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# CARVER

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## CT-26v A/V Preamplifier/Tuner Owner's Manual

# CARVER



## 1. Safety Instructions

1. Read Instructions — All the safety and operation instructions should be read before the Carver Component is operated.

2. Retain Instructions — The safety and operating instructions should be kept for future reference.

3. Heed Warnings — All warnings on the Component and in these operating instructions should be followed.

4. Follow Instructions — All operating and other instructions should be followed.

5. Water and Moisture — The Component should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. Ventilation — The Component should be situated so that its location or position does not interfere with its proper ventilation. For example, the Component should not be situated on a bed, sofa, rug, or similar surface that may block any ventilation openings; or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through ventilation openings.

7. Heat — The Component should be situated away from heat sources such as radiators, or other devices which produce heat.

8. Power Sources — The Component should be connected to a power supply only of the type described in these operation instructions or as marked on the Component.

9. Power Cord Protection — Power-supply cords should be routed so that they are not likely to be walked upon or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit the Component.

10. Cleaning — The Component should be cleaned only as recommended in this manual.

11. Non-use Periods — The power cord of the Component should be unplugged from the outlet when unused for a long period of time.

12. Object and Liquid Entry — Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the Component.


13. Damage Requiring Service — The Component should be serviced only by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has spilled into the Component; or
- C. The Component has been exposed to rain; or
- D. The Component does not appear to operate normally or exhibits a marked change in performance; or
- E. The Component has been dropped, or its

cabinet damaged.


14. Servicing — The user should not attempt to service the Component beyond those means described in this operating manual. All other servicing should be referred to qualified service personnel.

15. Power Lines — An outdoor antenna should be located away from power lines.



CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN




CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK

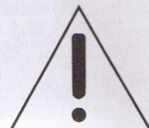
DO NOT REMOVE COVER (OR BACK)

NO USER-SERVICEABLE PARTS INSIDE

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL




The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

PORTABLE CART WARNING



Carts and stands - The Component should be used only with a cart or stand that is recommended by the manufacturer. A Component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the Component and cart combination to overturn.



16. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, un prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans laisser aucune partie à découvert.

17. Grounding or Polarization — Precautions should be taken so that the grounding or polarization means of the Component is not defeated.

18. Internal/External Voltage Selectors — Internal or external line voltage selector switches, if any, should only be reset and re-equipped with a proper plug for alternate voltage by a qualified service technician. See an Authorized Carver Dealer for more information.

19. Attachment Plugs for Alternate Line Voltage (Dual voltage models only) — See your Authorized Carver Dealer for information on the attachment plug for alternate voltage use. This pertains to dual-voltage units only.

This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

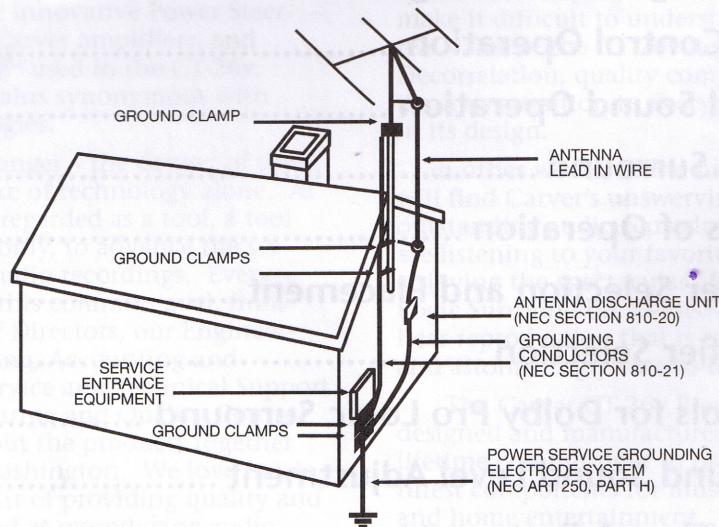
ATTENTION — Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.

**WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

**CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.**

**ATTENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.**

**EXAMPLE OF ANTENNA GROUNDING ACCORDING TO NATIONAL ELECTRICAL CODE INSTRUCTIONS CONTAINED IN ARTICLE 810—"RADIO AND TELEVISION EQUIPMENT"**



**NEC—NATIONAL ELECTRICAL CODE.**

**NOTE TO CATV INSTALLER**

This reminder is to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

**OUTSIDE ANTENNA GROUNDING**

If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the lead-in wire to an antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure above.



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## 2. Prelude

Your choice of Carver Corporation's CT-26v A/V Preamplifier/Tuner carries with it a heritage of over 15 years of audio and video research, development and design refinements. Carver engineers make use of the latest advances in electronics manufacturing techniques to provide state-of-the-art high-value audio products which emphasize innovative technologies and features at an affordable price. Designed to offer the ultimate in sonic performance and system flexibility, the CT-26v serves as an appropriate control center for the finest home entertainment systems.

### About Carver Corporation

Carver has its roots in the Pacific Northwest, and established itself in the early 80s as a major force among audio enthusiasts with the introduction of such products as the C-4000 preamplifier with Auto-Correlator™ and Sonic Holography™, the TX-11 with ACCD™ (Asymmetrical Charge-Coupled Detector) and the M-1.5 stereo power amplifier, one of the most powerful amplifiers available at the time for home hi-fi use. Through the years, other useful features have been developed and implemented as technology has grown. Carver was one of the first to introduce products for home theater applications with the landmark CT-17 Preamp/Tuner Dolby Pro Logic decoder. We knew Home Theater was going to become popular, so we continued to develop new technologies for Home Theater, including the innovative Power Steering™ system used in Carver amplifiers, and Infinite Decorrelation™ used in the CT-26v. The Carver name remains synonymous with leading edge technologies.

But therein lies a danger – the danger of using technology for the sake of technology alone. At Carver, technology is regarded as a tool, a tool used for one purpose only, to advance the science of reproducing audio recordings. Every Carver employee has this common goal, from our CEO and Board of Directors, our Engineering, Sales and Marketing, Accounting and Finance, Customer Service and Technical Support Staff to the Manufacturing and Quality Control people who actually put the products together here in Lynnwood, Washington. We love music, and the vigilant pursuit of providing quality and reliable products aimed at reproducing audio with absolute musical accuracy – whether it be LP, CD or cinema soundtrack – is our corporate vision.

### Infinite Decorrelation™

Dolby Pro Logic Surround Sound systems provide two surround (rear) channels, but the same signal is sent to both channels. This signal is a fully correlated, mono signal. This can cause lack of left/right directionality for signals that are placed behind the listener and also allows some signals to sound as if they are in your head rather than spatially diffuse. LucasFilm THX® systems use what they call a decorrelation circuit to minimize the mono effect of the surround channels. This virtually eliminates the sound from ever appearing to image in your head and creates a very satisfying surround envelopment. At Carver Corporation we have experimented with various ways to further increase the sense of sound field size and directionality. We call this new technique **Infinite Decorrelation™**, which achieves the maximum surround space and directional cues. The result is subtle, but quite effective. Virtually any rear channel event sounds better, bigger, more lifelike. Music also has a much more realistic sound space when experienced with Infinite Decorrelation.

In addition to the Dolby Pro Logic decoder, your CT-26v offers three other surround modes to provide concert-hall realism to the music in your living room.

The digital frequency-synthesis AM/FM tuner provides up to 16 preset station memory to quickly and easily select your favorite stations.

The features offered by the CT-26v were carefully selected to provide enough flexibility to enjoy listening to music or Dolby Surround encoded soundtracks, but not so complicated to make it difficult to understand and operate. The real value of the CT-26v lies inside, with Infinite Decorrelation, quality components and our meticulous attention to every manufacturing detail in its design.

In other words, at the heart of the CT-26v you will find Carver's unswerving commitment to outstanding audio reproduction. Whether you are listening to your favorite music recording or enjoying the spectacular effects of Dolby Pro Logic Surround on a video soundtrack, you will hear reproduction that is clear, full, spacious, and astonishingly true-to-life.

The Carver CT-26v Preamplifier/Tuner was designed and manufactured by people with a lifetime commitment to providing the world's finest components for music reproduction and home entertainment. Thanks for placing your confidence in Carver. We know your new preamp/tuner will provide many years of listening enjoyment.

If you have access to the Internet, you can check out the full line of Carver products and company announcements on our World Wide Web page (<http://www.carver.com>).



### 3. CT-26v Features

- ☐ Dolby Pro Logic surround with 5 modes and adjustable delay
- ☐ Phono Input Stage
- ☐ **Infinite Decorrelation™** for a wider rear soundstage
- ☐ 3 audio inputs, 2 audio/video inputs, 1 composite video output
- ☐ Digital frequency-synthesis AM/FM tuner
- ☐ Random presetting of up to 16 AM/FM stations
- ☐ Gold-plated RCA input/output jacks
- ☐ Easy-to-read fluorescent display lets you confirm settings at a glance
- ☐ Bass and treble tone controls and balance control
- ☐ Motor-driven master volume control can be operated from the remote control
- ☐ Two AC outlets, one switched and one unswitched
- ☐ Infrared Remote control
- ☐ Removable handles for placement in 17" wide cabinet space (with trim end caps)

### 4. Unpacking and Paperwork

Carefully unpack your CT-26v and keep the original carton and packing materials for future moving, shipment, or long-term storage. **Keep this manual close at hand for easy reference while installing and learning how to operate the CT-26v.** In the long run, reading the manual will save time and perhaps avoid some needless frustration.

After opening the box, please check for any visible signs of damage that were not apparent from the outside of the box. If you do encounter what appears to be concealed damage, please consult your Carver Dealer before proceeding to further unpack or install the unit.

#### Important Paperwork

Make sure to save your sales receipt. Your receipt is required to establish the duration of your Limited Warranty, and for insurance purposes. Next, make a note of the serial number which is located on the back of the CT-26v. Record it in the space provided below for convenient reference.

Model: **CT-26v**

Serial Number: \_\_\_\_\_

Purchased at: \_\_\_\_\_

Date: \_\_\_\_\_

Finally, take a moment to fill out the Customer Registration Card packed with the CT-26v and return it to Carver. This provides us with important information about you, our valued customer.

#### Accessories

The accessories provided with the CT-26v include:

- AM Loop Antenna
- FM Dipole Antenna
- RH-88 Remote Control
- 2 AAA Batteries (for remote)
- 2 End Cap Spacers



## 5. Installation

### Location and General Precautions

Observe the following precautions when choosing a location for your CT-26v:

- Do not expose the unit to rain or moisture.
- Place on a vibration-free surface.
- Protect from prolonged exposure to direct sunlight.
- Avoid excessive exposure to extreme cold or dust.
- Avoid exposure to electrostatic discharges.
- Do not place heavy objects on the unit.
- **Protect from heat and allow adequate ventilation.** Place away from direct sources of heat, such as heating vents and radiators. All components produce some heat during operation, so make sure that ventilation holes are not covered, and that air is allowed to circulate freely behind, beside, and above the unit. Excessive heat is the single greatest source of both short-term and long-term component failure.

If a fluid or foreign object should enter the unit, disconnect the power plug and contact an authorized dealer or service center. Do not pull out the plug by pulling on the cord; grasp the plug firmly.

### What You Will Need

No connecting cables are supplied; appropriate connecting cables are normally supplied with source components. Additional cables are available from your Carver dealer.

If installing in a cabinet, provide sufficient cable slack to allow turning the CT-26v around 180° to make all connections. If this is not possible, a small lamp and hand mirror may be helpful in making some connections.

### Connection Tips

- Make sure all components are OFF before making any connections. It's a good idea to plug in your AC power cord last to avoid accidentally turning on the unit while installing.
- Make sure that "left is hooked to left and right is hooked to right" at each connection. The obvious way to assure this is to assign one hook-up cord plug color to left and the other to right. Generally RED is used to signify RIGHT. White, grey or black then represents left.
- Whenever possible, keep power cords away from signal cables (inputs from CD player, tape deck, etc.) to prevent hum. While hum is less of a problem today than it was in the past, noise can still find its way into your system if a component's power cord becomes too intimately involved with a hook-up cable. Carver components' power cords and convenience outlets are all on the right side of the chassis (when viewed from the back). This allows you to bundle all the component power cords and keep them separate from signal connections.
- Choose reliable hook-up cables (also called interconnects, patch cords or RCA cables). There are lots of different grades of hook-up cables. Much has been written concerning the benefits of relatively expensive "audiophile" cable compared to the average hookup cable that is often supplied with audio source components. We recommend that this issue be discussed with your Carver dealer, who can help you determine the best choice for your own individual system.

