

Poly-DAR

Polyphonic Digital Audio Repeater



User's Manual

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Marilyn
Systems, llc.

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Introduction

Thank you for purchasing the Poly-DAR polyphonic audio repeater. Capable of playing and mixing up to 8 audio tracks simultaneously through a built-in 100W amplifier, it can create interactive soundscapes that react to an environment rather than just simply playing in the background. The Poly-DAR replaces numerous pieces of equipment with a single, small box freeing you up to focus on your vision.

This rugged, versatile player was designed to make your attraction or exhibit that much more awesome for years to come and we think you're going to love it!

Disclaimer

Marilyn Systems equipment is neither designed nor intended for use in safety critical applications where the potential for personal injury or property damage is present. The customer assumes full responsibility and liability for any consequences arising from such use. Marilyn Systems, LLC. makes no assertion that this product is suitable for any specific application and will not be held responsible or liable in any way for improper use.

Marilyn Systems strives to ensure the accuracy of the information provided in this manual. Should you find an error, please bring it to our attention so that we may correct it in a future revision.

Warranty

Unless stated otherwise, all products manufactured by Marilyn Systems are warranted to be free from defects in material and workmanship for a period of three (3) years from date of purchase. Products that fail during the warranty period will be repaired or replaced at the discretion of Marilyn Systems.

The warranty does not cover return shipping charges to Marilyn Systems or physical product damage due to improper configuration or application, abuse, accidents, or shipping. Marilyn Systems will cover ground return shipping charges for products repaired or replaced under the conditions of this warranty.

All products manufactured by others and sold as such by Marilyn Systems shall be governed by the terms of said manufacturer's warranty.

Customer support

Marilyn Systems is available for technical or service support by phone or email:

Phone: 210.200.8451 between the hours of 9am-6pm Central Standard Time
Fax: 210.200.8487

Email: support@marilynsystems.com
www.marilynsystems.com

Marilyn Systems, LLC.
2935 Thousand Oaks Dr., STE 6, #260
San Antonio, Texas 78247

Operation

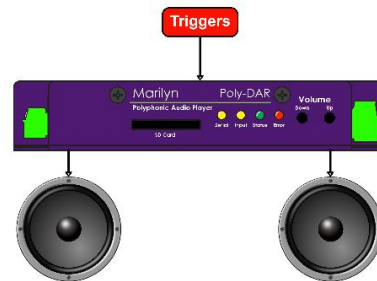
The Poly-DAR has 8-voices of polyphony. Polyphony describes how many sounds a device can play simultaneously. Each "sound player" within that device is referred to as a voice.

Behind the scenes, the voice manager is responsible for finding an available voice to play the next requested track on. When a track is triggered, the manager will first look for any unused voices and if none are available, it will "steal" the oldest-playing voice that can be taken. Triggered sounds configured as DoNotDisturb cannot be stolen by the voice manager.

All eight voices are mixed down to a single stereo pair which is fed to the internal amplifier.

Standard Mode

In standard operating mode, up to eight voices and triggers interact in one single group with the above polyphony rules applied across all. A startup or triggered ambient track set can be configured, with any of the eight inputs triggers able to duck the ambient content as needed. Note that only one ambient track can play at a time in this mode.

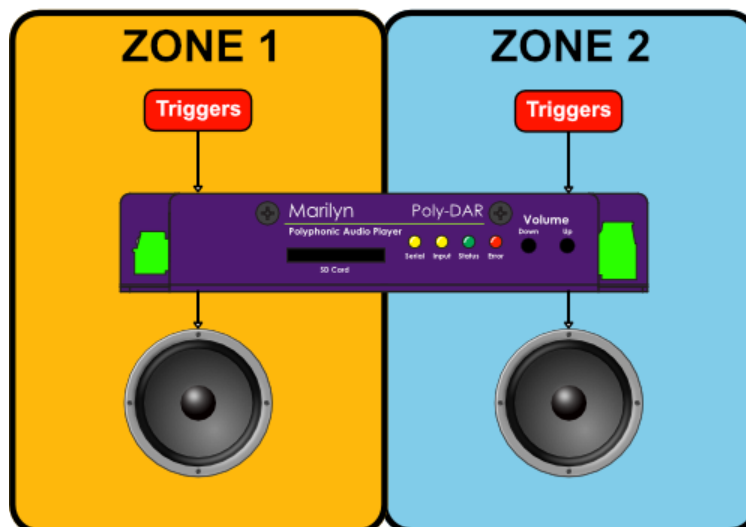


Dual Zone Mode

Dual zone operating mode allows for one Poly-DAR to provide independent audio for two zones. Each speaker output feeds a zone and the 8 trigger inputs and voices can be divided between them as needed. Each zone has its own startup or triggered ambient track set and triggered sounds can only duck the ambient level in the zone that they are assigned to. There can only be one ambient track playing in each zone at any time. The above polyphony rules apply per-zone and neither zone can steal voices from the other.

