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DTV Guide

January 2001



A Supplement to *TWICE*

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This Week In Consumer Electronics



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DTV Market Outlook



By Todd Thibodeaux
Vice President,
Market Research
CEA

The consumer electronics industry is guided by one mantra, change. What makes strategic sense one day, might be pure folly the next. A line from the Clint Eastwood movie *Heartbreak Ridge* might sum it up best, "to meet the challenge we must overcome, improvise, and adapt." In the nearly two years since retail availability of digital TV, the industry has had to do plenty of all three.

The current debate about broadcast standards and over-the-air content really does little justice to the spectacular future which digital TV has always had, and we must move past it. Instead, the industry should begin to focus on a DTV future which doesn't rely on any single source of content to define success or failure. To get the focus we need, and to put things in the proper perspective, we first have to dispel some myths.

MYTH 1: The success or failure of DTV is determined by the number of DTV monitors sold with an integrated digital decoder. Consumers value flexibility now more than ever. You don't have to look farther than the thriving PC upgrade market to see evidence of that. Consumers may not understand all the nuances of DTV (or even want to for that matter) but they do understand its potential. An integrated set is only one of many options available to consumers today. The future for DTV is modular. Buy a display now and upgrade your box as you see fit.

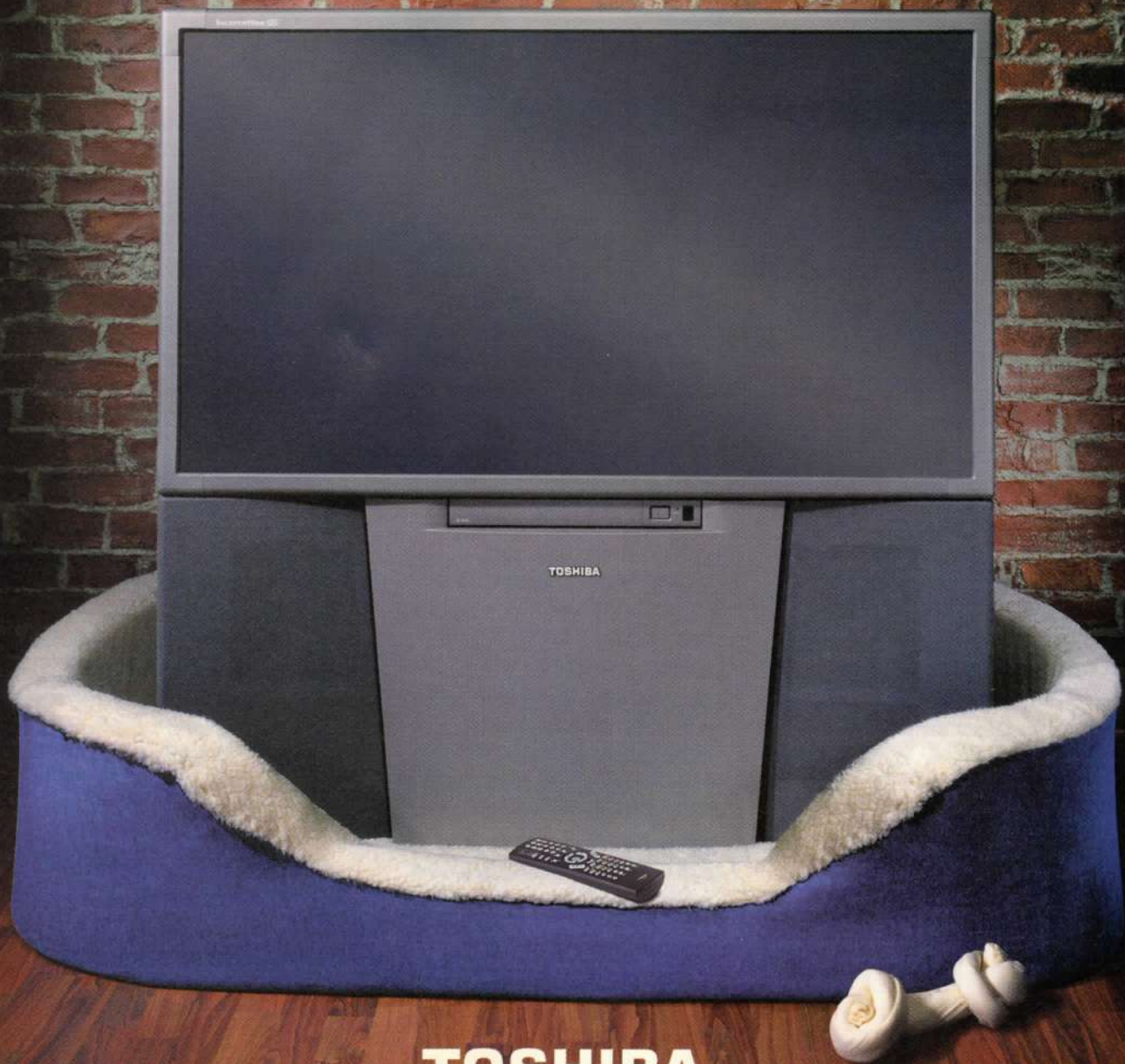
MYTH 2: The success or failure of DTV is determined by the amount of digital over-the-air programming. The network audience is not only fracturing, it's falling apart. Wrestling beats Monday Night Football in young male demographics. The Summer Olympics from Sydney wins its primetime slot for two weeks and is dubbed a failure. In fact, every night, more than 50% (and growing) of all TV watching eyeballs are not on ABC, CBS, NBC or Fox. The networks no longer own the monopoly on "must see" programming. Among younger demographics, a large chunk of evening hours are spent online with traditional TV programming providing little more than background noise. Other than sports, big event content like concerts and movies aren't the strong suit of the networks. Don't get me wrong, sports, movies, and events are important, but the limited network delivery of them is not the end-all-be-all. A variety of content is needed from

as many different delivery platforms as possible including satellite and Internet content.

MYTH 3: Prerecorded content cannot drive the DTV transition. DVD has been a phenomenal product. The fastest selling, by a growing margin, in the history of the consumer electronics industry. Can DVD drive the transition by itself? Probably not for the long term. Can it drive growth as the industry overcomes, improvises and adapts? Yes it can, just as the VCR helped drive the large screen color TV market in the early 1980's. As penetration of VCRs and prerecorded content grew rapidly in the 80's, so did the sale of large screen sets. And at prices roughly equivalent, in real terms, to the prices we'll likely see in the DTV market next year. Never forget, the U.S. has 20 million households who have already purchased a \$2,000 TV. DVD and DVD progressive can provide the same boost.

The future success of DTV is not dependent on selling integrated sets, or relying on the major networks for programming, and certainly can be powered by DVD in the short-run. The DTV of the future isn't like the analog TV of the past so why should we bind any perceived success or failure to the outdated dogmas of the past. The industry must focus on providing the most flexible platform possible to allow all set-top boxes and DTV displays to interact with the widest range of content possible to appeal to the widest possible audience. ■

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CBS Carries HDTV Ball

Offers Primetime Lineup in HD

By Glen Dickson

Early HDTV adopters have more HDTV programming to watch this fall, mostly thanks to CBS.

CBS, the HDTV leader among broadcast networks, has been broadcasting 15 hours of primetime HDTV each week through subsidy deals from Mitsubishi and Samsung. The Tiffany Network offered the majority of its primetime schedule in 1080-line interlace HDTV after closing a new sponsorship deal with Panasonic Consumer Electronics.

CBS aired 17 of its 18 weekly comedy and drama series in HDTV. New series included: *That's Life*; *Yes, Dear*; *The Fugitive*; *CSI: Crime Scene Investigation*; *The District*; *Bette*; and *Welcome To New York*. Returning HDTV programs were: *The King Of Queens*; *Everybody Loves Raymond*; *Family Law*; *JAG*; *Nash Bridges*; *Touched By An Angel*; *Becker*; *Judging Amy*; *City Of Angels*; and *Diagnosis Murder*.

