

DR SCIENTIST

The Atmosphere

Decay – Reverb decay time.

CTRL1 – Displayed on the screen under Decay.

CTRL2 – Displayed on the screen above Tempo.

Sidebar Markers tell you what features are active. **BYP** lights up red for Trails Bypass mode. **LFO** lights up yellow if the internal LFO is on. **EXP** lights up green if expression or control voltage are plugged in. **MIDI** lights up blue momentarily if MIDI data is received.

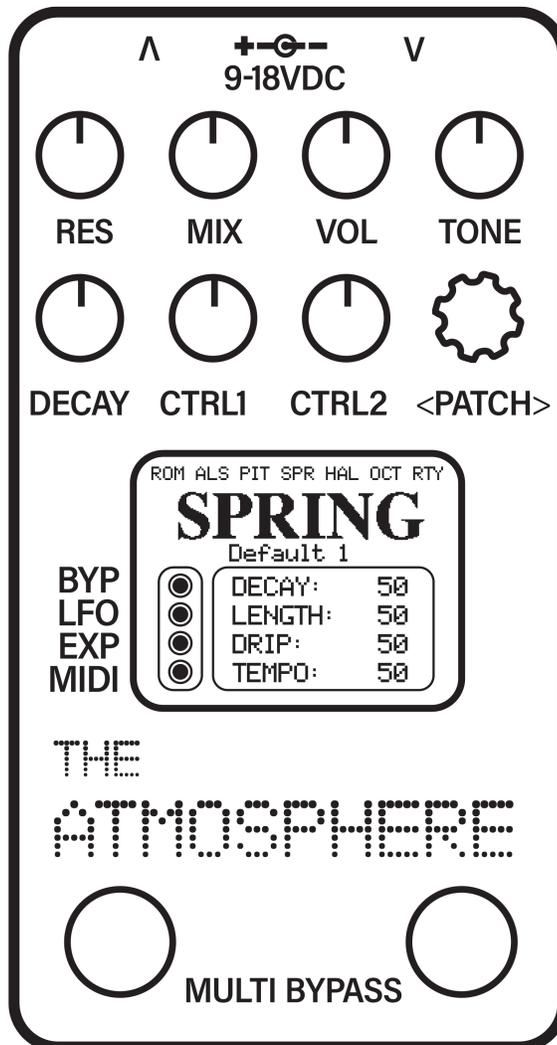
MIDI plugs in here, standard full size 5 pin DIN jack.

Multi Stomp – Hold down and double-click Patch knob to enter menu and choose functions.

Safe with voltages between **9V** and 18V, **300mA**, 2.1mm centre negative.

OUT

IN



Res – System Resolution, the sample rate of the digital effects engine. Turn down for slower, lower, longer, grainier, more lofi reverb.

The **Patch Selector** knob is a rotary encoder with **4 functions**. Turn it left or right to advance the patches down or up. Press the knob once to go between Preset and Default modes. Hold the knob down to save a Preset. Double click the knob to enter the menu screen where you can edit and assign the LFO, adjust MIDI, change bypass type.

Plug in **expression** (TRS cable, any resistance) or **control voltage** (TS cable, 0-5V) here.

Bypass Stomp – Hold down to change between Trails (red indicator on screen) or True Bypass.

The Atmosphere

Hello and thank you very much for purchasing The Atmosphere! We really appreciate it and we hope you have a ton of fun with your pedal! Please check out our Atmosphere playlist at www.youtube.com/drscientistsounds to see more settings and examples of using the pedal. Email us, info@drscientist.ca, if you have any questions at all, and check out www.drscientist.ca for other goodies.

Power – 9VDC, 300mA, centre negative 2.1mm plug. The Atmos is safe up to 18VDC but higher voltage requires more current, 600mA at 18V. It's a digital pedal so you'll need to use a good, isolated, filtered, and regulated supply and be careful with daisy chaining or you could have hum. Hum is almost always related to the power supply and interference with other pedals so start there if you have hum, check in with me for a trouble-shooting partner. (There's no battery inside)

The Screen – This shows you lots of info like the current patch, it shows you what the CTRL knobs do for each patch and their setting, it shows you details like the bypass setting, LFO status and mapping, expression/control voltage status and mapping, MIDI data being received. At the top of the screen is a banner that previews what the next 3 and previous 3 patches are. **Please note**, the screen takes half a moment to update when it has to redraw everything, so when you go through the patches you either should go slowly, one at a time, or quickly, turn the knob and go through several, because once the screen starts to redraw you have to wait for it to finish.

