

ASP-MG24 Signal Processor / Masking Generator 2 Input x 4 Output







CIE, 3 Widdowson Close, Blenheim Industrial Estate, Bulwell, Nottingham NG6 8WB, UK

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– 1 –
Specifications are subject to change without notice.

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Important Safety Instructions



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage " within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this device near water.
- 6. Clean only with dry cloth.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the device.
- 11. Only use attachments/accessories specified by the manufacturer.
- 12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When a cart is used, use caution when moving the cart / device combination to avoid injury from tip-over.



- 13. This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
- 14. Unplug this device during lightning storms or when unused for long periods of time.
- 15. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 16. **WARNING:** To reduce the risk of fire or electric shock, this device should not be exposed to rain or moisture and objects filled with liquids, such as a vase, should not be placed on this device.
- 17. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
- 18. The mains plug of the power supply cord shall remain readily operable.
- 19. 🔮 Protective earthing terminal. The apparatus should be connected to a mains socket with a protective earthing connection.





WARNING - When The Device Is In Use

- WARNING: For the terminals marked with symbol of $\frac{1}{7}$ may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.
- WARNING: The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
- WARNING: The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
- To prevent electric shock, do not remove the product cover as there are high voltage components inside. Refer all servicing to AtlasIED.
- Should any of the following irregularities occur during use, immediately switch off the power, disconnect the power cord from the AC outlet and contact AtlasIED. Do not to attempt to continue operation with the product as this may cause fire or electric shock:
 - Smoke or strange smell coming from the unit.
 - If the product falls or the case is damaged.
 - If water or any metallic objects falls into the product.
 - If the power supply cord is damaged in any way.
 - If the unit is malfunctioning.
- Do not insert or drop metallic objects or flammable materials into the ventilation holes of the product's cover, as this may result in electric shock or fire.
- Do not place any containers with liquid or metallic objects on the top of the product. If any liquid spills into the unit, fire or electric shock may result.
- Never operate this product or touch the power supply cord during an electrical storm, electric shock may result.
- Never exceed the power rating on the product when connecting equipment. Fire and/or property damage may result.
- Operate the product only with the voltage specified on the unit. Fire and/or electric shock may result if a higher voltage is used.
- Do not modify, kink, or cut the power cord. Do not place the power cord in close proximity to heaters and do not place heavy objects on the power cord, including the product itself, doing so may result in fire or electrical shock.
- Ensure that the safety ground terminal is connected to a proper ground. Never connect the ground to a gas pipe as a catastrophic disaster may result.
- Be sure the installation of the product is stable, avoid slanted surfaces as the product may fall and cause injury or property damage.



CAUTION - When Installing The Product

- Plugging in or unplugging the power cord with wet hands may result in electric shock.
- Never move the unit with the power cord plugged into the wall, as damage to the power cord may result.
- When unplugging the cord from the wall, grasp the plug, NOT the cord.
- Never install this product in humid or dusty locations, nor in direct sunlight, near sources of heat, or in areas where sooty smoke or steam are present. Fire and electric shock may result.
- Keep all sides of the unit at least 31/2" away from objects that may obstruct air flow to prevent the unit's internal temperature rise.

CAUTION - When The Product Is In Use

- Never place heavy objects on the product, causing it to fall and/or break, resulting in personal injury and property damage. In addition, the product itself may fall and cause injury and property damage.
- Contact AtlasIED for instructions on cleaning the inside of the unit. Large accumulations of dust inside the unit may result in heat buildup and fire.
- Ensure that the power supply plug is securely plugged into the wall outlet. Never allow dust to accumulate on the power plug or inside the wall outlet.
- When cleaning the unit or the unit is not to be operated for an extended period, unplug the power cord from the wall.



Introduction

The AtlasIED ASP-MG24 is a 2 input by 4 output digital loudspeaker management system and masking generator designed for fixed sound installation markets. The ASP-MG24 features the latest in available technology utilizing a 32-bit (40-bit extended) floating point processors and high performance 24-bit Analog Converters. Both balanced inputs are mic/line selectable along with 4 addition independent masking generator input sources. Inputs and outputs can be routed or mixed in multiple configurations to meet even the most complex system designs. Control parameters include I/O levels, delay, polarity, parametric EQ, crossover selections, 31 band EQ, White/Pink Noise, Auto Ramp, routing, mixing and compressor/limiters. The ASP-MG24 can be controlled or configured in real time with the intuitive PC GUI, accessed via the RS-232 or USB interface. Software upgrade for CPU and DSP via PC always keeps the ASP-MG24 current. A programmable remote control is also available.

