

Automatic Failure Detector/Substitutor



Model AFDS2

Description

The Bogen Model AFDS2 Automatic Failure Detector and Substitutor provides continuous electronic supervision of the main and standby power amplifiers in a sound system, and substitutes the standby power amplifier should the main power amplifier's output drop by as little as 2 dB*. The changeover is almost instantaneous with virtually no loss of signal, thereby assuring uninterrupted performance. This device is a critical, highly desirable component in systems with a dedicated emergency announcement amplifier.

The AFDS2 pulses a 40 kHz frequency into the inputs of the main and standby power amplifiers and continuously analyzes their output. If the 40 kHz level from either amplifier should fall below 2 dB*, a fault alert tone will sound, indicating a failure. Front, panel-mounted LEDs indicate which (main or standby) amplifier has failed. The fault alert tone may be silenced by momentarily pressing the SILENCE button; however, the LED will stay on for the duration of the malfunction and the SILENCE button will automatically reset when the failure is corrected.

Features

- Supervises both main and standby power amplifiers
- Automatically transfers operation to standby power amplifier
- LEDs and fault alert tone notify user of a 2 dB* or greater drop in either amplifier's output
- Automatically restores operation to main power amplifier when trouble is corrected
- Rear-panel screwdriver-adjustable controls for setting the oscillator level and the detector levels and sensitivities
- Operates with 25V or 70V constant-voltage systems, balanced or unbalanced
- Screw terminal or phono jack connections
- Operates from 120V AC or 12V DC
- Standard 19-inch rack mounting
- Front panel made of #16-gauge cold-rolled steel, finished in black enamel

*Threshold is adjustable.

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Specifications subject to change without notice.
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**Technical
Specifications**

Supervision Frequency:	40 kHz
Supervision Frequency Level:	5mV to 50mV into 47 kilohms
Input Impedance:	Medium-Z 10 kilohms
Detector Input Signal @ 40 kHz:	2V
Detector Supervision Range:	2 dB (min.) to 12 dB (max.)
Failure Indicators:	LEDs (visual) and tone module (aural)
Controls:	Screwdriver-adjustable controls for oscillator level and detector sensitivity
Remote Annunciation:	Status terminal provides 12V DC / 100 mA in the failure mode
Power Consumption:	120V AC, 15W or 12VDC @ 0.5A
Operating Temperatures:	14° F (-10° C) to 149° F (65° C)
Dimensions:	19" W x 3-1/2" H x 7-1/2" D
Weight:	8 lb.
Finish:	Black enamel

**Architect &
Engineer
Specifications**

The amplifier failure detector and automatic substitutor shall be a Bogen Model AFDS2, or equivalent, capable of continuously supervising the operation of any main power amplifier and its standby amplifier in a sound system.

It shall be capable of detecting a loss of as little as 2 dB in either amplifier and automatically switch operation from main to standby amplifier, should the main amplifier be at fault. The failure of either amplifier shall be indicated by a corresponding front, panel-mounted LED and an aural fault alert tone. It shall be possible to silence the tone by depressing the SILENCE button, which shall automatically reset when the failure is corrected.

A 40 kHz signal, originated within the AFDS2, shall be pulsed into the inputs of the main and standby amplifiers and their outputs shall be continuously analyzed; if either amplifier should fall below 2 dB*, the AFDS2 shall be activated.

*Threshold is adjustable.

It shall be suitable for operation with, and capable of detecting failure in, any 25V or 70V balanced or unbalanced system.

The device shall be powered from either a 120V AC, 60 Hz line or a 12V DC source, with power consumption limited to 15W or 0.5A, respectively. Screwdriver-adjustable controls shall be provided on the unit for setting the sensitivity of the device and the level of the 40 kHz oscillator.

The unit shall be 19" W x 3-1/2" H x 7-1/2" D and shall weigh 8 lb. The panel shall be fabricated from #16 gauge cold-rolled steel and shall be finished in black enamel.

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