"CBS is dedicated to providing viewers with high-definition television programming on an ongoing basis," says Martin Franks, Executive Vice President of CBS Television. "Primetime television is the bread and butter of any network's lineup, and we're pleased to work with Panasonic to bring HDTV viewers the best in entertainment

programming."

"HDTV continues to grow and change the way consumers view television, sparked in large part by a steady stream of quality high-definition programming," adds Bill Mannion, Vice President of Panasonic's Television and Network Systems Division.

CBS's digital affiliates, which now number 31 stations, are obviously pleased. "It's great news for us, especially considering our position in the market with HD," says John Greene, vice president of Capitol Broadcast and head of HDTV strategy at WRAL-TV in Raleigh, N.C. "We're real proud of what they're doing. It's a great boost for CBS that I think will pay off in the long run." (WRAL-TV, a leader in producing local HDTV programming, has done its own deal with Panasonic Broadcast to convert its news production to HDTV. The station began broadcasting five hours a day of HDTV news on Oct. 13, 2000).

The only CBS primetime series that wasn't shown in HDTV was *Walker, Texas Ranger*, which is shot on 16mm film and thus does not convert as well to high-definition video as series shot on 35 mm film. 16 of the series that are shot on 35mm film were converted to Panasonic high-definition videotape. *Diagnosis Murder* was not produced in 35mm film, but instead was shot using new

1080-line progressive/24-frame per second HDTV videotape from Sony. The "1080p/24" gear, which has already been employed by filmmaker George Lucas, is viewed by many industry experts as a possible alternative to 35 mm film for episodic television production.

Franks says that Mitsubishi's first HDTV sponsorship "helped plant the seed in Hollywood" by spurring post-production houses to install HDTV equipment. Now that competitive post-production facilities have the necessary gear, producing HDTV versions of shows has become much cheaper. Franks also predicts that increasing acceptance of 24p technology will spur more HDTV production, and hence, more HDTV broadcasts.

HDTV technology is also gaining acceptance for live production, and CBS will be bringing more HDTV sports to the table for the 2000-2001 television season. After airing the NCAA Final Four and 2000 Masters in HDTV last spring, and the U.S. Open Tennis Championship in HDTV last summer, CBS struck a deal with Thomson Consumer Electronics to underwrite the HDTV broadcast of Super Bowl XXXV as well as four American Football Conference play-off games. The HDTV football schedule includes the AFC Wild Card, Sunday, Dec. 31, 2000; AFC Divisional Playoffs, Saturday, Jan. 6, and Sunday, Jan. 7, 2001; AFC

Championship, Sunday, Jan. 14, 2001; and Super Bowl XXXV, Sunday, Jan. 28, 2001 from Tampa, Fla.

Thomson also sponsored CBS's Final Four HDTV broadcast. The NFL playoffs and Super Bowl "are a good vehicle at the best time of the year to sell television product," according to Thomson spokesman David Arland. "A lot of people buy new sets in January to watch the Super Bowl."

In 2001, CBS will again broadcast the Masters tournament in HDTV. The high-definition production from the legendary Augusta National golf club will again be done in partnership with Sony, which is in the second year of a three-year agreement.

There could be even more HDTV programming to come on CBS. Mitsubishi, which sponsored CBS's broadcast of the 2000 U.S. Open, has indicated that it will focus on underwriting event programming on CBS this year, which means sports and movies. And CBS executives have indicated that another deal with Samsung is a possibility.

ABC, which broadcast Monday Night Football in HDTV in partnership with Panasonic but was unable to reach a new deal for this season, promises more primetime HDTV. The network has been showing Wonderful World of Disney Presents and ABC Big Picture Show movies in 720-line progressive HDTV. "In 1999, we did 124 hours in primetime," says network spokes-person Nicky Jurado. "What we're looking at for 2000 is to exceed that by 20 to 30 hours."



NBC airs The Tonight Show With Jay Leno in 1080-line interlace HDTV five nights a week, and will continue to broadcast limited sports and specials in HDTV, according to NBC spokesperson Rebecca Tompkins. The network, which is also testing DTV datacasting in partnership with Intel, planned to show the movie Titanic in HDTV last fall.

Fox doesn't have any plans to offer HDTV in the near future. The network has been broadcasting an all-digital primetime feed since November 1998, as well as the 480-line progressive, widescreen Fox News Sunday. All of Fox's primetime film content is produced in 480p, while Fox's reality-based programming that is shot on videotape, such as Cops, is converted from 480i to 480p for transmission. About three hours of Fox's primetime schedule is offered in widescreen, including shows such as Ally McBeal and The X-Files. The network expected to broadcast up to 8 hours of widescreen per week last fall.

As for UPN and The WB, neither network has announced any HDTV programming plans. Noncommercial PBS, on the other hand, has shown a regular monthly schedule of HDTV and widescreen SDTV programming since late 1998. The network expanded its DTV offerings, broadcasting four widescreen SDTV programs and one HDTV documentary in October; five widescreen programs and three HDTV programs in November; and two widescreen shows and one HDTV program in December. HDTV fare included Nova: Runaway Universe on Nov. 21; River of Iron: Dreams of the Grand Canyon Railroad on Nov. 24; Piano Grand! A Smithsonian Celebration on Nov. 29; and Nova: Japan's Secret Garden on Dec. 19.

In cable HDTV programming, movie channels HBO and Showtime and regional sports network MSG continue to lead the way. MSG, a regional sports network primarily carried in the New York metropolitan

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DTV Programming

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area, produces New York Yankees and Mets baseball, New York Knicks and New Jersey Nets basketball, and New York Rangers and New Jersey Devils hockey in HDTV. HBO has been airing HDTV movies since March 1999, and Showtime launched its own HDTV service in January 2000.

HBO is airing about 60 percent of its motion picture titles in HDTV each month, and upconverting the rest to 4:3, 1080-line interlace HDTV. The network is being carried by direct broadcast satellite (DBS) services DirecTV and EchoStar and cable operators Time Warner Cable and Cablevision.

At least one other cable operator planned to carry HBO's hi-def service by the end of 2000, and a few other have expressed interest, says Bob Zitter, senior vice president of technology operations for HBO. Zitter says cable operators have been waiting for digital set-tops that have 1394 outputs and "5C" copy protection.

"That hardware is just becoming available," he says.

Zitter is disappointed that the technical interface between HDTV sets and cable set-tops has taken so long to be agreed upon. And he also isn't impressed with the lack of HDTV programming from the broadcast networks.

"It's been very lonely out here, and I'm glad to hear that at least CBS is stepping up to the plate to do primetime," says Zitter. "With all due respect to my colleagues who have over-the-air transmissions, when they were pleading for spectrum I don't remember them saying they were only going to use it if they got subsidies [for HDTV programming]."

Showtime's HDTV service is being carried by Time Warner Cable and EchoStar. The premium network is offering about 50% of its primetime movies in HDTV. An additional 25% of Showtime's movies and original programming is shown in wide-screen SDTV.

Showtime has found a reluctance from both movie studios and cable operators to support HDTV service while the industry waited to settle technical interface issues. "It's a real chicken-and-egg because of the desire not to offer it until the settops are available," says Glenn Oakley, Showtime senior vice president of corporate strategy.

In addition to HBO's hi-def service, DirecTV offers a channel of pay-per-view HDTV movies, sporting events and concerts. On Sept. 30, competitor EchoStar followed suit by launching its own HDTV pay-per-view channel with a broadcast of the James Bond thriller *The World Is Not Enough*, followed by *Supernova* on Oct. 14 and *The Ninth Gate* on Oct. 24. ■

Glen Dickson is associate editor of Broadcasting & Cable, a publication of Cahners Business Information.