Key Features

- 2 Mic/Line Inputs and 4 Outputs
- System routing and mixing flexibility
- 4 Independent Random Pink or White Noise Generators
- 8 Parametric Filters for each Input and Output
- Multiple Crossover types up to 48dB
- Full Function Compressor Limiters
- Four 1/3rd Octave Graphic Equalizers for Masking
- User set masking auto ramp
- Precise Level, Polarity and Delay
- Full 5-segment LED's on every Input and Output
- Storage of up to 30 Program Setups
- Multiple Levels of Security Locks
- Optional Programmable System Controller
- RS-232 & USB Interface for PC Control and Configuration
- CPU and DSP upgrade via PC



Front Panel



1. LED Power Indicator

The Power LED will illuminate Blue when the external power supply is plugged into the power socket and the power supply is plugged into a AC source.

2. Level LED Indicators

5 LEDs per channel indicate the status of the signal level: Signal, -12dB, -6dB, -3dB, Over / Limit. The Input "Over" LED references to the device's maximum headroom. The Output "Limit" LED references to the threshold of the limiter.

3. RS232 Connector

Standard female DB9 socket. A straight through cable is required for PC connection.

4. USB Connector

Standard female USB socket. A straight through cable is required for PC connection.

5. LED Data Indicator

The Data LED will illuminate Green when there is connection made between the ASP-MG24 and the computer.



Rear Panel



1. Power Supply Socket

An external UL rated 120v AC power supply has been included with the ASP-MG24. Only use the provided power supply due to the specific DC voltages required to operate the unit.

2. Input Connectors

There are two removable 3 Pin Phoenix type connectors for providing input signal to the unit. They can accept either a balanced or unbalanced signal. For balanced signals connect (Ground to GND), (Positive signal to +) and (Negative signal to -). For unbalanced signals connect the (- to the GND together) and the (Positive to +).

3. Mic / Line Level Selection

Each Input has the capability to accept either a microphone or line level signal. Prior to connecting the inputs make sure the software input gain that apply to the channel routing are set to -10dB. Also the limiters are set to +20dB for gain setup. Prior to applying signal to the input you must set the analog gain switch to match the type of input you are using. The Line position gain is calibrated for 0dBu or unity gain within the DSP software. The Mic position is calibrated for -30dBu when the DSP gain is set for unity or 0dB. If more gain is needed carefully turn the up the appropriate channel DSP gain in the software. If you will be using a microphone it is recommended when starting to turn the input gain to -40dB and slowly bring up the input gain to the desired level.

4. Output Connectors

There are four removable 3 Pin Phoenix type connectors for providing output signal. They can deliver either a balanced or unbalanced signal. For balanced signals connect (Ground to GND), (Positive signal to +) and (Negative signal to -). For unbalanced signals connect the (- to the GND together) and the (Positive to +).

5. RJ45 Port

This port is used for remote system controllers. For Ethernet connection an optional card is required. Call AtlasIED for more details.



Getting to Know the Software

Loading the Software

- 1. Load the software onto your computer by following the Quick Star Guide and Software Installation Guide.
- 2. Note: It is important to have your computer screen resolution set to the highest viewing setting or a minimal setting of 1280 x 1240 pixels. Failure to do may cause the dialog boxes to appear out the viewing area. To find a window that should appear use the master screen curser Up / Down arrows to find the three boxes. All screens can be moved by clicking and holding the selected screen for personal viewing preferences.
- 3. After the software is loaded and the proper screen resolution is set. Open the software and follow the steps below: **Note:** It is not necessary to have the computer connected to the ASP-MG24 viewing and program purposes.

Opening the Software

- 1. Your screen should look like the view below. If not, close the software and restart.
- 2. If you have the ASP-MG24 connected to your computer click "Yes " to connect or you can work in Off Line Mode by clicking "NO".
- 3. After you have the screen above, click on (1) Start, (2) Log On and then (3) Enter. Do not put anything into the pass word box at this time. Later you will assign one if needed. If a pass word has been assigned, you will need to enter it.



You are now ready to open the Device panel by clicking on Device 1. Note: An ASP-MG24 is also known as a "Device". Multiple ASP-MG24's can be controlled via one GUI interface. If only one ASP unit is connected to the computer click on Device 1 and the main control window will appear.