In this mode, the Poly-DAR is still playing stereo files which must first be panned hard left for zone 1 and right for zone 2. We provide Audacity macros that automate the process by mixing both channels of a stereo track down to a single channel for either zone.

Using stereo tracks in dual zone mode allows for creative solutions such as playing common ambient sounds or announcements across both zones simultaneously using only a single voice.



Unit layout

Top View



Figure 1 – Top view

Front View



Figure 2 – Front view

1 SD Card slot

All sound files and configuration information are stored on a class 4 or class 10 SD card up to 32GB in size.

2 Serial activity indicator

Lights to indicate serial port activity.

Front View *continued*

3 Input activity indicator

Lights to indicate a change on the inputs.

4 Status indicator

Indication	Function
Slow blink	No flash memory card inserted or no usable configuration file/media found on the card
Fast blink	Reading the configuration file and analyzing any media present on the flash card
short flash every second	Unit is idle and operating normally
On	Audio is playing

5 Error indicator

Indication	Function
Off	No errors
On	SD card not detected in socket

6 Volume Down / Up buttons

Controls the volume of the built-in amplifier. The set value is retained even with the power removed. Optionally, the upper and lower volume limits can be specified to ensure that the audio is never turned too high or low. You can also specify a preset level with the buttons disabled altogether.

Rear View



Figure 3 – Rear View

7 INT / EXT Switch

Select internal or external operation of the opto-isolators.

Choose "INT" when simple dry-contact closures like buttons, relay contacts, etc. are needed. In this mode, the inputs share power with the Poly-DAR and the "-" terminal on the input connector is used to activate the inputs.

By selecting "EXT", the inputs are completely isolated from the Poly-DAR and are configured as sinking or sourcing voltage inputs triggered by an externally-powered system such as a show controller or PLC. The external system provide a common of the correct polarity via the "C" terminal on the input connector. Always leave the "-" terminal on the input terminal block disconnected when the inputs are configured for external operation.

Left View



Figure 4– Left View

8 Inputs terminal block connector

Eight non-polarized, optically isolated inputs sharing a single common are available for triggering audio playback. The inputs can accept 12-24VDC and draw a maximum of 10mA each. Please refer to figures 7, 8 & 9 for wiring examples.

Terminal	Function
-	Power supply ground used for internal mode only
1	Input 1
2	Input 2
3	Input 3
4	Input 4
5	Input 5
6	Input 6
7	Input 7
8	Input 8
C	Input opto-isolator common used for external mode only

Left View continued

9 DMX-512 / RS-485 Terminate switch

Enables / disables the internal 120ohm terminating resistor. Typically, not enabled with DMX-512

10 DMX-512 / RS-485, RS-232 connector

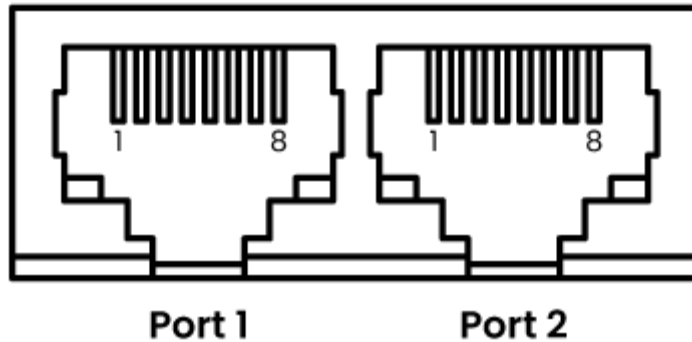


Figure 5

Port 1 Pin	Function
1	DMX-512 / RS-485 + in
2	DMX-512 / RS-485 - in
3	
4	
5	
6	
7	Ground
8	Ground

Port 2 Pin	Function
1	DMX-512 / RS-485 + through
2	DMX-512 / RS-485 - through
3	
4	
5	RS-232 Rx
6	RS-232 Tx
7	Ground
8	Ground

Right View

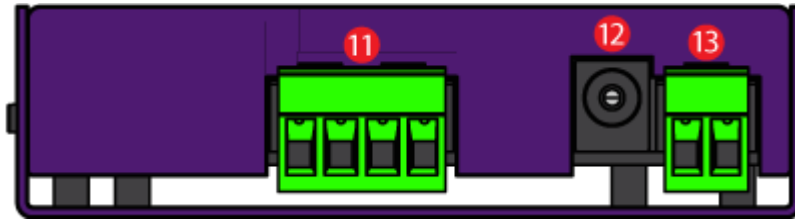


Figure 6 – Right View

11 Amplifier Out terminal block connector

A built in 100-Watt stereo amplifier that can drive a 4 to 8-ohm speaker load per channel (see figure 5.)