Before you send a component in for service, swap hook-up cables to see if they're the culprit.

- For video connections, use connecting cables that are specifically designed for video. Video signals are far higher in frequency than audio and can often benefit from a higher quality interconnect. Several companies make specialized audio/video cables with two audio and one video conductor. Consult your Carver dealer.
- **DON'T PANIC!** While there are more than thirty possible connections on the back of the CT-26v, matching them up with your existing equipment is simple if you make the connections methodically, one at a time. This is the safest way to avoid cross-connecting channels or confusing signal inputs with outputs.



## Rear Panel Connections

### ANTENNA CONNECTIONS

#### A. Antenna Terminals

Connect the AM and FM antennae here. See Figure 7 on page 18 for antenna connections.

### AUDIO INPUTS AND OUTPUTS

#### B. PHONO input jacks

Connect to the output jacks of a turntable equipped with a moving magnet (MM) cartridge. Connect the turntable's ground wire to the **GND** terminal (C).

**Note:** If you hear a humming sound or other noise when the ground wire is connected, try disconnecting the ground wire.

#### D. CD input jacks

Connect to the audio output jacks of a CD player.

#### E. TAPE input jacks

Connect to a cassette deck's output (PLAY) jacks.

#### F. DVD/DBS audio input jacks

Connect to the audio output jacks of a laserdisc player, DVD or Satellite System.

#### G. VCR audio input jacks

Connect to a VCR's audio output jacks.

#### H. TAPE audio output jacks

Connect to the audio input jacks of a cassette deck.

**Note:** The TAPE INPUT/OUTPUT jacks can be connected to the analog jacks of any cassette deck, reel-to-reel, DAT, MD player or DCC deck.

#### I. VCR audio output jacks

Connect to the audio input jacks of a VCR.

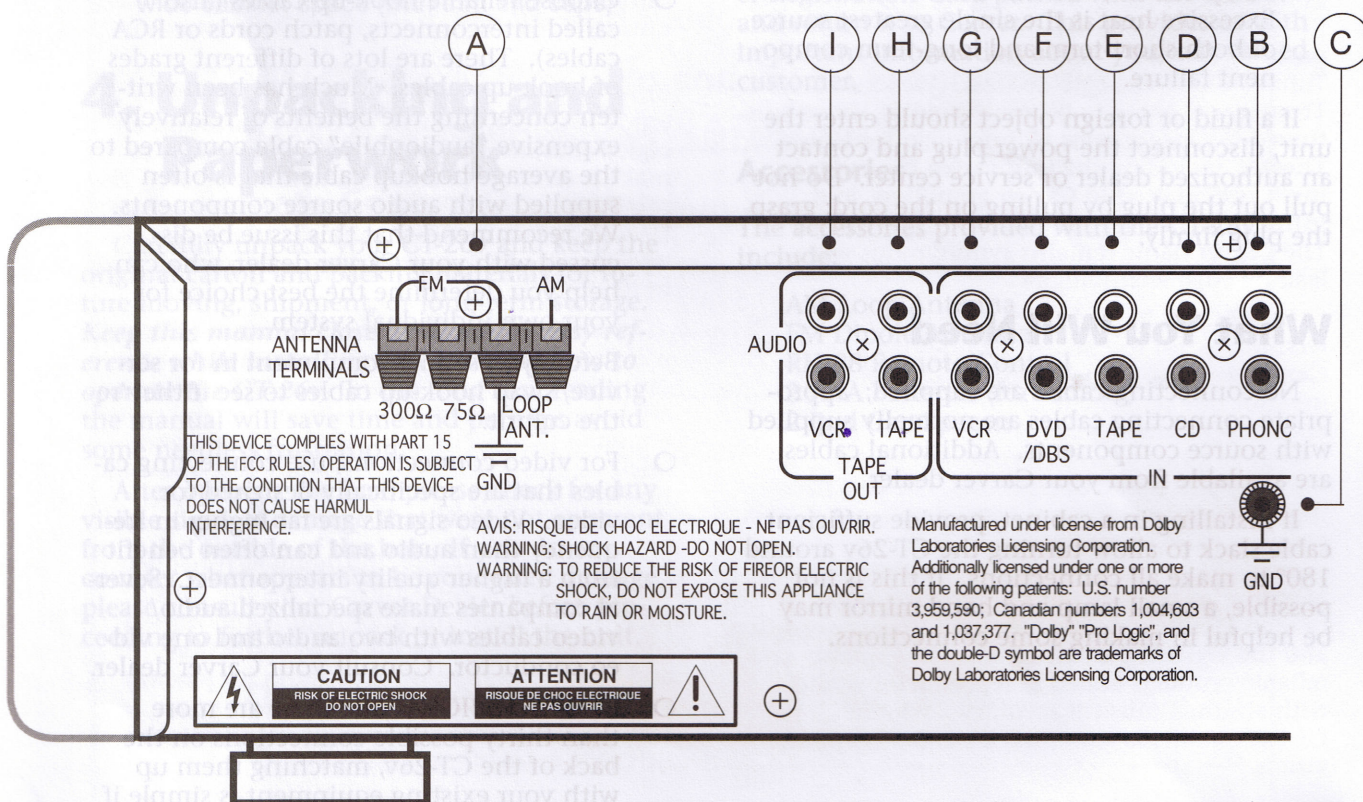


Figure 1. CT-26v Rear Panel View



## VIDEO INPUTS AND OUTPUTS

### J. DVD/DBS video input jack

Connect to the video output jack of a laserdisc player, DVD or Satellite System.

### K. VCR video input/output jacks

Connect the **IN** jack to a VCR's video output jack and connect the **OUT** jack to the VCR's video input jack.

### L. MONITOR output jack

Connect to a TV's video input jack. This jack routes the video signal from the video source selected to your TV monitor.

## MAIN AUDIO OUTPUTS

### M. FRONT output jacks

Connect to the input jacks of the amplifier used to drive the main left and right speakers.

### N. SURROUND output jacks

Connect to the input jacks of the amplifier used to drive the surround (rear) speakers.

### O. CENTER output jack

Connect to the input jack of the amplifier used to drive the center channel speaker.

### P. SUBWOOFER output jack

A connection for adding a subwoofer speaker to your system. This may be desirable particularly if your main (FRONT) speakers are lacking in low frequency response.

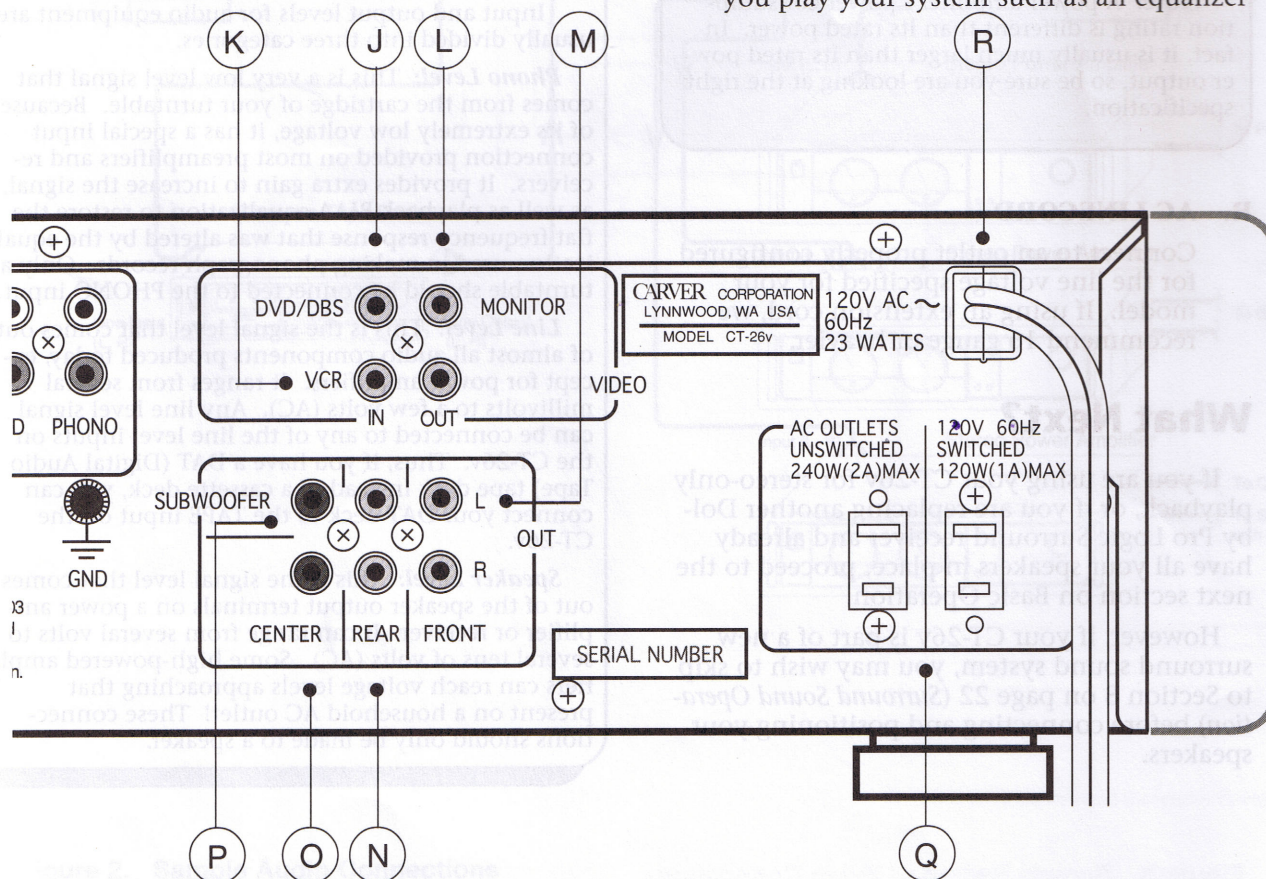
*This is a full-range output* (no internal crossover provided). Connect to the input jack of a powered subwoofer or to an electronic crossover/amplifier combination used to drive a subwoofer speaker.

## OTHER CONNECTIONS

### Q. AC OUTLETS

Connect the power cords of components such as a cassette deck and CD player to these outlets.

Both **SWITCHED** and **UNSWITCHED** outlets are provided. The one marked **SWITCHED** provides power only when the CT-26v is turned on and is useful for components which you use every time you play your system such as an equalizer





or your most-used sound source. The one marked UNSWITCHED is always live as long as the CT-26v is plugged into a live outlet. A component connected here may be left on permanently, or may be switched off with its own power switch.

**Note:** In order to avoid potential turn-on thumps, any program source plugged in here should be switched on BEFORE the CT-26v is turned on.

Be sure the total power consumption of the connected components does not exceed the values listed below:

**SWITCHED 120W MAX TOTAL**  
**UNSWITCHED 240W MAX TOTAL**

#### CT-26v switched outlet warning

Do not plug a power amplifier into the CT-26v switched outlets. Make sure the total power consumption of any other components plugged into these outlets does not exceed 120 watts.

#### CT-26v unswitched outlet warning

If you plug a power amplifier into this outlet, be sure not to exceed the 240 watt rating of the unswitched outlet. Consult the power amplifier's owner's manual to determine its overall power consumption if in doubt.

**Note:** A power amplifier's power consumption rating is different than its rated power. In fact, it is usually much larger than its rated power output, so be sure you are looking at the right specification.

## R. AC LINECORD

Connect to an outlet properly configured for the line voltage specified for your model. If using an extension cord, we recommend 16 gauge or heavier.

## What Next?

If you are using your CT-26v for stereo-only playback, or if you are replacing another Dolby Pro Logic Surround receiver and already have all your speakers in place, proceed to the next section on Basic Operation.

However, if your CT-26v is part of a new surround sound system, you may wish to skip to Section 8 on page 22 (*Surround Sound Operation*) before connecting and positioning your speakers.