Start Setup H	elp											
Main Wind	ow [L4											
_	Device 1											
_	Device 2											
_	Device 3											
	Device 4											
Deuter 4	Ed.	VC	ACDA	C24								
Jevice 1	Gain	Compressor	_ASP-N	Mute		Mixer	Fiter	Delay	Gain	Linder	Mite	
IN1	40.00dR	20.0484	Pressoo	and E	E.							OUT1
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-10.0000	20.0050	Dypass	Find the first state of the sta	- 8		Bypass	0.000ms	0.00dB	20.0dBu	Mute	
N2	-10.00dB	20.0dBu	Bypass	Mute								OUT2
					Ē	Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
DI3 MI	Masking	Gain	Mask EQ	Mute =	믭							0.02
	on	-10.00dB	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN4 M2	Off	-10.00dB	Bypass	Mute	Ē.			_				
NS M3			_			017	0	0.000	0.0040	20.040.0		OUT4
	Off	-10.00dB	Bypass	Mute			bypass	0.000ms	0.0048	20.0dBu	mute	
INS M4	orr	-10.00dB	Bypass	Mute								
							and the second second					





Mic / Line Input

Main Wind	low [L4]]										
	Device 1											
	Device 2											
	Device 3											
	Device 4											
Device 1	- File:	XStartup	_ASP-N	IG24.	xdat							
	Gain	Compressor	Filter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
	-10.00dB	20.0dBu	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUT1
N2	-10.00dB	20.0dBu	Bypass	Mute								OUT2
	Masking	Gain	Mask EQ	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN3 M1	off	-10.00dB	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUT3
IN4 M2	orr	-10.00dB	Bypass	Mute					_			OUT4
IN5 M3	Off	-10.00dB	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN6 M4	orr	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall	Device Store	Import MEQ	Data		Up	Sync in progr	ess	

Input Meter

The bar graph meter illustrates the level of the input signal POST the channels gain control and is PRE input filters and compressor settings.

Device 1	File:	XStartup	_ASP-N	NG24.xdat								
	Gain	Compressor	Fiter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
	-10.00dB	20.0dBu	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
N2	-10.00dB	20.0dBu	Bypass	Mute								OUT2
	Masking	Gain	Mask EQ	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
	Off	-10.00dB	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN4 M2	off	-10.00dB	Bypass	Mute								OUT4
IN5 M3	Off	-10.00dB	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN6 M4	off	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall Device	Store	Import MEQ	Data		Up	Sync in progr	ess	_

Gain

For you convenience both Mic / Line Inputs and the four masking generators levels are shown. Controlling the gain can be accomplished by dragging the fader, using the up down buttons or by typing in the number viewing text box. Channel Mute can be accomplished by clicking on the Mute tab and will illumination Red indicating the channel is in Mute. Input Polarity can be set by clicking on the Polarity tab.





ASP-MG24 Signal Processor / Masking Generator

Compressor

Inputs 1 & 2 have fully adjustable compressor limiters. When clicking on the compressor tab, two sub viewing screens will appear. **Note:** All control boxes can be dragged for desired positioning of the screen. Screen 1 is an indicator screen showing the compressor / limiter operation. The second is the settings screen. In that screen you have control over Threshold, Attack, Release and Ratio. Adjustment can be made using the Up / Down arrows or by typing into the data viewing text box.



- Threshold Limit Threshold. Ranges from -20 to +20dBu in 0.5dB steps.
- Attack Attack time. Ranges from 0.3 to 1ms in 0.1ms steps, and ranges from 1 to 100ms in 1ms steps.
- Release Release time. Can be set at 2X, 4X, 8X, 16X or 32X the attack time.
- Ratio The Ratio control allows adjustment to the amount of Input vs. Output level with signals exceeding the set threshold limit.



ASP-MG24 Signal Processor / Masking Generator

Filter

When clicking on the filter screen 3 sub viewing screens appear. **Note:** If the screens do not appear you may have to change your screen resolution. Also use the screen curser Up / Down arrows to find the three boxes. All three screens can be moved by clicking and holding the selected screen for personal viewing preferences.



Graphic Screen

This screen will view all the all filter chacteristics that are set.

EQ	Grap	h - C	ev	:1	n_	Ch	:1											
Op	tions																	
+P/20	5																	
	5								1									
Oct di	3			┿┥						<u></u>		╈	F					
-10)										_						_	
-14 -17-20	5													020				
-25	5																	
-31	20		~			100							1	¢	_			

Filter Adjust Window

Each input has 8 adjustable filter selections. Choices are Parametric, Hi-shelf and Lo-shelf. Adjustments can be made via the up / down arrows, text window and by dragging the curser on the Graphics Screen. After any adjustment made they should appear on the Graphic Screen.

EQ Co	ntrols - Dev1	In Ch	1 Ba	ınd2	- 1	ile:	XSt	artu	ıp 💶	
1	Type : PEQ	EQ Le	vel:10	.00dB		Freq:	353Hz		BVV:0	.64Oct
2	Type : PEQ	EQ Le	vel : -15	5.50dB		Freq :	1512Hz		BVV: 0	.080ct
3	Type : PEQ	EQ Le	evel: 0.	00dB		Freq :	1000Hz		BVV: 0	.330ct
4	Type : PEQ	EQ Le	evel: 0.	00dB		Freq : 1	1000Hz		BVV:0	.330ct
5	Type : PEQ	EQ Le	evel: 0.	00dB		Freq :	1000Hz		BVV: 0	.330ct
6	Type : PEQ	EQ Le	evel: 0.	00dB		Freq :	1000Hz		BVV: 0	.330ct
7	Type : PEQ	EQ Le	evel: 0.	00dB		Freq :	1000Hz		BVV: 0	.330ct
8	Type : PEQ	EQ Le	evel: 0.	00dB		Freq :	1000Hz	ļ	BVV: 0	.330ct
	*									
Reset	*	-	T	T		T	V	V	-	

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Crossover Window

The Crossover Window allows the adjustment of Filter type, Frequency, and slope. The Reset button will set all filters back to factory settings. This Reset button only effects this screen settings.