Terminal	Function
L-	Left channel negative terminal
L+	Left channel positive terminal
R-	Right channel negative terminal
R+	Right channel positive terminal

12 24VDC In – 2.5mm barrel connector

Terminal	Function
Tip	Power supply positive
Barrel	Power supply ground

13 24VDC In - terminal block connector

Terminal	Function
+	Power supply positive
-	Power supply ground

- Note that the terminal block is internally connected to the barrel jack. See figure 4 for a wiring example.
- A 24VDC 120W switching power supply will provide enough overhead when running the amplifier at full volume.

Power Wiring

24VDC power may be applied to the Poly-DAR using either the 2.5mm jack or terminal block (figure 7 below.) Unused power connectors should not be used to supply other devices.

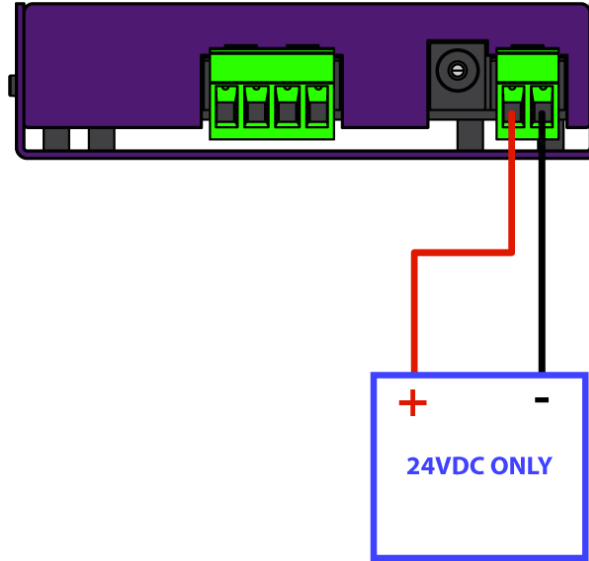


Figure 7 – Power wiring example

Amplifier Wiring

Speakers

Speakers should be connected to the Poly-DAR as shown in figure 8 below. Multiple speakers may be connected in series / parallel as long as the 4-ohm load limit is not exceeded.

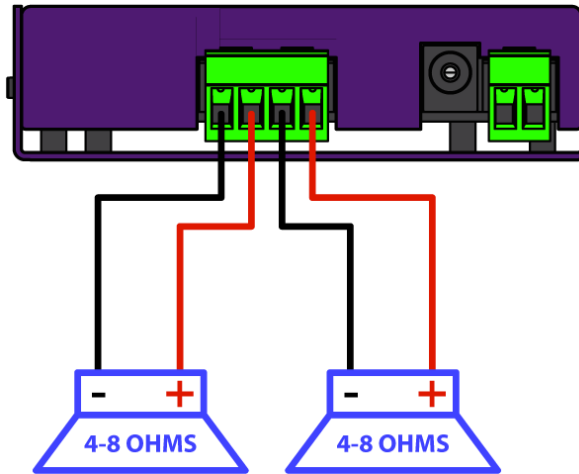


Figure 8 – Stereo speaker wiring example

Line Level Out

A special line level mode allows for the amplifier outputs to be connected to the balanced inputs of an external audio system. Refer to figure 9 below for an example of how to connect using either an XLR or 1/4" TRS phone jack. Do not connect the "-" speaker terminals to ground. Ground pins on balanced connectors should be left floating.

- **Line-out mode can ONLY be used with balanced audio inputs.**
- **Operate ONLY with line out mode enabled.**

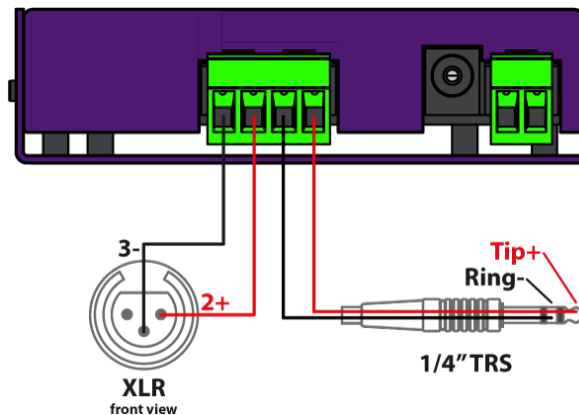


Figure 9 – Stereo line-out wiring example

Incorrect wiring or usage can damage the Poly-DAR and other equipment. Use at your own risk!

Input Wiring

Internal Mode

Internal mode should be used when simple dry-contact closures are needed for input triggers. The INT/EXT switch on the back of the Poly-DAR must be set to INT. In this configuration, the "-" negative terminal on the input connector is used to trigger the inputs. The "C" terminal is not used. Please refer to figure 10 below for a wiring example.