The <Patch> Knob – **This advances the patches up or down when you rotate it** but it's also got a few more jobs to do. **Press it to go to the Preset for the patch you're on.** Press again to go back to default. **Hold the button down to save your current settings as a Preset.** **Double click the button and you'll enter the Main Menu Screen** of the Atmosphere, the place where you can assign the MIDI channel, change the bypass type, set the status of the Internal LFO System, and assign the LFO or expression/control voltage input to 6 Atmos parameters.

The Stomps – BYP – Turns your pedal on and off and you also use it choose between True Bypass or Trails Bypass. True Bypass removes the Atmosphere circuit from your signal chain when you bypass it, it connects the input jack directly to the output jack. This makes your reverb decay end abruptly when you turn the pedal off. Trails Bypass keeps the Atmosphere circuit in your signal chain when you bypass it, your reverb decay will naturally fade away and the Atmos will be like a transparent buffer in your signal chain.

You choose between True Bypass or Trails Bypass by holding down the BYP stomp switch. In Trails Bypass mode there will be a red indicator on the screen and this is the default setting.

There's one more thing you can do with the BYP stomp and that's choose your favourite bypass screen, this is what shows up on the display when the pedal is off. **While powering on your Atmos, hold down the BYP stomp to enter the bypass screen selection page.** From there you press the MULTI stomp to cycle through the 10 screen options, BYP stomp to select the one you like.

The Stomps – MULTI – You can choose what this stomp does and it responds to press and hold, so you get 2 choices with it. We ship it like this: Press turns the LFO on/off, Hold turns infinite decay on. **You can select its functions by holding down the MULTI stomp and double-clicking the <Patch> knob.** In the menu you use the <Patch> knob to scroll to the option, press the <Patch> button to select. Press options: Patch Up, Patch Down, Preset/Default Bank, Infinite Hold On/Off, LFO Tap Tempo, LFO On/Off. Hold options: Patch Up, Patch Down, Preset/Default Bank, Infinite Decay On, LFO On/Off.

The Mix/Vol Knobs – Use these to craft your soundscape, the Mix knob goes from fully dry when all the way down to fully wet when all the way up. The Volume knob sets the level of your mixed signal, it's quieter than unity when all the way down, unity around noon, and has a bit of boost when all the way up.

The Decay Knob – This sets the reverb decay amount for all patches. Its value is displayed on the screen and its colour changes depending on settings, ie if exp/cv is mapped to Decay the number will be green, yellow if the LFO is mapped to it, and it turns teal when infinite decay is active from the MULTI stomp.

The Res Knob – This sets the resolution of the DSP engine that makes the reverb effects. Up all the way is full 32kHz

sample rate, turn it down all the way to 16kHz sample rate for a lower, slower, longer, grainier reverb sound.

The Tone Knob – This is an active treble control that's only on the wet signal, not the dry. You can use it to either cut or boost the high frequencies, leave it at noon for flat response. This is a purely analog control, it doesn't exist in the digital realm at all (like all the other controls do) so this is the only knob that doesn't get saved in the Preset system.

The CTRL Knobs – On each reverb patch you can control the reverb decay plus two parameters. These parameters change depending on what patch you're on and the screen updates to show their function with each patch. Their on-screen numbers will change colour depending on settings, ie if exp/cv is mapped to either or both they'll be green, yellow if the LFO is mapped to them.

The Main Menu Screen – Double-click the <Patch> knob to enter this menu with 4 sub-areas. You scroll to the different options by rotating the <Patch> knob and then you select by clicking the <Patch> button. You can change the MIDI number the pedal receives on, it's set to 17/Omni by default. You can also choose between True Bypass and Trails Bypass. (Which can also be done by holding down the BYP stomp). This screen also has the setup for the Internal LFO System and the Expression/CV/LFO mapping, more on those below. Double-click the <Patch> knob to exit to the main Patch screen.