Lo-Cut	Type : Linkwitz	Fre	equenc	oy : 50	Hz	Slope : 24dB/Oct
Hi-Cut	Type : Butterworth	Free	quency	7:290	OHz	Slope : 12dB/Oct
Derect	A					*
Reset	*		T	T	T	*

Graph Sub Screen Window

Advance Viewing Feature - In the top right corner of the window there is option button. This window allows you to view multiple channels of filters. Re set the viewing scale. The Reset button will set all filters back to factory settings. This Reset button only effects this screen settings.



Mute

This button when depressed turns Red and mutes the signal at the input of the channel.

Device 1	- File:	XStartup	_ASP-N	IG24.:	xdat							
	Gain	Compressor	Fiter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mutc	-	or	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
	-10.00dB	20.0dBu	Bypass	Mute			Bunase	0.000me	0.00dB	20.0dBu	Mute	OUT2
	Masking	Gain	Mask EQ	Mute			ojpuoo	0.0001115	0.0000	Londaba	indee	
IN3 M1	Off	-10.00dB	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUTS
IN4 M2	orr	-10.00dB	Bypass	Mute		-						OUT4
INS M3	Off	-10.00dB	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN6 M4	orr	-10.00dB	Bypass	Mute		4						
Reset All	File Open	File Save	Device	Recall	Device Store	Import MEQ	Data		Up	Sync in progr	ess	





ASP-MG24 Signal Processor / Masking Generator

Masking Generator Inputs

Device 1	- File:	XStartup	_ASP-N	G24.xdat								
	Gain	Compressor	Fiter	Mute		Mixer	Filter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
N2	-10.00dB	20.0dBu	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUT2
	Masking	Gain	Mask EQ	Mute			-,,					
IN3 M1	Off	-10.00dB	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	оцтз
IN4 M2	orr	-10.00dB	Bypass	Mute								OUT4
INS M3	Off	-10.00dB	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN6 M4	orr	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall Device	Store	Import MEQ	Data		Up	Sync in progr	ess	

Meter

There are four bar graph meters that illustrates the level of the output signal of the generator, it is POST the channels gain control and PRE input filters.



Masking

When the Masking window a small window will open. This window also to the selection of the filter either White or Pink noise.

Ramp Time

The Power Ramp button allows you set the desired turn on signal ramp time during power up. The Time buttons allows you to adjust the amount of preset time you need. The amount of steps is a formula of gain divided by time. The ramp interval voltage change will occur every 6 seconds. The amount of dB steps will vary depending on the total ramp time you select and the amount of gain from change from -40dB. **Example:** If you choose 2 minute of ramp time and the channels gain is set for -10dB, use the following is the formula to calculate dB rate of change (Gain = -40dB minus -10dB = -30dB) and (Time = 120 seconds / 6 seconds = 20 steps) Gain Steps = 30dB / 20 steps = 1.5 dB change per second.

Ramp Bypass

If the Power UP Ramp button is Green the ramp feature is engaged, if grey the feature is bypassed.



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Gain

For you convenience both Mic / Line Inputs and the four masking generators levels are shown. Controlling the gain can be accomplished by dragging the fader or by using the up down buttons or by typing in number viewing text box. Channel Mute can be accomplished by clicking on the Mute tab and will illumination Red indicating the channel is in Mute.



Masking EQ

When clicking on the filter screen, 3 sub viewing screens appear. Note: All three screens can be moved for personal viewing preferences.



Graphic Screen

This screen will view all the all filter characteristics that are set. There 31 filter select points on the screen. By dragging your curser over the number and left clicking the mouse and holding you can drag the filter to the amount of boost or cut for a specified 1/3 octave frequency.

) ptions																						
/20 15 10 5 IdB1 2 3 -5	4 5	6	7	8 -9	10 1	11-12	13_1	14_1	5	16		-18	<u>19 20 ;</u>	21 22	23	-21	i_26	i _27	-21	3—29	30	31
10 15 20 25 30											17					24						



1/3 Octave Graphic Screen

This screen corresponds with the Graph screen. There are 20 filters that appear in this window. That is because the masking operating range is from 100Hz to 8KHz..Adjustments to the filters can be made dragging the filter number on the screen or by typing the number into the window or by using the UP / Down arrows. The Reset button will set all filters back to factory settings. This Reset button only effects this screen settings.