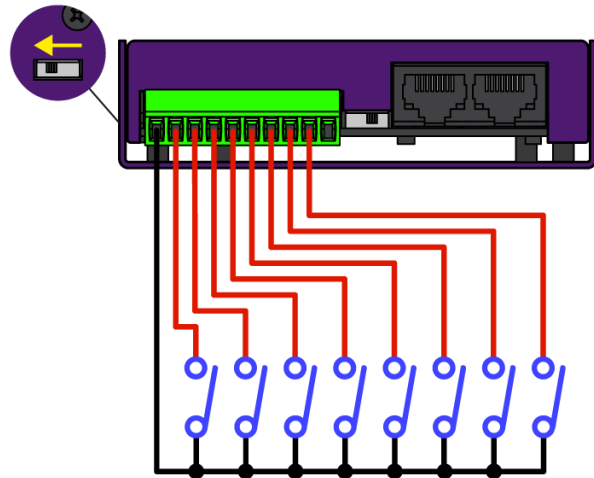


Figure 10 – Dry-contact Input wiring example in internal mode (INT/EXT switch set to INT)

External Mode

External mode should be used when the Poly-DAR will be triggered from an externally powered system such as a show controller or PLC. The INT/EXT switch on the back of the Poly-DAR must be set to EXT which completely isolates the Poly-DAR from the input connector. In this configuration, the inputs are available as sinking or sourcing voltage inputs with the external system providing a common of the correct polarity via the "C" terminal on the input connector. **Always leave the "-" terminal on the input terminal block disconnected when the inputs are configured for external operation.**

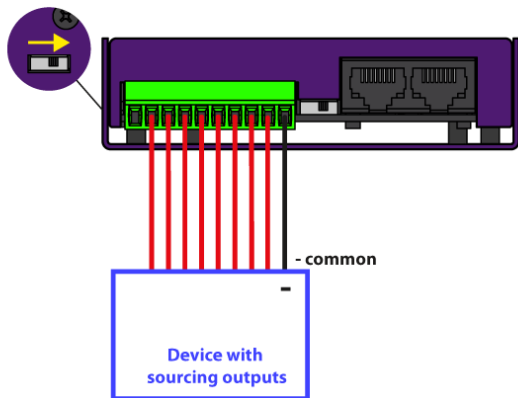


Figure 11 – Sinking voltage input wiring example in external mode (INT/EXT switch set to EXT)

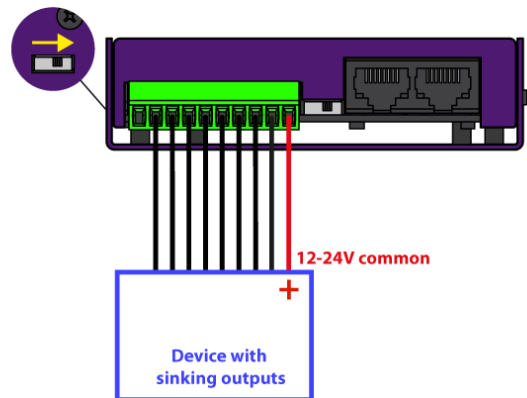


Figure 12 – Sourcing voltage input wiring example in external mode (INT/EXT switch set to EXT)

Audio Files

Formatting

All audio files must be formatted as uncompressed, signed-16-bit stereo WAV files at 44.1KHz sample rate. Any audio file not formatted properly will not be played.

Audio files for dual-zone mode must be prepared by panning left for zone 1 and right for zone 2. To quickly handle this, we provide Audacity macros that mix the stereo channels of your files to the correct zone.

If tracks are extremely loud, there is a possibility of clipping when mixed with other tracks. This is controlled by reducing the playback volume of the source track in your sound-editing software or reducing the trigger playback volume for the affected sounds.

Audio files must be placed in the root directory of the SD card.

Naming

All audio files are referenced numerically by the Poly-DAR and files must be assigned a number so that they can be found and played. This is done by simply adding a three-digit number from 001 to 500 to the front of the file name. No characters are allowed in front of this number.

For example, to make a file track 1:

This is the most awesome song ever.wav

You will simply add 001 to the front of the name :

001This is the most awesome song ever.wav

The Poly-DAR ignores everything after the three-digit number, so the following are also valid:

001 This is the most awesome song ever.wav

001_This is the most awesome song ever.wav

Configuration File

The DAR configuration file specifies all operating parameters for the player. A simple text format allows for editing from any computer or operating system.

This file must be named "config.txt" so that the player can find it on startup. The file must be in the root directory of the card.

The configuration file for the DAR is based on the standard INI file format.