## System Configurations

The following pages contain drawings of typical connections that you might make in your installation. These drawings demonstrate how each of the inputs and outputs on the rear panel of the CT-26v are interconnected with other audio and video components.

Your particular installation will probably not use all of the connections shown, although if you are using the CT-26v as the center of a full-fledged audio/video system you will use many or most of the connections shown.

The inputs and outputs on the CT-26v are labeled to correspond to the most common audio and video components in use today. However, it is perfectly okay to connect components other than those indicated by the labels to unused inputs or outputs, so long as they are line level signals.

### A note on input/output levels

Input and output levels for audio equipment are usually divided into three categories.

**Phono Level:** This is a very low level signal that comes from the cartridge of your turntable. Because of its extremely low voltage, it has a special input connection provided on most preamplifiers and receivers. It provides extra gain to increase the signal, as well as playback RIAA equalization to restore the flat frequency response that was altered by the equalization used in making phonograph records. Only a turntable should be connected to the PHONO input.

**Line Level:** This is the signal level that comes out of almost all audio components produced today, except for power amplifiers. It ranges from several millivolts to a few volts (AC). Any line level signal can be connected to any of the line level inputs on the CT-26v. Thus, if you have a DAT (Digital Audio Tape) tape deck instead of a cassette deck, you can connect your DAT deck to the TAPE input on the CT-26v.

**Speaker Level:** This is the signal level that comes out of the speaker output terminals on a power amplifier or receiver. It can range from several volts to several tens of volts (AC). Some high-powered amplifiers can reach voltage levels approaching that present on a household AC outlet! These connections should only be made to a speaker.



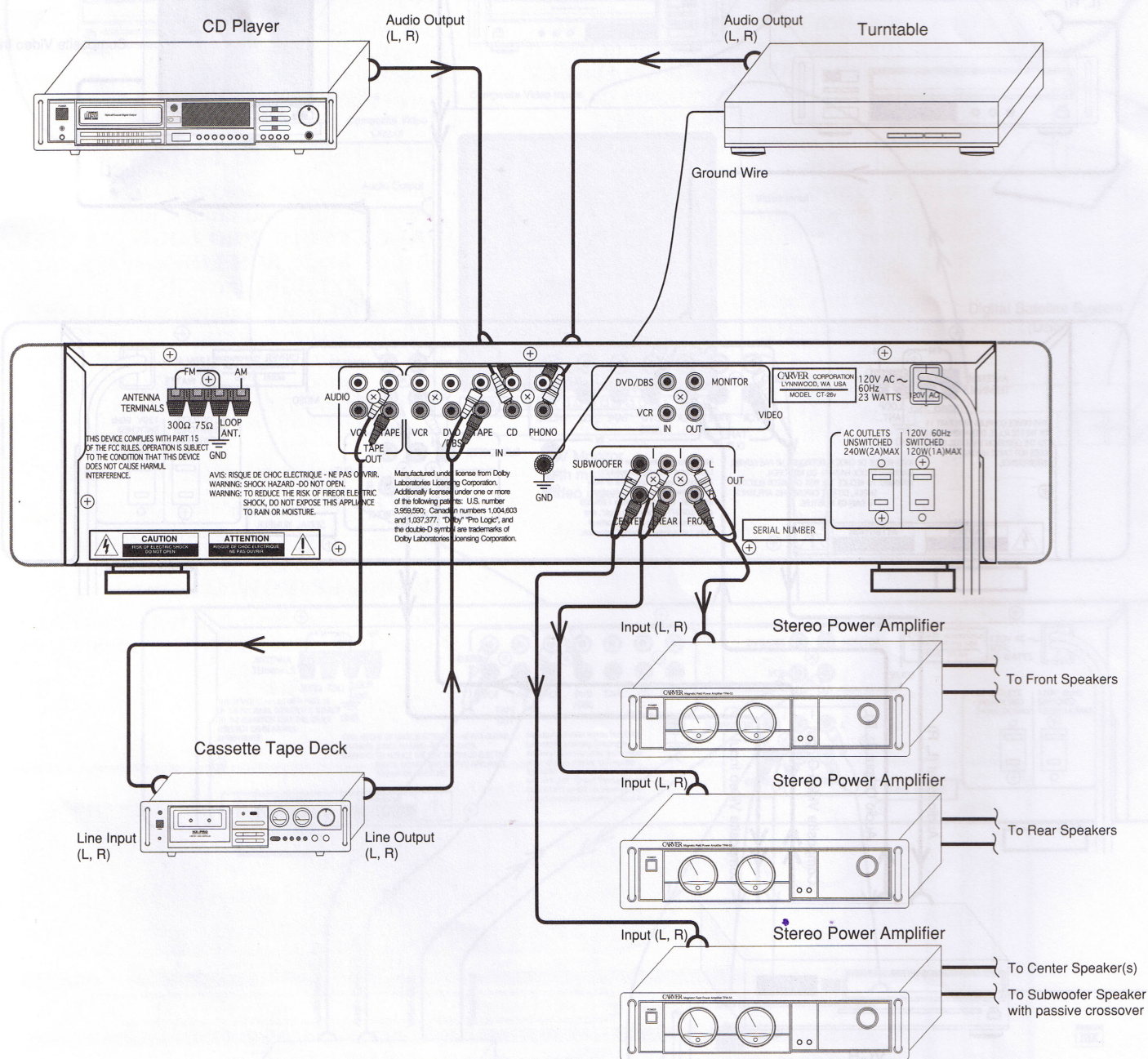


Figure 2. Sample Audio Connections



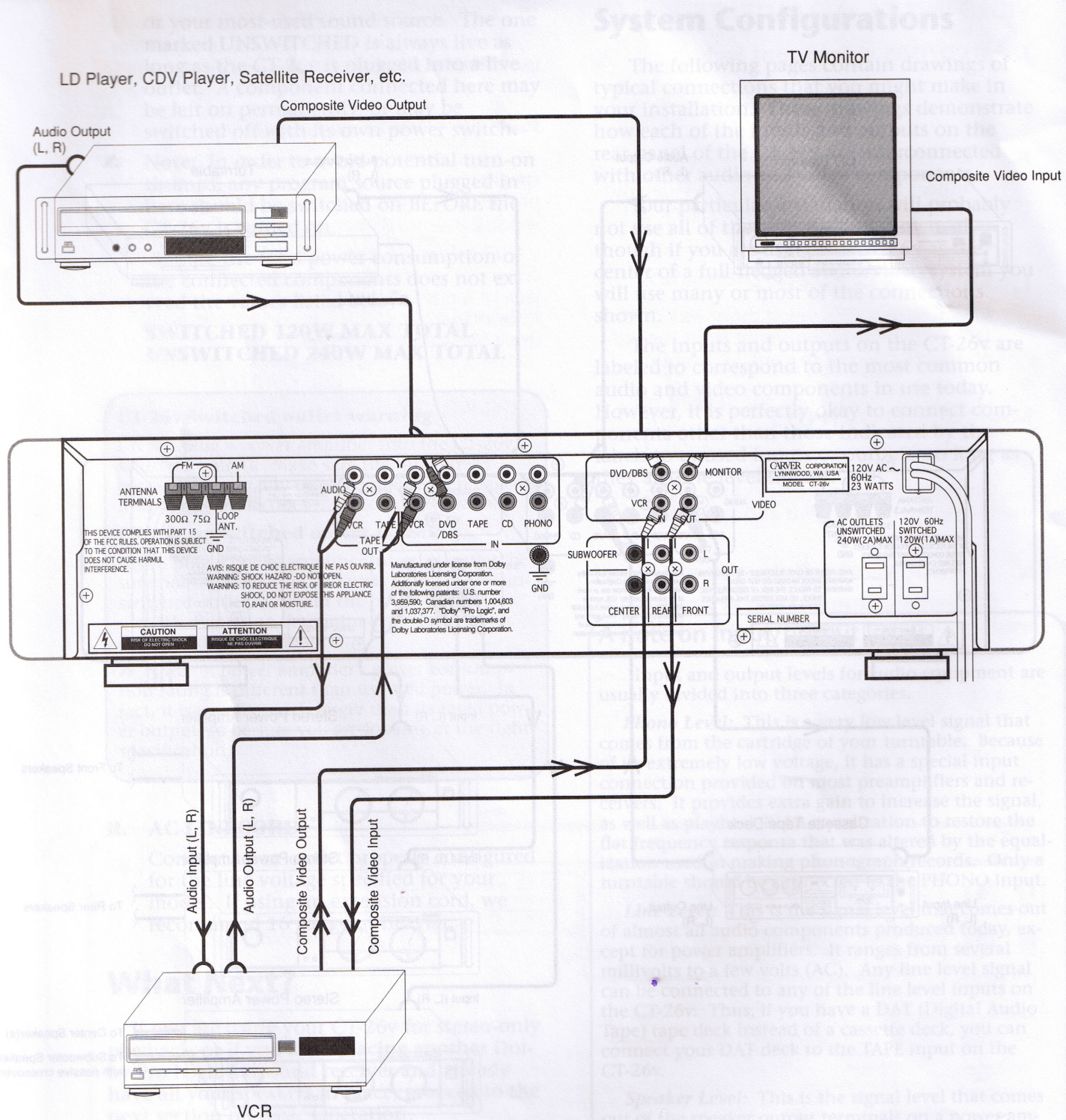


Figure 3. Sample Switched Video Connections



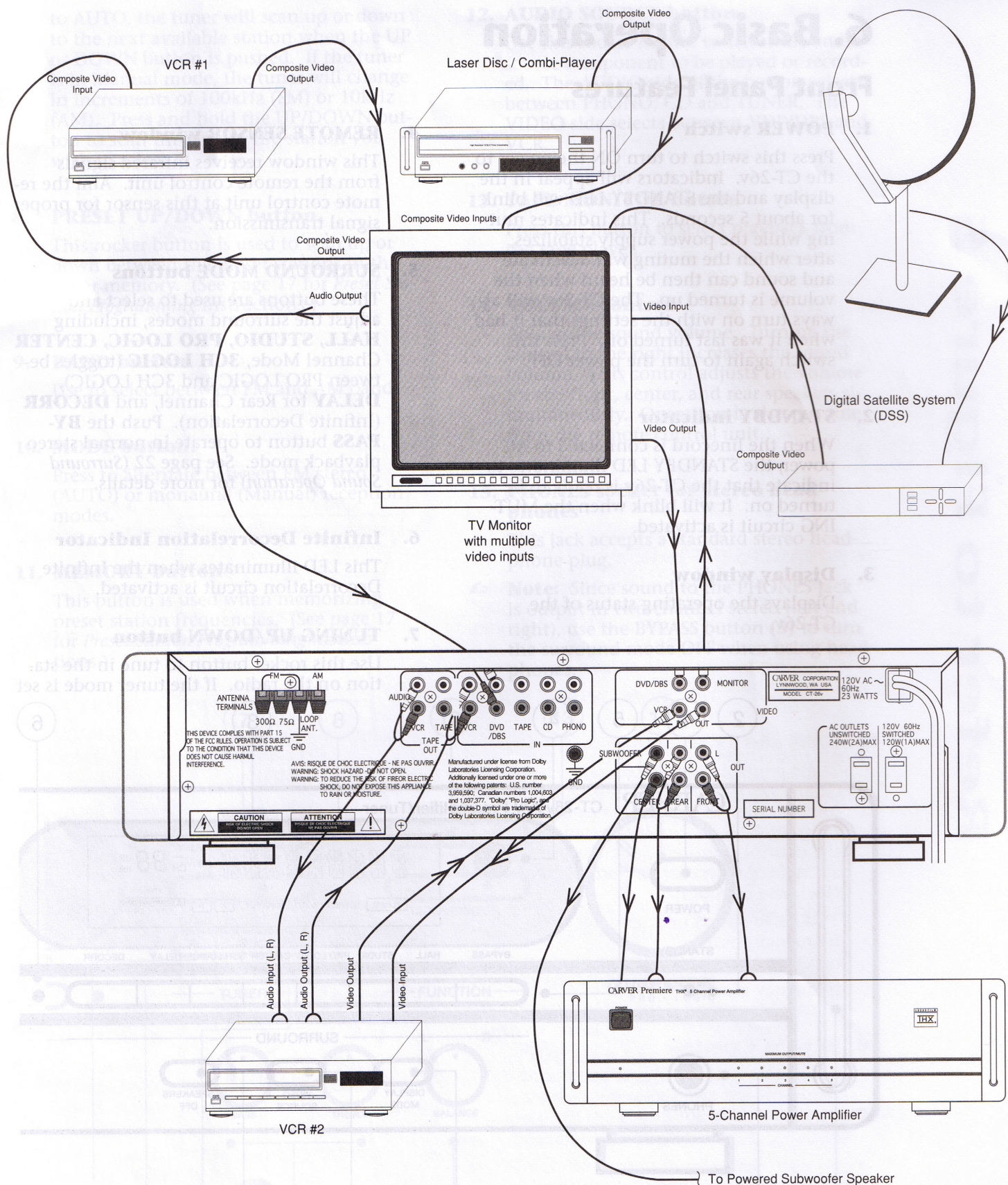


Figure 4. Additional Audio/Video Connections



## 6. Basic Operation

### Front Panel Features

#### 1. POWER switch

Press this switch to turn ON the power to the CT-26v. Indicators will appear in the display and the STANDBY LED will blink for about 5 seconds. This indicates muting while the power supply stabilizes, after which the muting will deactivate and sound can then be heard when the volume is turned up. The CT-26v will always turn on with the settings that it had when it was last turned off. Press this switch again to turn the power OFF.