GEQ - De	v1 In 💶 🗖 🔀									
8 - 100Hz	0.00dB									
9 - 125Hz	0.00dB									
10 - 160Hz	0.00dB									
11 - 200Hz	0.00dB									
12 - 250Hz	0.00dB									
13 - 315Hz	0.00dB									
14 - 400Hz	0.00dB									
15 - 500Hz	0.00dB									
16 - 630Hz	0.00dB									
17 - 800Hz	-23.00dB 0.00dB									
18 - 1kHz	0.00dB 0.00dB									
19 - 1.25kHz	0.00dB 0.00dB									
20 - 1.6kHz	0.00dB									
21 - 2kHz	0.00dB									
22 - 2.5kHz	0.00dB									
23 - 3.15kHz	0.00dB									
24 - 4kHz	-13.00dB									
25 - 5kHz	0.00dB									
26 - 6.3kHz	0.00dB									
27 - 8kHz	0.00dB									
Depet										
Reset	. .									

Crossover Window

The Crossover Window allows the adjustment of Filter type, Frequency, and slope. The Reset button will set all filters back to factory settings. This Reset button only effects this screen settings.

Crosso	ver - Dev1 O	ut C	h1	Ban	d1	🗖 🗖 🗙
Lo-Cut	Type : None	Free	quency	/:100	OHz	Slope : 6dB/Oct
Hi-Cut	Type : None	Free	quency	/:100	OHz	Slope : 6dB/Oct
	*					*
Reset	.			V	V	





Mute

This button when depressed turns Red and mutes the signal at the input of the channel.

Device 1	- File:)	XStartup	_ASP-M	G24.xda	t							
	Gain	Compressor	Fiter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUTI
N2	-10.00dB	20.0dBu	Bypass	Mute								OUT2
	Masking	Gain	Mask EQ	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
INS MI	Off	-10.00dB	2 GEQ	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	CUT3
IN4 M2	011	-10.00dB	Bypass	Mute		F						OUT4
IN5 M3	off	-10.00dB	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
ING M4	Off	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall Devic	e Store	Import ME	Q Data		Up	Sync in prog	ress	

Masking Generator Outputs

Device 1	- File:	XStartup	_ASP-N	IG24.xd	lat							
	Gain	Compressor	Fiter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUTI
	-10.00dB	20.0dBu	Bypass	Mute			Danago	0.000000	0.004P	20.04Pu	Muto	OUT2
	Masking	Gain	Mask EQ	Mute			буравь	0.0001115	0.0000	20.0000	mute	
IN3 M1	off	-10.00dB	2 GEQ	Mute		orr	Bypass	0.000ms	0.00dB	20.0dBu	Mute	оцтз
IN4 M2	no	-10.00dB	Bypass	Mute		-				_		OUT4
IN5 M3	Off	-10.00dB	Bypass	Mute		off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN6 M4	orr	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall De	vice Store	Import MEQ	Data		Up	Sync in progr	ess	

Mixer

This button allows you to route or mix any of the inputs to this output. When clicking on this button a window will appear that shows all six inputs. Each input channels gain operates from OFF to 0dB. Controlling the mixed gain can be accomplished by dragging the fader or by using the up down buttons or by typing in number viewing text box. **Note:** The signal feeding into the mixer will not be effect by other output channel mixes. When you have completed you routing or mix you can view the route by channel indicator lines or by the number of channels indicated in the mixer viewing window.





ASP-MG24 Signal Processor / Masking Generator

Filter

When clicking on the filter screen 3 sub viewing screens appear. **Note:** All three screens can be moved for personal viewing preferences.



Graphic Screen

This screen will view all the all filter characteristics that are set.

EQ Graph	- Dev:1 Out_Ch:1		
Options			
+P/20			
10	02		
5 0dB			
-5			
-15		\sim	
-P/-20 -25			
-30 20	100		10k 30k
		^	

Filter Window

Each input has 8 adjustable filter selections. Choices are Parametric, Hi-shelf and Lo-shelf. Adjustments can be made via the up / down arrows, text window and by dragging the curser on the Graphics Screen. After any adjustment made they should appear on the Graphic Screen.

