



TVA-20

SIGNAL-ACTIVATED POWER AMPLIFIER AND AUTOMATIC AB SWITCH

INTRODUCTION

A common challenge in custom installations is allowing a local source—such as audio from a bedroom TV—to play through the main-system speakers in that room. Many televisions do not have connections for external speakers—and those that do may not have enough power to drive the room's speakers. The TVA-20 is the perfect solution. A reliable signal-activated switch, the TVA-20 detects the audio signal from a local, independent source, amplifies it up to 20 watts, and switches it to that room's speakers, interrupting the main source if present. The main source continues to supply the rest of the home's speakers without interruption.

Since the TVA-20 provides its own amplifier, it compensates for the lack of amplifier power typical in smaller television sets, delivering rich, full sound through the room's speakers.

The hide-away TVA-20 installs near the equipment being switched. It accommodates speaker-level inputs from the main-system amplifier and line-level inputs from the local source (e.g., a TV's variable audio output). Its speaker-level outputs connect to the room's speaker pair. In the default mode, the main amplifier, connected to TVA-20 input "A", supplies the room's speakers. When an audio signal is present at input "B", the TVA-20 disconnects "A" and supplies source "B" to the speakers.

The TVA-20 includes a sensitivity adjustment for the "B" input trigger level (you may wish to sustain a small "B" signal without actually switching). The unit switches back to the "A" source 15 seconds after the "B" source is removed. This delay time prevents inadvertent re-switching if the "B" signal drops momentarily. If a longer delay is desired, a jumper terminal inside the TVA-20 can be set to 30 seconds.

Another method for triggering the TVA-20 is by sensing the presence of a video signal. This is accomplished by connecting the composite video output from a VCR, TV, etc. to the TVA-20's video detect jack. A video cascade jack loops the video signal connected to the video detect jack out again.

Features Include:

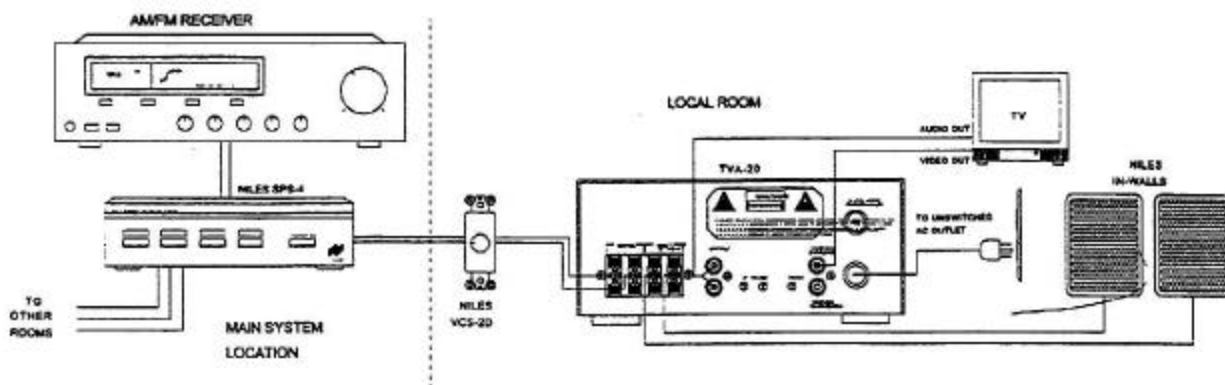
- Integrates a local, independent audio source into an existing speaker installation
- Provides 20 watts of high-quality amplification for the local source
- Switching is signal-activated, requiring no mechanical action
- Other speakers in house will not be interrupted
- Separate left and right output level controls
- Adjustable switching-trigger level
- Spring-loaded push terminals for speaker connections
- RCA jacks for local input connection

INSTALLATION CONSIDERATIONS

The TVA-20 should be installed near the components you are going to switch. An unswitched 110 volt AC outlet is required for powering the unit. Install the TVA-20 in an area with adequate ventilation.

Once adjusted, the TVA-20 will operate automatically. The unit can be tucked away behind the components if desired. No further adjustment is required.

CONNECTIONS



ADJUSTING THE TVA-20

The SENSITIVITY control adjusts the amount of audio level needed to activate the TVA-20. The threshold may be set anywhere between 15 and 150 mV. Adjusting the control clockwise will increase the sensitivity, lowering the trigger threshold. Adjusting the control counter-clockwise will decrease the sensitivity, increasing the trigger threshold.

Once the sources have been connected to the TVA-20, turn on the POWER switch, activate the source connected to the "B" input and adjust the SENSITIVITY control until the TVA-20 triggers at the desired level. You will hear the relays in the TVA-20 "click" when it is triggered.

Note: The factory setting of the SENSITIVITY control is maximum (fully clockwise). If you want the TVA-20 to trigger at the slightest input level, leave the control at this setting.

Video Detect and Cascade

A composite video output from a VCR, TV, etc. connected to the VIDEO DETECT jack will activate the TVA-20. The VIDEO CASCADE jack loops the video signal connected to the VIDEO DETECT back out again.

Delay Time

The TVA-20 switches back to the "A" source 15 seconds after the "B" source is removed. If a longer delay is desired, a jumper terminal inside the TVA-20 can be set to 30 seconds. Consult Niles Audio for more information.

Gain Controls

The GAIN controls adjust the output level of the TVA-20's left and right amplifier channels. Set the volume of the "B" source to its loudest conceivable listening level. Adjust the GAIN controls on the TVA-20 until the speakers are playing at the desired level.

SPECIFICATIONS

Power Output

20 Watts per channel (RMS) into 8 ohms at less than .05% THD
25 Watts per channel (RMS) into 4 ohms at less than .10 % THD
Both ratings from 20 Hz to 20 KHz

Frequency Response

20 Hz to 20 KHz ± 1 dB

Signal-to-Noise Ratio

> 80 dB

Input "A" Power Handling

600 Watts/channel continuous (RMS)

Minimum "B" Trigger Level

15 mV audio

Connectors

Gold-plated RCA jacks and spring-loaded push terminals

Power Requirements

120 VAC 60 Hz @ 100 Watts maximum

3-wire grounded cord

Overall Dimensions

8 1/2" Wide x 4" High x 8 1/4" Deep

Weight

5 1/2 lbs.