Each operating parameter of the DAR consists of a name and value separated by an equal sign (=).

```
name = value
```

Parameters are grouped by section. The section name appears on its own line in square brackets.

```
[section]
```

Comments may be added and are preceded with a semicolon. Comments are for documentation purposes only and are ignored by the DAR.

```
; comment text
```

Default values are assumed on all parameters if the parameter is not defined or defined incorrectly.

[Config] section

Configure the operating mode of the Poly-DAR

	Parameter	Value	Default	Description
	Mode	Standard	*	Single stereo zone with up to eight voices and inputs available
		DualZone		Two mono zones each with definable input and voice counts
<i>These settings are only used in Standard mode</i>	Voices	1-8	8	Sets the number of voices
	Inputs	1-8	8	Sets the number of inputs
	Zone1NumVoices	1-7	4	Sets the number of voices assigned to Zone 1
<i>These settings are only used in DualZone mode</i>	Zone2NumVoices	1-7	4	Sets the number voices assigned to Zone 2
	Zone1Inputs	1-7	1-4	Sets the inputs assigned to zone 1
	Zone2Inputs	1-7	5-8	Sets the inputs assigned to zone 2

Note: Inputs may be specified as either a list (1,2,3,4...) or range (1-4)

Example 1:

; Configure for standard mode with 8 voices and 8 inputs

```
[Config]
Mode = Standard
Voices = 8
Inputs = 1-8
```

Example 2:

; Configure for DualZone Mode with 4 voices and 4 inputs per zone

```
[Config]
Mode = DualZone
Zone1NumVoices = 4
Zone2NumVoices = 4
Zone1Inputs = 1,2,3,4
Zone2Inputs = 5,6,7,8
```

[Amplifier] Section

Poly-DAR amplifier configuration

Parameter	Value	Default	Description
MinVolume	0-100	0	Sets the minimum volume for the amplifier
MaxVolume	0-100	100	Sets the maximum volume for the amplifier
FixedVolume	0-100	100	Sets the amplifier to a fixed volume level that cannot be changed using the volume control buttons. This overrides MinVolume and MaxVolume. Only takes effect when present in this section
LineOutMode	No	*	Line out mode disabled
	Yes		Amplifier is fixed at 2VRMS output level <ul style="list-style-type: none">• Line-out mode can <u>ONLY</u> be used with balanced audio inputs. Grounds should be left floating.• Operate <u>ONLY</u> with line out mode enabled.• Incorrect wiring or usage can damage the Poly-DAR and other equipment. <u>Use at your own risk!</u>

Example 1:

```
; Full-range volume control  
  
[Amplifier]  
MinVolume = 0  
MaxVolume = 100
```

Example 2:

```
; Fixed volume disables volume buttons  
  
[Amplifier]  
FixedVolume = 60
```

Example 3:

```
; Line out mode disables volume buttons  
  
[Amplifier]  
LineOutMode = Yes
```

[Startup] section (Standard Mode)

Standard mode startup configuration. This is what will occur when the unit is powered-on or the SD card is inserted.

Parameter	Value	Default	Description
Action	DoNothing	*	Take no action
	Play		Play a single track specified in FirstTrack
	Ambient		Loop through the specified track set indefinitely with the ability to be ducked by triggered sounds
FirstTrack	1-500	1	Specifies the first track to be played by the startup action. This number corresponds to the three-digit number in the file name of an audio track
LastTrack	>= FirstTrack (500 max)	FirstTrack	Specifies the last track to be played by the startup action.
Volume	0-100	100	Volume level for this action
Fade Rate	0-25	0	Defines how long the volume should take to ramp from the current level to the new level defined by this action in seconds. If zero, then no fade occurs. No fade if volume is not defined
DuckedVolume	0-100	0	Volume level when ducked by triggered sound. No effect if this is not present in this section
DoNotDisturb	No	Yes for ambient, No for non-ambient	Allow other triggers to interrupt audio played by this trigger
	Yes		Do not allow other triggers to interrupt the audio played by this trigger

Example:

```

; Continuously play ambient tracks 1-4
; Volume will take 2 seconds to duck in and out for triggered tracks
[Startup]
Action = Ambient
FirstTrack = 1
LastTrack = 4
Volume = 100
FadeRate = 2
DoNotDisturb = Yes
DuckedVolume = 60

```

[Zone1Startup] section (DualZone Mode)

Dual Zone mode startup configuration. This is what will occur in Zone 1 when the unit is powered on or the SD card is inserted.

Parameter	Value	Default	Description
Action	DoNothing	*	Take no action
	Play		Play a single track specified in FirstTrack
	Ambient		Loop through the specified track set indefinitely with the ability to be ducked by triggered sounds
FirstTrack	1-500	1	Specifies the first track to be played by the startup action. This number corresponds to the three-digit number in the file name of an audio track
LastTrack	>= FirstTrack (500 max)	FirstTrack	Specifies the last track to be played by the startup action.
Volume	0-100	100	Volume level for this action
Fade Rate	0-25	0	Defines how long the volume should take to ramp from the current level to the new level defined by this action in seconds. If zero, then no fade occurs. No fade if volume is not defined
DuckedVolume	0-100	0	Volume level when ducked by triggered sound. No effect if this is not present in config file
DoNotDisturb	No	Yes for ambient, No for non-ambient	Allow other triggers to interrupt audio played by this trigger
	Yes		Do not allow other triggers to interrupt the audio played by this trigger.

