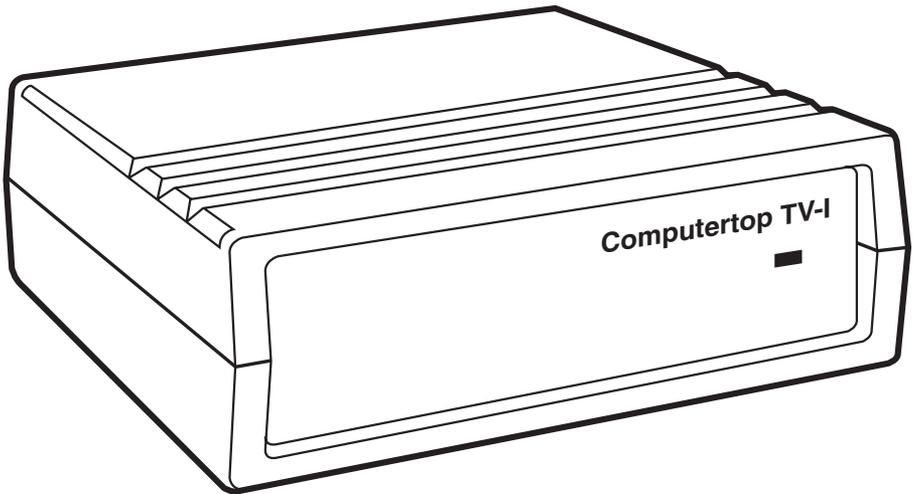




Computertop TV-I



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This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for Radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

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1. Specifications

System Requirements —	Any Macintosh with an ADB Port Any PC-compatible computer with Windows
Input —	75 Ω , F-Connector VHF: Channels 2-13 UHF: Channels 14-69 CATV: Channels A 2-65
Video Output —	NTSC Video: SN 2 Vp-p, 47dB
Audio Output —	SN 0.5 Vp-p, 40dB
Power Consumption —	1.8 watts
Power Adapter —	Input: 120V, 150mA, 60Hz Output: 15VDC, 300 mA
Storage Temperature —	14 to 122°F (-10 to +50°C)
Humidity —	80% non-condensing
Maximum Altitude —	15,000 feet (4572 m)
Size —	1.8"H x 7.0"W x 4.5"D (4.6 x 17.8 x 11.4 cm)
Shipping Weight —	6 lb. (2.7 kg)

2. Introduction

2.1 Overview

Computertop TV-I is a stand-alone television tuner that can be controlled by either a Macintosh® or an IBM® compatible computer with Windows™. Computertop TV-I accepts television broadcast signals via an external antenna or cable TV. It generates composite video and mono audio output. Video and audio can be routed to any computer-based video digitizer or directly to a monitor and audio amplifier.

Computertop TV-I software provides a remote-control interface for selecting and storing channels. When the software is running under Macintosh System 7™ or later, AppleEvents are supported. HyperCard® XCMDs for Macintosh are also supported.

2.2 Requirements

Macintosh: System 6.x or later;
Macintosh SE or newer.

Windows: Any PC Computer compatible with Windows 3.x.; Serial Port (Com1, Com2, Com3, Com4).

Compatibility: Any device that takes standard NTSC composite input.
Any Audio Digitizer that takes Line Level Audio Input.

2.3 Package Contents

1. Computertop TV-I unit.
2. Mini-DIN-4-to-mini-DIN-4 ADB cable (for use with Macintosh).
3. Mini-DIN8-to-DB25 Cable (for use with PC compatibles).
4. RCA® to RCA video cable.
5. AC power adapter.
6. Diskette with Computertop TV-I operating software.
7. This manual.

You need to supply:

1. Antenna or cable television.
2. Audio cable (see **Section 3.3**).

3. Installation

Before installing the Computertop TV-I, make sure that your computer is off.

3.1 Attaching the Television Input

The AERIAL IN jack is a standard F-type antenna jack. The Computertop TV-I accepts either cable or antenna input.

3.2 Connecting Your Computer to the Computertop TV-I

MACINTOSH USER ONLY

The ADB Input/Output ports are Apple Desktop Bus™ Mini-DIN-4 connectors—the same connectors on your keyboard and Macintosh.

