

Carver CT-26v Preamplifier/Tuner

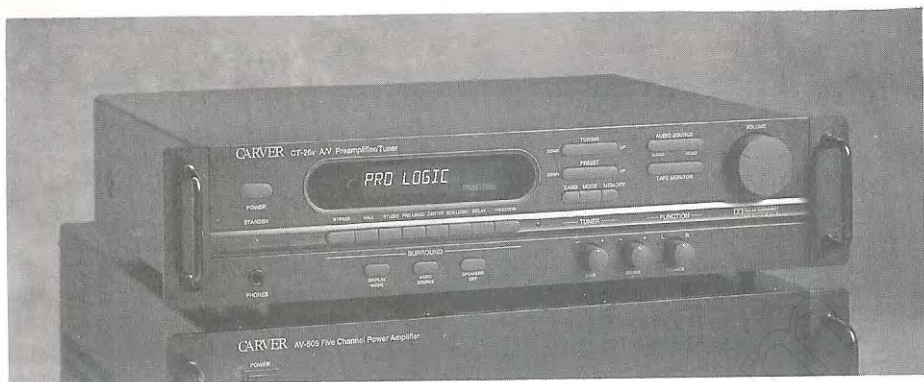
Manufacturer: Carver Corporation, P.O. Box 137, Woodinville, WA 98072-0137; 425/482-3400; www.carver.com

Price: \$499 (soon to be discontinued, and replaced by the new and nearly identical CT-25.1 at \$599.98)

Source: Manufacturer loan

Reviewer: James T. Frane

I have used a Carver CT-17 preamp/tuner in my stereo system for the past seven years. When the opportunity arose to review its latest incarnation, the CT-26v, I looked forward to trying it. I have enjoyed using the CT-17 because it is versatile, has a useful remote control, and has provided yeoman service with good sound. The CT-17's only required maintenance involved the application of contact cleaner to its volume control and switches to eliminate noise. This wasn't required until after several years of use. I will also have to replace or resolder the push-on FM coax connector, which appears to have



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an intermittent connection, possibly at the circuit board.

Audio-only use does not take advantage of all the 26v's capabilities, nor those of the CT-17, but one seldom uses all the capabilities of most pieces of equipment. The cost of the CT-26v is less in today's dollars than the CT-17 was in 1990.

There are pros and cons to a preamp/tuner. On the positive side, it combines two units that handle low level signals in one chassis, physically isolating them from the higher-level circuits of a power amplifier. This decreases the possibility of crosstalk. A separate preamp/tuner also permits independent selection of the power amplifier to suit the user's needs. This can be a real advantage because one can buy a separate amplifier of greater power than that available with a receiver or integrated amplifier. Also, a preamp/tuner may be less expensive than a separate preamp and tuner.

On the negative side, a preamp/tuner has the potential disadvantage of cross-talk between the tuner signal and the other circuits. There is also the limitation of the number of units available.

The black, 20-pound CT-26v is 4-5/6" high, 19" wide (17" wide with handles removed) and 13-1/2" deep. Soft-feel buttons and knobs across the faceplate are matte black and have light gray lettering with sufficient contrast to be easily read in all but dim light. The buttons are in the shape of horizontal ovals.

Next to the power switch in the upper left corner of the front panel is the display window, which shows the CT-26v's operat-

ing mode. Under the power switch is a red LED that glows when the CT-26v is plugged into a live circuit. Directly below the window are eight surround mode buttons, and to its right are tuner control, audio source, and tape monitor buttons. At the top right corner is a volume control knob operable from the remote control. The lower right side is home for the bass, treble and balance knobs. The treble control is +/- 10 dB at 10 kHz and the bass is +/- 10 dB at 100 Hz. There is no tone control bypass. Under the surround-mode buttons are three buttons labeled: display mode, which when pressed, shows all the CT-26v settings; video source selector; and speaker off buttons. To their left is a 1/4" headphone jack.

