

1:1 Redundant Line Amplifier/Equalizer System



MITEQ's 1:1 Redundant Line Amplifier/Equalizer systems are designed to ensure continuous operation without disruption of the transmission signal.

A fault condition in the on-line amplifier/ equalizer, or an operator generated command, will switch the standby amplifier/equalizer to the on-line position and remove the on-line amplifier/equalizer from the transmission path.

Independent gain control and slope adjustment potentiometers, for each amplifier/equalizer, are located on the rear panel.

Features

- Slope and gain adjustment
- Fully redundant power supplies
- Remote control via RS485
- Automatic/manual control from both local and remote mode
- Remote status
- Standby input/output access
- Amplifier/equalizer current fault detection

Options

- Remote RS422, IEEE-488, RS232 or contact closure
- Dedicated remote control panel
- 50 ohm IF impedance

Models	Frequency
RAUE - 70	70 \pm 20 MHz
RAUE - 70	140 \pm 40 MHz

Specifications

Frequency	Refer to table
Gain	20 dB minimum (at center frequency and 6 dB slope adjustment), 10 dB nominal (at 0 dB slope)
Gain adjustment range	0 to 20 dB minimum
Amplitude slope adjustment range	0 to +6 dB
Input return loss	18 dB minimum
Output return loss	18 dB minimum
Input/output impedance	75 ohms (50 ohms optional)
Amplitude flatness	± 0.2 dB maximum (at 0 dB slope)
Power output (1 dB compression)	+10 dBm minimum
Noise figure	10 dB maximum (at maximum gain)

1:1 System Functions

Modes of Operation

- Local mode: Commands are received from the keys on the front panel.
- Remote mode: Commands are received from a remote system controller via the remote interface connector.
All front panel keys are disabled with the exception of local/remote mode selection.
- Automatic mode: Switchover occurs if a fault is detected in the on-line unit.
- Manual mode: Switchover may be executed either via the front panel keys (local mode) or the remote interface (remote mode).

Front Panel Function

- Commands: A1: On line/standby
A2: On line/standby
- Mode selection: Local/remote
Auto/manual

Alarms (LED Indicators)