Example:

```

; Continuously play ambient tracks 1-4
; Volume will take 1 second to duck in and out for triggered tracks
[Zone1Startup]
Action = Ambient
FirstTrack = 1
LastTrack = 4
Volume = 100
FadeRate = 1
DoNotDisturb = Yes
DuckedVolume = 60

```

[Zone2Startup] section (DualZone Mode)

Dual Zone mode startup configuration. This is what will occur in Zone 2 when the unit is powered on or the SD card is inserted.

Parameter	Value	Default	Description
Action	DoNothing	*	Take no action
	Play		Play a single track specified in FirstTrack
	Ambient		Loop through the specified track set indefinitely with the ability to be ducked by triggered sounds
FirstTrack	1-500	1	Specifies the first track to be played by the startup action. This number corresponds to the three-digit number in the file name of an audio track
LastTrack	>= FirstTrack (500 max)	FirstTrack	Specifies the last track to be played by the startup action.
Volume	0-100	100	Volume level for this action
Fade Rate	0-25	0	Defines how long the volume should take to ramp from the current level to the new level defined by this action in seconds. If zero, then no fade occurs. No fade if volume is not defined
DuckedVolume	0-100	0	Volume level when ducked by triggered sound. No effect if this is not present in config file
DoNotDisturb	No	Yes for ambient, No for non-ambient	Allow other triggers to interrupt audio played by this trigger
	Yes		Do not allow other triggers to interrupt the audio played by this trigger.

Example:

```

; Continuously play ambient track 10
; Volume will take 1 seconds to duck in and out for triggered tracks
[Zone2Startup]
Action = Ambient
FirstTrack = 1
Volume = 70
FadeRate = 1
DoNotDisturb = Yes
DuckedVolume = 60

```

[InputxMake] Section

Defines a “make” action for the specified input *x*. An input “makes” when power is applied to that input. In DualZone mode, action applies only to the zone that the input is assigned to.

Parameter	Value	Default	Description	
Action	DoNothing	*	Take no action	
	Play		Play one of the specified track(s) per make	
	Loop		Loop through the specified track(s) indefinitely	
	Ambient			Loop through the specified track(s) indefinitely with the ability to be ducked by triggered sounds.
				In Standard mode, replaces currently playing ambient
	AllStop		Stop all tracks playing in the zone that the input is assigned to	
FirstTrack	1-500	Input # (1-8)	Specifies the first track to be played by the startup action. This number corresponds to the three-digit number in the file name of an audio track	
LastTrack	>= FirstTrack (500 max)	FirstTrack	Specifies the last track to be played by the startup action.	
Volume	0-100	100	Volume level for this action	
Fade Rate	0-25 seconds	0	Ambient: Defines how long the volume should take to ramp in/out when ducked by another triggered sound	
			Non-Ambient: Defines how long the volume will take to ramp to the level defined in Volume when track starts. No fading occurs if value is zero or this parameter is not defined in this section	
DuckedVolume	0-100	0	Volume level when ambient is ducked by a triggered sound. No effect if this is not present in this section	
DoNotDisturb	No	Yes for ambient, No for non-ambient	Allow other triggers to interrupt audio played by this trigger	
	Yes		Do not allow other triggers to interrupt the audio played by this trigger.	

Example:

```

; play track 5 when input 1 is made
;
[Input1Make]
Action= Play
FirstTrack= 5
Volume= 100
DuckAmbient= No
FadeRate= 0

```


[InputxBreak] Section

Defines a "break" action for the specified input x. An input "breaks when" when power is removed from an input.

Parameter	Value	Default	Description
Action	DoNothing	*	Take no action
	Play		Play one of the specified track(s) per make
	Loop		Loop through the specified track(s) indefinitely
Loop	Ambient		Loop through the specified track(s) indefinitely with the ability to be ducked by triggered sounds
			In Standard mode, replaces currently playing ambient In DualZone mode, replaces currently playing ambient in the zone that input is assigned to
	Stop		Stop all tracks playing in the zone that the input is assigned to
	AllStop		Stop all tracks playing on the Poly-DAR
FirstTrack	1-500	Input # (1-8)	Specifies the first track to be played by the startup action. This number corresponds to the three-digit number in the file name of an audio track
LastTrack	>= FirstTrack (500 max)	FirstTrack	Specifies the last track to be played by the startup action.
Volume	0-100	100	Volume level for this action
Fade Rate	0-25 seconds	0	Ambient: Defines how long the volume should take to ramp in/out when ducked by another triggered sound
			Non-Ambient: Defines how long the volume will take to ramp to the level defined in Volume when track starts. No fading occurs if value is zero or this parameter is not defined in this section
DuckedVolume	0-100	0	Volume level when ambient is ducked by a triggered sound. No effect if this is not present in this section
DoNotDisturb	No	Yes for ambient, No for non-ambient	Allow other triggers to interrupt audio played by this trigger
	Yes		Do not allow other triggers to interrupt the audio played by this trigger.