#### 2. STANDBY indicator

When the linecord is connected to AC power, the STANDBY LED illuminates to indicate that the CT-26v is ready to be turned on. It will blink when the MUTING circuit is activated.

#### 3. Display window

Displays the operating status of the CT-26v.

#### 4. REMOTE SENSOR window

This window receives infrared signals from the remote control unit. Aim the remote control unit at this sensor for proper signal transmission.

#### 5. SURROUND MODE buttons

These buttons are used to select and adjust the surround modes, including **HALL, STUDIO, PRO LOGIC, CENTER** Channel Mode, **3CH LOGIC** (toggles between PRO LOGIC and 3CH LOGIC), **DELAY** for Rear Channel, and **DECORR** (Infinite Decorrelation). Push the **BY-PASS** button to operate in normal stereo playback mode. See page 22 (*Surround Sound Operation*) for more details.

#### 6. Infinite Decorrelation Indicator

This LED illuminates when the Infinite Decorrelation circuit is activated.

#### 7. TUNING UP/DOWN button

Use this rocker button to tune in the station on the radio. If the tuner mode is set

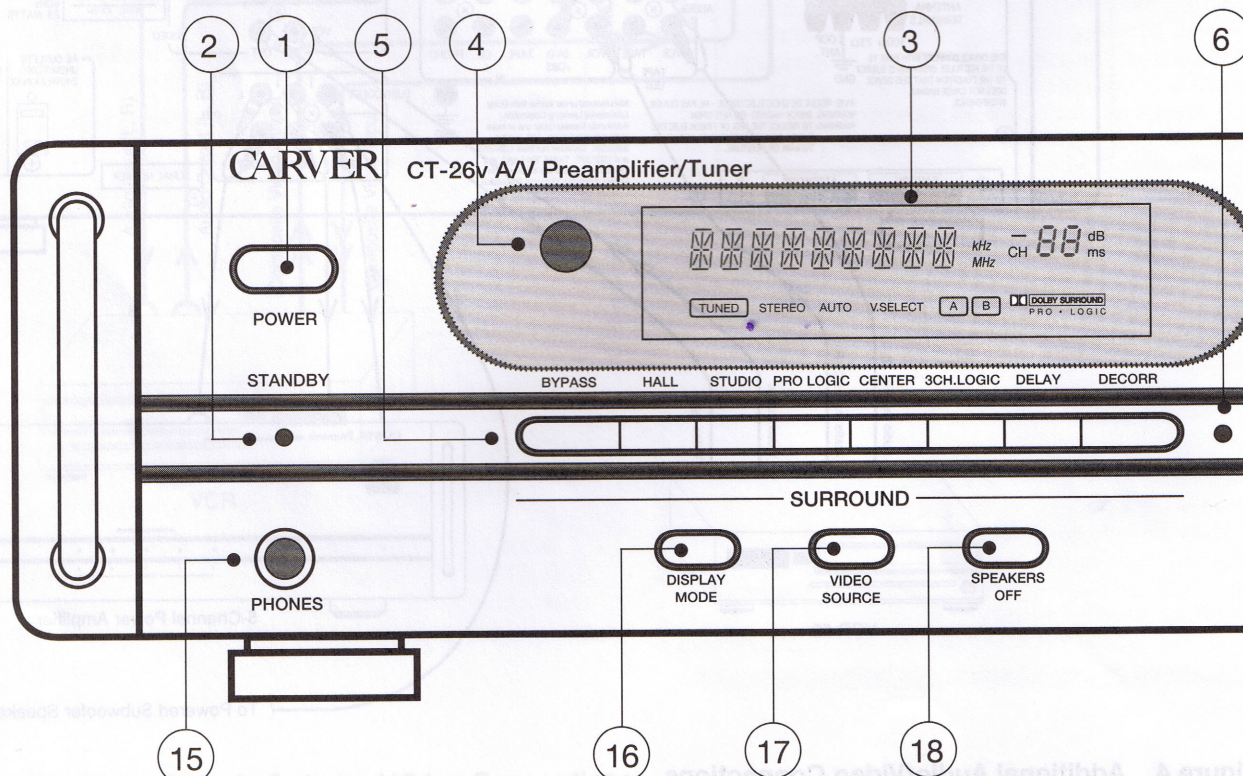


Figure 5. CT-26v Front Panel View



to AUTO, the tuner will scan up or down to the next available station when the UP or DOWN button is pushed. If the tuner is in Manual mode, the tuner will change in increments of 100kHz (FM) or 10kHz (AM). Press and hold the UP/DOWN button to scan through to the station you wish to select.

### 8. PRESET UP/DOWN button

This rocker button is used to scan up or down between the preset stations in the tuner memory. (See page 17 for *Preset Station Programming* instructions.)

### 9. BAND button

Use to select between FM and AM bands.

### 10. MODE button.

Press to alternate between FM stereo (AUTO) or monaural (Manual) reception modes.

### 11. MEMORY button

This button is used when memorizing preset station frequencies. (See page 17 for *Preset Station Programming* instructions.)

### 12. AUDIO SOURCE button

Use this rocker button to select the audio source component to be played or recorded. The AUDIO side of the button selects between PHONO, CD and TUNER. The VIDEO side selects between VDP/DBS and VCR.

### 13. TAPE MONITOR button

Press this button to select playback from the tape player.

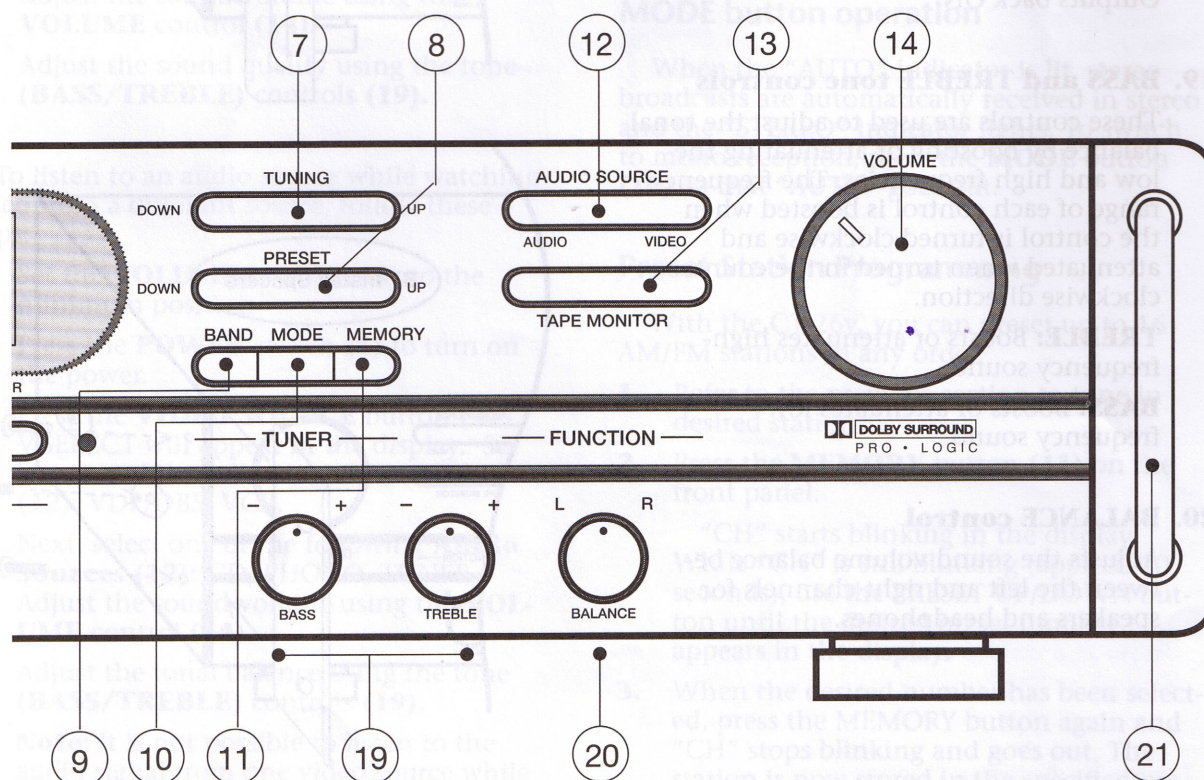
### 14. VOLUME control

Adjusts the sound volume. Turning the control to the right increases the sound volume. This control adjusts the volume for the front, center, and rear speakers simultaneously. Operation is also possible from the remote control unit.

### 15. PHONES socket for stereo headphones

This jack accepts a standard stereo headphone plug.

**Note:** Since sound to the PHONES jack is output in two-channel stereo (left and right), use the BYPASS button (5) to turn the surround mode OFF when using headphones.





# Refer to Figure 5

## 16. DISPLAY MODE button

Press and hold this button to review the current settings and status of the receiver, including current audio, video, surround, and Personal 1 and 2 preference settings.

**Note:** You may press and hold this button to scan through all the settings, or repeatedly press and release the button to speed up the process. After all the settings have been displayed, the display will turn OFF. Press the DISPLAY MODE button one more time to turn the display back ON.

## 17. VIDEO SOURCE

Pressing this button causes V.SELECT to illuminate in the display. This allows you to select audio and video sources independently. This also activates the MONITOR OUT jack and directs the video source selected to the MONITOR OUT jack. Use this button to select the video source for viewing or recording on a VCR (see *Recording and Dubbing* on page 18).

## 18. SPEAKERS OFF button

Use this button to turn the Main Outputs OFF. H/P ONLY will appear in the display. This allows you to listen with headphones without disturbing others in the room. Press this button again to turn the Main Outputs back ON.

## 19. BASS and TREBLE tone controls

These controls are used to adjust the tonal balance by boosting or attenuating the low and high frequencies. The frequency range of each control is boosted when the control is turned clockwise and attenuated when turned in the counter-clockwise direction.

**TREBLE:** Boosts or attenuates high-frequency sound.

**BASS:** Boosts or attenuates low-frequency sound.

## 20. BALANCE control

Adjusts the sound volume balance between the left and right channels for speakers and headphones.

## 21. Handle Removal

The CT-26v is shipped with the handles installed. To remove the handles, use a Phillips screwdriver to remove the three screws on each side of the chassis, nearest the front panel. Remove the handles and install the spacers provided as shown in Figure 6. It may be helpful to gently pull the side of the top cover away from the handle when removing and installing the handle or end cap spacers. Reinstall the three screws on each side of the chassis to secure the spacers in place.

Store the handles in a safe place for future use.