Warning

Shut down the Macintosh before connecting or disconnecting ADB cables.

If you have a free ADB port on the Macintosh: Connect the supplied ADB cable to the free ADB port on your Macintosh and to either ADB port on the Computertop TV-I.

If you do not have a free ADB port on the Macintosh: Disconnect your ADB cable from the Macintosh and attach it to either ADB port on the Computertop TV-I. Your keyboard is now attached to the Computertop

TV-I. Connect the supplied ADB cable to the other ADB port on the rear panel of the Computertop TV-I. Connect the other end to your Macintosh. Whatever you type on your keyboard will pass through the Computertop TV-I to your Macintosh.

WINDOWS USER ONLY

The PC COMM PORT connector on the Computertop TV-I is a Mini-DIN-8 connector. Connect one end of the supplied Mini-DIN-8-to-DB25 cable to the PC COMM PORT connector on the Computertop TV-I and the other to either Com Port 1 or 2 on your PC. If your computer has DIP switch-selectable ports, use the computer instruction manual to set the DIP switch.

NOTE: The serial port of some computers may require a Null Modem Adapter.

3.3 Video and Audio Output

VIDEO

The Video Output can be routed to any device that accepts composite video. If you are using a video digitizer, use the supplied composite video cable to connect the VIDEO OUT jack on the tuner to the composite input jack on the digitizer. If you are using another device, you will need to supply the appropriate cable.

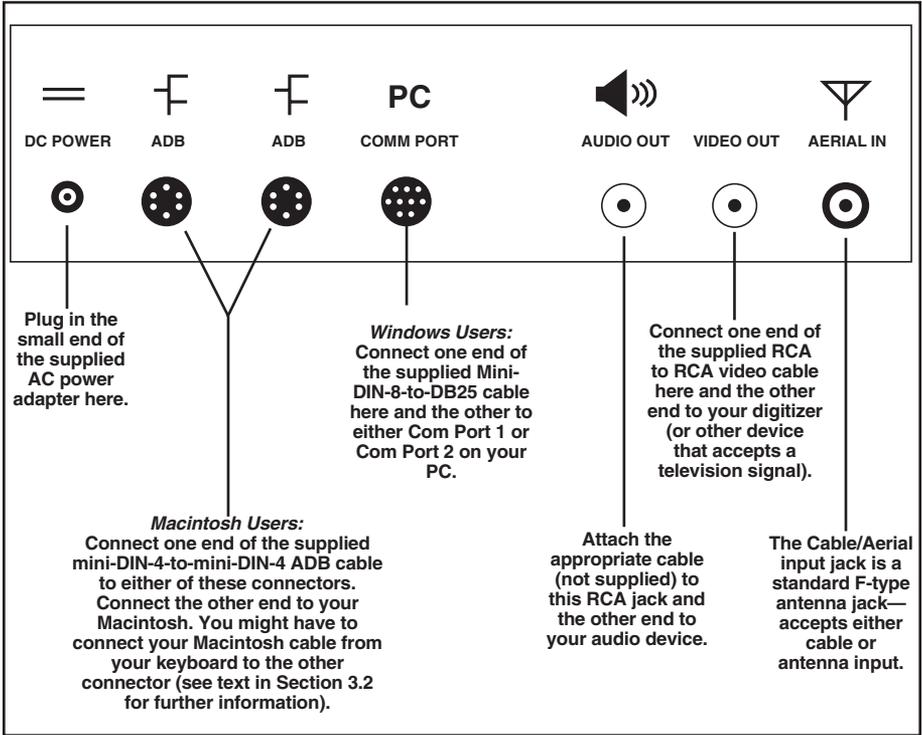


Figure 1. The rear panel of the Computertop TV-I.

AUDIO

The Audio Output can be routed to any device that accepts line level audio. Use an RCA to 3.5mm audio cable to connect the AUDIO OUT jack on the Computertop TV-I to an audio device. If you are using the Macintosh microphone input (available on newer Macintosh computers), you will need a Line Level to Microphone Level Adapter cable, as described in your Macintosh manual. If you are using

another type of device, you need to supply the appropriate cable.

