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TOA 900 SERIES

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# IN-WALL AMPLIFIER

(60-WATT)  
(120-WATT)

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## W-906A/912A

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 TOA



## Features

1. 6-channel mixer power amplifier
2. Expandable to 8-input
3. Output power: 120W for W-912A, 60W for W-906A
4. Wide frequency response: 30 to 20,000Hz  $\pm$ 1dB
5. Low distortion and noise
6. Excellent output regulation
7. Built-in one-octave equalizer
8. Built-in compressor
9. Self-protection circuitry design
10. Separate output terminals: 4 and 8 ohms, 25 and 70 volts
11. Extra space for customizing
12. LED pilot light
13. LED peak indicator
14. Full range of plug-in modules
15. Flush and surface mounting

## Description

The TOA W-906A and W-912A Mixer Power Amplifiers control and mix up to six independent input signals plus two inputs with use of an expanding kit WE-2. The W-906A delivers up to 60 watts of output power and the W-912A 120 watts. Twenty one optional accessory modules are available to allow the W-906A and W-912A amplifiers to be configured for a variety of applications. Edge connectors on the rear of the units permit TOA modules to be easily inserted for use.

Modules include the M Series microphone preamplifiers, available with muting, remote volume control, voice gate and

compressor options. The U Series auxiliary preamplifiers, available with muting, remote volume control and compressor options. The B Series bridging transformers, available with muting option, the L Series line matching transformers, available with muting option, the S Series signal generator modules and the I-01S Exes interface paging module. Also available are the T-01S module featuring 600-ohm balanced output capability and the T-02S module featuring auxiliary input and balanced line output for music-on-hold.

For detailed module specifications, please refer to publication TOA 900 Series Module Specifications, Features and Connector Chart.

The W-906A and W-912A Mixer Power Amplifiers have a built-in one-octave graphic equalizer with 9 bands to tailor sound system frequency response to room acoustics, reducing feedback tendencies and improving intelligibility. A built-in compressor circuit is provided to protect the output level from distortion as a result of excessive input and keep it constant. The compressor's threshold level can be adjusted. The W-906A and W-912A Mixer Power Amplifiers have output terminals to match 4- or 8-ohm speaker systems, or a speaker distribution system may be connected to the 25 or 70-volt terminals. User's (blank) space is provided for additional functions to be made by the customers. The expanding kit (optional) may be loaded in this space when the number of inputs is increased.