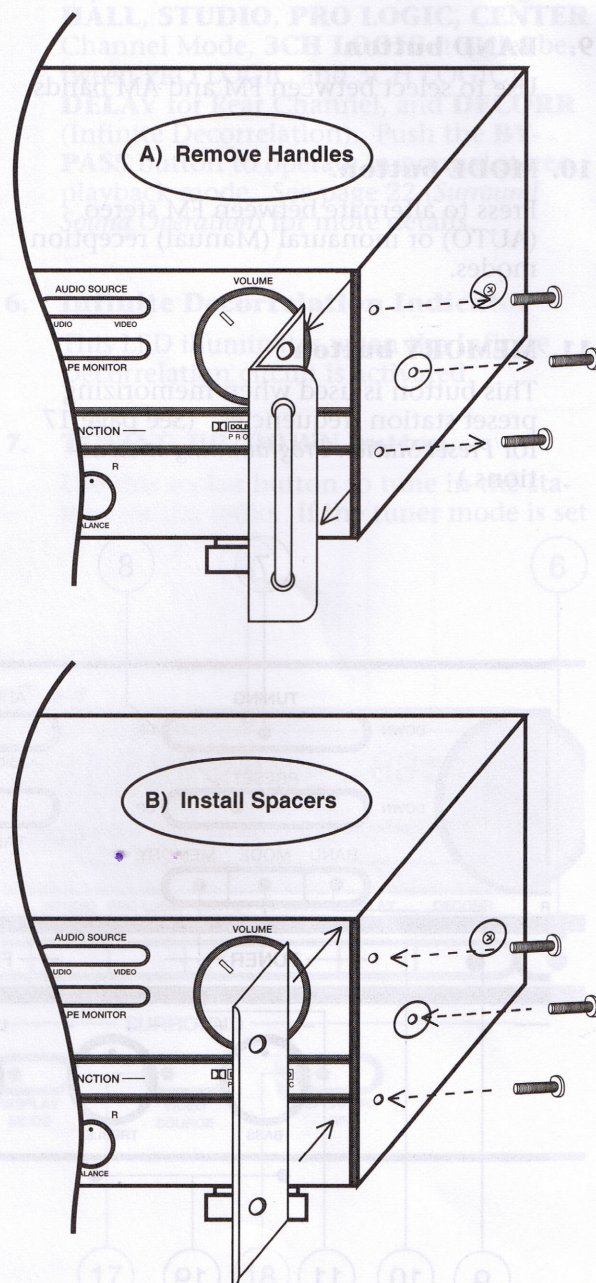


Figure 6. Handle Removal



## Playback of Audio and Video Sources

Follow these steps to listen to any audio source, or to view video sources:

1. Set the **VOLUME** control (14) to the minimum position.
2. Press the **POWER** switch (1) to turn on the power.
3. Select the desired input source by pressing the AUDIO SOURCE Function button (12) according to the table shown below.

Source component	Function button
CD player	AUDIO SOURCE: CD
FM/AM	AUDIO SOURCE: TUNER
Turntable	AUDIO SOURCE: PHONO
Laserdisc player	AUDIO SOURCE: VDP/DBS
Video cassette recorder	AUDIO SOURCE: VCR
Cassette deck	TAPE MONITOR

4. Start playing the program source.
  - For surround sound encoded programs, see page 25 for instructions on the optimum settings for the surround mode buttons (5).

Adjust the sound volume using the **VOLUME** control (14).

Adjust the sound quality using the tone (**BASS/TREBLE**) controls (19).

To listen to an audio source while watching video from a different source, follow these steps:

1. Set the **VOLUME** control (14) to the minimum position.
2. Press the **POWER** switch (1) to turn on the power.
3. Press the **VIDEO SOURCE** button (17). V.SELECT will appear in the display. Select one of the following video sources (12): VDP/DBS, VCR.
4. Next, select one of the following **Audio Sources (12)**: CD, PHONO, TUNER. Adjust the sound volume using the **VOLUME** control (14).  
Adjust the tonal balance using the tone (**BASS/TREBLE**) controls (19).

**Note:** It is not possible to listen to the audio signal from one video source while watching the video signal from another.

## FM/AM Tuner Functions and Preset Programming

### Manual Station Selection

1. Set the **VOLUME** control (14) to minimum.
2. Press the **POWER** switch (1) to turn on the power.
3. Press the **AUDIO SOURCE** button (12) to select TUNER. Press the **TUNER MODE** button (10) so that AUTO appears in the display. Press **BAND** (9) to select AM or FM.
4. Press the **TUNING UP** and **DOWN** buttons (7) to tune in the desired station. Pressing and holding the button sequentially scans frequencies in the indicated direction. Releasing the button while scanning activates the auto tuning function, which automatically scans the frequencies until a station is detected, at which point the TUNED indicators lights and auto tuning stops. If the station is in stereo, the STEREO indicator will also appear in the display.
5. Adjust the sound volume with the **VOLUME** control (14). If necessary, adjust the tone controls (**BASS/TREBLE**) (19).

### MODE button operation

When the "AUTO" indicator is lit, stereo broadcasts are automatically received in stereo and the "STEREO" indicator lights. To switch to mono reception, press the **MODE** button (10) so that "AUTO" goes out.

### Preset Station Programming

With the CT-26v, you can preset up to 16 AM/FM stations in any order.

1. Refer to the previous section to tune in desired station.
2. Press the **MEMORY** button (11) on the front panel.  
"CH" starts blinking in the display. While "CH" is still blinking (approx. 10 seconds), use the PRESET UP/DOWN button until the desired preset number appears in the display.
3. When the desired number has been selected, press the MEMORY button again and "CH" stops blinking and goes out. The station is now stored in the specified preset memory location.



## Preset tuning

1. Press the **PRESET UP/DOWN** button (8). The display mode changes to preset number mode.
2. You can fast forward through the preset stations by pressing and holding the **PRESET UP** or **DOWN** button (8).

When the desired preset station is received, let go of the **PRESET UP** or **DOWN** button.

## Recording and Dubbing

### Recording an audio tape

1. Select the desired audio source or video source (12).
2. Adjust recording levels on your tape deck.
3. Start playback of the audio or video source.
4. Start recording. Press **TAPE MONITOR** button (13) to monitor signal from tape deck.

## Video source recording or copying

In this example, the video and audio from a laserdisc player are recorded onto a video tape in a VCR.

1. Select the laserdisc player by pressing the **VIDEO SOURCE** button (17), followed by the **AUDIO SOURCE: VIDEO** Selection button (12) until VDP/DBS appears as the audio and video source.
2. Start playing the laserdisc player.
3. Start recording on the VCR.

For details on playback and recording operation, refer to the instruction manuals provided with the video components.

### Simultaneous audio/video recording

The signal from the source selected with the **AUDIO SOURCE** Function button (12) is simultaneously output from the TAPE and VCR audio output jacks.

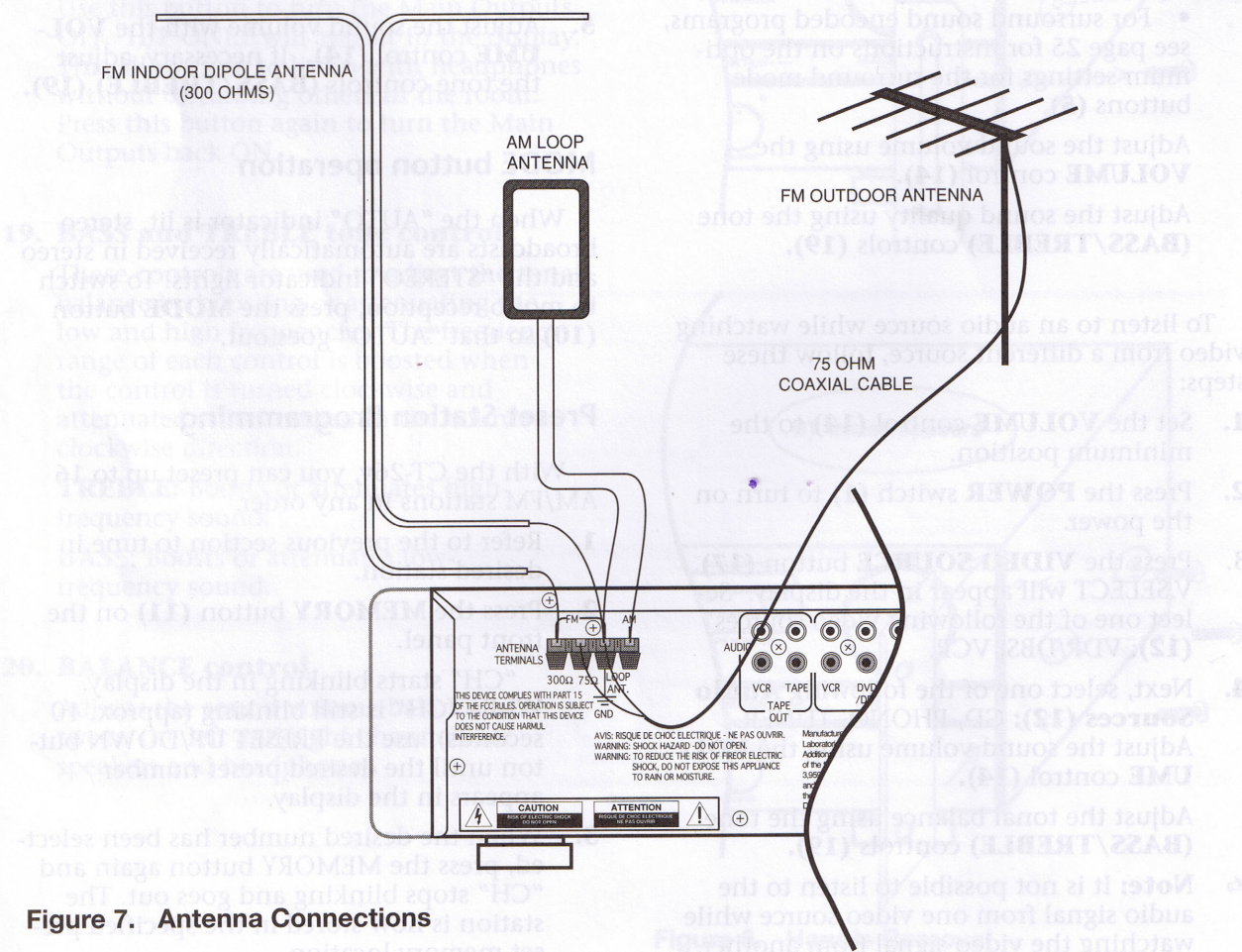


Figure 7. Antenna Connections



## 7. Remote Control Operation

### RH-88 Handheld Remote Transmitter

The remote control transmitter duplicates virtually all of the functions of the main unit front panel, and can also provide remote control for a CD player equipped with the RC-5 infrared remote control format.

The RH-88 wireless infrared remote requires two AAA batteries. Remove the battery compartment door on the back of the remote control by pressing in the direction of the arrow against the tab. Insert the batteries supplied, making sure to match the positive (+) and negative (-) ends with the diagram inside the battery compartment.

### Remote Operation

The remote control unit will work in a range of approximately 20 feet in front of and about 30 degrees to either side of the CT-26v.

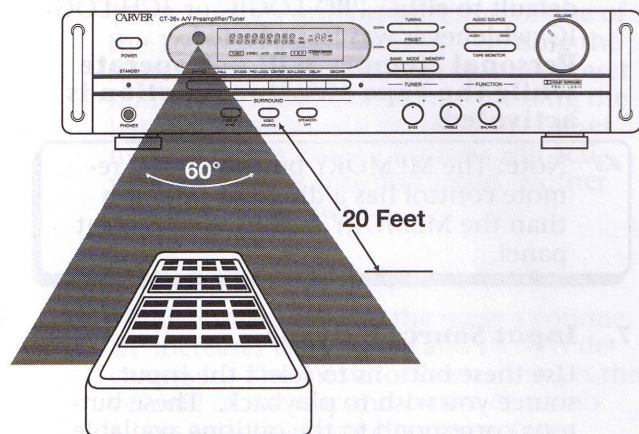


Figure 8. Remote Control Operating Distance and Angle

If the remote control begins to occasionally not respond, 1) check its batteries; 2) make sure the infrared projection area on its tip is clean; 3) check that the CT-26v infrared remote sensor window is not dirty or blocked from direct line-of-sight with the remote.

If you will not be using the CT-26v's remote for a long period of time, be sure to remove the batteries to prevent corrosion damage from leaking batteries.

### RH-88 Operation

The remote control unit supplied with the CT-26v has two types of buttons: "Preamp/Tuner Operation buttons," which are used to control the CT-26v functions, and "CD Control buttons," which are used to operate a CD player using RC-5 infrared commands.

