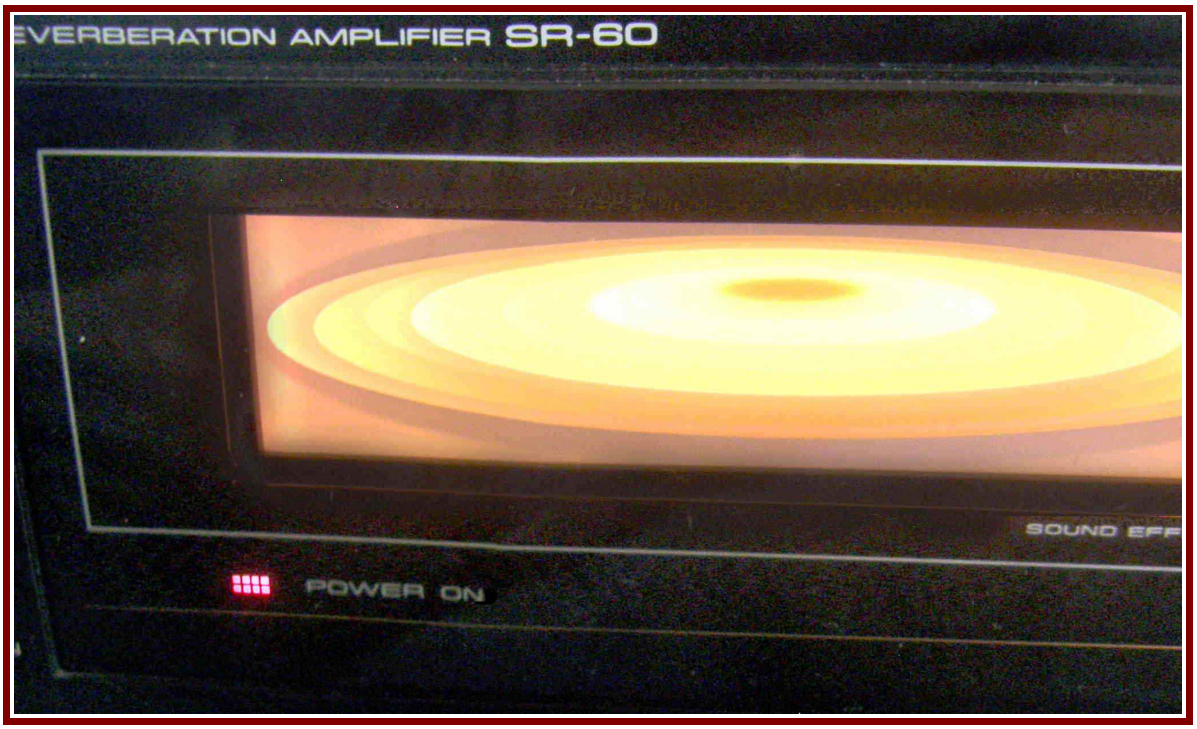
Pioneer SR-60 Analog Delay & ”Reverb”



General Info

These delays and “reverbs” were sampled from a Pioneer SR-60 Reverb Amplifier unit. What is that? Well there was a trend through the 70s, of reverb units made for use in home stereo systems (they even had them for cars). They would add a 'live' or arena type of sound to the music you listened to, when activated. The earlier ones used springs, then a few were made with bucket brigade delay chips for a short time before digital equipment was common. To this day some home entertainment equipment will have digital simulations of various acoustic space for applying to your music (many DVD players for example), so the fad hasn't totally died out.

The SR-60 is very simple with only three different settings, one of which is redundant, leaving you with 'reverb' and 'duet'. Duet is a single-tap delay at about 90ms, and the reverb is basically the same thing but with feedback, so it's really just a repeating delay, meant to simulate a reverb (it's pretty poor at it). While modern digital reverbs would blow it out of the water as far as realism is concerned, it has it's own sound that can be great for occasional tracks that require something special. The unit is fully analog and these resulting programs reflect that in the sound.

Inside the unit is a trim-pot that alters the sound when adjusted from its pre-set position. At either extreme, the distortion levels rise drastically, among other changes. I sampled the trim-pot to create programs where the user can adjust a control that simulates the trim-pot and its effect. I think this might be a Nebula first- having sampled controls in reverb programs, and one program actually has 2!

I sampled both duet and reverb modes straight, with the trim-pot control, then I sampled alternate versions using some trickery which I'll explain in the 'Program Details' section. The alternates give a fair amount of variety, and most of them also provide the trim-pot control or other sampled controls. Altogether, this makes for a fair amount of variety of possible sounds you can get out of this set. Most were sampled in stereo, except for two which were done in mono.

Installation

Just copy the .n2p files to your Nebula 'Programs' folder, and the .n2v files to the 'Vectors' folder.

Organization

The programs will all be found in the 'REV' category in Nebula, then in the 'TT9' and/or 'TT4' sub-categories, for 96khz and 44.1khz respectively. The 'TT' stands for Time Tube, as in - Super Time Tube + Analog Delays & 'Reverbs', which is another library of mine (and was actually released long after this one, but I'm retroactively reorganizing this stuff). The Time Tube release included another unit very similar to this one, with some similar programs/effects. So moving this library there with that one groups some similar things together, making use more convenient for anyone who has both libraries. If you don't have that one but do have and like this one, you should check it out!

