## Introduction

The DST4 is unique in that it combines a powerful guitar preamp with high-quality digital effects in a single unit. Contributing even further to its uniqueness is its multi-mode capability, which allows you to use the preamp and the effects separately. This allows the performing guitarist to use the DST4's preamp section before a guitar amp, and then patch the DST4's digital effects into the amplifier's effects loop, taking advantage of the combination of the DST4 preamp and the amplifier's preamp section working in harmony, plus getting the maximum tone before effects and the power amp section of the amp.

## Features

- 75 presets that can include any of four distortion types, and/or studio reverb, delay, and chorus, flanging, pitch shifting, and tremolo effects
- Preamp section and effects section can be used independently
- Designed to interface seamlessly with a combo amp or head
- Four analog preamp types: Xtreme, Scream, Retro, and Cln Tube
- 12AX7 tube for Cln Tube preamp settings
- 3-band storable EQ with sweepable mid frequency control
- Stereo outputs
- Speaker Simulator circuit
- Headphone and direct outputs
- Level matching for use with any effects loop
- Easy programming
- "Send and Remember" MIDI program change programming
- External footswitching
- MIDI mapping
- 16-bit digital effects
- Room and hall reverbs
- Flanging, chorusing, tremolo, and single and dual pitch shifting
- Combination effects
- Three-year warranty
- Designed and manufactured in the United States of America

The DST4 provides you with four preamp types (including one that employs a 12AX7 tube) plus 25 algorithms of the finest studio-quality reverbs, delays, chorus, flanging, tremolo, single and dual pitch-shifting, and multi-effects

combinations. It's incredibly simple to use and designed so that you can use the preamp and effects separately, making it the perfect companion to your guitar amp or studio setup. ART designed a combination of powerful processing and ease of use into the DST4. We strongly suggest that you read and refer to this manual while getting used to your new processor.

Fill in the following information for your reference:

Date of purchase _____

Purchased from _____

Serial number _____

412-5004-101





## Quick Start Instructions

You've unpacked your DST4 and you're in a hurry to get it up and running. You probably would rather play with it than read the manual (at least, right now). Fair enough. But check out the basics, outlined here, just to get your DST4 on line. It should take only a couple of minutes for you to read through them, and then you'll be ready to fire up your DST4. Refer to this section if you have any difficulty. And later, when you want to get into more of the details of your DST4, check out the rest of the manual.

## Quick Setup

Before you do anything, make sure your amp is in a clean mode, with any preamp gain turned low. The DST4 has more than enough gain to drive the daylights out of your amplifier. Turn the DST4's Output knob to its full counterclockwise position. Turn this knob up *only* after all other setup steps are completed.

Plug the AC (mains) cord into a wall socket.

**Straight into an amp:** If you're patching the DST4 into a guitar (or other instrument) amplifier, use one good-quality shielded cord between the instrument and the DST4's Input. Run a second shielded cord from the Left Main Output to the amp's input. If the amp has stereo input capabilities (or if you're using two amps), connect another cord between the DST4's Right Main Output and the amp's second-channel input (or the second amp's input). Note: Many guitar amps have two input channels, but are *not* stereo (check your amp's manual).

**In an amp's effects loop:** Because the DST4 can be separated into individual preamp and effects stages, it can be used two ways with an amplifier's effects loop. The first way utilizes the DST4's preamp before the guitar amplifier's preamp and then places the DST4's effects in the amplifier's effects loop. This provides maximum flexibility. The second approach is a standard effects-loop patch, in which the guitar is plugged into the guitar amp and the DST4 is placed in the loop as a processor.

## DST4 Preamp Into Guitar Amplifier/ DST4 Effects Loop In Amp's Effects Loop

Use a shielded cord to connect the DST4's Preamp Output to the guitar amplifier's input. Connect the guitar amp's effects loop output to the DST4's Effects Input. Use another shielded cord to connect the DST4's Left Main Output to the guitar amp's effects loop return jack (if you're using two guitar amps, you can connect the DST4's Right Main Output to a second amp's effects loop input or instrument input, which yields stereo).

## DST4 In Guitar Amplifier's Effects Loop Only

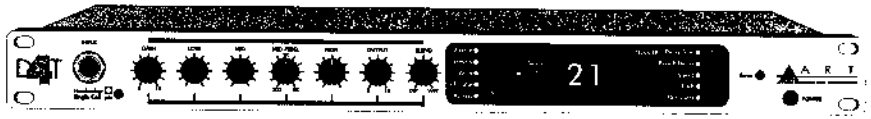
If you're patching the DST4 into a guitar (or other instrument) amplifier's effects loop, and it's mono, use one shielded cord between the amp's effects-send jack and the DST4's Input. Run a second shielded cord from the DST4's Left Main Output to the amp's effects-return jack. (If the amp has stereo returns, use another shielded cord to connect the DST4's Right Main Output to the amp's other effects return jack.)

**Into a mixer:** Connect a shielded cord between your guitar and the DST4's Input. You can connect the DST4's Direct Output XLR jack to one of your mixer's line inputs, or use a shielded instrument cord between the DST4's Left Main Output and a line input on your mixer. If you want to run in stereo, connect a second shielded cord from the DST4's Right Main Output to another line input on your mixer.

**Note:** If you need further help during your initial hook-up, refer to the diagrams and information on pages 29 through 36.



# TUTORIAL



The DST4 is designed to work intuitively—like a guitar amplifier. Therefore, it shouldn't take long for you to get the hang of the DST4. Here's a quick course to get you up and running:

Plug the DST4's AC plug into the wall socket, and press its Power switch (the reassuring glow of the LEDs tell you that the DST4 is now powered up). Now turn on your amplifier or your mixer and monitor amplifier.

Make sure that your guitar's volume control, or your mixer's or amp's input or send level control, is turned up and that signal is being sent to the DST4.

Now turn up the DST4's Output level, and raise the gain or return level on your amp or mixer. You should be hearing the DST4. If not, check your connections and your amp or monitor system (you did remember to turn everything on, didn't you?).

Set the DST4's input to respond best to either Humbucker or Single Coil pickups via the button directly below the Input. (This switch is included so that if you switch between guitars with different pickup configurations, you don't have to adjust the presets.) If your guitar has hotrodded pickups, an active preamp, or uses a combination of standard pickups and piezo transducer, try both settings to see which sounds best to you. Likewise, if you use the DST4 with an acoustic guitar, try both settings. Here's another tip: If you want more "heat" from your humbuckers, try the DST4's Single Coil setting, which will add a bit of boost.

Press the FX Bypass button (the LED next to it will glow). This turns off the effects portion of the DST4—we'll turn it back on after we've explored the preamp section.

Let's begin by auditioning the DST4's killer preamp sounds. Select preamp

types by pressing the Preamp selector button to the right of the Xtreme LED, and modify gain, output, EQ, and dry/effects blend with the seven knobs on the front panel's left half. As you turn any of the knobs, notice that the Tweak LED glows, meaning that the DST4 is in Tweak mode. Because it is in Tweak mode, the entire front panel is "live." (If you press the Tweak button, to exit Tweak mode, you enter Preset mode.)

Select different preamps by pushing the Preamp Selector, which is located next to the LED labeled Xtreme. Each time you press this button, another preamp type is chosen (it cycles through from Xtreme to Scream, Retro, and Tube, and then back to Xtreme).

**Note:** You can compare your straight guitar's level with the preamplified level by pushing the Bypass button below the Preamp Selector. When the Bypass LED glows, the guitar's signal passes straight through the DST4 without changes in gain or tone. Press Bypass again to exit the bypass mode.

Now let's explore the effects. Press the FX Bypass button so that its LED turns off, indicating that the effects are now active. The number shown in the Numerical Display tells you which one of the 25 effects algorithms is "live." Turning the Encoder lets you choose among them. Once you've selected the effect algorithm you want, press the Effects Parameter Edit button, which is right next to the LED labeled Delay Time. One of the Effects LEDs (Delay Time, Reverb Decay, Speed, and Pitch) will glow, telling you which parameter you can adjust. Turn the Encoder clockwise to increase the value, and counter-clockwise to decrease it. Notice that the two-digit number in the Numerical Display reflects any changes you make. The range for all parameters is from 00 to 20.

Each algorithm is designed so that you can adjust one parameter. The list below tells you what effect or effects make up each algorithm, plus which parameter you can adjust for that algorithm. It also tells you something about the algorithms, such as whether an effect has regeneration, modulation speed, etc.