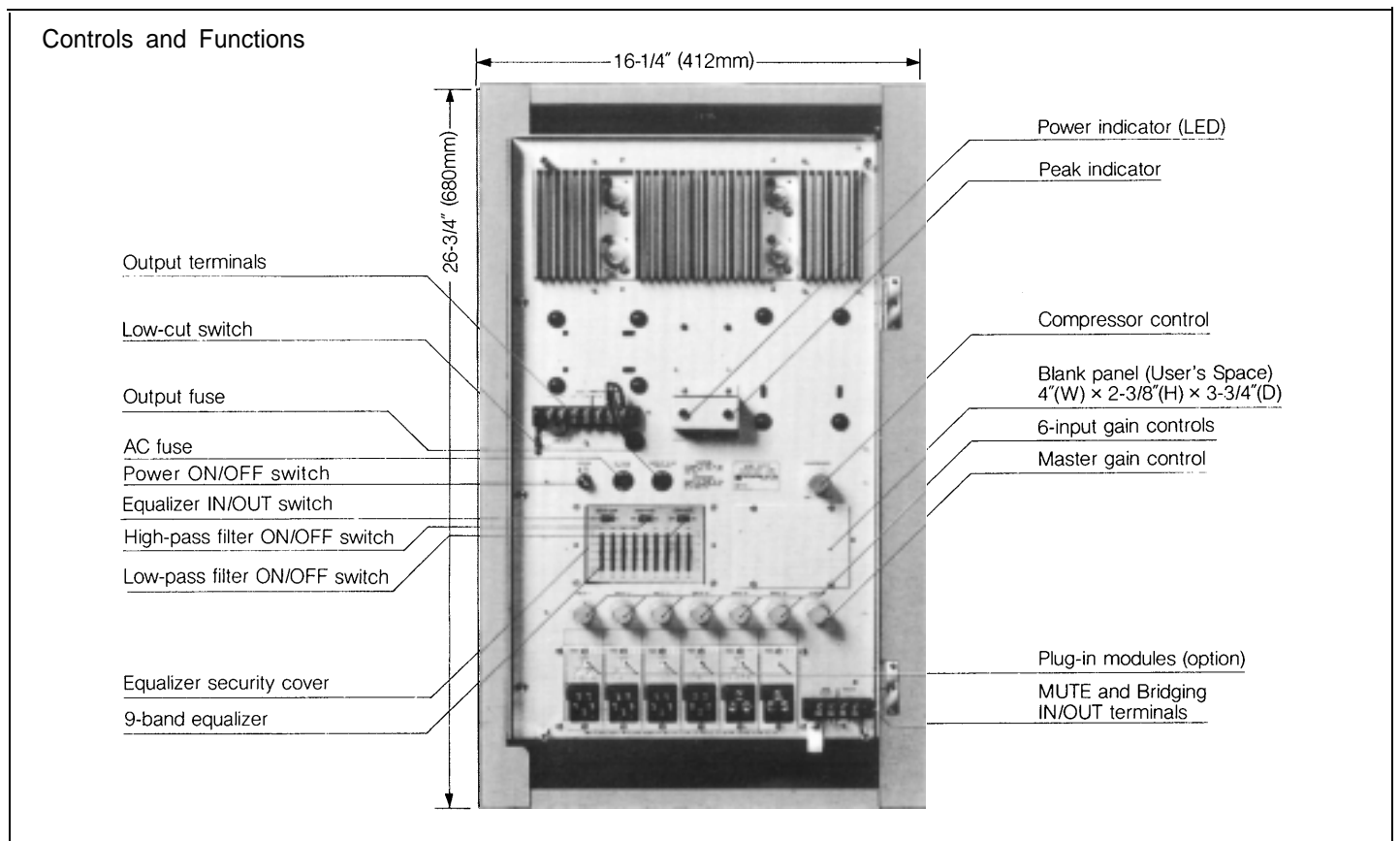
Protection against tampering is assured by means of a key-locked hinged door. The W-906A and W-912A can be mounted in any four-inch wall with use of the BX-9F Flush Mounting Back Box. Wall mounting is also possible with use of the BX-9S Surface Mounting Box.