The AM/FM tuner uses digital frequency synthesis and has 16 available presets. These presets can be set to either AM or FM, which can be intermingled, as the tuner can switch back and forth as presets are selected. The tuning button allows station selection in an endless loop so that when the end of the "dial" is reached it automatically starts at the other end. Infinite decorrelation is a surround mode feature designed to minimize rear channel monaural effects.

On the rear of the CT-26v, from left to right are spring-loaded FM and AM antenna terminals, a series of gold-plated RCA phono jacks, unswitched and switched AC outlets, and the power cord. I prefer a threaded F-connector for coaxial cable because I use coax from an antenna and had to adapt. The spring-loaded terminals can, however, provide a tighter connection than a push-on coax F-connector. Carver says that consumer feed-

back indicates a preference for spring connectors. That implies that 300 ohm antenna twin-lead is often used. If so, I'm surprised, because the twin-lead is unshielded and can pick up signals that may degrade the signal from the antenna. I used a balun transformer to adapt my 75-ohm coax cable to the spring connectors.

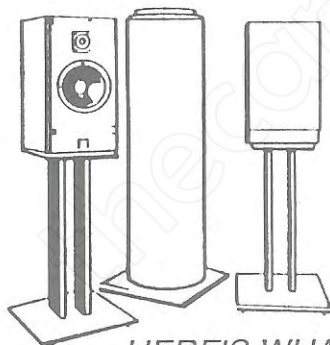
The rear panel has audio and video input (and output, as applicable) phono jacks for both channels for VCR, tape deck, DVD/DBS, CD, phono, DVD/DBS, VCR, and monitor. Below the video jacks are the subwoofer, center channel, surround, and main (left and right front) output jacks. For connection for two-channel stereo use, I used the designated audio input jacks and the front output jacks.

The 31-page owner's manual is comprehensive and clear. Drawings of the front and back of the CT-26v are shown, along with diagrams of audio and video connections. The basic operation of each of the functions is explained, and there are instructions for removing the handles, should one desire to remove them.

A standard remote control is designed to operate the unit over a 60-degree angle

from distances up to 20 feet. The remote has buttons for power; mute (which turns the sound completely off, rather than reducing its level); test tone (operable in Pro Logic or 3 Channel Logic modes), which sends a test tone to each speaker in turn for volume adjustment; a button that changes the surround mode being used; a bypass for normal stereo mode (according to the manual, this energizes the infinite decorrelation mode instead on some models); a memory button plus two numbered buttons to store and access two personal surround settings; and input source selectors for each of the available inputs. Below these are buttons for adjusting delay time, and controlling the volume of the center and rear channels. Next on the remote are front or stereo, volume control and two buttons for stepping through the AM/FM presets, followed by CD player controls for a Carver (or other make with RC-5 infrared control codes) CD player.

The CT-26v's specifications include FM usable sensitivity of 15.3 dBf, with a 25 dBf mono and 40.7 dBf stereo 50 dB quieting sensitivities. Signal-to-noise ratio is 80 dB in mono and 75 dB in stereo, with THD (total



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harmonic distortion) figures of 0.15% mono and 0.40% stereo.

AM sensitivity is 18 micro volts with a 50 dB S/N ratio. The phono response is listed as RIAA +/- 1 dB from 20 Hz to 20 kHz with a 74 dB S/N ratio. Line level inputs are rated at 10 Hz to 50 kHz +/- 3 dB with a 91 dB S/N ratio. Preamp input sensitivities are 1.4 mV referenced to 0.5 V out for the phone section and 85 mV referenced to 0.5 V out for the line level inputs. Phono impedance is 47K ohms and line level is 50K ohms.

Associated Equipment: The power amplifier was a Carver FTM-55x power amplifier controlled by the CT-26v or the CT-17 preamp-tuners. Speakers were Mach One model M-Twos used with NHT SW3 subwoofers run in dual mono and separately driven by an NHT SA-3 power amplifier with integral electronic crossover. The Mach Ones were run full range. Interconnect cables were by Gotham and Monster Cable, and speaker cables were Kimber 4PR to the Mach Ones and Original Monster Cable to the NHTs. A Sony CDP-C315 CD player, Dual CS5000 turntable used alternately with a Shure V15 Type V cartridge and a Grado Prestige Red cartridge, as well as the Carver CT-26v tuner and a Denon TU-767 tuner were used as signal sources.