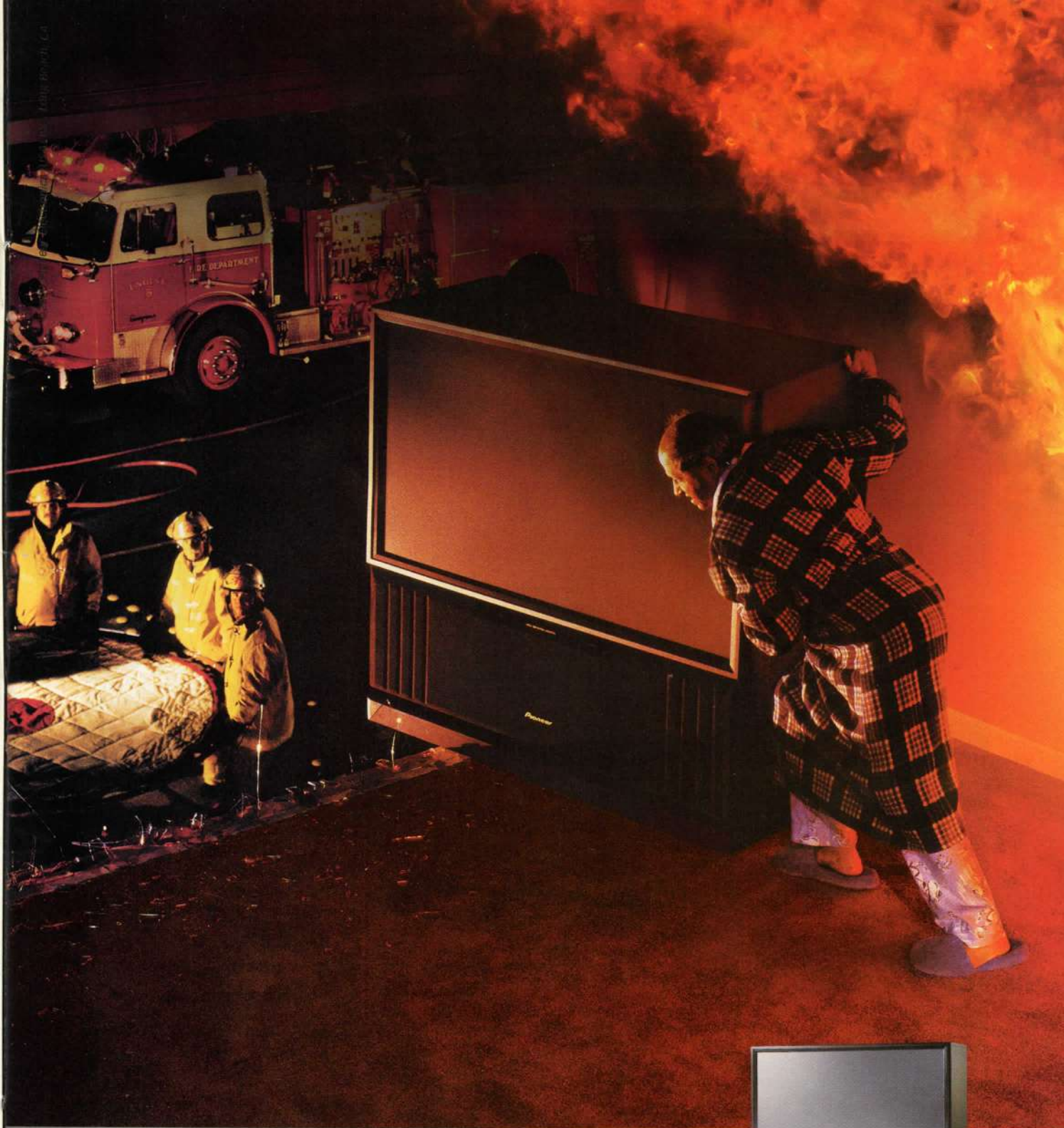
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DTV Products by Greg Tarr Courtesy of TWICE

The following TWICE charts contain the most comprehensive source of information on DTV products available in the market. All of the DTV products listed fall into one of the following categories:

- Monitors, which, with the addition of a digital set-top box, offer a complete DTV system,
- Integrated sets that include a digital receiver and display; or
- Digital set-top boxes designed to work with high-definition and digital displays, or current analog displays.

HDTV Monitors

(33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
Dwin	Transvision	1-chip DLP Front PTV	Variable	480p, 540p, 1080i 720p>576p 1080i (1024x768)	Transcanner built in	0	RGB via VGA 3 HD Component	Now	\$12,950.99
Dwin	HD700	7" CRT Front PTV	Variable	480i, 480p, 720p, 1080i	No (line doubler multiplier available)	0	RGBHV via BNC	Now	\$12,500.99
Electrograph	DTS-42	Plasma Display Panel	42W 16.9	480p, 720p, 1080i	No	0	RGBH via BNC	Now	\$11,995.99
Elitevision	P-1400	LCD	Variable	1080i, 720p	Scaler	0	RGa via VGA, HD Component	Now	\$10,995.99
Elitevision	DLA-G15	DILA Front PTV	Variable	1080i, 720p 480p	Scaler	0	RGB via VGA, HD Component	Now	\$22,995.99
Elitevision	EV-2600	7" CRT Front PTV	Variable	1080i, 720p, 480p	No	0	RGBHV via BNC, HD component	Now	\$12,995.00
Elitevision	EV-3600	8" CRT Front PTV	Variable	1080i, 720p, 480p	No	0	RGBHV via BNC, HD component	Now	\$22,995.99
Elitevision	EV-4600	9" CRT Front PTV	Variable	1080i, 720p, 480p	No	0	RGBHV via BNC, HD component	Now	\$32,995.99
Fujitsu	PDS-4221	Plasma Panel	42W 16.9	720p, 1080i, 480p	Scaler (1024x1024)	0	RGBHV via BNC, Component BNC, RGB via VGA	Now	\$15,995.99
Fujitsu	PDS-4222 Brushed Silver	Plasma Panel	42W 16.9	720p, 1080i, 480p (1024x1024)	Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA	Now	\$15,995.99
Fujitsu	PDS-4209	Plasma Panel	42W 16.9	720p, 1080i, 480p (852x480)	Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA	Now	\$7,999.99
Fujitsu	PDS-4214	Plasma Panel	42W 16.9	720p, 1080i, 480p (852x480)	Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA	Now	\$9,999.99
Hitachi	55DMX01W	DLP Rear PTV	55W 16.9	720p	Yes	2	(2) HD Component, RGB via VGA	Jan-01	\$12,995.99
Hitachi	61SWX01W	7" CRT Rear PTV	61W 16.9	1080i	Yes	2	(2) HD Component	Now	\$4,999.99
Hitachi	61SDX01B	7" CRT Rear PTV	61" 4.3	1080i	Yes	2	(2) HD Component	Now	\$3,799.99
Hitachi	53SWX01W	7" CRT Rear PTV	53" 16.9	1080i	Yes	2	(2) HD Component	Now	\$3,999.99
Hitachi	53SDX01B	7" CRT Rear PTV	53" 4.3	1080i	Yes	2	(2) HD Component	Now	\$3,299.99
Hitachi	53SDX89B	7" CRT Rear PTV	53" 4.3	1080i	Yes	2	HD Component	Now	\$3,299.00
Hitachi	53FDX01B	7" CRT Rear PTV	53" 4.3	1080i	Yes	2	(2) HD Component	Now	\$2,699.99
Hitachi	43FDX01B Tabletop	7" CRT Rear PTV	43" 4.3	1080i	Yes	2	(2) HD Component	Now	\$2,199.99
Hitachi	36SDX01S	Direct View	36" 4.3	1080i	Yes	2	HD Component	Now	\$2,199.99
JVC	AV-61S901 D'Alila	D-ILA Hologram Rear PTV	61W 16.9	1080i (1.32 mil. pixels)	Yes (line doubles NTSC)	2	(2) HD Component	TBA	\$6,999.99
Konka	HR3093U	Flat-Faced Direct View	30W 16.9	1080i	Yes	1	RGBHV via BNC	TBA	\$2,499.00
Konka	HR3289U	Flat-Faced Direct View	32" 4.3	1080i	Yes	1	RGBHV via BNC	2001	TBA
Konka	HD5098U	Rear Projection	50" 16.9	1080i	Yes	1	RGBHV via BNC	TBA	TBA
Loewe	Planus PLA 5303 PL	Direct View	30W 16.9	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA, HD Component	Jan-01	\$3,300.00
Loewe	Calida Tabletop CAL 2323-MB	Direct View	32" (4.3)	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA, HD Component	Now	\$2,400.00
Loewe	Aconda ACO9303PB	"Real-Flat" Direct View	30W 16.9	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA	Now	\$3,600.00