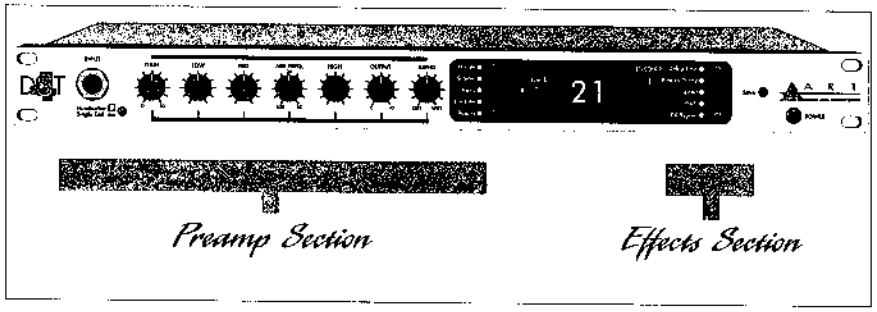
## DST4 Effects Algorithms

| Location | Description | Adjustable Parameter | Notes |
|---|---|---|---|
| 1 | Chorus | speed | |
| 2 | Delay | short delay time | no regen(eration) |
| 3 | Delay | medium delay time | medium regen |
| 4 | Delay | long delay time | high regen |
| 5 | Flange | speed | low regen |
| 6 | Flange | speed | inverted flange |
| 7 | Reverb | decay | room |
| 8 | Reverb | decay | hall |
| 9 | Pitch Transposer | pitch | |
| 10 | Tremolo | speed | |
| 11 | Tremolo + Reverb | tremolo speed | 1 second decay |
| 12 | Flange + Reverb | flanger speed | 1.5 second decay |
| 13 | Chorus + Delay | short delay time | no regen/slow speed |
| 14 | Chorus + Delay | medium delay time | low regen/slow speed |
| 15 | Chorus + Delay | long delay time | medium regen/ medium speed |
| 16 | Flange + Delay | medium delay time | low regen/slow speed |
| 17 | Flange + Delay | long delay time | medium regen/ medium speed |
| 18 | Delay + Reverb | delay time | room |
| 19 | Delay + reverb | delay time | hall |
| 20 | Chorus + Reverb | reverb decay | slow speed/room |
| 21 | Chorus + Reverb | reverb decay | slow speed/hall |
| 22 | Dual PT | voice 1 pitch | voice 2 = octave down |
| 23 | Dual PT | voice 1 pitch | voice 2 = octave up |
| 24 | Chorus + Delay + Reverb | delay time | slow speed/no regen |
| 25 | Chorus + Delay + Reverb | reverb decay | |

Once you've fine-tuned the preamp and effects to your taste, you may save them (see page 20 for details). However, this means overwriting one of the factory presets, all of which are very impressive; some may be just what you're looking for. So before you write any new presets into memory, we recommend that you try the DST4's presets first.

# DST4 FRONT PANEL CONTROLS & INDICATORS

The left half of the DST4's face panel includes the controls for the preamp circuitry and a preamp/effects Blend control; on the right side is the digital effects section. Keep in mind that the preamp section can be used with or without digital effects, and if you're using the DST4 with an amp, it can be like adding a third overdrive channel—with four different distortion/overdrive characteristics, plus effects!




## Input jack

Plug your guitar into the front-panel Input jack. Always use a good-quality, shielded cord with good-quality plugs.

## Input selector (Humbucker/Single Coil)

Set the DST4's input to respond best to either Humbucker or Single Coil pickups via the button directly below the Input. The Single Coil mode adds 6dB of boost and a little EQ to compensate for the lower output common to single-coil pickups, compared with humbuckers. If your guitar has hotrodded pickups or an active preamp, or uses a combination of standard pickups and a piezo transducer, try both settings to see which sounds best to you. Likewise, if you use the DST4 with an acoustic guitar, try both settings.

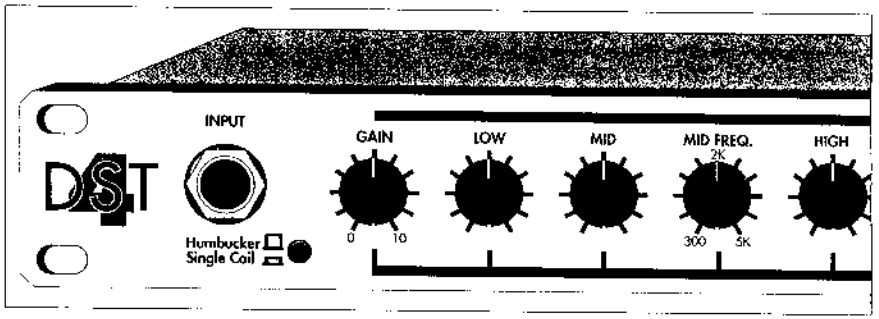
## Gain

The Gain control sets the amount of preamp gain for the distortion circuit. Its range is from 00 (none) to 20 (We warned you!). Use lower settings for cleaner, bluesy overdrive sounds, and dial up higher settings when you want your guitar to kill.



## Low

The Low control adjusts the amount of low end in your guitar's sound, letting you add thump to the bottom, or thin it out for a sharper type of cutting ability. The range is from a cut of 15dB to a boost of over 15dB (at 12 o'clock, it's "flat"—no boost or cut; the numerical display shows 10). If you feel the need to crank up the Low control, make sure your amp is seated firmly on a stable surface. (If you're using a stack, you may want to duct tape your head to the cabi-



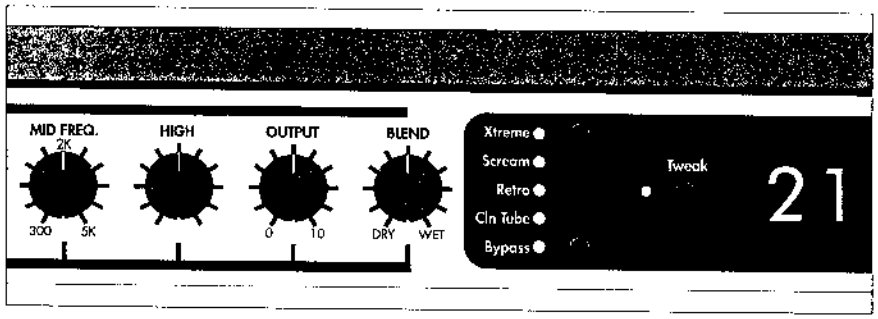

net, to keep it from falling off). If you're plugging the DST4 straight into a mixer/recorder setup, keep one eye on the VU meters and another on the monitors (to make sure their speakers don't jump out of the enclosures!).

## Mid & Mid Freq

The Mid control adjusts the amount of boost or cut to the "body" of your sound. The Mid Freq control sets the frequency range you want to boost or cut. Its range is from 300 Hz to 5kHz. To obtain proper "suck," or "scoop," for maximum shred, set the Freq control somewhere between 12 and 3 o'clock (10 to 16 on the Numerical Display) and cut the midrange by setting the Mid control to between 7 and 9 o'clock. (This is an especially great way to create a "cabinet simulation" effect when you plug the DST4 straight into a mixer/recorder setup—even at low distortion settings.) You can also select a frequency to boost, making it easy to sustain—or even to feed back—specifically at certain notes or when you play in certain ranges.

## High

The High control adjusts the amount of high end in your guitar sound. Its range is from a cut of 15dB to a boost of 15dB (at 12 o'clock, it's "flat"—no boost or cut; this is 10 on the Numerical Display). To splinter glass, boost the High control. To get rid of the edge, cut the High control.




## Output

The Output control is not a master output level for the entire DST4. It is the output of the preamp/distortion section leading into the digital effects. Therefore, you can use it to match the output of the DST4's preamp section to your guitar's "normal" level (the level you hear when the DST4's preamp section is bypassed). The Output control is also useful for boosting the output level for your incredible leads and bone-grinding rhythm.

## Blend

The Blend control adjusts how much of the digital effects are added to the DST4's preamp sound. The Blend knob's range is from Dry (100% guitar, or preamp-enhanced guitar, depending on whether the distortion is bypassed) to Wet, for full effect. The Numerical Display indicates the setting, too, from 00 (Dry) to 20 (Wet).

## Preamp Selector Switch

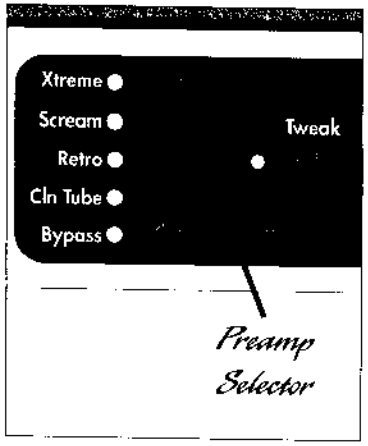
The DST4 provides you with four preamp types, Xtreme, Scream, Retro, and Cln Tube, each with its own personality. With over 100dB of gut-wrenching gain, and complete tonal control, virtually any overdrive or distortion sound—no matter how subtle or explosive—is available with the DST4. Here are descriptions of the four preamp types:



DST

## Xtreme

This is the ultimate distortion. If your playing style demands a tone beyond the distortion formerly known as shred, then this is your setting. Don't try to clean up this sound; it won't happen. Nail down your amp or monitor speakers, and blast!