The Internal LFO System – The Atmosphere features a powerful low frequency oscillator that you can assign to the following parameters: Vol, Mix, Res, Decay, CTRL1, CTRL2. You can map the LFO to the parameters you'd like in the next menu box, the Exp & LFO Mapping box. You can turn the LFO on/off inside the Main Menu Screen and we ship the pedal with the Press action of the MULTI stomp set to LFO On/Off. The rate of the LFO can be set from 1 to 350 BPM, this can be set with the <Patch> knob or tap tempo or MIDI. You can set the LFO depth from 1 to 10, it's default setting is 3. The LFO comes in 8 different waveform shapes, you can choose between: Sine, Ramp, Saw, Triangle, Square, Step, Sample & Hold, and Random.

The Expression/CV System – The 1/4" jack on the right side of the Atmos box is where you can plug in an expression pedal or a control voltage. **For expression you need to use a TRS cable**, the kind with 2 bands at the end. We recommend a resistance value of at least 50k but you can use pedals with lower resistance, only you'll see on the screen that you don't reach the full range of sweep. To fix that just plug your exp pedal into the Atmos, set your exp pedal to max, ie toe down all the way for most pedals, and then **power on your Atmos while holding down both the MULTI and BYP stomp switches**. This will set the Atmos to give you full range with your max setting. To reset this for CV use or for a different pedal just do the same procedure but without the exp pedal plugged in.

For control voltage you need to use a regular TS cable, the normal guitar/pedal patch cable with one band at the end. The Atmos will respond to 0-5VDC signals.

In the Main Menu Screen you can assign the Expression/CV input to 6 parameters: Vol, Mix, Res, Decay, CTRL1, CTRL2.

The MIDIs – The Atmosphere is shipped set to MIDI channel 17/Omni. **I'll refer you to the separate sheet at the end of this manual for MIDI implementation** but every function of the pedal, excluding the Tone knob, is accessible by MIDI, there's a CC number for everything. You can change the patches with PC numbers 1 – 16 for the Default patches, 17 – 32 for the Preset patches. MIDI Clock sets the LFO rate.

The Patches – **I'll refer you to the separate Patch sheet after this page that shows each one and their controls**, The Atmosphere features 16 lovingly hand crafted reverb patches that Neil and I worked on for the better part of a year. Our goal was to cover the fundamentals, pay tribute to the classic sounds of the ol' RRR, while also creating some new, unique, and experimental sounds.

The Factory Reset – If you need to restore your Atmosphere to how we shipped it, just **power on your pedal while holding down the <Patch> button**. This will take you to the Factory Reset screen where you'll have 10 seconds to decide, hit the BYP stomp to reset the pedal, hit the MULTI stomp to exit the screen. The Factory Reset will overwrite all the Presets, all of the saved data like the bypass screen choice, mappings, all reset to the day we built it.

Thanks again! We really appreciate your purchase and we hope you enjoy The Atmosphere!

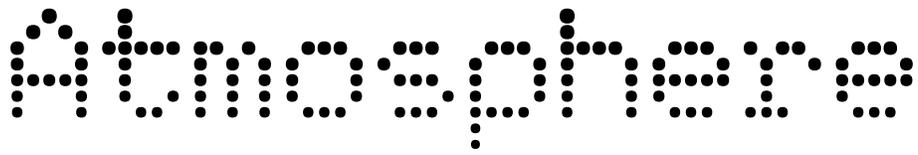
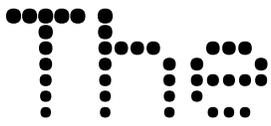
-Dr. Scientist (Ryan & Tanya Clarke, Neil Graham)