Use

Lite/clean versions have no harmonics so they can sound cleaner in some cases, compared to the full ones. If that's what you want, use them, and you can render with them if you want (quality is not hurt, they just lack distortion). Only use the full ones if you want the extra grit. In some cases (mainly the bionic programs) the harmonics can add weird little hiccups/artifacts, but they're analog in nature- it's what was sampled. It only happens if you boost the output (with the verb control) a lot to get a really hot signal coming out. This boosts the harmonics. It can sound like subtle resonant filter 'squirts' or squeeks, things like that. I actually like it and think it adds a nice character/grit/dirt to the sound. But again, if you don't like it, you can use the lite/clean programs.

All of these programs are set up to use as 'sends' for use in a send slot in your DAW. All that really means is that when they load, the 'dry' control is dropped down so that there is no dry signal coming out of Nebula. Nebula's internal routing is designed so that any dry signal is mixed with the wet before being fed back. So that means that if you use the 'feedback' control that I've provided for all of these programs and have the 'dry' control set to put out any dry signal also, you will get bad/unintended results. The dry signal also feeds back and you'll get comb-filtering, and it's just not a good thing.

I have no idea why the routing in Nebula is set up like that, but it is, and there's nothing I can do about it. All I can do is set up my reverb programs to load as sends, because I like having the feedback control there. If you are using the programs in send channels in your DAW, there's no problem. If you really want to use it as an insert, there's only a problem if you want to use the 'feedback' control, in which cse you'll have to avoid the 'dry' control in Nebula, and instead use the wet/dry mix control in your DAW for the Nebula instance.

One other benefit to using these programs in an actual send slot in your DAW, is that you can also then apply a delay to the signal with whatever means

at your disposal, to get a 'pre-delay' for the reverb effect. It's weird that Nebula doesn't allow devs to have a pre-delay control for reverbs, but it doesn't, so this is the only way to achieve a pre-delay.

Controls

TPot- This control was sampled from an internal trim-pot inside the unit (you're not really supposed to mess with it). The 0% position the programs load at represents the pre-set position of the control as it's supposed to be set. If you go up or down from there, you get more distortion (which you won't notice at all with the 'lite/clean' versions) and some tonal change to the effect. Some programs allow you to go up OR down from the default position, but one only goes down from there. The results are similar going in both directions, but there are slight differences.

Focus- This control is only found in the main 'Duet' programs. It provides a 2nd sampled control. What was it sampled from? Well, while using the unit I noticed that it seemed to sound different depending on which input jacks I used (there are 2 sets). One seemed more 'focused' to me, with the other being a bit 'fluffier'. It affects the stereo image in a subtle way. This control allows you to transition between the two.

Dry- Adjusts the dry signal's level. The programs load with this at the lowest level, which cuts the dry signal out.

Verb- Adjusts the reverb level.

FeedB- Adjusts feedback level. As with any control labeled feedback, in any effect, you should be careful with it. Use a limiter after Nebula to be safe.

Program Details

SR-60 Duet – This one is a straight recreation of the unit in duet mode. It just gives a single-tap echo at about 93ms. The trim-pot was sampled, allowing you to adjust up and down-wards (from the factory set position). There is also a focus control that slightly changes the sound (very subtle).

SR-60 Bionic Duet A – Trickery was used which resulted in the frequency response of the echo being shifted upwards by 2x. The unit is fairly dark normally, so this alternate version could come in handy if a slightly brighter sound is wanted. To get this result I sampled the unit by playing the tones used in sampling 2x slower. Trim can go up or down from it's normal position.

SR-60 Bionic Duet B – The sampling tones were played/recorded somewhere between 3 and 4 times slower than normal. This shifts the frequency response of the echo up

by the same amount, from the standard duet program. Here the trim control can only go down from the normal position.

SR-60 Bionic Duet C – This one used another piece of hardware, actually 3. An FM transmitter, and a tube radio. Also a Urei 565T filter was used. There is a control in the program called Tune and it transitions between 5 different sampled setups. If you have it on a whole number you are right on one of them. Each setup used a different combination of settings on the filter, the speed that the sampling tones were played/recorded at, and the tuner on the radio was adjusted to get different results. If you tune a tube radio slightly off of signal, just right, you get really weird, almost modulation-like effects, and I think you can hear some of that here. This is a mono effect.

SR-60 Reverb – A straight recreation of the unit in its 'reverb' mode. It's hardly good for use as an authentic acoustic space, but has it's own sound and can work well for more creative uses. Trim can go up or down.

SR-60 Bionic Reverb A – Sampling tones were played/recorded 2x slower, resulting in the frequency response of the 'reverb' going 2x up. Try this if you want a brighter reverb sound, but it can get a bit more metallic so you will have to be careful with how much you mix in. Try the feedback control for analog metallic heaven (if there is such a place). Trim goes up and down.

SR-60 Bionic Reverb B – Tones were sampled 3-4 times slower, resulting a much brighter 'reverb'. Much more metallic but subtle mixing can still provide a nice fluid sound. Again, try the feedback. This is the only one in the set with no sampled control.

SR-60 Bionic Reverb C – The tones were sampled only slightly slower resulting in only a slight upward shift, BUT there was also an old Philco tube amp used in chain (the same amp I sampled for my Frequency Tweakers B set). There is a control called 'EQ' which was made by adjusting both of the simple eq controls on the amp- bass and treble. At one extreme you have a bassier sound, at the other you have more treble. At the extreme treble side you get a sizzling kind of effect. This is a mono effect.

V1.40 – use this version number to keep track of updates. If the manual posted at my site has a higher version number than the one you have, your set probably isn't up to date.

www.cupwise.com

Thanks:

Giancarlo, Enrique, everyone else at Acustica – and everyone involved in advancing Nebula in any and all ways.
www.acustica-audio.com