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HDTV Monitors (continued from page 10)

(33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
Loewe	Aconda AC09303SM	"Real-Flat" Direct View	30W" 16:9	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA	Now	\$3,600.00
Loewe	Aconda AC09383SM	Direct View	38W" 16:9	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA	Feb-01	TBA
Loewe	Aconda AC09383PB	Direct View	38W" 16:9	480i, 480p, 540p, 1080i	Yes	2	RGB via VGA	Feb-01	TBA
Madrigal	MP-9	9" CRT Front PTV	Variable	1080i, 720p	No	0	RGBHV via BNC	Now	\$60,000.00
Madrigal	MP-8	8" CRT Front PTV	Variable	1080i, 720p	No	0	RGBHV via BNC	Now	\$45,000.00
Marantz	PV5580W	7" CRT Rear PTV	55W" 16:9	1080i	Yes	2	HD Component	Now	\$5,999.99
Marantz	PV6080W	7" CRT Rear PTV	60W" 16:9	1080i	Yes	2	HD Component	Now	\$6,499.99
Marantz	VP-8000	1-chip DLP	Variable	1080i	Yes		HD Component	Now	\$8,999.99
Marantz	VP-8100	1-chip DLP Front PTV	Variable	1080i (1,024x768 pixels)	Yes	0	HD Component	Now	\$12,499.99
Marantz	PD4298HD	Plasma Display Pane	42W" 16:9	720p (1,024x1,024 pixels)	Yes	0	HD Component	Now	\$18,999.99
Mitsubishi Platinum Series	WT-46805	7" CRT Rear PTV	46W" 16:9	960i, 1080i	Yes	2	HD Component, RGB via VGA	Now	\$2,899.00
Mitsubishi Platinum Series	VS-50805	7" CRT Rear PTV	50" 4:3	960i, 1080i	Yes	2	RGBHV via VGA, HD component	Now	\$3,199.99
Mitsubishi Platinum Series	VS-60805	7" CRT Rear PTV	60" 4:3	960i, 1080i	Yes	2	HD Component, RGB via VGA	Now	\$3,699.99
Mitsubishi Platinum Series	WT-46807	7" CRT Rear PTV	46W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$3,199.99
Mitsubishi Platinum Series	WS-55807	7" CRT Rear PTV	55W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$3,699.99
Mitsubishi Platinum Series	WS-65807	7" CRT Rear PTV	60W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$4,199.99
Mitsubishi Platinum-Plus	WS-55857	7" CRT Rear PTV	55W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$4,199.99
Mitsubishi Platinum-Plus	WS-65857	7" CRT Rear PTV	65W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$4,699.99
Mitsubishi Diamond Series	WS-55907	7" CRT Rear PTV	55W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$4,699.99
Mitsubishi Diamond Series	WS-65907	7" CRT Rear PTV	65W" 6:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$5,199.99
Mitsubishi Diamond Series	WS-73907	9" CRT Rear PTV	73W" 16:9	NTSC>960i, 480p, 1080i	Yes	2	HD Component	Now	\$9,199.99
Mitsubishi DLP	WD-65000	1-chip DLP Rear PTV	65W" 16:9	720p (1280x720)	Yes	2	HD Component	Now	\$14,999.99
NetTV	DTV29X	Direct View	27" 4:3	1080i, 720p	No	optional	(2) VGA 15-pin D-sub	Now	\$1,299.00
NetTV	DTV29XC	Direct View	27" 4:3	1080i, 720p	No	1	(2) VGA 15-pin D-sub, HD Component	Now	\$1,899.00
NetTV	DTV34X	Flat Faced Direct View	32" 4:3	1080i, 720p	No	optional	(2) VGA 15-pin D-sub	Now	\$1,849.00
NetTV	DTV34XC	Flat Faced Direct View	32" 4:3	1080i, 720p	No	1	(2) VGA 15-pin D-sub HD Component	Now	\$2,599.00
NetTV	DTV36XW	Flat Faced Direct View	34W" 16:9	1080i, 720p	No	0	(2) VGA 15-pin D-sub HD Component	Now	\$4,599.00
NetTV	DTV42WP	Plasma Display Panel	40W" 16:9	1080i, 720p	No	0	RGB, HD Component	Now	\$11,999.00
Panasonic	CT-34WX50 Tau	Flat-Faced Direct View	34W" 16:9	1080iM, 480p	Yes	1	HD Component	Now	\$4,499.95
Panasonic	CT-32HX40 Tau	Flat-Faced Direct View	32" 4:3	1080i 480p	Yes	2	HD Component	Now	\$1,899.95
Panasonic	CT-36HX40 Tau	Flat-Faced Direct View	36" 4:3	1080i, 480p	Yes	2	HD Component	Now	\$2,399.95
Panasonic	PT-52DL10	DLP Rear PTV	52W" 16:9	720p (1280x720)	Yes	1	HD Component	Now	\$12,999.95
Panasonic	PT-56WXF95	7" CRT Rear PTV	56W" 16:9	1080i, 720p, 480p	Yes	2	HD Component	Now	\$4,499.95
Panasonic	PT-65WX50	7" CRT Rear PTV	65W" 16:9	1080i, 720p, 480p	Yes	2	HD Component	Now	\$4,999.95
Panasonic	PT-51HX40	7" CRT Rear PTV	51" 4:3	1080i, 480p	Yes	2	HD Component	Now	\$2,599.95
Panasonic	PT-56HX40	7" CRT Rear PTV	56" 4:3	1080i, 480p	Yes	2	HD Component	Now	\$2,799.95

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DTV Products by Greg Tarr Courtesy of TWICE