## Scream

The Scream preamp provides a distortion quality reminiscent of the screamin' green stompbox of the late '70s and '80s, only with a heck of a lot more gain. The Scream preamp retains a bit of clean signal mixed with the distorted tone for a really ratty but smooth and intelligible sound. The Gain control lets you to clean up the sound at lower settings and produce great sustain when it's driven harder. Similar to using a hotrodded version of classic metal-clad overdrives, the Scream's distortion is primo when you want to give your combo or head a firm kick in the shins.

## Retro

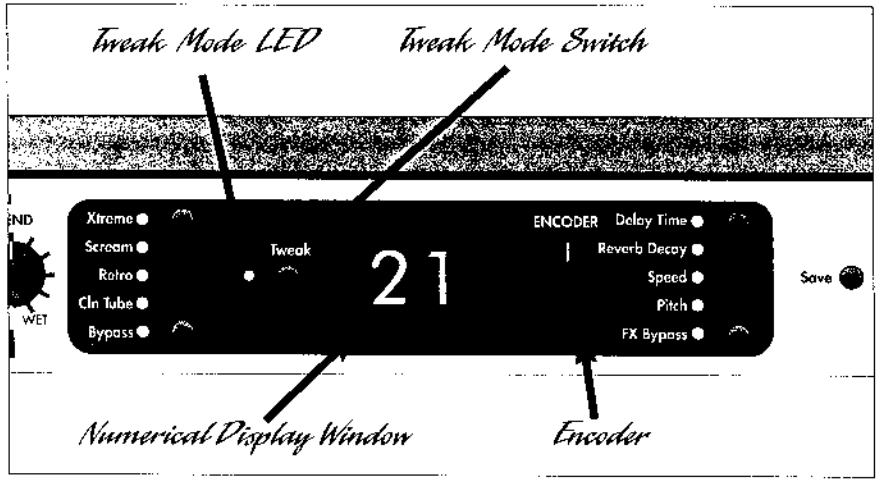
The Retro preamp's distortion offers enough versatility to produce a wide range of textures, from smooth overdriven vintage tones to down-and-dirty Texas Blues distortions. The Drive control allows you to clean up to the faintest of tube rattle to the roar of an overworked white Bassman. If you're good with your guitar's volume pot, this is the easiest distortion to sail through "Little Wing"-type material. . . and then some.

## Cln Tube

Whether you're looking for the ultimate in power surf lead tone, clean 'n' meaty country pickin', or ballsy blues rhythm textures, the Cln Tube preamp settings deliver what you crave. The DST4's 12AX7 tube provides the warmth and fatness that only a tube can create, plus its unique responsiveness allows it to "dirty-up" and dig in as you pick harder.

## Bypass Switch & LED

The Preamp Bypass switch lets you bypass the preamp section completely, should you only want to use the DST4's high-quality digital effects alone. This allows your DST4 to act as a multi-effects device in your studio or in your




amplifier's effects loop, plus when the DST4 is in split mode (with the DST4 preamp patched into your amp, and the DST4 effects patched into the amp's effects loop), you get another set of "amp only" sounds.

Use the preamp section with or without the DST4's digital effects—your choice. And don't forget to try the overdrive and distortion preamp settings with an amp's overdrive for a completely out-of-control experience. And if your amp only has one channel, or a wimpy second channel, the DST4's distortion adds another channel and fattens up your amp into a 10-ton grinding machine.

## Tweak Mode Switch & LED

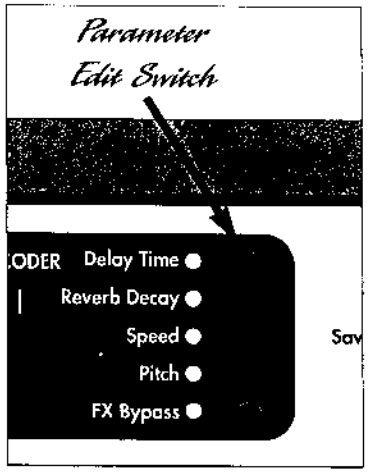
Think of this as the DST4's "nerve center." Pressing the Tweak button puts the DST4 in or out of Tweak mode (the LED glows when Tweak mode is active). You can also enter Tweak mode from Preset mode by turning any knob—except the Encoder—or pressing the Preamp Selector button. (Note: If any of the Digital Effects LEDs is glowing, you can enter Tweak mode using the Encoder, too.) When the DST4 is in Tweak mode, you can change any settings in the preamp and effects sections, select preamp types, and select effects algorithms.





## Numerical Display Window

This display shows a 2-digit number that corresponds to the preset currently in use. It also provides a numerical readout of a control's setting when the DST4 is in Tweak Mode. Finally, it guides you during MIDI operations.




## Encoder

The Encoder is used for adjusting parameters, selecting presets, or selecting effects, choosing locations for saving edited presets, or setting MIDI control and channel numbers, depending on the DST4's mode.

## Effects Section

The DST4's high-quality digital effects were specially chosen to be impressively musical, plus they are perfect complements to the preamp section's overdrive and distortion sounds. Note that you can use the digital effects with or without the distortion, so you can even use the DST4 for adding digital effects to clean guitar sounds, or during mixdown to enhance tracks you've recorded. You can also bypass the effects section completely, providing yet another texture.

## Effects Parameter Edit Switch

This switch does double duty. First, when the DST4 is not in Tweak mode, it lets you adjust the current effects parameter. Press the Parameter Edit switch, and the LED corresponding to the adjustable parameter illuminates. At the same time, the Numerical Display changes from the current preset number to a number representing the effects parameter's value (00 through 20—minimum to maximum value, respectively). Turning the Encoder adjusts one of the following parameters:

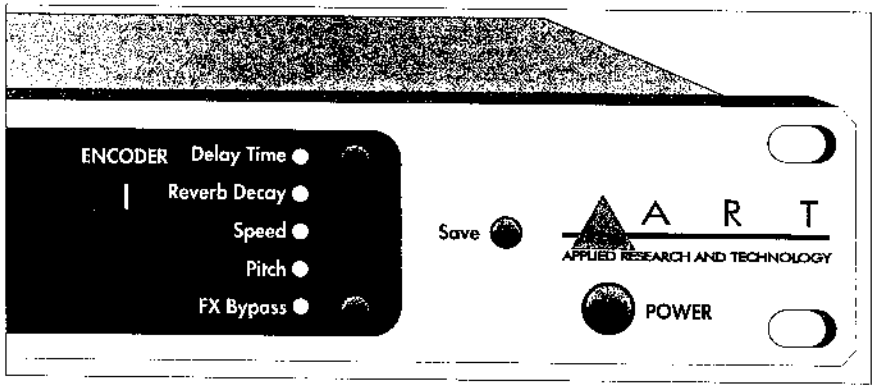
## Delay Time

Depending on whether the effect is a short, medium, or long delay (see Digital Algorithm Preset List, page 9), you can create doubling effects—a short delay that gives the illusion of two instruments playing simultaneously—or slapback

or echo effects. Regeneration, or recycling of the effect-enhanced signal back through the effect to create more echoes (instead of a single delayed signal), is also employed in some algorithms.

## Reverb Decay

This is the amount of time it takes for reverb to "die away" after the sound




entering the reverb ends. The DST4 includes room and hall reverb algorithms, which as their names imply, are simulations of small and large acoustical spaces, respectively.

## Speed

Flanging, chorus, and tremolo are all modulated effects that increase and decrease in intensity at a specific rate. The Speed setting governs that rate.

## Pitch

The pitch transposer creates a selectable harmony. In the dual PT (PT is short for "pitch transposer") programs, two harmonies are created. Effects Algorithm 9 is a single harmony, whereas Effects Algorithm 22 produces a fixed harmony an octave below the note you play and another selectable harmony. Effects Algorithm 23 produces a fixed harmony an octave above the note you play, plus a second selectable harmony.





## Pitch Shift Intervals

The following list shows the intervals created by the DST4's Pitch Transposer, arranged by the value that is shown in the Numerical Display. Note that the detuned unisons sound like two identical notes played together, but because they are slightly detuned, the tone is thicker and more like the sound of two separate instruments playing in unison.