Listening and Use: First, the nitpicks, which have to do with features, not sound. When using the function buttons from either the front panel or the remote, there is sometimes a slight electronic tick through the speakers. The mono switch works only on FM (the latter in common with the CT-17). I would prefer a mono switch that works on all sources, as it can aid in loudspeaker positioning and balance adjustments. The remote doesn't have individual buttons to select each preset, and so they have to be stepped through in sequence. It's more convenient to be able to select a preset by number.

Differences between the CT-26v and the CT-17 are the 26v's lack of sonic holography -- which I seldom use -- and FM stereo blend (ACCD on the CT-17). The latter can make an unlistenable station listenable. There is no midrange tone control nor loudness control, which remain unused on the CT-17. The lack of a signal strength meter for FM reception can be a handicap because it can be used to

make antenna orientation easier. There is no tone control bypass switch to take these controls out of the circuit, thus shortening the signal path and eliminating the possibility of sonic effects from these controls.

The rest is all essentially positive. Fine adjustment of the volume control is easy with the remote, being easier to control than that of the CT-17. FM reception is good, bringing in 26 listenable FM stations compared to the 19 located by the CT-17 (which, in fairness is experiencing a problem with the antenna input connector) and 33 by the Denon.

The Denon tuner also allows more control of FM quality by displays for signal strength and distortion, and circuit adjustments. Indeed, the listenable stations on the more expensive (but older) Denon generally sounded better than the same stations on the CT-26V even without using the Denon's reception-enhancing features. The 26v's AM reception was good, although the AM sound was bass-heavy. This was probably a combination of station emphasis as well as the tuner rolling off high frequencies.

The CT-26v makes no background electronic noise through the speakers, it has a phono section (very much appreciated), and appealing aesthetics. Phono sections have been deleted from too many current preamps. I have an enjoyable CD collection, but I value and listen to my records as well. The sound through the CT-26v was very good, as it added no discernible colorations. The sound was as spacious and deep as permitted by the recording. I could hear no differences between the CT-17 and the CT-26v on most sources, except that I judged the FM reception to sound just a bit better on the CT-17, and even better with the Denon. There was no apparent tuner signal feed-through to other circuits.

Just about the time this CT-26v review was ready, the unit I was reviewing developed distortion through the output. I had just returned home with a Paul Desmond CD I had purchased at a bargain price. When I played it, I thought I had determined why the bargain price -- it sounded terrible. I then tried a CD I knew to be good, and it, too, sounded very distorted. Through a process of substituting components, I found that the CT-26v was the culprit. This distortion oc-

curred on all signal sources. I talked to Jim Croft at Carver, and we agreed I'd send the unit back, Carver would investigate and determine the cause of the sudden appearance of the distortion.

Some weeks later, I heard from Jim. He said that a resistor in the muting circuit was the problem. This resistor had been changed out to a larger value in later production models, but the unit I had was an early production sample that had not been modified. The new production resistor was substituted and the unit returned to me. I have now used it for many hours over several weeks, often leaving it on for 24+ hours. There is no trace of the previous distortion, nor could I cause it to reappear. My conclusion is that current production units are not likely to distort as did the test unit. Once a problem has been identified and traced to a component in a circuit, the most difficult part of the solution has been completed. When the faulty circuit component has been replaced with a component of the proper value and the problem disappears, there is no reason to believe there will be later problems.

The Carver CT-26v has shown itself to be a reasonable value for its price. With the distortion mystery solved, I think the Carver will be a sensible choice for many. As with any audio component, the prospective buyer should put the unit through its paces, including evaluating its ability to pull in FM stations satisfactorily in the buyer's area. For the home theater system buyer, I suggest also trying the CT-26v with video sources in a surround-sound environment.

- JTF

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