- A1
A2
Power supply A
Power supply B
System

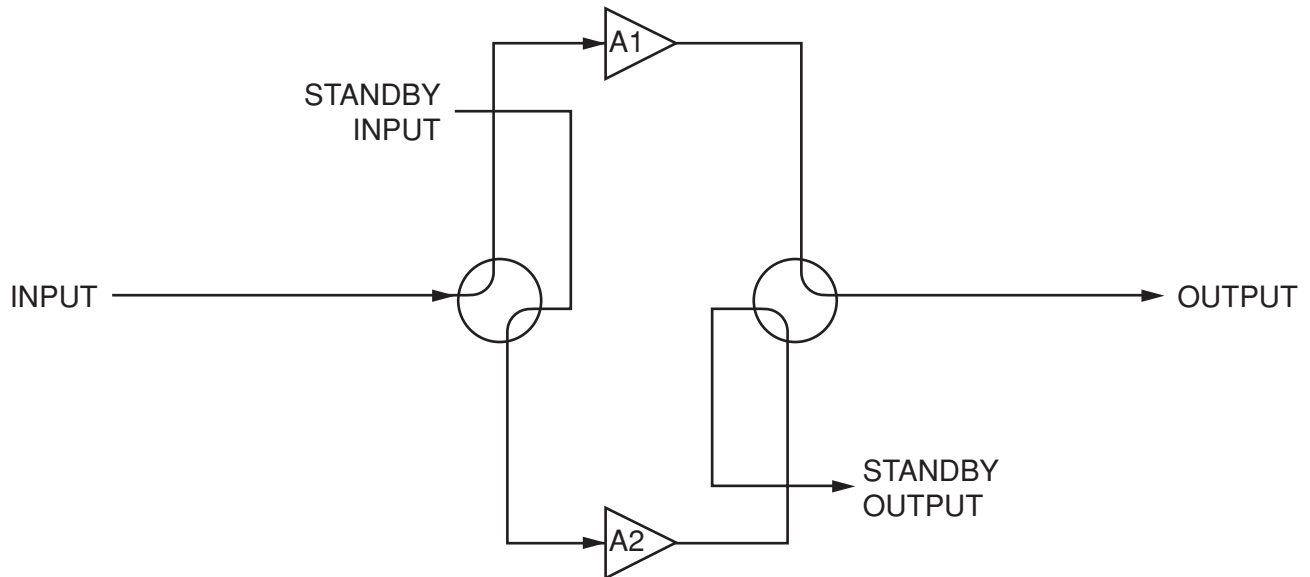
Rear Panel Controls

- Gain control "A1" potentiometer
Gain control "A2" potentiometer
Slope adjust "A1" potentiometer
Slope adjust "A2" potentiometer

Remote

- Commands: A1: On line
A2: On line
Auto
Manual
- Status: A1: On line
A1: Standby
A2: On line
A2: Standby
Remote
Local
Auto
Manual
System: Normal
System: Fail
A1: Normal
A1: Fail
A2: Normal
A2: Fail

Functional Block Diagram



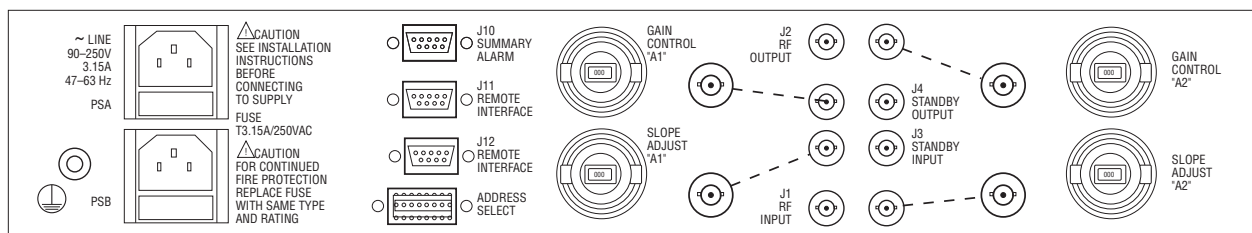
Options

- 15.** 50 ohm if impedance
- 17.** Remote control.
 - A.** RS422.
 - B.** RS485 (standard).
 - C.** RS232.
 - D.** Contact closure.
 - F.** IEEE-488.
- 22.** Dedicated remote control panel.
Provides remote control and status over dedicated RS485 bus. Option 17B (RS485 remote bus) must be ordered.

Notes: Missing option numbers are not applicable to this product.

For literature describing local control (front panel) and remote control (bus protocols) refer to MITEQ's Technical Note 25T031.

Rear Panel View



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General Specifications

Primary Power Requirements

Voltage	90–250 VAC
Frequency	47–63 Hz
Power consumption	25 W typical, steady state, 100 W peak during switchover

Switch Specifications

Switch type	Four-port transfer
Switch contacts	Break-before-make, wiping
Switch drive	Latching, with manual override
Switching speed	150 ms maximum

Summary Alarm

Contact closure/open for DC voltage alarm
Contact closure/open for DC voltage and/or switch position and/or amplifier current

Physical

Weight	20 pounds (9.07 kg) nominal
Overall dimensions	19" [482.6mm] x 3.5" [88.9mm] panel height x 22" [558.8mm] nominal (chassis depth 20" [508mm] excluding protrusions)
IF connectors (input/output)	BNC female
Remote interface connectors	DE-9S for RS485 and RS422, DB-25P for RS232, DB-37S for contact closure, IEEE-488 receptacle for IEEE-488
DC voltage test point	Jack receptacle (interior)
Summary alarm connector	DE-9P

Environmental

Operating

Ambient temperature	0 to 50°C
Relative humidity	Up to 95% at 30°C
Atmospheric pressure	Up to 10,000 feet

Nonoperating

Ambient temperature	-50 to +70°C
Relative humidity	Up to 95% at 40°C
Atmospheric pressure	Up to 40,000 feet
Shock and vibration	Normal handling by commercial carriers



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Specifications are subject to change without notification.