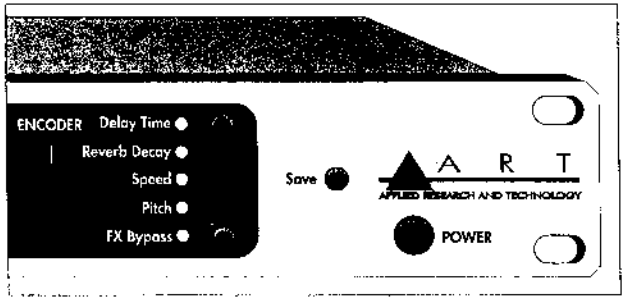
| Number | Interval |
|---|---|
| 00 | -octave |
| 01 | -major 7th |
| 02 | -minor 7th |
| 03 | -major 6th |
| 04 | -perfect 5th |
| 05 | -perfect 4th |
| 06 | -major 3rd |
| 07 | -minor 3rd |
| 08 | -major 2nd |
| 09 | detuned unison 1 |
| 10 | detuned unison 2 |
| 11 | detuned unison 3 |
| 12 | +major 2nd |
| 13 | +minor 3rd |
| 14 | +major 3rd |
| 15 | +perfect 4th |
| 16 | +perfect 5th |
| 17 | +major 6th |
| 18 | +minor 7th |
| 19 | +major 7th |
| 20 | +octave |

## FX Bypass Switch & LED

Pressing the FX Bypass switch causes the signal entering the effects section to bypass it (the LED glows to indicate this). If the preamp section and effects section aren't separated (by using the effects loop), then the preamp's sound goes straight through to the output without effects whenever the FX Bypass switch is activated.

## Save

Pressing Save sets the DST4 in Save mode. The Numerical Display blinks on and off, indicating that it is ready to store an edited preset. You may store the edited preset in the current location by simply pressing Save again. The display will indicate that the preset has been stored by showing "yA" momentarily before again displaying the preset's number. If you want to save a preset to another location, press Save, then turn the Encoder to the location number where you wish to save the preset (01 to 75), and then press Save again. The Numerical display stops blinking, shows "yA," indicating that the preset is saved, and then shows the preset number.




**Note:** To abort a save operation at any time during the saving process (while the Numerical Display is blinking), simply turn any of the knobs or press any front-panel button (except Save, Power, or Humbucker/Single Coil).

**Note:** Bypass and FX Bypass states are also stored with Presets.

## Power

The Power switch supplies and removes power from the unit; the LCDs and Numerical Display Window illuminate when power is on. If the unit does not turn on when the switch is toggled, check the AC (Mains) power cord. Also make sure that the outlet that it is plugged into is "live," by plugging in another piece of equipment that you know works (try plugging into another outlet, too). If the outlet is good but the DST4 does not turn on, consult your dealer or ART Customer Service.





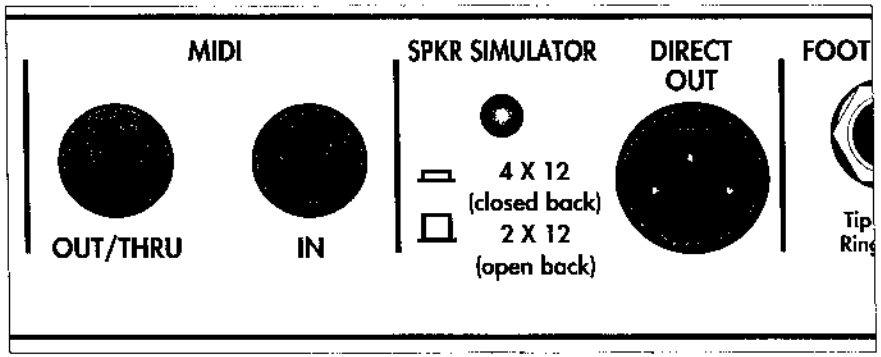
# REAR PANEL

## AC Power Cord

The DST4's AC (mains) power cord is permanently attached. Do not attempt to alter or remove this power cord. If it is ever damaged, consult your dealer or the ART Customer Service department.

## MIDI In & MIDI Out/Thru

The jack labeled MIDI In receives the MIDI signal containing MIDI Program Change messages. It enables you to "talk" to the DST4 from an external source such as an X-12 or X-15 Ultrafoot, a computer equipped with MIDI ports and associated software, or a sequencer.



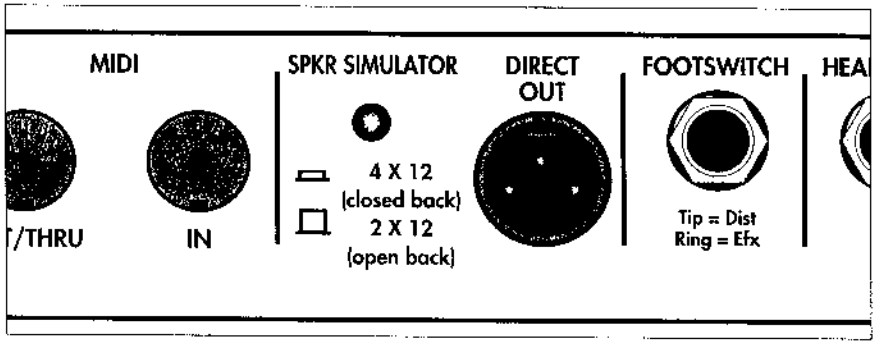

The MIDI Out/Thru jack operates in two ways. As a MIDI Out, it transmits MIDI information from the DST4 to other MIDI-controllable gear such as sequencers, synthesizers, etc. As a MIDI Thru, it passes the information reaching the MIDI In.

## Spkr Simulator

When you use the Direct Out to send the DST4's signal to a recording console, power amp, P.A., etc., you can choose between two different speaker emulations that add size, shape, and texture to your instrument's preamplified sound. The two choices are: 4x12 (Closed Back) and 2x12 (Open Back), emulating the tightness and focus of a sealed enclosure with four 12" speakers and the looseness and funkiness of an open-backed cabinet housing two 12s, respectively.

## Direct Out (XLR)

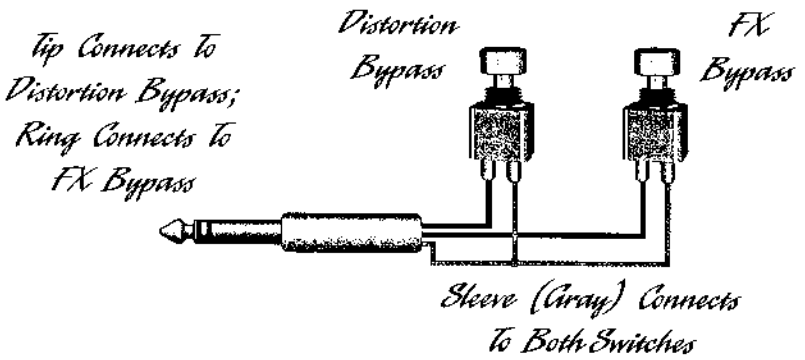
The Direct Out takes the signal from the DST4's left (mono) channel, complete with effects, and adds speaker emulation. Like using a separate direct box, it pro-




vides a high-quality, electrically balanced, high-level signal that's ideal for direct connection in the studio or onstage to mixing consoles. So because of this feature, the signal from the Direct Out can be sent to P.A. or recording gear without a direct box in between. For best tone, always use a high-quality microphone-type cable with good XLR connectors.

## Footswitch

As a convenience feature, the DST4's preamp Bypass and FX Bypass can be activated via footswitches. Push-on/push-off switches should be used, and make sure any dual footswitch is wired as shown in the diagram (tip = distortion Bypass on/off, ring = FX Bypass on/off):

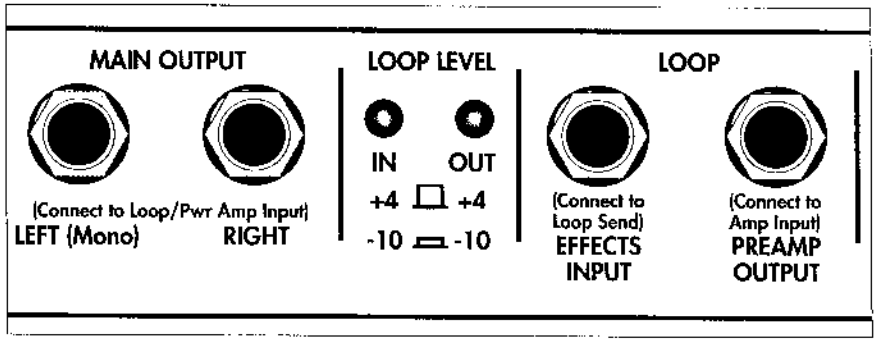







## Headphone

The sound of the preamp and the effects is output through the 1/4" headphone jack, so you can put on a pair of headphones and practice without disturbing




others. The jack is configured TRS (Tip/Ring/Sleeve), standard for virtually all headphones.