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The Atmosphere

ALGORITHM	DESCRIPTION	CTRL1	CTRL2
1 - Spring	Yeah, Canadians can surf!	Spring Length	Drip Level
2 - Hall	Deep and dense with many reflections	Pre-Delay	Bass
3 - Octave	Octave Up or Down or mix between	Octave +/-	Oct/Rev Mix
4 - Rotary	Radical Rotating Speaker Simulator	Rotating Rate	Rotary/Rev Mix
5 - Plate	Fast reflections with dense bright sound	Pre-Delay	Bass
6 - Smear	Delay that you can diffuse into reverb	Diffusion	Delay Time
7 - Vibro	Reverb through pitch vibrato	Vibrato Rate	Vibrato Depth
8 - Gated	Set the gate length and the trigger level (meant for staccato notes/input like drums)	Gate Length	Gate Threshold
9 - Swell	Reverb that slowly fades in (meant for legato notes/input like pads)	Reverb delay time	Reverb swell time
10 - Filter	Reverb through steep low pass and high pass filters	LPF cutoff	HPF cutoff
11 - Mod FX	Reverb through some classic modulations (flanger, chorus, tremolo, ring mod)	Modulation Rate	Modulation Type
12 - React	Play quiet for lots of reverb & minimal filter, play loud for minimal reverb & lots of filter	LPF cutoff	Envelope Sensitivity
13 - Aether	Dreamy reverse delay or reverb with or without swirly phaser	Reverse/Delay Mix	Phaser
14 - Room	Medium reflections with warm sound	Pre-Delay	Bass
15 - Alias	Reduce the sample rate of the reverb	Sample Rate	Alias/Rev Mix
16 - Pitch	Reverb that is constantly falling or rising in pitch, or set the pitch manually	Pitch Rate/ Manual Pitch	Pitch Down / Manual / Up

CV/Exp/MIDI and Internal LFO Assignable to: Res, Mix, Vol, Decay, CTRL1, CTRL2



MIDI Implementation

CC#	Function	Value
3	Bypass Type	0-63 Trails, 64-127 True
7	Volume Control	0-127
8	Mix Control	0-127
9	Remote Tap	Any
15	LFO Depth	1-10 (0 becomes 1, >10 becomes 10)
20	LFO Shape	1-8 (0 becomes 1, >8 becomes 8)
21	Infinite Reverb	0-63 Off, 64-127 On
22	Save Settings to Preset	Any
23	LFO Rate x 1 (in BPM)	0-127
24	LFO Rate x 2 (in BPM)	0-127 (x2)
25	LFO Rate x 3 (in BPM)	0-127 (x3)
29	Select Left Stomp Press Action	1-6 (0 becomes 1, >6 becomes 6)
30	Select Left Stomp Hold Action	1-5 (0 becomes 1, >5 becomes 5)
31	Bypass Screen Selection	1-11 (0 becomes 1, >11 becomes 11)
80	Bypass Foot Switch	0-63 Off, 64-127 On
81	Left Stomp Press	Any
82	Left Stomp Hold	Any (Inf Hold, 0-63 Off, 64-127 On)
83	LFO State	0-63 Off, 64-127 On
94	Resolution Control	0-127
102	Decay Control	0-127
103	CTRL1	0-127
104	CTRL2	0-127
105	Patch Up	Any
106	Patch Down	Any
107	Map Decay to Expression	0-63 Off, 64-127 On
108	Map CTRL1 to Expression	0-63 Off, 64-127 On
109	Map CTRL2 to Expression	0-63 Off, 64-127 On
110	Map Resolution to Expression	0-63 Off, 64-127 On
111	Map Mix to Expression	0-63 Off, 64-127 On
112	Map Volume to Expression	0-63 Off, 64-127 On
113	Map Decay to LFO	0-63 Off, 64-127 On
114	Map CTRL1 to LFO	0-63 Off, 64-127 On
115	Map CTRL2 to LFO	0-63 Off, 64-127 On
116	Map Resolution to LFO	0-63 Off, 64-127 On
117	Map Mix to LFO	0-63 Off, 64-127 On
118	Map Volume to LFO	0-63 Off, 64-127 On
119	Toggle Between Default/Preset	0-63 Default, 64-127 Preset

PC# 1-16 = Default Patches 1-16, PC# 17-32 = Preset Patches 1-16

MIDI Clock Controls LFO Rate