# Specifications

Note: (D): Direct output (T) Transformer output

Model	W-906A	W-912A
Type	In-Wall mounting 6-channel	mixer power amplifier
Output Power	60W RMS	120W RMS
Power Bandwidth	(D): 20—20,000Hz, 0.5% THD	(T): 50—20,000Hz, 0.5% THD
Frequency Response	(D): 30—20,000Hz ±1dB, (T): 30—15,000Hz ±1dB, (T): 30-20,000Hz +1dB, -2dB	
Total Harmonic Distortion	0.02% at 1 kHz, rated output	
Inputs	Six input ports: Each port accepts any input module except T-01S. One bridging input/output (Use T-01S only in port #5 or #6.)	
Input Sensitivity/Impedance	Input ports #1 to #6: 100mV/10k ohms, Bridging input/output 100mV/3.3k ohms	
Outputs	(T): 8 ohms, 25V & 70V balanced	(D): 4 ohms, unbalanced
Output Regulation (1kHz)	(D): Less than 0.5dB, no load to full load	(T): Less than 1.0dB, no load to full load
Signal-to-Noise Ratio (Band Pass: 20-20,000 Hz)	Controls OFF: 90dB Master volume Max.: 77dB	Equalizer IN: 88dB Compressor IN: 84dB
Compression	Attack time: no greater than 2 milliseconds Release time: variable 20 msec to 2 sec.	Compression range: 30dB Distortion: less than 1%
Equalization	9-band one-octave graphic equalizer Center frequencies: ISO 63, 125, 250, 500, 1k, 2k, 4k, 8k, 16k Hz Equalization range: ±12dB	
Filters	High-pass filter: 180Hz 12dB/octave	Low-pass filter: 7kHz 12dB/octave
Controls	6 Input gain controls 1 Master gain control 1 Compression level control 9 Equalizer controls 1 Power ON/OFF switch	1 Equalization ON/OFF switch 1 High-pass filter ON/OFF switch 1 Low-pass filter ON/OFF switch 1 Low-cut switch (60Hz, 6dB/octave, inside)
Indicators	1 LED power indicator	1 LED peak indicator
Protection Circuitry	Built-in with 2 AC fuses (1 inside) and 1 output circuitry Output circuitry protection when heatsink temperature overheats	
Connectors	Input #1 to #6: Card-edge connector Output: Screw-terminal strip Bridging input/output: Screw-terminal strip	Mute Screw-terminal strip AC power cord SJT 3-conductor
Power Consumption	AC 120V, 60Hz, 100W	AC 120V, 60Hz, 180W
User's Space (Blank Panel)	Effective space for customizing 4"(W) x 2-3/8"(H) x 3-3/4"(D) Optional expanding kit WE-2 may be loaded	
Dimensions	Face panel: 26-3/4"(H) x 16-1/4"(W) x 1-1/8"(D) (680 x 412 x 28 mm)	
Weight (without input modules and back box)	30.20 lbs (13.7kg)	38.14 lbs. (17.3 kg)
Color	Silver	
Standard Accessories	3 Volume control covers	
Other Features	Output disconnect for approx. 5 sec. after power turned on Muting Function: provided for modules U-11S, U-12S, B-11S, L-11S, M-11S, L-41S	
Associated Equipment	Plug-in modules (see module specifications) Volume control cover.....YA-910 Expanding kit.....WE-2	

\*Power Bandwidth and Frequency Response are from input port to power amplifier output. \*Specifications are subject to change without notice.



## Architect's and Engineer's Specifications

The In-Wall Amplifiers shall be capable of controlling and mixing up to 6 independent input signals plus 2 inputs with the use of an expanding kit. The amplifiers shall deliver up to 60W or 120W of output power. The TOA plug-in accessory modules designed for use with the W-906A and W-912A In-Wall Amplifiers shall utilize the latest in surface mount component technology and include the following modules: the M Series microphone preamplifiers available with muting, remote volume control, voice gate and compressor options, the U Series auxiliary preamplifiers available with muting, remote volume control and compressor options. The B Series bridging transformers, available with muting option, the L Series line matching transformers, available with muting option, the S Series signal generator modules and the I-01S Exes interface paging module. Also available shall be the T-01S module featuring 600-ohm balanced output capability and the T-02S module featuring auxiliary input and balanced line output for music-on-hold.

The In-Wall Amplifiers shall have a built-in 1-octave graphic equalizer with 9 bands to tailor sound system frequency response to room acoustics, reducing feedback tendencies and improving intelligibility. A built-in compressor circuit shall be provided to protect output level from distortion as a result of excessive input and keep it constant. The compressor's threshold level shall be able to be adjusted.

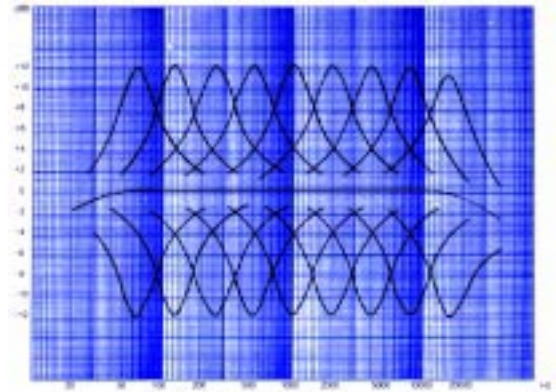
The In-Wall Amplifiers shall have output terminals to match 4- or 8-ohm speaker systems, and shall allow a speaker distribution system to be connected to the 25- or 70-volt terminals.