## Main Output (Left & Right)

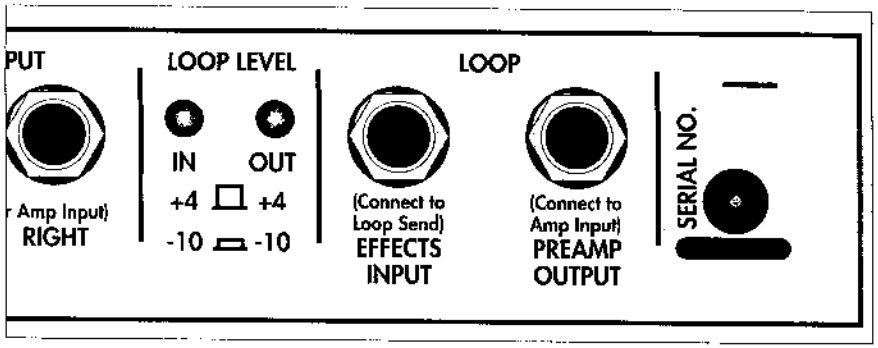
Two 1/4" output jacks are included for sending the DST4's output (from the effects section) to an amp, recording channels, etc. When you use only one Main Output, use the Left one. When nothing is plugged into the Right Main Output jack, the effect's output reaching the Left Main Output is a processed combination of both the left and right signals (that is, the outputs are summed).

## Loop Level

When using the DST4's Loop, the best signal-to-noise ratio and optimum signal quality will be the result of correct level matching between the DST4 and your other gear. Check with the manual accompanying your other equipment and/or experiment by setting the DST4 Loop Level In and Out switches to their +4 and -10 positions.

## Loop

Using the DST4's preamp separately from its effects section is a matter of running a shielded cord from the Loop Preamp Output to an amplifier, running the amplifier's effects loop send to the DST4's Loop Effects Input, and then running the DST4's Main Output (Left, or both in stereo applications) to the




amp's effects loop return. You can also place signal processors in the DST4's Loop (Loop Preamp Out to processor's input, processor's output to the DST4's Loop Effects Input). In all cases, for best sonic quality, use high-quality shielded cords that are no longer than necessary.

Note: You can also use the Preamp Output to feed a signal to your tuner; make sure the DST4's preamp is in Bypass mode when you want to tune, since this provides the cleanest signal.

## Vent for 12AX7 tube

A small vent is located on the rear panel for the 12AX7 tube. Never cover this vent or insert anything into it, as it may damage the tube or other circuitry.

## Presets In The DST4

The following list includes the preamp/effects combinations that come programmed into the DST4. You can use them as-is, modify them to suit your taste, and save them in any of the 75 preset locations.

| Preset | Preamp | Effects |
|---|---|---|
| 1 | Xtreme | Short Delay, no regen(eration) + Slow Chorus |
| 2 | Scream | Medium Delay, medium regen |
| 3 | Retro | Flange + Hall Reverb |
| 4 | Tube | Hall Reverb |
| 5 | Xtreme | Medium Delay, medium regen |
| 6 | Scream | Medium Delay, no regen + Slow Chorus + Room Reverb |
| 7 | Retro | Inverted Flange |
| 8 | Tube | Tremolo + Room Reverb |
| 9 | Xtreme | Chorus |
| 10 | Scream | Medium Delay + Hall Reverb |
| 11 | Retro | Long Delay, medium regen + Medium Flange |
| 12 | Tube | Chorus |
| 13 | Xtreme | Flange |
| 14 | Scream | Dual PT (pitch transposer), with voice 2 one octave up |
| 15 | Retro | Hall Reverb |
| 16 | Tube | Long Delay, medium regen + Medium Flange |
| 17 | Xtreme | Inverted Flange |
| 18 | Scream | Medium Delay, medium regen |
| 19 | Retro | Hall Reverb |
| 20 | Tube | Tremolo + Room Reverb |
| 21 | Xtreme | PT (pitch transposer) |
| 22 | Scream | Short Delay, no regen |
| 23 | Retro | Slow Chorus + Hall Reverb |
| 24 | Tube | Hall Reverb |
| 25 | Xtreme | Medium Delay, low regen + Slow Chorus |
| 26 | Scream | Inverted Flange |
| 27 | Retro | Room Reverb |
| 28 | Tube | Medium Delay, low regen + Slow Chorus |
| 29 | Xtreme | (Bypassed)+Medium Delay, medium regen |
| 30 | Xtreme | Medium Delay, medium regen |
| 31 | Xtreme | Chorus |
| 32 | Xtreme | Hall Reverb |
| 33 | Tube | Flange + Hall Reverb |
| 34 | Tube | Room Reverb |
| 35 | Tube | Chorus |
| 36 | Scream | Medium Delay, low regen + Slow Chorus + Room Reverb |
| 37 | Xtreme | Long Delay, medium regen + Medium Chorus |
| 38 | Scream | Medium Delay, low regen + Slow Chorus + Room Reverb |
| 39 | Retro | Long Delay, medium regen + Medium Flange |
| 40 | Tube | Room Reverb |

| Preset | Preamp | Effects |
|---|---|---|
| 41 | Xtreme | Hall Reverb |
| 42 | Tube | Medium Delay + Room Reverb |
| 43 | Xtreme | Flange |
| 44 | Tube | Chorus |
| 45 | Xtreme | Long Delay, medium regen + Medium Flange |
| 46 | Xtreme | Medium Delay + Hall Reverb |
| 47 | Tube | Medium Delay + Room Reverb |
| 48 | Xtreme | Medium Delay, medium regen |
| 49 | Tube | Tremolo |
| 50 | Xtreme | Long Delay, medium regen + Medium Chorus |
| 51 | Scream | Long Delay, medium regen + Medium Flange |
| 52 | Tube | Medium Delay + Room Reverb |
| 53 | Retro | Short Delay, no regen |
| 54 | Xtreme | Medium Delay, medium regen |
| 55 | Tube | Long Delay, high regen |
| 56 | Xtreme | Tremolo |
| 57 | Xtreme | Room Reverb |
| 58 | Tube | Room Reverb |
| 59 | Tube | Hall Reverb |
| 60 | Tube | Short Delay, no regen + Slow Chorus |
| 61 | Xtreme | (Bypassed)+Tremolo |
| 62 | Retro | Inverted Flange |
| 63 | Xtreme | Medium Delay, low regen + Slow Flange |
| 64 | Xtreme | Dual PT, voice 2 octave up |
| 65 | Retro | Room Reverb |
| 66 | Scream | Room Reverb |
| 67 | Tube | Medium Delay, low regen + Slow Chorus |
| 68 | Tube | Tremolo + Room Reverb |
| 69 | Retro | Inverted Flange |
| 70 | Scream | Medium Delay, no regen + Slow Chorus + Room Reverb |
| 71 | Tube | Chorus |
| 72 | Xtreme | Flange |
| 73 | Scream | Dual PT, voice 2 octave up |
| 74 | Retro | Hall Reverb |
| 75 | Xtreme | Inverted Flange |



## Restoring Presets To Original Factory Settings

If you want to restore all presets to their factory settings, press the Preamp Select, Parameter Edit, and Save buttons simultaneously. The DST4 will overwrite all presets with original factory settings; this will take several seconds, so be patient. Remember: Only do this if you want to restore all of the settings to their factory values. It erases all customized presets in the DST4. If you have favorite customized presets, either check their parameters and write them down, or use the MIDI Data Dump feature to offload your presets to a MIDI storage device before implementing a full reset. (See below for MIDI information.)

## DST4 MIDI Functions

The DST4's MIDI functionality was designed with guitarists in mind. It's simple, straightforward, and not intended to make life a nightmare. In particular, the Smart MIDI mode can save you a lot of time and head-scratching.

## Smart MIDI Mode

Smart "send and remember" MIDI mode is an easy way to program the DST4's MIDI program table, which tells the DST4 which presets to call up when MIDI Program Change numbers are received. Select the preset you want to recall, and then press both Parameter Edit (which acts like a "shift" key) and Save together to enter "send and remember" mode and send a program message from your MIDI controller (all four Effects LEDs blink on and off in unison). The unit automatically maps the Program Change message to the selected preset. Repeat the procedure for more presets. This is an extremely easy way to put presets in order without having to program. Note: Once the message is received by the DST4, the unit returns to its last selected mode of operation (either Tweak or Preset).

## Entering MIDI Mode

To Enter MIDI mode, press and hold the Parameter Edit button and then press the FX Bypass button. The Numerical Display now shows a two-digit number and a decimal point to the right. All of the Effects LEDs glow, which indicates you are now in MIDI mode.

## Exiting MIDI Mode

To exit MIDI editing mode, press Save. Any MIDI changes you make are automatically saved.

## Editing The MIDI Program Table

You can edit the DST4's MIDI Program Table so that it each program responds to the MIDI program number of your choice from a remote footswitch (such as ART's X-15 or X-12), or other MIDI gear. Since MIDI program numbers range from 1 through 128, the DST4 displays them by using two numbers and either one or two decimal dots. So preset numbers 1 through 99 are shown with the dot to their right (for example, 01., 25., 99.), while numbers over 100 are shown with a second decimal dot between them (for example, 0.1., 1.1., etc.). Program number 100 is shown as 0.0. (zero dot zero dot). Here are examples of the numbers and their equivalents:

99. is program number 99
0.0. is program number 100
0.1. is program number 101
2.8. is program number 128

Enter MIDI mode. If you press the Parameter Edit button, a two-digit number is shown with no decimal point. This is a preset number, 01 to 75, corresponding with the 75 preset locations in the DST4. Turn the Encoder until you reach the number you want to assign a MIDI program number to. If you want to reassign any more MIDI Program Table changes, repeat the procedure (press Parameter Edit, turn the encoder to select a MIDI number, press Parameter Edit again and turn the Encoder to select a preset, etc.).