3.4 Attaching the AC Power Adapter

Uncoil the cord attached to the supplied AC adapter. Plug the small end into the 15V DC POWER connector on the Computertop TV-I. Plug the transformer into a standard AC socket. The LED on the front panel will be lit to indicate that the Computertop TV-I has power.

3.5 Loading Software

MACINTOSH USER ONLY

Insert the provided disk “Computertop TV-I disk” into your computer. Drag the application “Computertop TV-I” to your hard drive. We advise that you do *not* drag the “Computertop TV-I Daemon” or “Computertop TV-I XCMDs” icon to your hard drive. See **Section 4.6** and **4.7** for more information.

WINDOWS USER ONLY

1. Make a directory on your hard drive entitled “comp_tvi.”
2. Insert the provided disk “Computertop TV-I disk” into your computer.
3. There are two files on the disk: “bwcc.dll” and “comp_tvi.exe.” Copy these to the directory you just made.

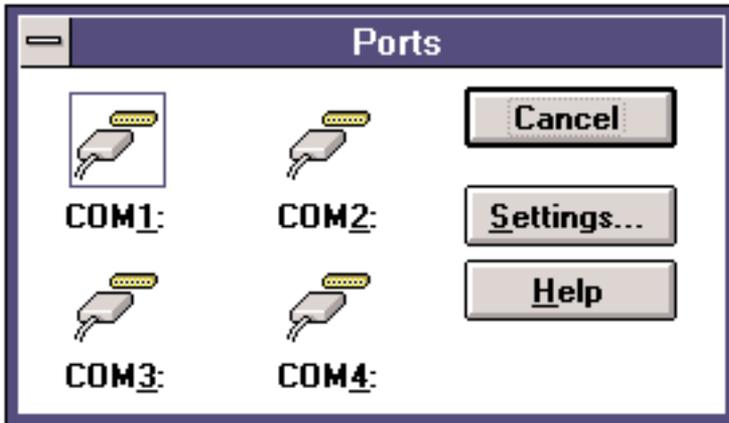


Figure 2. After you open the “Port” control panel, select the port attached to the Computertop TV-I. In this illustration, “COM1” has been chosen.

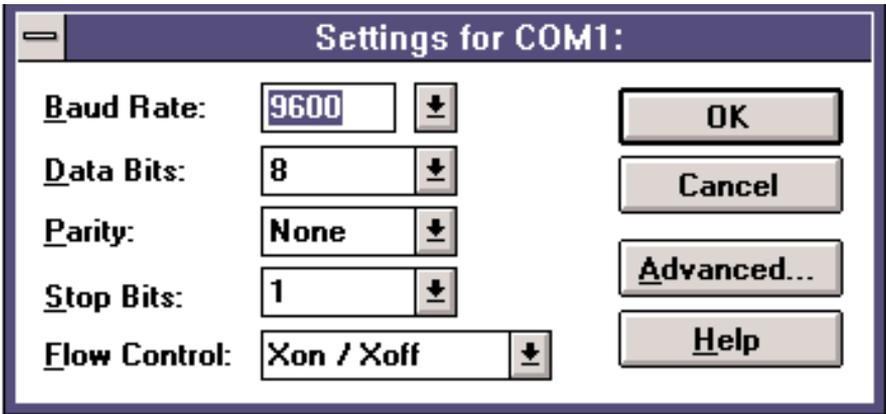


Figure 3. These are the settings for COM1—the Com port attached to the Computertop TV-I.

4. Open the “Control Panel” by double-clicking on it.
5. Open the “Ports” control panel by double-clicking on it. See Figure 2.
6. Select the port that is attached to the Computertop TV-I.
7. Click on the “Settings” button.
8. Make sure that the settings of your Com port match those in Figure 3. You might get an error message if this port is in use. Attach the ComputerTop TV-I to a different serial port.

4. Operation

4.1 Getting Started

Launch the Computertop TV-I application by double-clicking on its icon (Macintosh) or on “comp_tvi.exe” (Windows).