A user's blank space shall be provided for additional functions chosen by the user. This space shall accept an expanding kit (optional) when the number of inputs is increased. A key-locked door shall be provided to assure protection against tampering. The In-Wall Amplifiers shall be able to be mounted in any 4-inch wall with use of the BX-9F flush mounting back box. Wall mounting shall also be possible by using the BX-9S surface mounting box. The In-Wall Amplifiers shall be TOA models W-906A and W-912A.

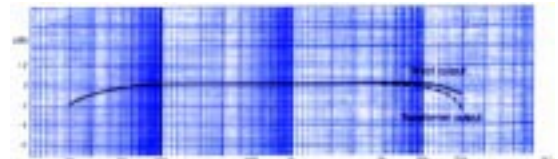
\*NOTE 1: THE T-01S MODULE WILL ONLY FUNCTION IN PORTS 5 AND 6 OF THE FOLLOWING MODELS: A-903A, A-906A, A-912A, M-900A, W-906A AND W-912A.

\*NOTE 2: W-906A AND W-912A IN-WALL AMPLIFIERS REQUIRE MODULES WITH SCREW TERMINALS.

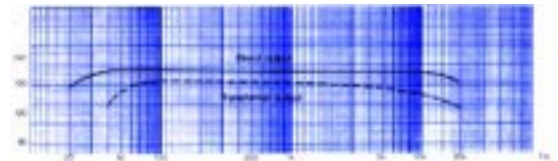
## Output Equalizer Characteristics



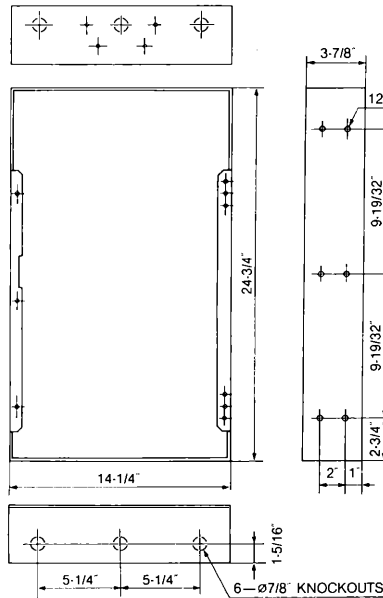
Frequency Response  
at 1/10 rated output (Direct output: 4-ohm load,  
Transformer output: 70V line)



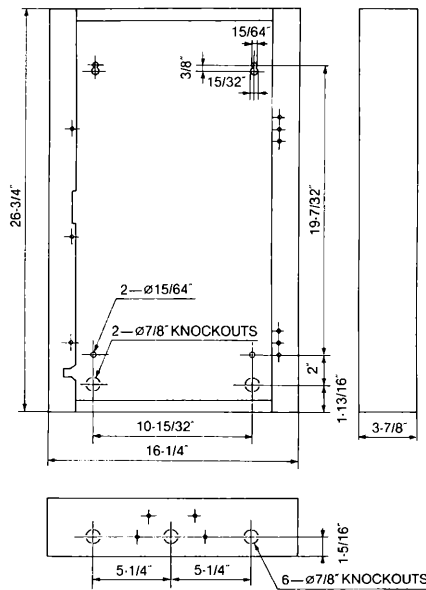
Power Output vs Frequency  
at 0.5% THD (Direct output: 4-ohm load,  
Transformer output: 70V line)



## Optional Back Box



**BX-9F**  
Back Box for  
flushmounting  
Weight:  
12.35 lbs. (56kg)



**BX-9S**  
Back Box for  
surfacemounting  
Weight:  
16.09 lbs. (7.3kg)