Functions that are unique to the remote control (not available on the front panel of the CT-26v) are indicated by black circles with white numbers on the remote control diagram (Figure 9).

#### To select an input source:

Select the desired input source using the appropriate source select button on the remote control. To play a CD, for example, press the **CD** button. To select PHONO, press the **PHONO** button. When the remote control signal is received, the source name is displayed in the CT-26v's display panel.

#### To carry out a CD operation:

First prepare the CD player for playback, and press the **CD** button. Then press the **CD PLAY** button.

For CD players that don't have RC-5 remote capability, you will need to use each components' own remote control to operate specific component commands.



## Remote Control Labels and functions

### 1. POWER button

This button operates the same as the POWER button on the front panel of the CT-26v. Pressing this button toggles the CT-26v ON and OFF.

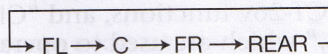
### 2. MUTE button

Press this button to turn off the sound to all the speakers. When this button is pressed, MUTING appears in the display and the STANDBY LED blinks. Press the MUTE button again to switch OFF the muting function. The sound will return to the speakers at the previous volume level. Muting is only possible from the remote control unit.

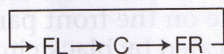
### 3. T. TONE button

This button functions only when the surround mode is set to PRO LOGIC or 3CH LOGIC. When this button is pressed, a test signal is output to the speakers in the following order:

In PRO LOGIC:



In 3CH LOGIC:



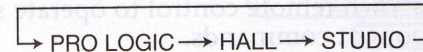
The test signal is produced at 4 second intervals for the first two cycles, then at 2 second intervals. The test signal in the Center and Rear channels will not move on to the next speaker while the volume is being adjusted to the respective speaker. The test signal will move on about two seconds after the volume button has been released.

The Test Tone button is only available on the remote control unit.

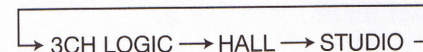
### 4. SURR. MODE button

This button selects the surround mode. Pressing the button repeatedly will cause the surround mode to toggle in the following sequence.

In PRO LOGIC:



In 3CH LOGIC:



The 3CH LOGIC button on the front panel is used to toggle between PRO LOGIC and 3CH LOGIC mode.

Press the BYPASS button on the CT-26v front panel to return to normal stereo operation.

### 5. DE•COR

Press this button to activate the **Infinite Decorrelation** circuit in the Rear Channel. When this circuit is ON, the LED next to the DECORR button on the front panel of the CT-26v illuminates. Press this button again to turn OFF the Infinite Decorrelation circuit.


### 6. MEMORY 1 - 2 buttons

These buttons are used to store the PERSONAL 1 and PERSONAL 2 surround settings in memory. Set the desired surround mode and input source on the CT-26v. Press the MEMORY button on the remote control. Then press the 1 or 2 button. M1 SET or M2 SET will appear in the display.

To recall the PERSONAL 1 or 2 setting, press 1 or 2 on the remote control and the CT-26v will automatically switch to the input source and surround mode settings stored in memory.

The Personal Memory function is only available on the remote control unit. If PRO LOGIC or 3CH LOGIC is stored in Personal Memory, the surround mode will default to either PRO LOGIC or 3CH LOGIC, whichever was last selected.

**Personal Memory will not operate while the Tape Monitor function is activated.**

 **Note:** The MEMORY button on the remote control has a different function than the MEMORY button on the front panel.

### 7. Input Source buttons

Use these buttons to select the input source you wish to playback. These buttons correspond to the options available with the AUDIO SOURCE and TAPE MONITOR FUNCTION buttons on the front panel.

### 8. DELAY Up/Down buttons

When using a surround mode (except 3CH LOGIC), this button is used to adjust the delay time. When the Up or Down button is pressed, the delay time appears in the display for 5 seconds. You can adjust the delay time for PRO LOGIC from 15.0mS to 30.0mS in 1.5mS increments.



You can adjust the delay time for HALL and STUDIO from 0mS to 33.0mS in 1.5mS increments. Delay time adjustment is available on both the front panel and the remote control.

### 9. CENTER Up/Down buttons

These buttons control the volume of the center channel. When the Up or Down button is pressed, CNTR VOL -xx dB appears in the display. The volume level can be adjusted from a maximum of 00 dB to -24 dB in 2 dB increments. Center channel volume adjustment is not available in HALL or STUDIO mode, or in PHANTOM Center mode. This adjustment is only available on the remote control.

### 10. REAR Up/Down buttons

These buttons control the volume of the surround channel. When the Up or Down button is pressed, REAR VOL -xx dB appears in the display. The volume level can be adjusted from a maximum of 00 dB to -24 dB in 2 dB increments. Rear channel volume adjustment is not available in 3CH LOGIC mode. This adjustment is only available on the remote control.

**Note:** The delay time, surround and center volume settings are memorized and remain at the most recent setting for each individual surround mode until changed.

### 11. PRESET Up/Down buttons

These buttons provide selection of one of the 16 preset radio stations. Pressing the right-hand button will increase the preset number in the display, while pressing the left hand button will decrease the preset number. (The PRESET buttons will activate the TUNER function when another function is selected.)

### 12. Main VOLUME Up/Down buttons

These buttons control the master volume. UP increases the volume and DOWN decreases it. The master volume changes the volume of the rear and center channels along with the front channel volume. Operation is the same as the rotary volume knob on the front panel.

**Note:** Do not try to manually rotate or impede the rotation of the volume knob while it is being operated from the remote control.

### 13. CD player operation buttons

DISC SKIP, SKIP BACK (◀◀), SKIP FWD (▶▶), PAUSE (⏸), PLAY (▶), STOP (■) buttons

These buttons operate a Carver CD player or other CD player with RC-5 infrared remote control codes.

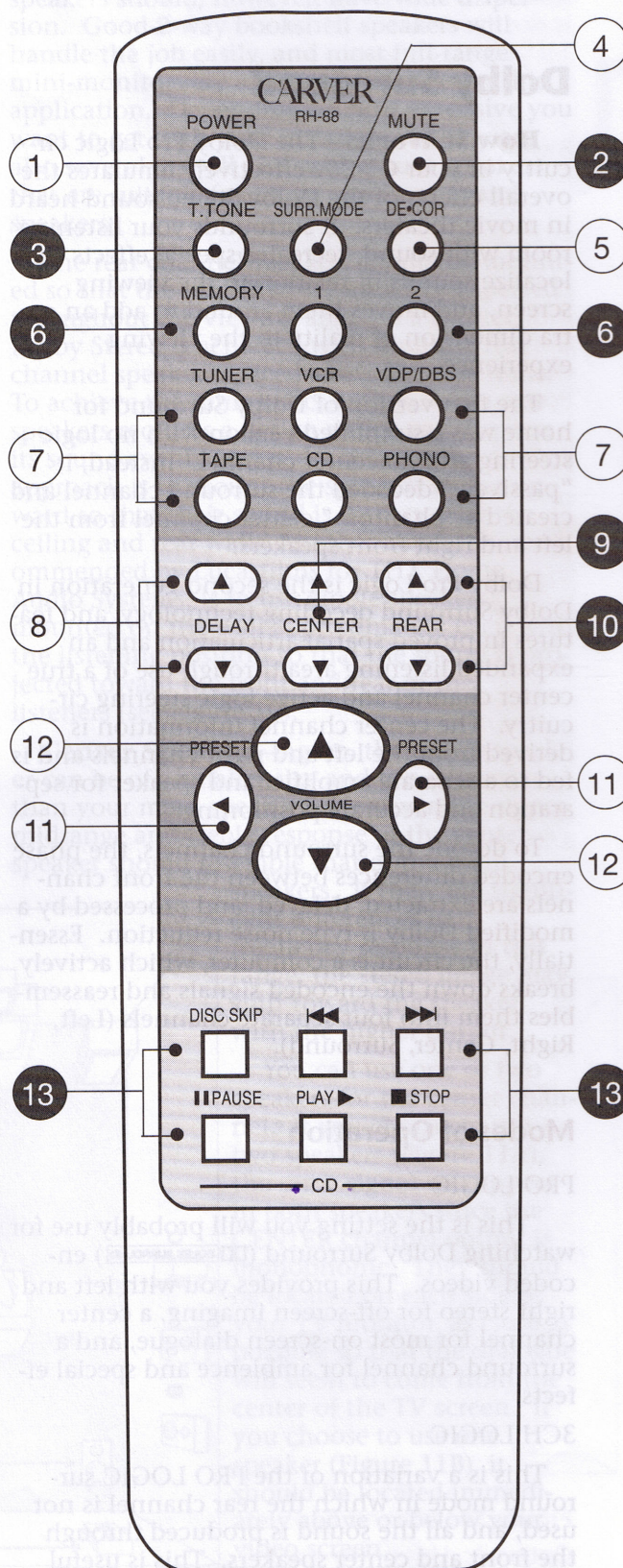


Figure 9. Remote Control Front View



## 8. Surround Sound Operation

### Dolby Surround

**How It Works**—The Dolby Pro Logic circuitry in your CT-26v effectively emulates the overall effects of the Dolby Stereo sound heard in movie theaters. It surrounds your listening room with sound, recreates special effects that localize sounds in relation to the viewing screen, and moves them around to add an extra dimension of reality to the viewing experience.

The first version of Dolby Surround for home was a simplified version with no logic steering and no center channel. Instead, it “passively” decoded the surround channel and created a “phantom” center channel from the left and right front speakers.

Dolby Pro Logic is the second generation in Dolby Surround decoding technology, and features improved spatial articulation and an expanded listening area through use of a true center channel and active logic steering circuitry. The center channel information is derived from the left and right channels and is fed to a separate amplifier and speaker for separation and accurate positioning.

To decode the surround channels, the phase encoded differences between the front channels are extracted, delayed, and processed by a modified Dolby B-type noise reduction. Essentially, the circuit is a computer, which actively breaks down the encoded signals and reassembles them into four separate channels (Left, Right, Center, Surround).

### Modes of Operation

#### PRO LOGIC

This is the setting you will probably use for watching Dolby Surround (DOLBY SURROUND) encoded videos. This provides you with left and right stereo for off-screen imaging, a center channel for most on-screen dialogue, and a surround channel for ambience and special effects.

#### 3CH LOGIC

This is a variation of the PRO LOGIC surround mode in which the rear channel is not used, and all the sound is produced through the front and center speakers. This is useful for soundtracks that are not Dolby Surround encoded, such as older movies or TV shows

that are not recorded in stereo. It provides a wide soundstage yet maintains localized dialog in the center channel. The 3CH LOGIC button serves as a toggle switch between PRO LOGIC and 3CH LOGIC. Push the PRO LOGIC button first, then press the 3CH LOGIC button to toggle back and forth. If 3CH LOGIC is selected, the next time the PRO LOGIC button is pressed the 3CH LOGIC mode will be invoked.

Only NORMAL and WIDE center channel modes are available in 3CH LOGIC mode. Delay time is disabled because the REAR channel is off.

There are three center channel modes available in PRO LOGIC. **PHANTOM** should be used if you have elected not to use a center channel speaker. This mode of operation directs the center channel information equally to the left and right channel speakers, creating a “phantom” center image of the dialogue. This is the way the first generation Dolby Surround worked.

**NORMAL** should be used if you are using a small center channel speaker (or speakers) with limited bass response. In NORMAL mode, the lower frequencies (below 100Hz) are removed from the center channel and redirected equally to the left and right speakers. Since bass frequencies are omnidirectional, this will not affect the imaging of the center channel. The dialogue will still appear to come from the video screen.

**WIDE** should be used if you are using a full-range center channel speaker that is just as capable of good bass response as your main left and right speakers. In this mode, all the center channel information remains in the center channel output.

The delay times available in Dolby Pro Logic range from 15 to 30 mS (milliseconds). This is the amount of time the surround information output to your rear speakers is delayed from the front and center channels. The reason for this delay is to allow the front channel information to reach your ears first. This is required because of a psychoacoustical phenomena known as the “Haas effect”, which states that our ears will tell us that sound is coming from the direction from which it arrives at our ears first. Delaying the rear



channels 15 to 30mS assures that our ears will hear the front channels first, maintaining a correct directional image. Sound travels at the rate of about 1 foot per millisecond, so the minimum number of milliseconds of delay you should use can be calculated with the following formula:

$$D_F - D_S + 15 = \text{Delay in milliseconds}$$

Where:

$D_F$  = Distance from listening position to Front speakers

$D_S$  = Distance from listening position to Surround speakers

You can experiment with the delay settings to find the one that works best for your particular speaker and listening positions.