Example:

```

; play track 8 when input 3 breaks
;
[Input3Break]
Action= Play
FirstTrack= 8
Volume= 100
DuckAmbient= No
FadeRate= 0

```

Configuration File Example

Following is the configuration file on the SD card that came with you Poly-DAR

```
; -----  
; Example Poly-Dar Configuration File  
; Written by: JLP  
;  
; In this example, the Poly-DAR is operating in Dual-Zone mode with triggered  
; sounds playing over ambient tracks in each zone.  
; -----  
  
; configure for Dual-Zone mode  
; each zone is assigned 4 input and 4 voices  
;  
[Config]  
Mode= DualZone  
Zone1Inputs= 1,2,3,4  
Zone2Inputs= 5,6,7,8  
Zone1Numvoices= 4  
Zone2Numvoices= 4  
  
; amplifier volume controls to default  
;  
[Amplifier]  
MinVolume= 0  
MaxVolume= 100  
  
; On device startup, begin playing an ambient track list in zone 1 (Left).  
; If another sound is triggered in this zone that is set to duck the ambient  
; track, it will take 1 second for the ambient to fade out and back in  
;  
[StartupZone1]  
Action= Ambient  
FirstTrack= 1  
LastTrack = 4  
Volume= 100  
FadeRate= 1  
DoNotDisturb = yes  
  
; On device startup, begin playing a single ambient track in zone 2 (Right).  
; If another sound is triggered in this zone that is set to duck the ambient  
; track, it will take 1 second for the ambient to fade out and back in  
;  
[StartupZone2]  
action= Ambient  
FirstTrack= 10  
Volume= 70  
FadeRate = 1  
DoNotDisturb = Yes  
  
; In zone 1, play track 5 over ambient when input 1 is made  
;  
[Input1Make]  
Action= Play  
FirstTrack= 5  
Volume= 100  
DuckAmbient= No  
FadeRate= 0  
  
; In zone 1, play track 6 over ambient when input 2 is made  
;  
[Input2Make]  
Action= Play  
FirstTrack= 6  
Volume= 100  
DuckAmbient= No  
FadeRate= 0
```

Configuration File Example *continued*

```
; In zone 1, play track 7 over ambient when input 3 is made
;
[Input3Make]
Action= Play
FirstTrack= 7
Volume= 100
DuckAmbient= No
FadeRate= 0

; In zone 1, play track 8 over ambient when input 3 breaks
;
[Input3Break]
Action= Play
FirstTrack= 8
Volume= 100
DuckAmbient= No
FadeRate= 0

; In zone 1, duck ambient while track 9 plays when input 4 is made
;
[Input4Make]
Action= Play
FirstTrack= 9
Volume= 100
DuckAmbient= Yes
FadeRate= 0

; In zone 2, play track 11 over ambient when input 5 is made
;
[Input5Make]
Action= Play
FirstTrack= 11
volume= 100
DuckAmbient= no
FadeRate= 0

; In zone 2, play track 12 over ambient when input 6 is made
;
[Input6Make]
Action= Play
FirstTrack= 12
volume= 100
DuckAmbient= no
FadeRate= 0

; In zone 2, play track 13 over ambient when input 7 is made
;
[Input7Make]
Action= Play
FirstTrack= 13
volume= 100
DuckAmbient= no
FadeRate= 0

; All audio will stop playing when input 8 is made
;
[Input8Make]
action= AllStop
```

Firmware Upgrade

The firmware on the Poly-DAR can be upgraded by simply inserting a memory card with the update file present. Find the latest firmware on our website at www.marilynsystems.com

To upgrade the firmware in your player, please use the following procedure:

1. Make sure to delete any other firmware files with an "msf" extension from the SD card
2. Copy the new firmware file with an "msf" extension, to the root directory of the card. DO NOT place it in a folder. Do not rename the file or change any file attributes.
3. With the DAR powered off, insert the memory card.
4. Power the DAR. All LEDs will begin to flash in a pattern. Be patient as the upgrade process can take over a minute.
5. Once the update is complete, the unit will boot normally.