HDTV Monitors (continued from page 11) (33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
Panasonic	PT-61HX40	7" CRT Rear PTV	61" 4:3	1080i, 480p	Yes	2	HD Component	Now	\$3,099.95
Panasonic	PT-50PD2-P	Plasma Display Panel	50W" 16:9	1080i	Yes	0	HD Component	2001	TBA
Philips	64PP9751	9" CRT Rear PTV	64W" 16:9	1080i	Yes	2	HD Component	Now	\$7,999.99
Philips	60PP9701	7" CRT Rear PTV	60W"	1080i	Yes	2	HD Component	Now	\$5,299.99
Philips	60PP9601	7" CRT Rear PTV	60" 4:3	1080i	Yes	2	HD Component	Now	\$3,799.99
Philips	55PP9701	7" CRT Rear PTV	55W" 16:9	1080i	Yes	2	HD Component RGB via VGA	Now	\$4,799.99
Philips	34PW9815	Direct View	34W" 16:9	1080i	Yes	2	HD Component	Now	\$3,499.99
Philips	34PW9846	Direct View	34W" 16:9	1080i	Yes	2	HD Component	Now	\$4,999.99 <small>(Includes Pronto remote and matching stand)</small>
Philips	30PW9815	Direct View	30W" 16:9	1080i	Yes	2	HD Component	Now	\$2,999.99
Pioneer	PDP-505HD	Plasma Panel	50W" 16:9	720p, 1080i (1,280x768)	Yes	0	RGB, HD Component	Now	\$20,000.00
Pioneer	SD-641HD5	7" CRT Rear PTV	64W" 16:9	480p, 1080i	Yes	2	HD Component	Now	\$6,999.99
Pioneer	SD-532HD5	7" CRT Rear PTV	53W" 16:9	480p, 1080i	Yes	2	(2) HD Component, VGA 15-pin D-sub	Now	\$4,499.99
Pioneer	SD-582HD5	7" CRT Rear PTV	58W" 16:9	480p, 1080i	Yes	2	(2) HD Component, VGA 15-pin D-sub	Now	\$5,499.99
Pioneer Elite	PRO-510HD	7" CRT Rear PTV	53W" 16:9	480p, 1080i	Yes	2	(2) HD Component, VGA 15-pin D-sub	Now	\$6,300.99
Pioneer Elite	PRO-610HD	7" CRT Rear PTV	58W" 16:9	480p, 1080i	Yes	2	(2) HD Component 15-pin D-sub	Now	\$7,300.00
Pioneer Elite	PRO-710HD	7" CRT Rear PTV	64W" 16:9	480p, 1080i	Yes	2	(2) HD Component, Expansion Slot Connection For SH-D07	Now	\$8,300.00
Princeton	AR2.7T	Multi-scan Direct View	27" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGBHV via VGA	Now	\$1,429.00
Princeton	AR3.2T	Multi-scan Direct View	32" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGBHV via VGA	Now	\$1,999.00
Princeton	AR3.6T	Multi-scan Direct View	36" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGBHV via VGA	Now	\$2,999.99
Princeton	AF3.0HD	Multi-scan Direct View	30W" 16:9	480i, 480p, 540p, 720p, 1080i	Yes	0	RGBHV via BNC, 640x480 VGA, (2) HD Component	Now	\$4,100.00
Princeton	AS3.6HD	Multi-Scan Direct View	36" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	RGBHV with BNC or VGA, HD Component	Now	\$3,999.99
Princeton	AR2.7HTX	Multi-Scan Direct View	27" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGB via VGA, HD Component	Now	\$1,799.99
Princeton	AR3.2HTX	Multi-Scan Direct View	32" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGB via VGA, HD Component	Now	\$2,499.99
Princeton	AR3.6HTX	Multi-Scan Direct View	36" 4:3	480i, 480p, 540p, 720p, 1080i	Yes	1	(2) RGB via VGA, HD Component	Now	\$3,499.99
ProScan	PS52810	Multi-Scan Rear Projection	52" 4:3	NTSC, RF, or Video > 480i Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$2,999.99
ProScan	PS61810	Multi-Scan Rear Projection	61" 4:3	NTSC, RF, or Video > 480i Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$3,599.99
ProScan	PS27810	Multi-scan Direct View	27" 4:3	NTSC, RF, or Video > 480i Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$1,299.99

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HDTV Monitors (continued from page 12)

(33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
ProScan	PS32810	Multi-scan Direct View	32" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$1,999.99
ProScan	PS36810	Multi-scan Direct View	36" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$2,399.99
Proton	MM3601VT	Direct View	36" 4:3	1080i	No	0	RGB via VGA, HD Component	Now	\$3,199.99
Proton	MM2701VT	Direct View	27" 4:3	1080i	No	0	RGB via VGA, HD Component	Now	\$1,299.99
RCA	MM32110	Direct View	32" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	TBA	\$1,749.99
RCA	MM36110	Direct View	36" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$2,199.99
RCA	MM52110	7" CRT Rear PTV	52" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$2,799.99
RCA	MM61110	7" CRT Rear PTV	61" 4:3	NTSC, RF, or Video > 480i, Component 480p > 480p, DTC100 SD 480i / 480p > 540p, DTC100 HD 1080i > 1080i, PC VGA: 640 X 480 > 480p, PC SVGA: 800 X 600 > 600p	No	2	RGB via VGA, HD Component	Now	\$3,299.99
ReVox	E542	Plasma Panel	42W" (16:9)	480p, 720p (852x480)	Yes	0	RGB via VGA, Component Video	Now	\$18,950.00
Runco	PL-42c	Plasma Panel with controller	42W" 16:9	1080i, 720p, 852x480	Yes	0	HD Component via RCA	Now	\$14,995.00
Runco	PL-50c	Plasma Panel with controller	50W" 16:9	1080i, 720p, 1280x768	Yes	0	HD Component	Now	\$25,995.00
Runco	Reflection Series VX-101c	1-chip DLP Front PTV with controller	Variable	720p, 1080i, (4:3: 800x600) (16:9: 800x450)	Yes	0	HD RGB	Now	\$9,995.00
Runco	Reflection Series VX-1c	1-chip DLP Front PTV with controller	Variable	720p, 1080i, (4:3: 1024x768) (16:9: 1024x575)	Yes	0	RGBS via VGA 15-pin D-sub	Now	\$16,995.00
Runco	Reflection Series VX-3c	3-chip DLP Front PTV	Variable	720p, 1080i, (1024x768)	Yes	0	HD Component via BNC	Now	\$64,995.00
Runco	DTV-873	7" CRT Front	Variable	720p, 1080i	Scales 540p	0	HD Component via BNC, RGB via BNC	Now	\$17,995.00
Runco	DTV-940	7" CRT Front PTV	Variable	720p, 1080i	No	0	HD Component via BNC, RGB via BNC	Now	\$15,995.00
Runco	DTV-947	7" CRT Front PTV	Variable	720p, 1080i	Scaler (includes controller)	0	HD Component via BNC, RGB via BNC	Now	\$18,995.00
Runco	DTV-992	8" CRT Front PTV	Variable	720p, 1080i	No	0	HD Component via BNC, RGB via BNC	Now	\$27,995.00
Runco	DTV-992Ultra	8" CRT Front PTV	Variable	720p, 1080i, 1080p	No	0	HD Component via BNC, RGB via BNC	Now	\$32,995.00