The main window of the Computertop TV-I application will appear on your computer desktop. It is a remote-control interface for selecting and storing channels.



Figure 4. Application Icon.

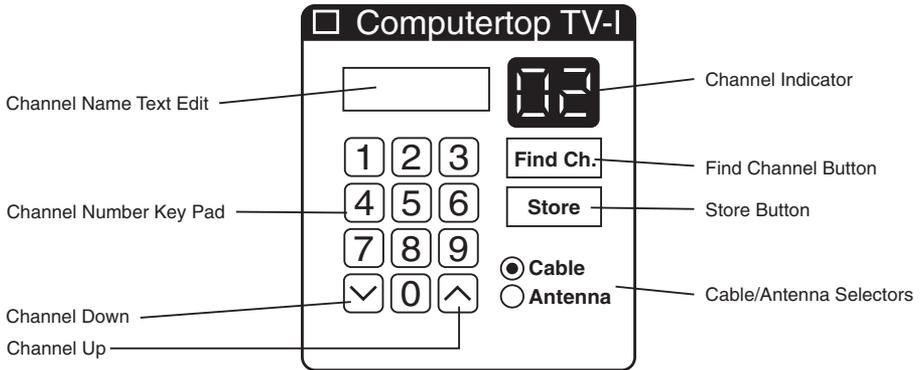


Figure 5. The remote-control interface.

The Computertop TV-I cannot distinguish between cable and antenna frequencies, so it is important that you set the **Cable/Antenna Selectors** to reflect the incoming signal. Just click on the appropriate circle.

The **Channel Indicator** displays the current channel number that is tuned in.

The **Channel Number Key Pad** allows selection of a channel number by clicking on the channel number(s) desired.

Click on the **Channel Down** and **Channel Up** keys to select the next channel in sequence.

The **Channel Name Text Edit** has two purposes: associating a name with a channel and selecting a channel by name. These functions are covered in more detail in **Sections 4.2 and 4.3.**

4.2 Storing Channel Names

Initially there are no channel names stored in the Computertop TV-I's memory. To name a channel, follow these steps:

- Select the appropriate input (cable or antenna). Each channel may have two names: one for cable, one for antenna.
- Select the appropriate channel using the **Channel Number Key Pad**. If there is an existing name for this channel it will appear in the **Channel Name Text Edit**.
- Select the **Channel Name Text Edit** by clicking on it.
- Type a new channel name.
- Click on the **Store** button.

The new name is now associated with the selected channel.

4.3 Channel Selection by Name

- Select the appropriate input (cable or antenna). Remember, each channel may have two names: one for cable, one for antenna.
- Select the **Channel Name Text Edit** by clicking on it.
- Type the first few letters of the desired channel's name.
- Click on the **Find Channel** button. If no channel names match, the computer will beep.

4.4 Preferences File

When you quit the application, the Computertop TV-I application preserves the channel number, Cable/Antenna setting, and window location in a preferences file.* These settings are restored when the application starts up.**

***Note:** If the system disk is locked or full, the settings cannot be saved.

****Note:** The tuner begins generating video and audio from cable Channel 2 as soon as it has power. The Computertop TV-I will not reflect the settings in the preference file until you start the application by double-clicking on its icon.

4.5 Keyboard Equivalents

Most buttons on the remote-control interface have a keyboard equivalent:

The **Enter** or **Return** key is the same as clicking on the **Find Channel** button.

The **Tab** key toggles the focus between **Channel Name Text Edit** and **Channel Number Key Pad**.

When the focus is on the **Channel Name Text Edit**, a blinking cursor and the name of the channel (if a name has been stored) appear. See Figure 6.

- The arrow keys move the cursor to the left or right.

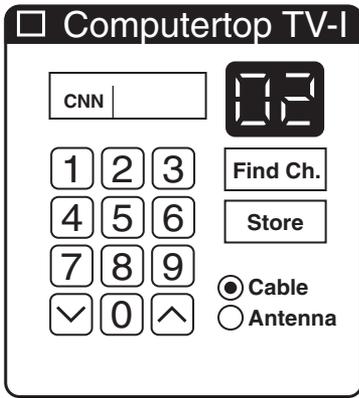


Figure 6. The focus is on Channel Name Text Edit (see Section 4.5).