EQ Co	ntrols - Dev1	Out Ch1 Band	2 - File: XStar	t 💶 🗖 🗙
1	Type : PEQ	EQ Level : -15.00dB	Freq: 2322Hz	BW: 0.33Oct
2	Type : PEQ	EQ Level : 11.75dB	Freq : 295Hz	BWV: 1.06Oct
3	Type : PEQ	EQ Level : 0.00dB	Freq: 1000Hz	BW: 0.33Oct
4	Type : PEQ	EQ Level : 0.00dB	Freq: 1000Hz	BVV: 0.33Oct
5	Type : PEQ	EQ Level : 0.00dB	Freq: 1000Hz	BVV: 0.33Oct
6	Type : PEQ	EQ Level : 0.00dB	Freq: 1000Hz	BW: 0.33Oct
7	Type : PEQ	EQ Level : 0.00dB	Freq: 1000Hz	BW: 0.33Oct
8	Type : PEQ	EQ Level : 0.00dB	Freq : 1000Hz	BVV: 0.33Oct
	A			A
Reset		T T	• • •	.



Crossover Window

The Crossover Window allows the adjustment of Filter type, Frequency, and slope. The Reset button will set all filters back to factory settings. This Reset button only effects this screen settings.

Crosso	ver - Dev1 O	ut C	h1	Ban	d1	🗖 🗖 🗙
Lo-Cut	Type : None	Free	quency	y:100	OHz	Slope : 6dB/Oct
Hi-Cut	Type : None	Free	quency	y : 100	OHz	Slope : 6dB/Oct
	*					*
Reset				V	Υ.	

Delay Window

The delay window allows you adjust the channels delay from 0ms to 200ms per output. Controlling the mixed gain can be accomplished by using the up down buttons or by typing in number viewing text box.



Gain

The four output gain levels are shown when clicking on this window. Controlling the gain can be accomplished by dragging the fader or by using the up down buttons or by typing in number viewing text box. Channel Mute can be accomplished by clicking on the Mute tab and will illumination Red indicating the channel is in Mute. Input Polarity can be set by clicking on the tab.

Device 1	- File:	XStartup	_ASP-N	IG2	4.xdat								
	Gain	Compressor	Fiter	Mu					Delay	Gain	Limiter	Mute	
M	-10.00dB	20.0dBu	Bypass	Mu	Gain - Out 1	Out 2	ut			0.00dB	20.0dBu	Mute	OUT1
N2	-10.00dB	20.0dBu	Bypass	Mu	0.00dB	0.00dB	0.00dB	0.00dB	_				OUT2
	Masking	Gain	Mask EQ	Mu	Ĩ.	1	1	1	.000ms	0.00dB	20.0dBu	Mute	
IN3 M1	Off	-10.00dB	2 GEQ	Mu					.000ms	0.00dB	20.0dBu	Mute	оцтз
IN4 M2	Off	-10.00dB	Bypass	Mu									OUT4
IN5 M3	Off	-10.00dB	Bypass	Mu					.000ms	0.00dB	20.0dBu	Mute	
ING M4	Off	-10.00dB	Bypass	Mu	Mute +Polarity	Mute +Polarity	Mute +Polarity	Mute +Polarity					
Reset All	File Open	File Save	Device	Reca	III Device :	store imp	OIT MEY Dat	*		Up	Sync in progr	ess	





Limiter

All four outputs have fully adjustable limiters. When clicking on the compressor tab, two sub viewing screens will appear. Note: All control boxes can be dragged for desired positioning of the screen. Screen 1 is an indicator screen showing the compressor / limiter operation. The second is the settings screen. In that screen you have control over Threshold, Attack, Release and Ratio. Adjustment can be made using the Up / Down arrows or by typing into the data viewing text box.



- Threshold Limit Threshold. Ranges from -20 to +20dBu in 0.5dB steps.
- Attack Attack time. Ranges from 0.3 to 1ms in 0.1ms steps, and ranges from 1 to 100ms in 1ms steps.
- Release Release time. Can be set at 2X, 4X, 8X, 16X or 32X the attack time.
- Ratio The Ratio control allows adjustment to the amount of Input vs. Output level with signals exceeding the set threshold limit.

Compr	essor	/Limi	iter .		
20					
15					
10					
5					
0dB					
-5					
-10					
-15					
-20					
-25					
-30					
-35					
10					
-40 -35	-30 -25 -2	20 -15 -	10 -5 00	dB 5 10	0 15 20

Limite	er - Dev	v1 Ou	t C	
Threshold	t: 7.5dBu	Attack	: 0.3ms	Release : 2X



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Mute

Channel Mute can be accomplished by clicking on the Mute tab and will illumination Red indicating the channel is in Mute.



Output Meter

The bar graph meter illustrates the level of the output signal POST the channels gain control and filters but is PRE Limiter settings.