## Speaker Selection and Placement

**Front Speakers**—These should be full-range, high quality speakers—the best speakers in your system. They should be located far enough from each side of your TV monitor to provide a well defined stereo image. The TV monitor should be located midway between the left and right front speakers.

**Rear Speakers**—The rear speakers in your surround sound system provide ambient sound for an open, “concert hall” effect when listening to music. They also spread the sound and provide special effects on video soundtracks when used in the Dolby Surround mode.

The demands made on your rear surround speakers are far less than on your main room speakers. Therefore, these speakers do not need to be as large (and as expensive) as your main room speakers. Deep bass response is not important at all. They should, however, have a smooth midrange and reasonably clean upper midrange. Extended high frequency performance is not critical either, because the very high frequencies are rolled off above 7kHz. This is to minimize dialog sibilance crosstalk in the rear channel, and also to

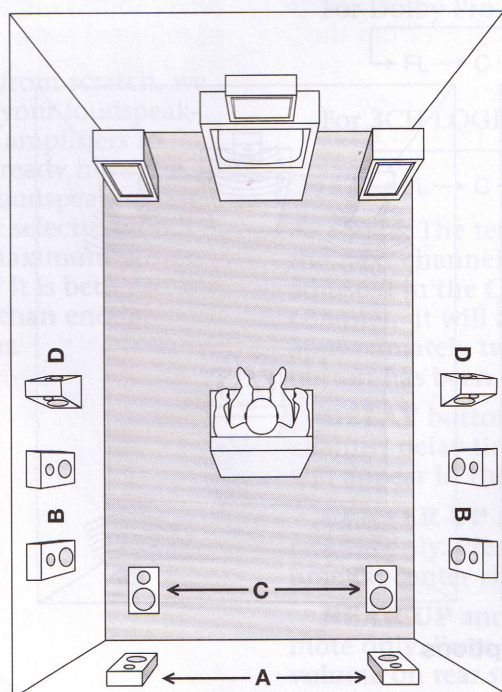
create a sense of increased distance between the speakers and the listener. The surround speakers should, however, have wide dispersion. Good 2-way bookshelf speakers will handle the job easily, and most full-range mini-monitors are also quite suitable for this application. Depending on how extensive you want to get with your installation, there are also several in-wall and wall-mount speakers that are suitable for use as surround sound speakers.

The rear channel speakers should be mounted so that the rear channel sound is dispersed throughout the viewing area. In a theater, Dolby Stereo is achieved with multiple rear channel speakers spaced along the side walls. To achieve the same effect with just two rear speakers requires a design which can disperse its sound evenly across the listening area. One approach is to mount the speakers facing upward so that their sound is dispersed by the ceiling and rear wall. Another approach, recommended by Lucasfilms for THX Home Audio Systems, is to use dipole speakers mounted on the wall approximately even with the listening position so that the sound is projected toward the front and rear of the listeners (see Figure 10).

**Center Speaker**—Again, the center speaker can be of a smaller size and less expensive than your main speakers. However, the upper midrange and treble response of the center speaker should resemble that of the main

speakers. If there are significant differences in frequency response in this range, the stereo image may shift toward the speaker with the higher output.

You can use one or two speakers for the center channel. If you choose to use two speakers (Figure 11A), the same signal will appear in both speakers since the CENTER channel output is monophonic. They should be located on each side of your TV monitor, as close as possible so that the dialogue will seem to come from the center of the TV screen. If you choose to use one speaker (Figure 11B), it should be located immediately above or below your video screen.



**Figure 10. Rear Speaker Options**

Option A: Placed or mounted behind listeners.

Option B: Placed or mounted along side walls.

Option C: Placed or mounted facing upward.

Option D: Dipole speakers placed or mounted even with listening position.



In either case, the center speaker(s) should be placed as close to your video screen as possible, so it must be magnetically shielded. If it is not shielded, it could cause distortion of the TV picture. Special video-compatible monitor speakers are available for this application.

As another option, many TV monitors have a separate audio input jack that can be used to input an audio signal from an external source, like a VCR or your stereo system. If the speaker in your TV monitor is adequate, you can use these jacks to connect the CENTER Audio Output from the CT-26v directly to your TV monitor (Figure 11C). Just remember to select the external audio input (TV/VIDEO or whatever) on your TV monitor when using Dolby Pro Logic, 3CH Logic, Hall or Studio modes.

You might also consider using a Sat/Sub (Satellite/Subwoofer) system for the front and center speakers. Several manufacturers have speaker systems designed specifically for surround sound in home theater applications. This has the benefit of providing matched loudspeakers for the left, right and center channels as well as making use of a subwoofer to handle the bass frequencies.

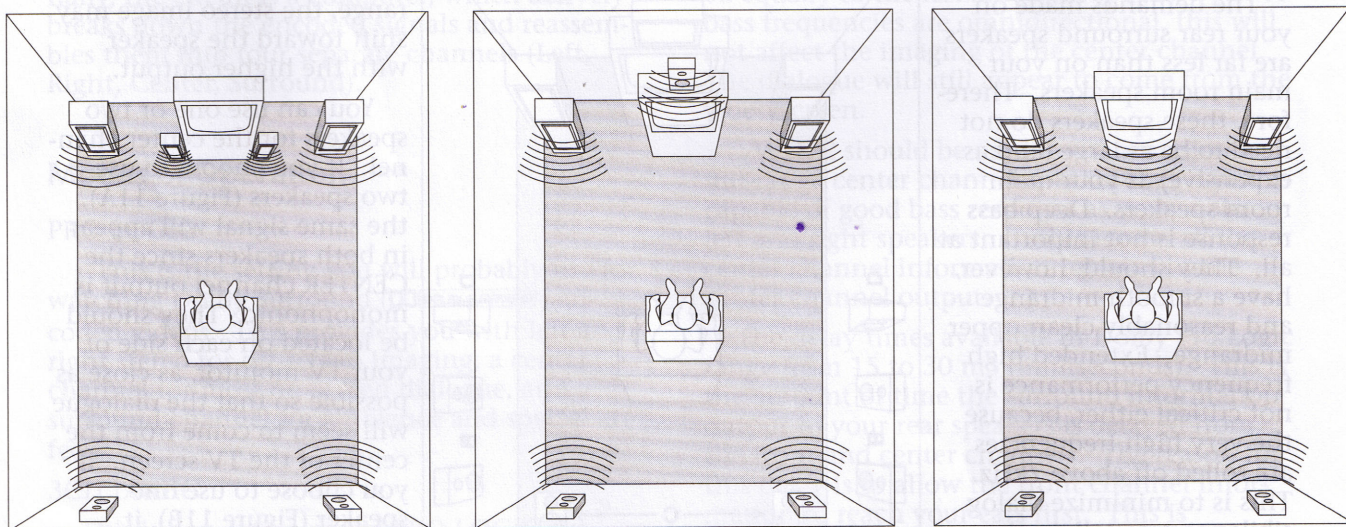
**Subwoofer Speaker**—The subwoofer output on the CT-26v is full-range and requires an external crossover to filter out the mid-range and high frequencies. Most powered subwoofers have a built-in crossover, often providing a variable control for selecting the crossover frequency. If you decide to use a separate

amplifier/speaker combination you will need to provide either an electronic crossover between the CT-26v and the power amplifier, or a passive crossover between the power amplifier and the speaker. The speaker should be capable of reproducing very low frequencies. An ideal subwoofer would be able to reproduce the lowest two octaves in the audio spectrum, which is 20Hz to 80Hz. Few subwoofer speakers are rated below 30Hz, however. This should be sufficient for most applications.

## Amplifier Selection

The type of amplifier you choose to power the various speakers in your Surround Sound system will largely depend on the kind of speakers you are using.

For the front speakers, you will want to use a stereo amplifier with enough power to accommodate the maximum power rating of the speakers you have chosen for your main stereo reproduction. Avoid skimping on amplifier power for the front speakers. If you use an amplifier that is rated less than half of the maximum power rating of the speakers, then you will not benefit from the full potential of your speakers. You also run the danger of driving the amplifier to its maximum capacity in an attempt to try and reach the full potential of the speakers, which will produce "clipping" in the amplifier, a lethal condition for loudspeaker drivers.



**Figure 11. Center Speaker Options**

- Option A: Using two speakers
- Option B: Using one speaker
- Option C: Using speaker in TV



The same formula holds true for the amplifier you use to drive your surround speakers. The amplifier should have enough power to reach the maximum power rating of all the surround speakers you are using. Although in PRO LOGIC the surround channel is in mono, you should use a stereo amplifier because, in HALL and STUDIO modes, and with Infinite Decorrelation engaged, the Left and Right Surround outputs are different.

If you connect more than one speaker to each amplifier channel output, be sure you stay within the bounds of the manufacturer's recommended minimum impedance for the amplifier (refer to the amplifier's owner's manual for this information).

Depending on how you choose to set up your system, you may not require a separate amplifier for the center channel output. If your TV monitor has audio input jacks, you can connect the center channel audio output from the CT-26v directly to the TV, and use the combined audio amplifier and speaker(s) in the TV for the center channel.

You may choose not to use a center channel speaker at all, and simply use the PHANTOM mode for the center channel.

You might consider using a 5-channel audio/video amplifier to power the two front, the center and the two surround speakers.

Remember your Carver Dealer is available to assist you with recommendations for your specific application.

**Note:** If you are starting from scratch, we recommend that you choose your loudspeakers first, and then choose the amplifiers to match the speakers. If you already have the amplifiers and are choosing loudspeakers last, don't be too concerned about selecting loudspeakers that fall below the maximum power capability of your amplifiers. It is better to have an amplifier with more than enough power than not enough power.

## Controls for Dolby Pro Logic Surround

Numbers in parentheses refer to Front Panel drawing (pages 14-15) and numbers in brackets refer to Remote Control drawing (page 21).

**SURROUND MODE button (5) and [4].** This selects the mode of surround sound operation.

**CENTER MODE button (5 - not available on Remote).** This selects the NORMAL, PHANTOM or WIDE mode, depending on room set-up and type of center speaker used. If you are using a large center speaker with good bass response, use WIDE (for "wide bandwidth"). If you are using a smaller speaker, use the NORMAL setting, which rolls off the lower frequencies for the center channel and redirects them equally to the left and right main speakers. If you have no center speaker, use PHANTOM.

**Note:** PHANTOM mode is not available in 3CH LOGIC mode.

**TEST TONE button (3 - not available on front panel).** When pressed, a test signal (actually wide-band noise, not a tone) is output to each connected speaker sequentially. This is used to balance the volume level from each speaker.

Test tones are produced from the speakers in the following order at 4 second intervals for the first two cycles, and 2 second intervals after that.

For Dolby Pro Logic:

→ FL → C → FR → REAR →

For 3CH LOGIC mode:

→ FL → C → FR →

**Note:** The test tone will not move on to the next channel while the volume is being adjusted in the Center channel or the Rear channel. It will advance to the next channel approximately two seconds after the volume button has been released.

**DELAY buttons (5) and [8]** adjust the rear channel delay time, and the delay time setting will appear in the display for 5 seconds.


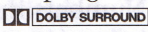
**CENTER UP and DOWN buttons [9]** on remote only. Press to increase or decrease volume on center channel.

**REAR UP and DOWN button [22]** on remote only. Press to increase or decrease volume on rear surround channels.

( ) - Front Panel  
see pages 14-15  
[ ] - Remote Control  
see page 21



( ) – Front Panel  
see pages 14-15  
[ ] – Remote Control  
see page 21

 **Note:** For best results, look for source material (video, audio, television/cable programs) that bear the Dolby Surround logo (  ): You may get a pleasing effect on standard stereo program material as well.


## Surround Sound Level Adjustment

This procedure adjusts the relative levels of your front, center, and rear speakers for best effect in your listening environment. It need not be repeated before each use of Dolby Surround if you do not change the levels.