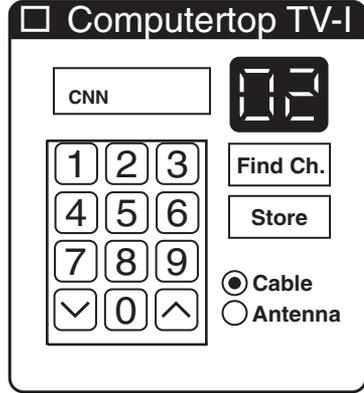


Figure 7. The focus is on Channel Number Key Pad (see Section 4.5).

- Pressing on the shift key and the arrow key will highlight the character to the left or right.

When the focus is on the **Channel Number Key Pad**, a rectangle appears around it. See Figure 7.

- The **up arrow** key is equivalent to the **Channel Up** button.
- The **down arrow** key is equivalent to the **Channel Down** button.
- The numeric keys are equivalent to the numeric buttons.

4.6 Macintosh Menus

These menus will appear when the focus is on **Channel Name Text Edit**. See Figure 6 and **Section 4.5**.

FILE

Close—Closes the active window. If no windows remain open, Computertop TV-I quits.

Default Settings—Removes all channel names from the Computertop TV-I memory and sets the channel to Antenna channel 2.

Quit—Closes the remote-control interface and any desk accessories that are open and quits the Computertop TV-I application.

EDIT

System 7 users may use any of the Edit commands without restriction.

In order for System 6 users to use the Edit commands (except **Select All**), a Desk Accessory must be open (e.g., the alarm clock), and MultiFinder® *cannot* be active. The **Select All** command does not have these restrictions.

Undo—Reverses last Edit command.

Cut—Removes the selected text from the Channel Name Text Edit to the Clipboard.

Copy—Copies the selected text from the Channel Name Text Edit to the Clipboard.

Paste—Replaces the selected text in the Channel Name Text Edit with text from the Clipboard.

Clear—Removes the selected text from the Channel Name Text Edit.

Select All—Selects all text in the Channel Name Text Edit.

4.7 AppleEvent Support

This section applies to AppleScript™ developers with a Macintosh System 7 or later release. Most users will not need or use this information.

When you use System 7 or later release, both the Computertop TV-I Application and the Computertop TV-I Daemon support AppleEvents for getting and setting channels.

Computertop TV-I Daemon is a “faceless” AppleEvent engine for controlling the Computertop TV-I. It has no human interface, and operates invisibly in the background. Its only function is to receive AppleEvents from other applications, such as AppleScript, Excel™ 4.0, and MPW® 3.3. If you should accidentally double-click on the icon, you will need to reboot your computer.

The Computertop TV-I supports the AppleEvents listed in the table that follows (pages 14 through 16).



Figure 8. The AppleEvent (Daemon) Icon.

Events	Parameters	Description
Quit		<ul style="list-style-type: none">• Quits the application
Get Data		<ul style="list-style-type: none">• Get the data from an object
Parameters:		
	Direct Object	<ul style="list-style-type: none">• The object whose data is to be retrieved• typeObject• Required
	Return Type	<ul style="list-style-type: none">• Return the data as this type• typeType• Optional
Reply Parameters:		
	Return Value	<ul style="list-style-type: none">• The data• typeWildcard• Required
	Error Number	<ul style="list-style-type: none">• The error number if any• typeLongInteger• Optional (absence indicates no error)
Get Data Size		<ul style="list-style-type: none">• Get the size of the data from an object
Parameters:		
	Direct Object	<ul style="list-style-type: none">• The object whose data is to be retrieved• typeObject• Required
	Return Type	<ul style="list-style-type: none">• Return size of the data as this type• typeType• Optional
Reply Parameters:		
	Return Value	<ul style="list-style-type: none">• The size• typeLongInteger• Required
	Error Number	<ul style="list-style-type: none">• The error number if any• typeLongInteger• Optional (absence indicates no error)

