NAME

gaintool – audio control panel

SYNOPSIS

/usr/demo/SOUND/bin/gaintool [**–d** *device*]

DISCLAIMER

This program is furnished on an AS IS basis as a demonstration of audio applications programming.

DESCRIPTION

gaintool is an XView demonstration program that controls various characteristics of the system audio device. By default, **gaintool** operates on **/dev/audio**, though an alternative audio device may be specified by using the **–d** option. Operations performed by the **gaintool** control panel affect all audio programs using the specified device; for instance, adjusting the **Play Volume** instantly changes the output gain, regardless of which program is playing audio data. Further, **gaintool** detects audio state changes made by other programs, and updates its display accordingly, so that it keeps in sync with the current device configuration.

gaintool demonstrates an important principle involved in the integration of audio in the desktop environment: by enabling global control of important audio characteristics, it is not necessary for every application to provide an interface for these parameters. For instance, since audio output may be paused from the control panel, it is not strictly necessary that output applications display a **Pause** button of their own. However, such applications may detect that audio output has been paused, and take appropriate action.

Control Panel

Play Volume
: This slider adjusts the output volume. Volume levels between **0** and **100** may be selected, where **0** represents infinite attenuation and **100** is maximum gain.

Record Volume
: This slider adjusts the recording gain level in the range **0** to **100**.

Monitor Volume
: Monitor gain controls the amount of audio input signal that is fed through to the output port. For instance, if an audio source (such as a radio or CD-player) is connected directly to the input port, the input signal may be monitored through either the built-in speaker or the headphone jack by adjusting this slider. Note that there may be audible feedback (a high-pitched whine) if a microphone is connected to the workstation and the monitor volume is set greater than zero.

Output
: This selector switches the audio output port between the built-in speaker and the external headphone jack.

Pause Play
: This button may be used to suspend and resume audio output. If audio output is in progress when **Pause** is pressed, it is stopped immediately and subsequent output data remains queued. The button then switches to a **Resume** button that, when pressed, resumes audio output at the point that it was suspended.

If no process has the device open for output when **Pause** is pressed, **gaintool** holds the device open itself, thereby denying other processes output access. Audio programs that simply open and write to the audio device will typically be suspended when they attempt to open the device. Programs that asynchronously poll the device will discover that it is ''busy'' and may take appropriate action.

Audio Device Status Panel

gaintool also includes an audio status panel that shows the current state of the audio device. This panel is extremely useful for debugging audio applications. Selecting ''Status...'' from the panel menu brings up the status panel (this can also be done on a SPARC system by pressing the **PROPS** (L3) key). Selecting ''Done'' from the panel menu removes the panel (this can also be done on a SPARC system by pressing the **OPEN** (L7) key).

When the **Update Mode** is set to **Status Change**, the audio device status is updated only when a **SIGPOLL** signal is delivered to **gaintool** (see **audio**(7I) on a SPARC system and **sbpro**(7D) on an x86 system). Because of this, the **Active** and **Samples** indicators are not necessarily kept up-to-date. This mode is useful for application debugging in order to see exactly when audio device status changes are being reported. When the **Continuous** mode is selected, the status is continually updated.

SEE ALSO

soundtool(6), **audio**(7I)

See **audiotool** manual page in *OpenWindows Desktop Reference Manual*.

SPARC Only
audioamd(7D), **dbri**(7D)

x86 Only
sbpro(7D)