Poly-DAR Technical Specifications

Audio

- Plays up to eight 44.1KHz, 16-bit PCM WAV files simultaneously.
- Class-D stereo amplifier delivers 50Watts-per-channel into a 4-to-8-ohm load at 24VDC

Storage

- SD or SDHC flash card up to 32GB. Class-4 or class-10 recommended

User Interface

- Volume control buttons
- Status LED indicators

I/O

- 8 optically isolated trigger inputs, contact-closure or sourcing / sinking voltage modes
- DMX-512 in/out
- RS-232

Power

- 24VDC @ 100W

Connectors

- Power in:
 - 2-position, 5.08mm removable terminal block
 - 2.5mm DC coaxial jack
- Opto-isolated inputs: 10-position, 3.81mm removable terminal block
- Amplifier out: 4-position, 5.08mm removable terminal block
- DMX-512:
 - RJ-45 in
 - RJ-45 through
- RS-232 shares RJ-45 through connector

Physical

- Powder-coated steel enclosure
- 5.375"Lx4"Wx1"H (136.53mm x 101.6mm x 25.4mm)
- DIN-rail mount option

Environmental

- Operating temperature: 0° to 38°C (32° to 100°F)
- Mount securely in a clean and dry environment

Mechanical Drawing

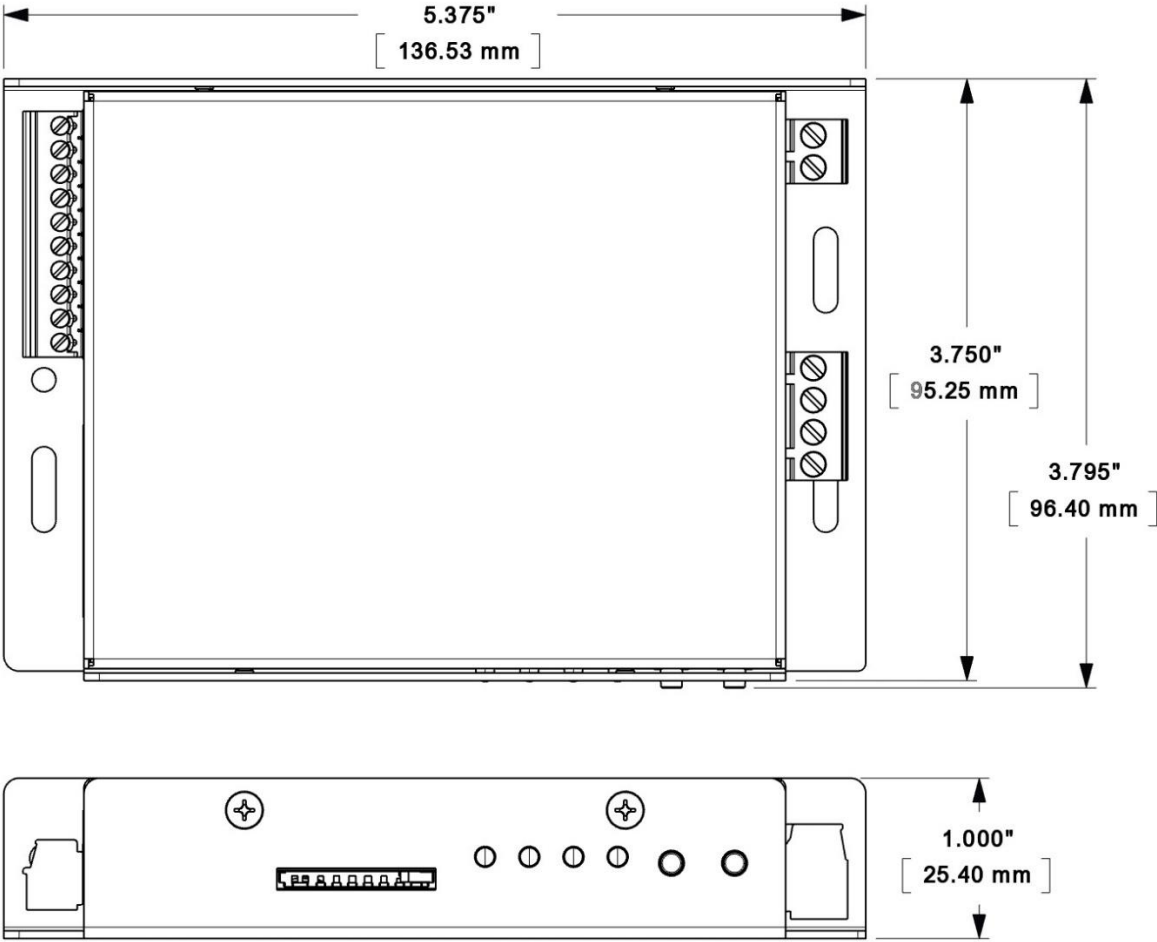


Figure 13 –Mechanical drawing