Events	Parameters	Description
Set Data		<ul style="list-style-type: none"> • Sets an object's data
Parameters:		
	Direct Object	<ul style="list-style-type: none"> • The object whose data is to be set • typeObject • Required
	Data	<ul style="list-style-type: none"> • The value to set • typeWildcard • Required
Reply Parameters:		
	Error Number	<ul style="list-style-type: none"> • The error number if any • type LongInteger • Optional (absence indicates no error)

Objects & Properties	Type	Permission	Description
Application			
Best Type	typeType	Read Only	The Best descriptor type.
Default Type	typeType	Read Only	The default descriptor type.
Class	typeType	Read Only	The class.
Name	typeChar	Read Only	The name.
Is Front Process	typeBoolean	Read Only	Is the active application.
Channel	typeShort	Read/Write	The current channel number. Get Data returns the current channel, Set Data selects a new channel. When writing to this property, typeChar may be used to select a channel by name.
Name of Channel	typeChar	Read/Write	The name of the current

Objects & Properties	Type	Permission	Description
			channel. Get Data returns the name of the current channel, SetData renames the current channel.
Input Source	enumSources	Read/Write	The current television signal source.
Minimum Antenna Channel	typeShort	Read Only	The smallest tunable channel from an antenna source.
Maximum Antenna Channel	typeShort	Read Only	The largest tunable channel from an antenna source.
Minimum Cable Channel	typeShort	Read Only	The smallest tunable channel from a cable source.
Maximum Cable Channel	typeShort	Read Only	The largest tunable channel from a cable source.

Enumerations	Type	Description
Sources	enumSources	Television signal sources
Antenna	enumAntenna	Aerial antenna signal
Cable	enumCable	Cable signal

4.8 XCMDs

This section applies only to Macintosh XCMD users only.

The Computertop TV-I offers the functions that follow on pages 17 through 19.

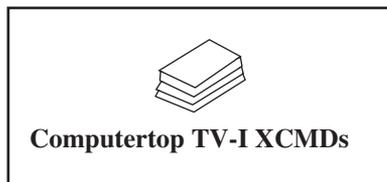


Figure 9. The HyperCard XCMDs Icon.

Selector	Parameters	Description
GetChannel		<ul style="list-style-type: none"> • Returns the current channel number.
Parameters:	None	
Reply Parameters:	Channel Number	<ul style="list-style-type: none"> • The current channel number.
SetChannel		<ul style="list-style-type: none"> • Sets channel to the given channel numbers.
Parameters:	Channel Number	<ul style="list-style-type: none"> • The desired channel number.
Reply Parameters:	None	
GetInput		<ul style="list-style-type: none"> • Returns the current television signal source.
Parameters:	None	
Reply Parameters:	Input Source	<ul style="list-style-type: none"> • The current source (Antenna or Cable).

Selector	Parameters	Description
SetInput		<ul style="list-style-type: none">• Sets channel to the given channel number.
Parameters:	Input Source	<ul style="list-style-type: none">• The desired source (Antenna or Cable).
Reply Parameters:	None	
SetChannelByName		<ul style="list-style-type: none">• Sets channel to the channel with the given channel name.
Parameters:	Channel Name	<ul style="list-style-type: none">• The name of the desired channel.
Reply Parameters:	None	
GetChannelName		<ul style="list-style-type: none">• Returns channel name of given channel number.
Parameters:	Channel Number	<ul style="list-style-type: none">• The channel number to get the name.
	Input source	<ul style="list-style-type: none">• The source (Antenna or Cable); Antenna and Cable channels may have different names for the same channel number.
Reply Parameters	Channel Name	<ul style="list-style-type: none">• The channel name.

Selector	Parameters	Description
StoreChannelName	• Replaces the designated channel name with a new name.	
Parameters:	Channel Number	• The channel number to name.
	Input Source	• The source (Antenna or Cable); Antenna and Cable channels may have different names for the same channel number.
	Channel Name	• The new channel name.
Reply Parameters:	None	
ChannelUp		• Sets channel to the next higher channel number with an active signal.
Parameters:	None	
Reply Parameters:	None	
ChannelDown		• Sets channel to the next lower channel number with an active signal.
Parameters:	None	
Reply Parameters:	None	



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