Exit MIDI mode, and your changes are automatically saved.

## Editing The MIDI Channel

Enter MIDI mode. Press Bypass, and the display shows either "on" or a number from 01 to 16. If "on" is shown, it means that the DST's MIDI reception is on for all channels. Turning the Encoder selects a MIDI channel. After you select the MIDI channel, pressing Save exits MIDI mode.

**Note:** You can press Bypass again to edit the Program Number.

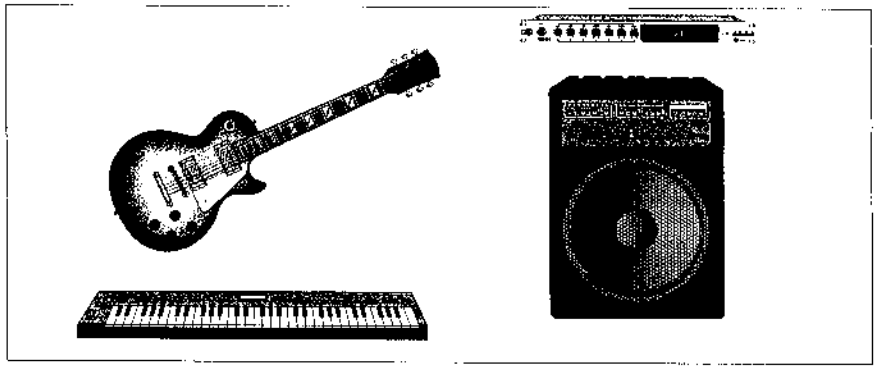
## Dumping Your Presets To Another MIDI Device

If you have a MIDI device capable of storing MIDI data, you can save your DST4's presets in a group. To do this, enter MIDI mode. Press and hold the Parameter Edit button while pressing the Preamp Select button. The display will blink and the DST4 will automatically exit MIDI mode when done (this procedure takes about 10 seconds).

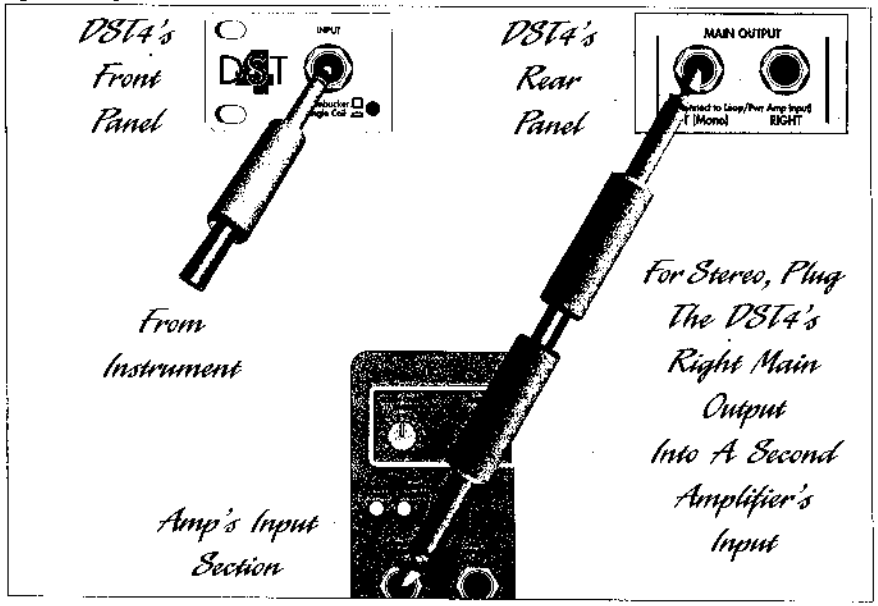


# SETUP DIAGRAMS

## PLUGGING DIRECTLY INTO A DST4 AND AMP

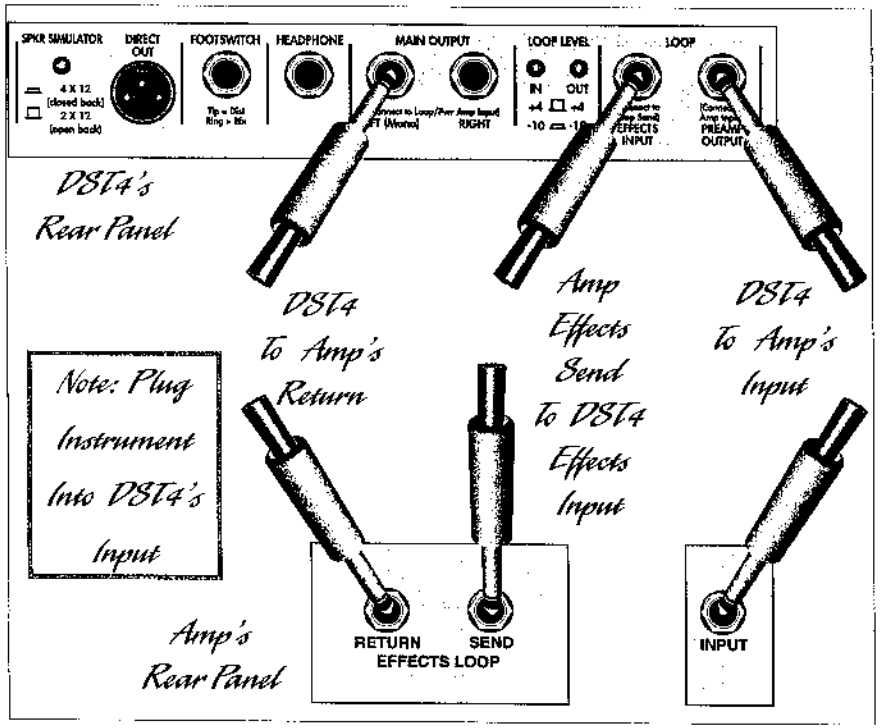


Before you do anything, make sure your amp is in a clean mode, with any preamp gain turned low. The DST4 has more than enough gain to drive the daylights out of your amplifier. When plugging a guitar into the DST4, make sure that there is sufficient signal level coming from the instrument (check that you've turned up the volume knob). Turn up the DST4's Gain and Output controls before turning up the amplifier's volume control.



# USING THE DST4 IN AN AMP'S EFFECTS LOOP (PREAMP AND EFFECTS SPLIT)

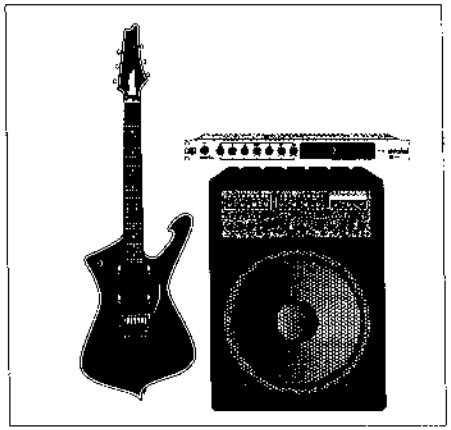
Plug your instrument into the DST4, and then run a cord from the DST4's Preamp Out to your amplifier's input. Next, connect the amp's effects send to the DST4's Effects Input. Then connect the DST4's Left Main Output to the amp's effects return. If the amp has stereo returns, you can run a second cord from the DST4's Right Main Output to it. Set the DST4's Loop Level controls for optimum sound quality and level.