Device 1	- File:	XStartup	_ASP-N	IG24.:	kdat							
	Gain	Compressor	Fiter	Mute		Mixer	Fiter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mute F		Off	2 PEQ	0.000ms	0.00dB	7.5dBu	Mut	CUTI
N2	-10.00dB	20.0dBu	Bypass	Mute F	i i	01	Damage	0.000mm	0.00-JD	20.04P.		CUT2
	Masking	Gain	Mask EQ	Mute		- Oli	bypass	0.0001115	0.0008	20.0080	Mu	
IN3 M1	Off	-10.00dB	2 GEQ	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mut	CUT3
IN4 M2	Off	-10.00dB	Bypass	Mute								OUT4
IN5 M3	Off	-10.00dB	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mut	
IN6 M4	Off	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall	Device Store	Import MEQ	Data		Up	Sync in progr	ess	

File Import and Export

Device 1	- File:	XStartup	_ASP-N	G24.xdat								
	Gain	Compressor	Fiter	Mute		Misser	Filter	Delay	Gain	Limiter	Mute	
N1	-10.00dB	20.0dBu	Bypass	Mute		Off	2 PEQ	0.000ms	0.00dB	7.5dBu	Mute	CUT1
N2	-10.00dB	20.0dBu	Bypass	Mute								OUT2
	Masking	Gain	Mask EQ	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
IN3 M1	Off	-10.00dB	2 GEQ	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	CUT3
IN4 M2	Off	-10.00dB	Bypass	Mute								OUT4
IN5 M3	off	-10.00dB	Bypass	Mute		Off	Bypass	0.000ms	0.00dB	20.0dBu	Mute	
ING M4	off	-10.00dB	Bypass	Mute								
Reset All	File Open	File Save	Device	Recall Device S	tore	Import MEQ	Data		Up	Sync in progr	ess	





Master Reset All

This button is the master rest button and will override all settings. Note: It will ask you if you are sure.



File Open

Program files can be recalled from your PC or Laptop. It operates like any other window files storing device. For your convenience you can preprogram a file in demo mode, save the file and loaded later into the device.

Device 1 ·	File:	XStartup	_ASF	Open				? 🔀	
	Gain	Compressor	Filte			-			
IM	-10.00dB	20.0dBu	Вура	Look m	XStartup_A	6P-MG24.xdat			OUT1
N2	-10.00dB	20.0dBu	Вура	My Recent Documents					OUT2
	Masking	Gain	Mask	B					
IN3 M1	Off	-10.00dB	2 GE	Desktop					OUT3
IN4 M2	Off	-10.00dB	Вура	My Documents					OUT4
INS M3	Off	-10.00dB	Вура						
IN6 M4	orr	-10.00dB	Вура	My Computer					
	File Open	File Save	De						
				My Network Places	File name:		•	Open	

File Save

Program files can be saved to your PC or Laptop. It operates like any other window files storing device. For your convenience you can preprogram a file in demo mode, save the file and loaded later into the device.





Device Recall

The ASP-MG24 has a built in non-volatile memory that can store up to 30 different program setups. A program can be recalled from the device. When doing so, only one program can be open on the desktop GUI. Once recalled, the program name and number will be at the top of the main screen.

Device 1 -	Progr	am 1 Op	oen Cei	ling	-	_						
	Gain	Compressor	Filter	Mute		Mixer	Filter	Delay	Gain	Limiter	Mute	
IN1	0.00dB	20.0dBu	1 PEQ	Mute			Bypass	0.000ms	0.00dB	20.0dBu	Mute	OUT1
IN2	0.00dB	20.0dBu	1 PEQ	Mute								OUT2
	Masking	Gain	Mask EQ	Mute	Program			X ^{ms}	0.00dB	20.0dBu	Mute	
IN3 M1	Pink	0.00dB	2 GEQ	Mute	Details Program No.	1: Open		ms	0.00dB	20.0dBu	Mute	OUTS
IN4 M2	Pink	0.00dB	Bypass	Mute	Program Name	Open Ce	iing					OUT4
IN5 M3	Pink	0.00dB	Bypass	Mute		-	Cancel	m	0.00dB	20.0dBu	Muto	
IN5 M4	Pink	0.00dB	Bypass	Mute			CGINEI	11				
	en e.	-	Device	Recall	Device Store	mport MEG	Data			Up Sync O	(

Device Store

The ASP-MG24 has a built in non-volatile memory that can store up to 30 different program setups. A program can be stored using this menu. The old program with the same program number will be replaced. Once the program is stored in the flash memory, it can be recalled at a later time, even after power down.





ASP-MG24 Signal Processor / Masking Generator

Import MEQ Data

This window allow you to directly import files from the AtlasIED room measurement software called MEQ. This is an advanced feature, contact support for more details.