1. Turn your sound system on and turn the **VOLUME** control (14) on the CT-26v all the way down.
2. Press **SURROUND MODE** button on the remote [4] or front panel (5) so "PRO LOGIC" appears in the display.
3. Switch the **Infinite Decorrelation** (5,6), [5] circuit OFF.
4. Press **CENTER** button (5) on the front panel to select the desired center channel mode of operation. After initial selection, the CENTER mode will appear in the display automatically each time PRO LOGIC mode is selected.
5. Press **TEST TONE** button [3] on the remote. Slowly increase the VOLUME control and you will hear a test tone in the left, center, right, and rear speakers in sequence. Adjust the VOLUME control for a comfortable listening level from the left and right speakers.
6. Sit in the viewing area and, using the remote control's **CENTER** [9] and **REAR** [10] surround volume buttons, adjust the sound volume so that the sound appears to be the same level from all speakers. (The display will indicate "CNTR VOL -xx dB" or "REAR VOL -xx dB" when buttons are pressed.) This presets the levels for average use conditions, so it is likely only small adjustments will be necessary to fine tune the system for specific programs after completing this procedure.

If you have an asymmetrical loudspeaker arrangement, where one speaker is further from your listening position than another, you may adjust the CT-26v L/R balance using the **BALANCE** control (20) to assist in arriving at a balanced sound.


7. When adjustment is complete, press the **TEST TONE** button [3] again to stop the test signal.

 **Note:** You may wish to note the level showing in the display when you complete your adjustment for the center and rear surround level. If you should change this adjustment when using other surround modes, you can reset it to optimum Dolby Surround level without repeating the test tone procedure.

## Delay Time Adjustment

This procedure adjusts the delay of the signal to the rear surround speakers. This adjustment is subjective, and will vary with room size and nature of soundtrack program. Adjustment range in **PRO LOGIC** mode is 15 to 30 milliseconds in 1.5 millisecond steps.

1. Begin playback of selected source.
2. Press **DELAY** UP or DOWN button [8] on the remote control. Current delay time will show in display window for 5 seconds. Press the button repeatedly or press and hold the button to change delay time.


 **Note:** Your CT-26v provides two other surround sound modes. *In these modes, no sound is heard from the center speaker.*

**Hall Surround**—In a concert hall, the sound that reaches your ears contains not only direct sound but also a complex combination of reflected sounds and reverberations, creating a rich sonic ambience. The Hall mode takes a L+R mono signal (hall ambience is not perceived in stereo), delays it by fractions of a second, and sends it to the rear speakers. The overall delay of the REAR channel can be varied from 0mS to 33mS.

**Studio Surround**—This setting produces a natural, spacious sound. In this mode, a delayed stereo difference (L-R) signal is sent to the rear speakers. As in the Hall Surround mode, the REAR output can be delayed from 0mS to 33mS.



## Operation

1. Press **SURROUND MODE** button (5) or [4] to select HALL or STUDIO.
  2. Press **DELAY** button (5) or [8]. Current delay time will show in window for 5 seconds. During this time, press **UP** or **DOWN** buttons on the remote [8] to select delay time. Delay range in all modes (except Dolby Surround) is from 0 to 33 milliseconds in 1.5 millisecond steps.
  3. Press **REAR UP** or **DOWN** buttons on the remote [10] to adjust level of surround speakers.
-  **Note:** Although surround sound effects are subjective, and highly dependent on variations in your listening room and source material, some general guidelines might prove helpful.

First, if you can hear discrete, direct sound from your rear surround speakers, they are set too loud. You should hear no direct sound coming from these speakers; rather, the effect should be an increased sense of openness, spaciousness, and (depending on speaker placement) a spreading of stereo imaging. Just because you can't hear the speakers doesn't mean they aren't working. Simply push the **BYPASS** button (5) to switch OFF the surround mode and you will hear a dramatic difference.

The surround volume is adjustable from 0 dB maximum to -24 dB minimum. In most listening situations, an adjustment between -6 dB and -20 dB will probably be most effective, but feel free to experiment. Remember that turning the Main Volume control up also increases the volume in the Center and Rear channels. The dB reading in the display indicates that channel's volume relative to the Left and Right Front channels.

Delay times in the 20 to 30 millisecond range will work best in most listening rooms, and with most program material. Some pop recordings that were mixed using considerable artificial reverberation may sound unnatural (lead vocals in particular) if delay times are too long or surround levels too high.

**Infinite Decorrelation** is a unique circuit developed by Carver engineers to enhance the surround sound effect. This applies to PRO LOGIC, HALL and STUDIO surround modes. The Dolby Pro Logic decoding circuitry produces a monophonic rear channel signal that is directed to both the left and right rear channel speakers. This can cause lack of directionality and can even cause the rear channel signals to sound as if they are in your head. Infinite Decorrelation processes the rear channel signal and produces two different signals for the left rear and right rear speakers, providing a wider and more realistic sound field. Once you realize how good it sounds, you will want to leave the Infinite Decorrelation circuit switched ON.



## 9. In Case of Difficulty

If you're having trouble or suspect a problem with the CT-26v, try some simple troubleshooting before contacting your Carver dealer or an Authorized Carver Service Center. Most likely, the problem lies elsewhere in the system or with a button or control inadvertently left in the wrong position.

### No sound. Display off.

1. CT-26v power off.
2. Line cord is either disconnected or loosely connected.
3. Poor fit between plug and wall receptacle.
4. Power off at wall receptacle. (Check with tester or lamp.)

### No sound (power OK and on).

1. CT-26v set to inactive source or MUTE.
2. Volume control is turned down on CT-26v or power amplifier.
3. MUTE is activated.
4. Tape or video button is pushed in with no tape running.
5. Selected input not functioning.
6. Program source is maladjusted. For example, tuner is between stations, tape is on a blank segment, CD player is in pause.
7. Speakers have been switched off.
8. Amplifier is switched off.
9. Loudspeakers are not properly connected to the amplifier.

### Sound is very faint, even with volume control all the way up.

1. Wrong input selector button has been pushed.
2. MUTE is activated.
3. CD player or other sound source with independent volume control is turned down.

### No sound in one channel.

1. Defective cable from signal source to CT-26v.
2. Defective cable from CT-26v to amplifier.
3. CT-26v BALANCE control fully clockwise or counter-clockwise.
4. Speaker fuse blown (if installed).
5. Speaker cable defective.

### Loud howl, squeal or whistle.

1. TAPE MONITOR is engaged while microphones are connected to tape deck for recording.

### Solo voices or instruments sound thin, shrill or distorted.

1. Treble controls set to maximum boost.
2. Phono cartridge wired out of phase.
3. Speakers are connected out of phase.

### No sound when AM or FM is selected.

1. No AM loop antenna has been connected.
2. No FM dipole or external antenna has been connected.

### No picture from TV monitor.

1. Incorrect VIDEO input selected on CT-26v or on TV.
2. Video component is not turned on.
3. Video component has been connected incorrectly.

### No sound from rear speakers.

1. Surround mode not selected, or 3CH LOGIC is selected.
2. Rear Volume control on CT-26v is turned down.
3. Rear speakers not properly connected.
4. Source signal is mono.



### Distortion or popping sound in rear speakers.

1. Rear Volume control set too high. See page 25 for proper adjustment procedure.

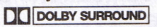
### Video sound is thin when using just Surround and Main Front Speakers in PRO LOGIC.

1. Center mode is incorrectly set to NORMAL or WIDE. It must be set to PHANTOM if a center channel speaker is not being used.

### Scanning mode will not stop at any stations.

1. No antenna connected or it is too small to pick up any signals.

### Dolby Pro Logic has no apparent effect.

1. PRO LOGIC has not been selected from front panel or remote SURROUND MODE button.
2. The video source is not Dolby Surround encoded. Check for the (  ) logo on the jacket, although unfortunately package labeling is not always a sure indication of encoding.
3. Improper adjustment of relative Front, Center and Surround channels. Review step-by-step instructions in this manual on proper Surround setup.
4. The video source is operating in mono. Dolby Pro Logic requires a stereo signal from the TV, VCR or LD player.

### Hum and noise.

1. Defective signal cables.
2. Improper fit between the signal cable plug and sockets.
3. Signal cables have been routed too closely to AC cables, power transformers, motors or TV sets.
4. Turntable or cassette deck may be oriented in such a way that it is picking up induced hum from internal AC wall wiring. Change component's position slightly.
5. Ground loop caused by cable FM (CATV) connection. Remove cable TV line and check if hum is reduced.

### Intermittent noise, static or hum caused by RF interference from CB, TV or radio.

1. Determine where the RFI is entering the system by disconnecting individual sound sources from the CT-26v.
2. Use interconnect cables with better shielding. Check with your Carver dealer.



## 10. Specifications

### FM Tuner Section

Tuning Frequency Range:  
87.50-108.0 MHz

Frequency Stepping:  
100 kHz

IHF Usable Sensitivity:  
15.3 dBf

Sensitivity for 50dB Quieting:  
Mono: 25 dBf  
Stereo: 40.7 dBf

S/N Ratio (IHF-A):  
Mono: 80 dB  
Stereo: 75 dB

THD (@ 1kHz):  
Mono: 0.15%  
Stereo: 0.40%

### AM Tuner Section

Tuning Frequency Range:  
520-1710 kHz

Frequency Stepping: 10 kHz

Sensitivity: 18 $\mu$ V

S/N Ratio: 50 dB

### Preamplifier Section

Frequency Response:  
Phono: RIAA  $\pm$ 1dB,  
20Hz to 20kHz

Line Level Inputs:  $\pm$ 3dB, 10Hz to 50kHz

Signal-to-Noise Ratio (IHF A-weighted):  
Phono: 74dB  
(at Tape Out, below an input reference of  
5mV rms at 1kHz)  
Line: 91dB (Bypass)

Input Sensitivity:  
Phono: 1.4mV ref. to 0.5V out  
Line: 85mV ref. to 0.5V out

Input Impedance:  
Phono: 47 kohms  
Line: 50 kohms

Tone Controls:  
Treble:  $\pm$ 10dB at 10kHz  
Bass:  $\pm$ 10dB at 100Hz

### Video Section

Input/Output Level: 1V p-p  
Input/Output Impedance: 75 ohms  
Frequency Response:  
2Hz to 8MHz (+0, -3dB)

### General

Power Requirements:  
120VAC/60Hz (USA and Canada)  
Other voltages available for export

Dimensions (H x W x D):  
4.65" x 19" x 13.5"  
118mm x 483mm x 343mm  
4.0" x 17" x 11.5"  
(w/out handles and feet)  
102mm x 432mm x 292mm

Net Weight: 12.0 lbs.  
(5.5 kgs)

Shipping Weight: 16.0 lbs.  
(7.3 kgs)

Carver constantly strives to incorporate new methods, materials, and technologies in order to further improve the quality of our products. Thus all specifications are subject to change without notice.



# 11. Care and Service Assistance

## Care

You'll want to wipe off the CT-26v's front panel and chassis from time-to-time with a soft, dry cloth. If you have something stubborn to remove, use a mild dish soap or detergent sparingly applied to a soft cloth. Don't use alcohol, ammonia, or other strong solvents.

## Service Assistance

We suggest that you read the LIMITED WARRANTY completely to fully understand your warranty/service coverage. Please promptly complete and return the CUSTOMER REGISTRATION CARD. Also be sure to save the sales receipt in a safe place. It will be necessary for warranty service.

If your CARVER product should require service, we suggest you contact the Dealer from whom you purchased it. Should the Dealer be unable to take care of your needs, you may contact the CARVER Technical Service Department by phoning 1-800-521-4333 or by writing to us at the Factory address shown at the right. We will then direct you to the nearest in our national network of Authorized Warranty Service Centers or give you detailed instructions on how to return the product to us for prompt action.

If you should have questions or comments, please write to the following Factory address. Please include the model and serial number of your Carver product, your complete address and a daytime phone number.

### Factory Address

Carver Corporation Service Department  
P.O. Box 1237  
Lynnwood, WA 98046-1237

206-775-6245

or

800-521-4333

206-775-9180

service@carver.com

206-775-1202

206-778-9453

*Customer Service and  
Technical Information*

*Customer Service Fax  
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*Main Office,  
General Business*

*Main Office Fax*

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