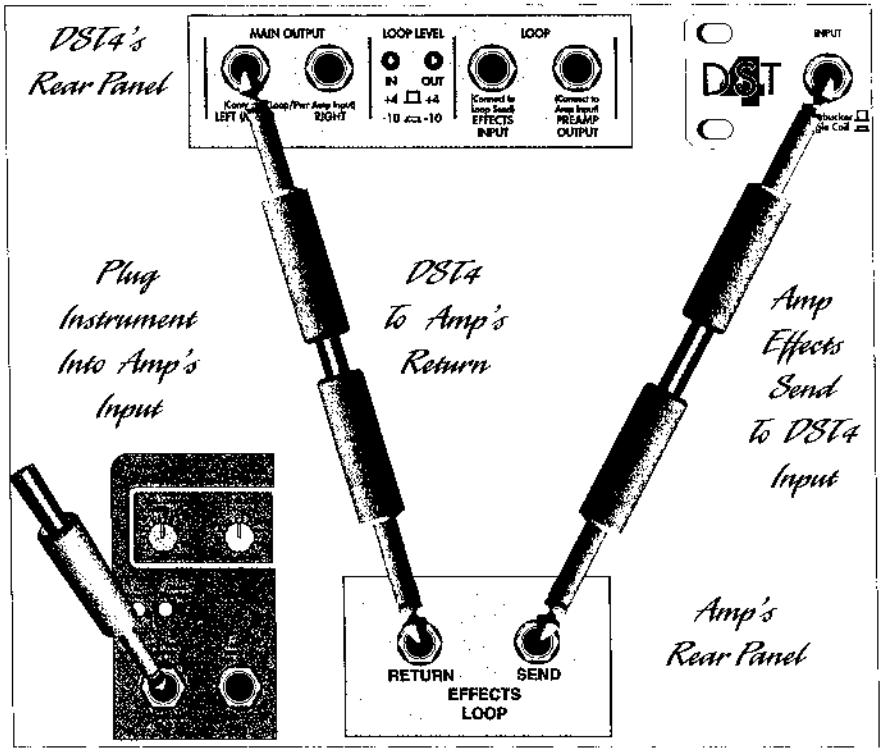





# USING THE DST4 IN AN AMP'S EFFECTS LOOP (PREAMP AND EFFECTS TOGETHER)

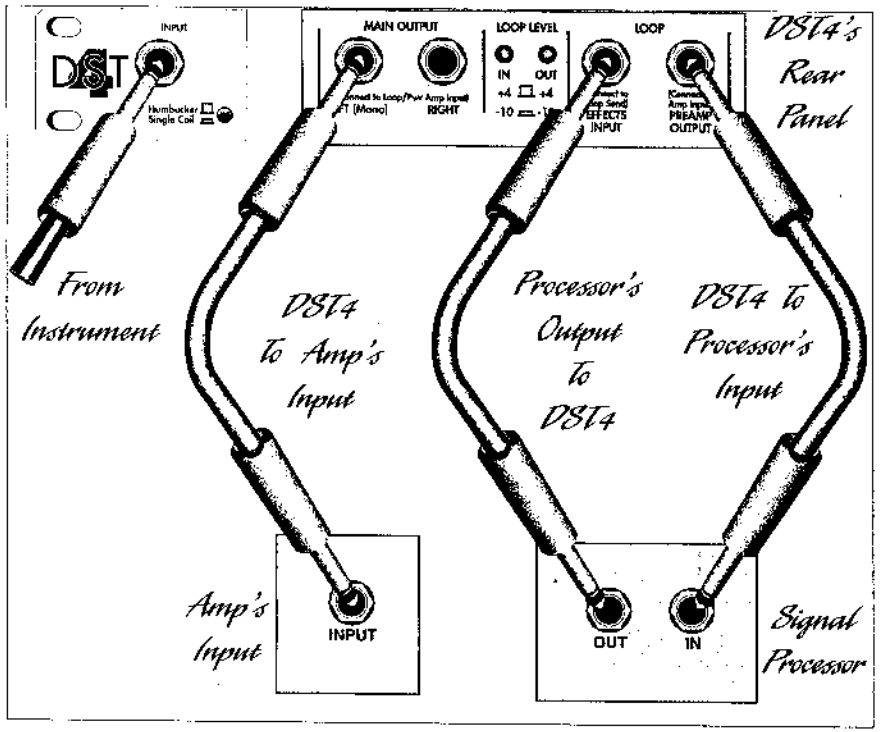


Patch the DST4 into the effects loop of an instrument amplifier as shown (for mono setups, use the DST4's Left Main Output jack). If the amp has two effects-loop return jacks for stereo operation, you may connect a second cord between the DST4's Right Main Output and the amp's second return jack.



# PATCHING ANOTHER SIGNAL PROCESSOR INTO THE DST4'S EFFECTS LOOP

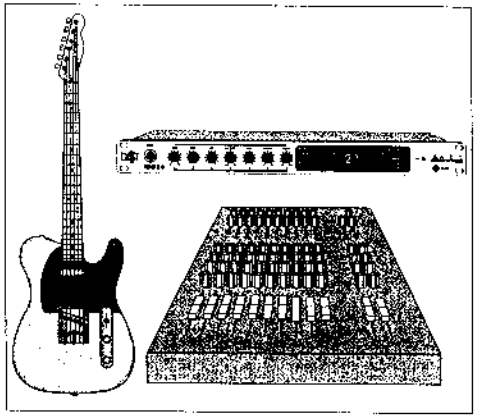
If you want to patch a favorite signal processor you already own into your signal chain, connect it as follows: Plug your instrument into the DST4's input, connect the DST4's Preamp Output to the effect's input, and the effect's output into the DST4's Effects Input. Then run the Left Main Output to an amp or mixer. (For stereo, add a second cord from the Right Main Output to another mixer channel or amp.)



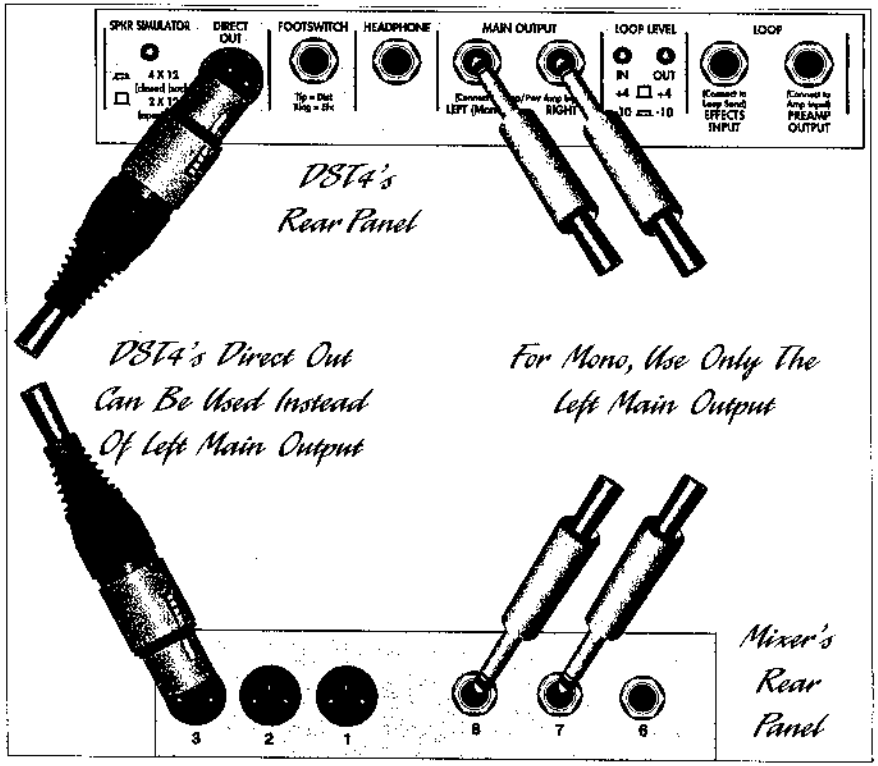




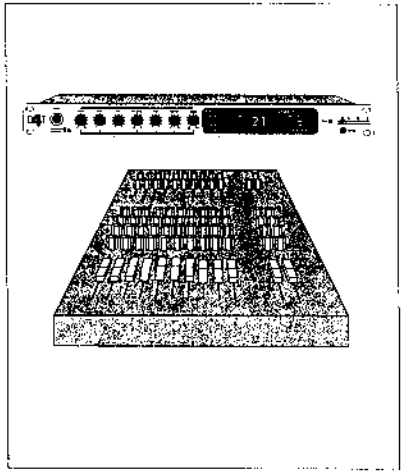

# PATCHING THE DST4 INTO A MIXER'S INPUT CHANNELS



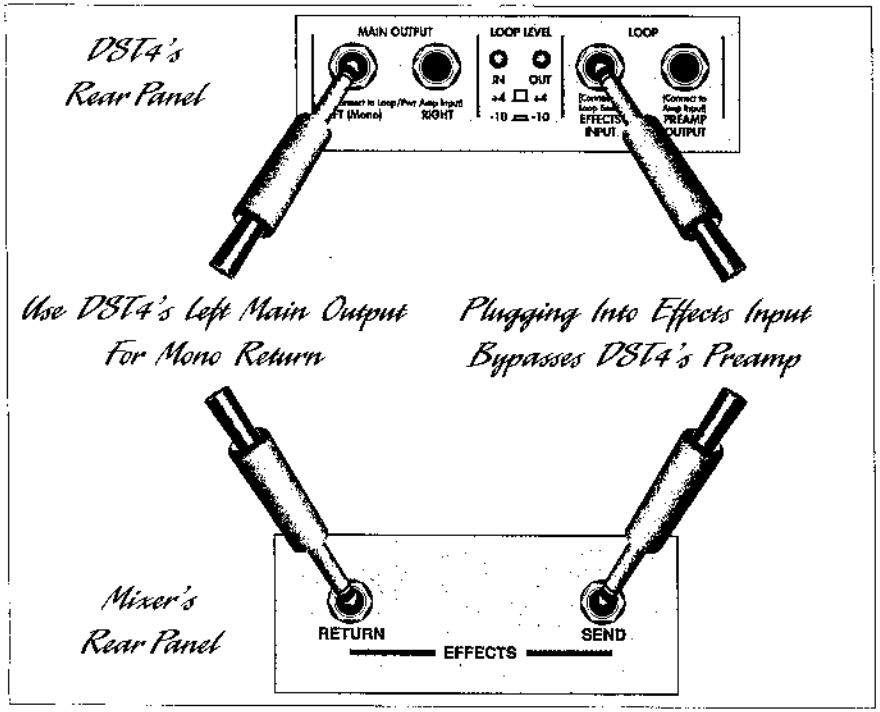
Connect the Left and Right Main Outputs of the DST4 to two line input channels of your mixer (use the Left Output if you wish to run in mono). You can also use the Direct Out in addition to, or instead of, the other connections. Adjust the Gain and Output levels of the DST4 and then the Input level of the mixer. Once you see signal present to the mixer, turn up your mixer's output levels (or monitor amp).



