRENT CONSUMPTION ..... 100 mA maximum

MODULE SPACE ..... One unit, 1.2 inches

OPERATION

Refer to DJ-4114A Voice-Matic Microphone Input Module for a basic description of the Voice-Matic operating principal.

The DJ-4115A-1 mixes the input signals from all the DJ-4114A modules in the system. The main output is the jumper configurable mix of (1) the gated microphone signals with NOM level control, (2) the signals from microphones placed in direct mode, (3) the auxiliary input signals, and (4) the auxiliary/microphone input signal. The auxiliary output is jumper configurable to mix gated or direct (ungated) microphone signals as well as auxiliary input signals. The Voice-Matic/Standard mode switch allows all microphone channels to be changed between standard mixing to Voice-Matic mixing. The Dynamic Threshold Sensing (DTS) reference voltage source and the NOM attenuator functions are located on the DJ-4115A-1.

A master Voice-Matic/Standard Mode switch function provides a master override of all Voice-Matic functions and places the mixer entirely in standard direct operating mode. The override function can be remotely activated via an open collector or dry contact connection to ground.

Remote level controls, one for each output and each auxiliary input, utilize low noise, low distortion, studio grade VCA s. Control is DC by a remote 10kΩ potentiometer which enables a 48dB control range before full attenuation (-100dB mute). The circuit is temperature compensated and has close tracking between units for multi-channel fader use.

The Auxiliary mic/line Input #3 switch function provides -100dB (@ 1 kHz) of attenuation and is jumper selectable to normally open or normally closed operation. The switch works in conjunction with the page/mute function which provides for auxiliary Input #3 to bypass a -30dB mute applied to one or both outputs. A remote open collector or dry contact connection to ground activates the mute and the input switch.

ARCHITECT'S SPECIFICATIONS

(Add DJ-4114A data sheet for complete specification)

The automatic microphone mixing system master module shall provide two outputs. The main output for sound reinforcement shall be the mix of gated, NOM level controlled, microphones, direct microphones, two line level auxiliary inputs, and a auxiliary mic/line input. An auxiliary output shall be jumper programmable to form a mix of gated and ungated microphones and two auxiliary line level inputs and shall be suitable for recording or broadcast applications. Both outputs shall be monitored by a signal presence LED. The master module shall provide a linking interface for true automatic mixing functionality in room combining applications.

Level control of the main and auxiliary outputs shall be provided by remote potentiometers. A continuous control range of 48dB shall be provided but shall be externally alterable to restrict range. Full counterclockwise rotation shall provide 100dB attenuation.

Auxiliary mic/line Input #3 shall have a jumper selectable input switch, 100 Hz High-Pass filter and a jumper selectable bypass of the -30dB muting circuit which affects all other inputs. Either or both outputs shall be mutable.

The automatic master output amplifier shall mount in and be powered by the IRP Model DJ-4100, DJ-4101, or DJ-4150 mainframe. The automatic master module shall be the IRP Model DJ-4115A-1 Voice-Matic Master Module.

ORDERING INFORMATION

Specify: DJ-4115A-1 Voice-Matic Master