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HDTV Monitors (continued from page 14) (33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
Runco	DTV-1101	9" CRT Front PTV	Variable	720p, 1080i, 1080p	No	0	HD Component via BNC, RGB via BNC	Now	\$39,995.00
Sampo	SME-34WHD5	Direct View	34W" 16:9	480i, 480p, 720p, 1080i	No	1	HD Component, RGB via VGA	Now	\$3,499.99
Sampo	SME-32HD5	Direct View	27" 4:3	480i, 480p, 720p, 1080i	No	1	HD Component, RGB via VGA	Now	\$1,299.99
Sampo	SME-27HD5	Direct View	32" 4:3	480i, 480p, 720p, 1080i	No	1	HD Component, RGB via VGA	Now	\$1,599.99
Samsung Tantus	HCJ552W	7" CRT Rear PTV	55W" 16:9	480p, 1080i	Yes	2	HD Component	Now	\$4,999.00
Samsung Tantus	HCJ652W	7" CRT Rear PTV	65W" 16:9	480p, 1080i	Yes	2	HD Component	Now	\$6,499.00
Samsung Tantus	PCJ534RF	7" CRT Rear PTV	53" 4:3	480p, 1080i	Yes	2	HD Component	Now	\$2,999.00
Samsung Tantus	PCJ614RF	7" CRT Rear PTV	61" 4:3	480p, 1080i	Yes	2	HD Component	Now	\$3,499.00
Samsung Tantus	HLK-436W	Ferro LCD Rear PTV	43W" 6:9	All Formats>720p	Yes	2	HD Component, VGA 15-pin D-sub	Q1-01	\$5,999.99
Samsung Tantus	HLK-506W	Ferro LCD Rear PTV	50W" 16:9	All Formats>720p	Yes	2	HD Component, RGB via VGA	Q1-01	\$6,999.99
Seleco	HDPLUS	7" CRT Front PTV	Variable	1080i	No	0	RGBS via BNC, RGB via VGA	Now	\$10,995.99
Seleco	SDG-700L6	7" CRT Front PTV	Variable	720p, 1080i, (1024x768)	No	0	RGBS via BNC, 15-pin D-sub	Now	\$11,595.99
Seleco	SVD-800HD	7" CRT Front PTV	Variable	720p, 1080i	Yes (DVDO i-scan)	0	RGBS via BNC, HD Component, 15-pin D-sub	Now	\$15,995.99
Seleco	SVD-800 Millennium	7" CRT Front PTV Hand selected	Variable	720p, 1080i	Yes	0	RGBS via BNC, HD Component, 15-pin D-sub	Now	\$19,995.99
Seleco	SDG-900	8" CRT Front PTV	Variable	720p, 1080i	No	0	RGBS via BNC, HD Component, 5-pin D-sub	Now	\$19,895.99
Seleco	SVD-450	7" CRT Front PTV	Variable	720p, 1080i	Scaler	0	RGBS via BNC, HD Component, 15-pin D-sub	Now	\$8,995.99
Seleco	SDV-100 Premiere	1-chip DLP Rear PTV	Variable	720p (800x600)	Scaler	0	RGBS via BNC, HD Component, 15-pin D-sub	Now	\$7,995.99
SharpVision	64LHP4000	7" CRT Rear PTV	64W" (16:9)	480p, 1080i	Yes	2	(2) HD Component Video	Now	\$6,995.99
SharpVision	XV-DW100U	LCD Front PTV	Variable	540p (1,024x768)	Yes	0	HD Component, RGBHV VGA	Now	\$10,995.99
SharpVision	LC-R60HDU	CG-Silicon LCD Rear PTV	60W" (16:9)	1024i (1280x1024)	Yes	0	HD Component RGB H&V sync	Now	\$49,995.99
SharpVision	LC-PD50U	Plasma Panel	50W" (16:9)	720p (1280x768)	Yes	0	HD Component, RGB H&V	Now	\$20,995.99
SharpVision	34N-WF5H	Direct View	34W" (16:9)	480p, 1080i	Yes	2	HD Component, RGBHV via VGA	Now	\$4,999.99
SharpVision	55RWP5H	7" CRT Rear PTV	55W" (16:9)	540p, 1080i	Yes	2	(2) HD Component RGB via VGA	Jan-01	\$4,499.99
SharpVision	61RWP5H	7" CRT Rear PTV	61W" (16:9)	540p, 1080i	Yes	2	(2) HD Component RGB via VGA	Jan-01	\$4,999.99
Sharp	61RWP4H	7" CRT Rear PTV	61W" (16:9)	480p, 1080i	Yes (to 480p)	2	(2) HD Component	Q4-00	TBA
Sharp	55RWP4H	7" CRT Rear PTV	55W" 16:9	540p, 1080i	Yes	2	(2) HD Component RGB via VGA	Q1-01	\$4,299.00
Sony	KP-57XBR10W	7" CRT Rear PTV	57W" (16:9)	1080i	Yes (DRC)	2	HD Component	Now	\$4,499.99
Sony	KP-65XBR10W	7" CRT Rear PTV	65W" (16:9)	1080i	Yes (DRC)	2	HD Component	Now	\$5,499.99
Sony	KP-53HS10	7" CRT Rear PTV	53" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$3,200.00
Sony	KP-61HS10	7" CRT Rear PTV	61" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$3,700.00
Sony	KV-32XBR400	Flat Screen Direct View	32" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$2,200.00
Sony	KV-36XBR400	Flat Screen Direct View	36" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$2,700.00
Sony	KP-53XBR300	7" CRT Rear PTV	53" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$4,499.00
Sony	KP-61XBR300	7" CRT Rear PTV	61" (4:3)	1080i	Yes (DRC)	2	HD Component	Now	\$5,499.00
Sony	VPH-G90U	9" CRT Front PTV	Variable	720p, 1080i	Yes (DRC)	0	RGBS-BNC, HD Component	Now	\$35,000.00
Sony	VPD-D50HTU	CRT Front PTV	Variable	720p, 1080i	Yes (DRC)	0	RGBHV, HD Component	Now	\$14,500.00

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HDTV Monitors (continued from page 15)

(33.75kHz @ 60 Hz or greater scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Suggested Retail Price
Sony	VPL-VW10HT	LCD Front PTV	Variable	720p (1366x768)	Yes (DRC)	0	RGBHV, HD Component	Now	\$6,990.00
Sony	PFM-510A1WU	Plasma Panel	42W" 16:9	720p, 1080i (1024x1024)	Yes	0	RGBHV, HD Component Video	Now	\$15,999.00
Sony	PFM-510A2WU	Plasma Panel	42W" 16:9	720p, 1080i (1024x1024)	Yes	0	RGBHV, HD Component Video	Now	\$16,999.00
Toshiba	65H80	7" CRT Rear PTV	65W" 16:9	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$5,499.99
Toshiba	56H80	7" CRT Rear PTV	56W" 16:9	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$4,499.99
Toshiba	40H80	7" CRT Rear PTV	40W" 16:9	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$2,999.99
Toshiba	61H70	7" CRT Rear PTV	61" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$3,499.99
Toshiba	55H70	7" CRT Rear PTV	55" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$3,299.99
Toshiba	43H70	7" CRT Rear PTV	43" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$2,699.99
Toshiba	Cinema Series 61HX70	7" CRT Rear PTV	61" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$3,799.99
Toshiba	Cinema Series 55HX70	7" CRT Rear PTV	55" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$3,499.99
Toshiba	Cinema Series 50HX70	7" CRT Rear PTV	50" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$3,299.99
Toshiba	Cinema Series 43HX70	7" CRT Rear PTV	43" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Now	\$2,799.99
Toshiba	Cinema Series CW34X92	Direct View	34W" 16:9	1080, 480p	Yes (IDSC, horizontal & vertical)	2	(2) HD Component Video Inputs	Now	\$4,499.99
Toshiba	Cinema Series 36HFX70	Direct View	36" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Q2-01	\$2,799.99
Toshiba	36HF70	Direct View	36" 4:3	1080i, 480p	Yes, IDSC 2	2	(2) HD Component Video Inputs	Q2-01	\$2,699.99
Vidikron	Vision One	CRT Front PTV	Variable	480p, 720p, 1080i, 1080p	No	0	RGBS via BNC	Now	\$49,995.99
Vidikron	Vision Two	CRT Front PTV	Variable	480p, 720p, 1080i, 1080p	No	0	RGBS via BNC	Now	\$31,995.99
Vidikron	Vision Three	CRT Front PTV	Variable	480p, 720p, 1080i, 1080p	No	0	RGBS via BNC	Now	\$24,995.99
Vidikron	VPF50HDX	CRT Front PTV	Variable	480p, 720p, 1080i, 1080p	No	0	RGBS BNC	Now	\$19,995.99
Vidikron	Epoch D-600	LCD Front PTV	Variable	480p, 720p, 1080i, (1024x768)	Digital Scaler	0	(2) RGB via VGA, 15-pin D-Sub	Now	\$9,495.99
Vidikron	Epoch D-2200	LCD Front PTV	Variable	480p, 720p, 1080i, 1080p	Digital Scaler	0	(2) RGB via VGA, HD Component	Now	\$13,495.99
Vidikron	Kronos One	7" CRT Front PTV	Variable	480p, 720p, 1080i	No	0	RGBS via BNC	Now	\$10,995.99
Zenith	IQC50H94W	7" CRT Rear PTV	50 (4:3)	1080i	Yes	2	HD Component	Now	\$3,299.99
Zenith	IQC50H94W	7" CRT Rear PTV	50 (4:3)	1080i	Yes	2	HD Component	Now	\$3,299.99
Zenith	IQC60H94W	7" CRT Rear PTV	60 (4:3)	1080i	Yes	2	HD Component	Now	\$3,799.99
Zenith	IQC60H95W	7" CRT Rear PTV	60 (4:3)	1080i	Yes	2	HD Component	Now	\$3,999.99
Zenith	IQD61W20	7" CRT Rear PTV	61W" (16:9)	1080i	Yes (Enhanced)	2	HD Component, RGB H/V via VGA 15-pin D-sub	Q1-01	TBA
Zenith	Pro 900X	7" CRT Front PTV	Variable	480i, 480p, 720p, 1080i	No	0	RGB H&V-sync	Now	\$12,599.99
Zenith	Pro 1200X	8" CRT Front PTV	Variable	480i, 480p, 720p, 1080i	Optional add-in line-quadrupler	0	RGB H&V-sync	Now	\$24,995.99
Zenith	ZLD15A1	LCD Direct View	15.1" 4:3	720p	Yes	1	RGBHV	Now	\$1,999.99