# PATCHING THE DST4 INTO A MIXER'S INPUT CHANNEL LOOP



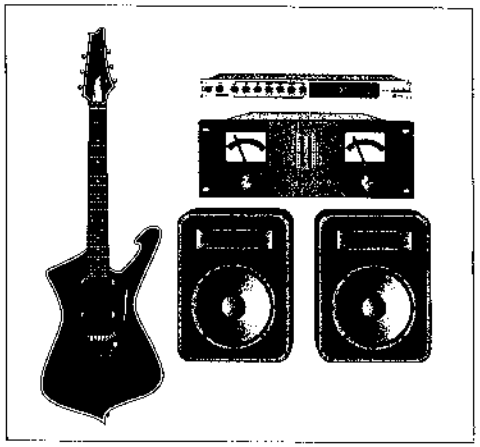
Connect the mixer's effects send to the DST4's Effects Input, and the DST4's Left Main Output to the mixer's return. This bypasses the DST4's preamp section and only uses the effects. You can send the Preamp Output to a mixer input channel, too, if you want to use the preamp separately. Note: Patching DST4's Input and Main Output into a mixer's effects loop—so that the preamp and effects are both employed together—should be done with caution since the DST4's preamp produces tremendous gain and may overload the mixer.



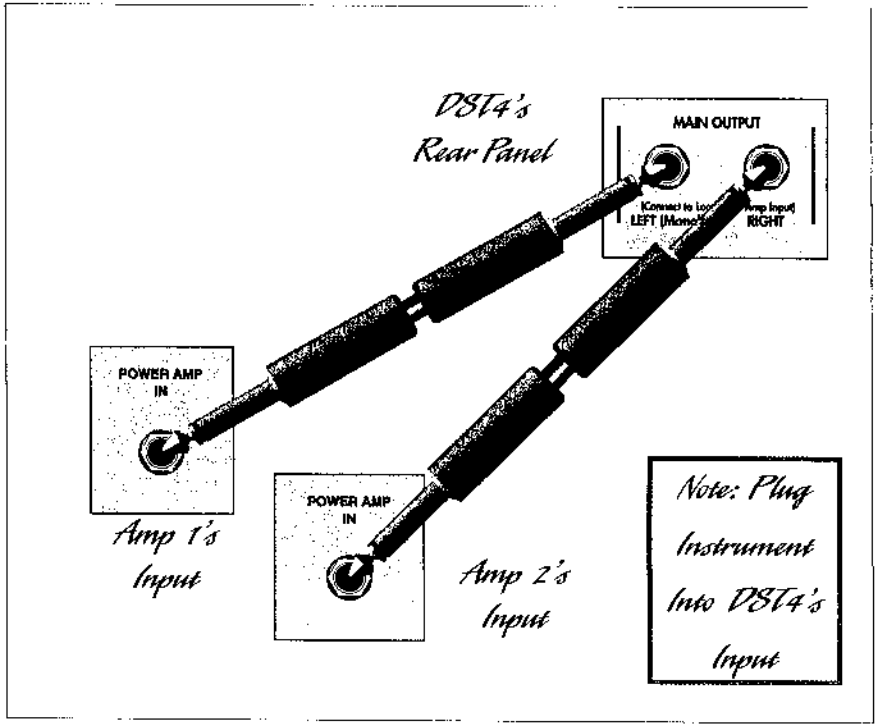




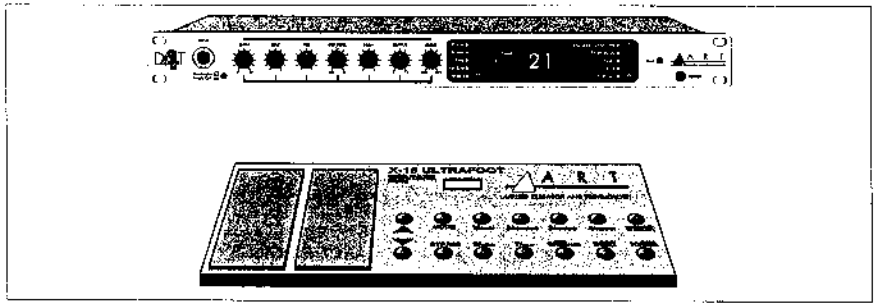

# USING THE DST4 IN STEREO WITH A POWER AMP AND SPEAKERS



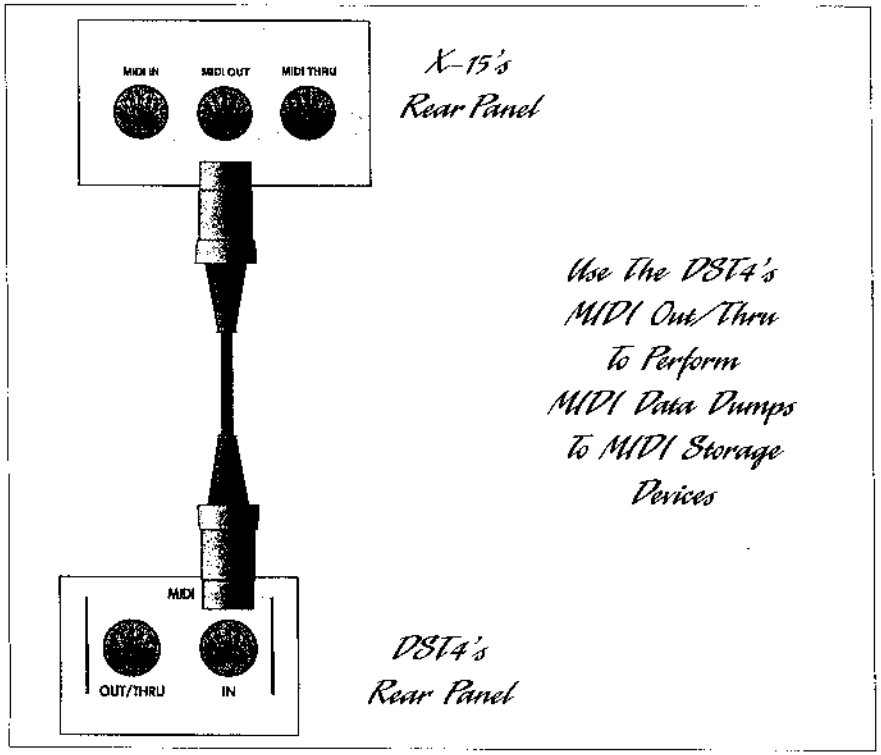
Plug your instrument into the DST4. Connect the Left and Right Main Output jacks into the Left and Right Input jacks on the power amp. Connect the speaker outputs of the amp to two cabinets (or a stereo cabinet). Power on the DST4 before turning on the power amp. Note: You can use the DST4's Direct Out to send your signal to a separate monitor or P.A. system.



# CONTROLLING THE DST4'S PROGRAM CHANGES WITH AN X-15 OR X-12 MIDI CONTROLLER



Patch the MIDI Out from your MIDI footcontroller, such as an ART X-15 or X-12, to the DST4's MIDI In jack. It is now ready to receive Program Change commands via MIDI.






# WARRANTY INFORMATION

## Limited Warranty

Warranty and Service for this unit will be provided by Applied Research and Technology, Inc. in accordance with the following warrant statement.

Applied Research and Technology, Inc. (ART) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of three years from the date of purchase. Applied Research and Technology, Inc. will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

**EXCLUSIONS:** This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

ART shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may also have other rights which vary from state to state.

For units purchased outside the United States, service will be provided by an authorized distributor of Applied Research and Technology, Inc.

## SERVICE

The following information is provided in the unlikely event that your unit requires service.

1) Be sure that the unit is the cause of the problem. Check to make sure the unit has power supplied, all cables are connected correctly, and the cables themselves are in working condition.