Device 1	Prog	ram 1 Or	ien Cei	ling				Look in:	Bob Preset F	īle:	-	+ 🖻 🕯
Device	Gain	Compressor	Fiter	Mute		Mixer	Filte					
M	0.00dB	20.0dBu	1 PEQ	Mute		3	Вура	My Recent Documents				
N2	0.00dB	20.0dBu	1 PEQ	Mute								
	Masking	Gain	Mask EQ	Mute	1	4	Вура	Desktop				
IN3 M1	Pink	0.00dB	2 GEQ	Mute		5	Бура	My Documents				
IN4 M2	Pink	0.00dB	Bypass	Mute								
IN5 M3	Pink	0.00dB	Bypass	Mute		6	Бура	My Computer				
IN6 M4	Pink	0.00dB	Bypass	Mute				S				

Sync Process

This window indicates the status of the connection between the GUI software and the devices. This window corresponds with Setup/ Port Connection window at the top of the page.





ASP-MG24 Signal Processor / Masking Generator

System				
Туре	DSP Controller 2x4 Speaker Processor / Masking Generator			
Power Supply Type	120V 20W UL Rated External DC Power Supply			
Front Panel				
Level Meters	In / Out 5 Segment LED			
RS-232	Female DB-9			
Power Indicator	Blue LED			
Data Status Indicator	Green LED			
USB Interface	Female USB			
Rear Panel				
Inputs	2 Selectable Mic / Line Inputs, 3-pin Balanced Phoenix			
Input Switch	2 Mic / Line Switches			
Outputs	4 Outputs, 3-pin Balanced Phoenix			
DC Power Receptacle	120V AC Power Supply			
Audio Control Parameters				
Gain	-40dB to +15dB in 0.25dB Steps			
Polarity	+/-			
Delay	Up to 200ms per I/O			
Parametric Filters (8 per I/O)				
Hi-shelf, Lo-shelf Filters				
Filter Bandwidth	0.02 to 2.50 Octaves (Q=0.5 to 72)			
Masking Inputs	4 Independent Generators White or Pink Noise 31 Band EQ per Output Parametric Filters, Crossover, Gain per Output Turn on Auto Ramp 0:00 – 10:00 Min			
Crossover Filters (2 per Output)	Filter Types: Butterworth, Bessel, Linkwitz Riley Slopes: 6 to 48dB / Oct			
Compressor / Limiters	Threshold: -20 to +20dBu Ratio: 1:40 Attack: 0.3 to 100ms Release: 2 to 32X the attack time			
System Parameters				
No. of Programs	30			
Program Names	12 Character Length			
Delay Units	ms, ft, m			
Security Locks	System			



ASP-MG24 Signal Processor / Masking Generator

Electrical Specifications (General)					
Input Impedance	Line 10k Ohms, Mic				
Output Impedance	50 Ohms				
Maximum Input & Output Level	+20dBu				
Frequency Response	20Hz - 20kHz (+/- 0.1dB)				
Dynamic Range	115dB (unweighted)				
CMMR	> 60dB (50 to 10kHz)				
Crosstalk	< -100dB				
Distortion	0.02% (1kHz @+4dBu)				
Processor	32-bit (40-bit extended)				
Sampling Rate	96kHz				
Analog Converters	High Performance 24-bit				
Propagation Delay	3ms				
Dimensions and Weight					
Rack Mount Requirements	1 RU, 19"				
Dimensions - Unit	W 19" x H 1.75" x D 8" (483mm x 44mm x 203mm)				
Weight - Unit	13.2 lbs. (6kg)				
Electrical Specifications (General)					
Input Impedance	Line 10k Ohms, Mic				
Output Impedance	50 Ohms				
Maximum Input & Output Level	+20dBu				
Frequency Response	20Hz - 20kHz (+/- 0.1dB)				
Dynamic Range	115dB (unweighted)				
CMMR	> 60dB (50 to 10kHz)				
Crosstalk	< -100dB				
Distortion	0.02% (1kHz @+4dBu)				
Processor	32-bit (40-bit extended)				
Sampling Rate	96kHz				
Analog Converters	High Performance 24-bit				
Propagation Delay	3ms				
Dimensions and Weight					
Rack Mount Requirements	1 RU, 19"				
Dimensions - Unit	W 19" x H 1.75" x D 8" (483mm x 44mm x 203mm)				
Weight - Unit	13.2 lbs. (6kg)				



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ASP-MG24	
Signal Processor / Masking	Generator

Notes:

Atlas <mark>IED. M</mark>

Owner's Manual	ASP-MG24 Signal Processor / Masking Generator
Notes:	



Limited Warranty

All products manufactured by AtlasIED are warranted to the original dealer/installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all AtlasIED products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. AtlasIED will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to AtlasIED do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any nonwarranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLASIED SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

AtlasIED does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Service

Should your ASP-MG24 require service, please contact the AtlasIED warranty department at 1-877-689-8055, ext. 277 or support.atlasied.com to obtain an RA number.

AtlasIED Tech Support can be reached at 1-800-876-3333 or support.atlasied.com.

Visit our website at www.cie-group.com to see other Atlas products.

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Specifications are subject to change without notice.