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Brand	Model	Display Type	Screen Size	Aspect Ratio	Native Scan Formats	Scan Conversion	Line Doubling For NTSC?	Built-In AC-3 Decoder?	IEEE 1394 Digital Interface	Date Available	Suggested Retail Price
Daewoo	DSP-3060N	Pure Flat Direct View	30W"	16:9	1080i	All Formats>1080i	Yes	Yes	No	Now	\$2,999.95
Hitachi	61HDX98B*	7" CRT Rear Projection	61W"	16:9	540p, 1080i	NTSC>540p 480i>540p 480p>540p 720p>1080i 1080i>1080i	Yes	Yes	No	Now	\$5,999.99 (includes dish)
Hitachi	61HDX01W*	7" CRT Rear Projection	61W"	16:9	540p, 1080i	NTSC>540p 480i>540p 480p>540p 720p>1080i 1080i>1080i	Yes	Yes (includes HD component inputs)	No	TBA	\$5,999.99 (includes dish)
Konka	HD3098U	Direct View	30W"	16:9	1080i	All Formats>1080i	Yes	Yes	No	TBA	\$3,499.99
Konka	HD3498U	Direct View	34W"	16:9	1080i	All Formats>1080i	Yes	Yes	No	TBA	TBA
Marantz	HD6400W	9" CRT Rear Projection	64W"	16:9	525p, 1080i	NTSC>525p 480i>1080i 480p>1080i 720p>1080i 1080i>1080i	Yes	Yes	No	Now	\$11,999.99
Philips	64PH9905	9" CRT Rear Projection	64W"	16:9	525p, 1080i	NTSC>525p 480i>1080i 480p>1080i 720p>1080i 1080i>1080i	Yes	Yes	No	Now	\$9,990.99
ProScan	PS65000*	7" CRT Rear Projection	65W"	16:9	540p, 1080i	NTSC/vid/Component/480i> 480p Component 480i>480p SD 480i/480p>540p ATSC HD 1080i/ 720p>1080i DIRECTV HD>1080i	Yes	Yes	No	Now	\$5,299.99
ProScan	PS34000* Performax	Direct View	34W"	16:9	540p, 1080i	NTSC/vid/Component/480i> 480p Component 480i>480p SD 480i/480p>540p ATSC HD 1080i/ 720p>1080i DIRECTV HD>1080i	Yes	Yes	No	TBA	\$3,499.99
ProScan	PS38000* Performax	Direct View	38W"	16:9	540p, 1080i	NTSC/vid/Component/480i> 480p Component 480i>480p SD 480i/480p>540p ATSC HD 1080i/ 720p>1080i DIRECTV HD>1080i	Yes	Yes	No	Now	\$3,999.99
RCA	F38310* Performax	Direct View	38W"	16:9	540p, 1080i	NTSC/vid/Component/480i> 480p Component 480i>480p SD 480i/480p>540p ATSC HD 1080i/ 720p>1080i DIRECTV HD>1080i	Yes	Yes	No	Now	\$3,799.99
RCA	P61310*	7" CRT Rear Projection	61W"	16:9	540p, 1080i	NTSC/vid/Component/480i> 480p Component 480i>480p SD 480i/480p>540p ATSC HD 1080i/ 720p>1080i DIRECTV HD>1080i	Yes	Yes	No	TBA	\$4,999.99
Samsung (Taurus Digital)	HJ555W	7" CRT Rear Projection	55W"	16:9	1080i	All Formats>1080i	Yes (Includes HD Component)	Yes	No	Now	\$6,999.99
Samsung (Taurus Digital)	HJ655W	9" CRT Rear Projection	65W"	16:9	1080i	All Formats>1080i	Yes (Includes HD Component)	Yes	No	Now	\$9,999.95
Sony	KWP-65HD1	CRT Rear Projection	65W"	16:9	960i, 480p, 1080i	NTSC>960i 480i>960i 480p>480p 720p>1080i 1080i>1080i	Yes (DRC)	No (on-board ProLogic)	No	Now	\$9,999.99
Sony	KW-34HD1	Direct View	34W"	16:9	960i, 480p, 1080i	NTSC>960i 480i>960i 480p>480p 720p>1080i 1080i>1080i	Yes	Yes	No	Now	\$6,499.99
Zenith Inteq	IQB64W10W	9" CRT Rear Projection	64W"	16:9	1080i	All Formats>1080i	Yes (Includes HD Component)	Yes	No	Now	\$9,999.99
Zenith Inteq	IQB56W10G	7" CRT Rear Projection	56W"	16:9	1080i	All Formats>1080i	Yes (Includes HD-compatible video)	Yes	No	Now	\$8,499.99

*Also receives DirecTV standard and HD satellite programming

Enhanced Definition TV Monitors

(31.5kHz or higher scanning frequency) External DTV-Decoder Required

Brand	Model	Display Type	Screen Size	Aspect Ratio	Native Scan Formats	On-Board Line Doubling/Scanning?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Date Available	Price
Fujitsu	PDS-4203	Plasma Panel	42W"	(16:9)	480p	Yes	0	RGB-H&V BNC, Component BNC, RGB 15-pin D SUB	Now	\$6,995.00
Fujitsu	PDS-4212	Plasma Panel	42W"	(16:9)	480p	Yes	0	RGB-H&V BNC, Component BNC, RGB 15-pin D SUB	Now	\$9,995.00
Hitachi	52LDX998	LCD Rear PTV	52"	(4:3)	Non-standard 600p (4:3) 450p (16:9)	Yes; Flex Converter	2	HD Component, VGA 15-pin D-sub	Now	\$4,999.00
Loewe	Planus Tabletop PLA530MB	Direct View	30W"	(16:9)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$3,000.00
Loewe	Planus Consolelette PLA530-PL	Direct View	30W"	(16:9)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$3,000.00
Loewe	Arcada Tabletop ARC232-PB	Direct View	32"	(4:3)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$2,200.00
Loewe	Art Tabletop ART736-MB	Direct View	36"	(4:3)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$3,900.99
Loewe	Art Console ART636-MB	Direct View	36"	(4:3)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$3,900.00
Loewe	Calida Tabletop CAL232-AS	Direct View	32"	(4:3)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$2,100.00
Loewe	Calida Tabletop CAL232-MB	Direct View	32"	(4:3)	Internally Processes NTSC to 480p	Yes	2	VGA (640x480)	Now	\$2,100.00
Marantz	PD-4292	Plasma Panel	42W"	(16:9)	480p (853x480)	Yes	0	RGB via VGA, HD Component	Now	\$12,999.99
NetTV	DTV42WP	Plasma Panel	42W"	(16:9)	480p	Yes	0	RGB via VGA	Now	\$8,999.00
Panasonic	CT-32XF56	Direct View	32"	(4:3)	480p	Yes	2	HD Component Video	Now	\$1,799.00
Panasonic	PT-42PD2-P	Plasma Panel	42W"	(16:9)	480p	Yes	0	HD Component, VGA 15-pin D-sub	Now	\$10,999.99
Philips	42FD9932	Plasma Panel	42W"	(16:9)	480p	Yes	0	RGB via 15-pin D-sub, HD Component	Now	\$9,990.00, \$10,990.00 with companion NTSC "E-box" FTR-9952
ProScan	PSP4200	Plasma Panel	42W"	(16:9)	480p	Yes	0	RGB via VGA	Now	\$12,999.99
Samsung	SLK-407W	TFT LCD Rear PTV	40W"	(16:9)	480p	Yes	2	HD Component Video VGA	Now	\$3,999.99
Samsung	TSK2792F	Flat Face Direct View "PureFlat"	27"	(4:3)	480p	Yes	2	HD Component Video	Now	\$1,199.99
Samsung	TSK3292F	Flat Face Direct View "PureFlat"	32"	(4:3)	480p	Yes	2	HD Component Video	Now	\$1,599.99
Samsung	TSK3092F	Flat Face Direct View "PureFlat"	30W"	(16:9)	480p	Yes	2	HD Component Video	Now	\$2,199.00
SharpVision	XVZW99	LCD Front PTV	Variable	Variable	480p	Yes	0	RGB H&V via VGA ED Component	Now	\$7,999.99
SharpVision	XVZ7000	LCD Front PTV	Variable	Variable	480p	Yes	0	RGBHV via VGA HD Component	Now	\$5,499.99
Sony	PFM-500A3WU	Plasma Panel	42W"	(16:9)	480p (852x480)	Yes	0	RGBHV, Component	Now	\$9,999.99
Zenith	H25D47DT	Direct View	25"	(4:3)	480p Multisync 1600x1200	Yes	1	S-video Multisync up to 1600x1200	Now	\$949.99
Zenith	H27D47DT	Direct View	27"	(4:3)	480p Multisync 1600x1200	Yes	1	S-video Multisync up to 1600x1200	Now	\$1,099.99
Zenith	H32D47DT	Direct View	32"	(4:3)	480p Multisync 1600x1200	Yes	1	S-video Multisync up to 1600x1200	Now	\$1,549.99
Zenith	H36D47DT	Direct View	36"	(4:3)	480p Multisync 1600x1200	Yes	1	S-video Multisync up to 1600x1200	Now	\$2,299.99

DTV Products

by Greg Tarr Courtesy of TWICE

Digital TV Set Top Decoders

Brand	Model	DTV Formats Received	Scan Conversion (Input > Output)	HD Interface for DTV Monitor	Includes NTSC Receiver	Includes NTSC Line Doubler/Scaler	Built-In Dolby Digital Decoder	IEEE 1394 Digital Interface	Date Available	Suggested Retail Price
EchoStar	Adapter module for Dish 5000**	Core 18 Table 3 Formats	Passes Undecoded HD Signal In Format Received	Connects via RF (RG6) To Separate DTV Decoder	No	No	No	No	Now	\$299.95
EchoStar	6000**	Core 18 Table 3 Formats (with optional tuner module)	All Formats>480i All Formats>1080i All Formats>720p	HD Component, RGB H&V via BNC, RGB via 15-pin D-Sub	Has Upgradable Expansion Slot For Add-on Terrestrial NTSC/ATSC Tuner modules	Yes	Yes (2 Channel)	No	Now	\$499.95 (optional ATSC tuner module \$149)
General Instruments	HDD200*** Adapter module for 4DTV digital C-Band Decoder	C-Band (ATSC tuner not included)	Selectable: All Formats>480p All Formats>720p All Formats >1080i	HD Component, RGBHV	No	Yes (multiplies externally tuned NTSC signals)	No	No	Now	\$1,599.99
Hughes Network Systems	HSYE-4686 Platinum HD*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component	Yes	No	Yes	No	Jan-01	TBA
Integra	IT815ST Formerly Unity Motion HDR-1000A	Core 18 Table 3 Formats	HD Formats>1080i SD Formats>480p	HD Component, RGBHV D-sub	No	No	Yes	No	Now	\$795.95
JVC	TU6000RU**	Core 18 Table 3 Formats (with optional tuner module)	All Formats>480i All Formats>1080i All Formats>720p	HD Component, RGB H&V via BNC, RGB via 15-pin D-Sub	Has Upgradable Expansion Slot For Add-on Terrestrial NTSC/ATSC Tuner modules	Yes	Yes (2 Channel)	No	Now	\$499.95 (optional ATSC tuner module \$100)
Konka	HD-0001	Core 18 Table 3 Formats	All Formats>1080i	RGB (High Density 15-pin D-sub)	No	No	Yes	No	TBA	\$999.95
Loewe	HDT-100	Core 18 Table 3 Formats	Switchable: All Formats>480i All Formats>480p All Formats>720p All Formats>1080i	HD Component, RGB via VGA	Yes	No	Yes (2-channel)	No	Now	\$1,599.99
Mitsubishi	SR-HD500*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component Video RGB H&V-Sync	Yes	No	Yes (2-channel)	No	Jan-01	\$1,025.00 (includes dish)
Mitsubishi	SR-HD400*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component Video RGB H&V-Sync	Yes	No	Yes (2-channel)	No	Jan-01	\$825.00 (omits DirecTV dish)
Panasonic	TU-HDS20*	Core 18 Table 3 Formats	All Formats> Any Output Selected	Switchable: HD Component or RGB H-V (RCA jacks)	Yes	Yes	No	No	Jan-01	\$1,099.95
Panasonic	TU-DA2420	Dish for the TU-HDS20	N/A	N/A	N/A	N/A	N/A	N/A	Now	\$199.95
Pioneer	SH-D505	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i	HD Component Video, RGB H&V-Sync	No	No	No	Upgradable Expansion Port	Now	\$2,499.99
Pioneer	SH-D09	Core 18 Table 3 Formats	Switchable: All Formats>480i, All Formats>1080i, All Formats>480p	Expansion Slot Connection for Pro-700HD	No	No	Yes	Upgradable Expansion Port	Now	\$2,499.99
ProScan	PSHD105*	Core 18 Table 3 Formats	Switchable: All Formats>480i, All Formats>540p, 720p>1080i, 1080i>1080i	RGB via VGA	Yes	Yes	Yes	No	Now	\$549.99

* Also receives DirecTV standard and HD satellite services
 ** Also receives Dish Network standard and HD satellite services
 *** Receives HD signals from digital C-band satellites

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SONY

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Escape to a better place. The Sony XBR400 TV can display a high-definition signal from an external receiver. And through Digital Reality Creation™ multifunction circuitry, consumers can experience near high-definition picture quality from any analog source.

FD Trinitron
WEGA

DTV Broadcasters

Stations Broadcasting Digital Signal

Station	City	Date On	Owner	Signal Type	Format	Time of Day	Cable Activity
WCBS (CBS)	New York	Nov. 98	CBS	High definition	1080i	24 hours	Time-Warner ¹
WNYW (Fox)	New York	April 99	Fox	Standard definition	480p	24 hours	NA
KTLA (WB)	Los Angeles	Oct. 98	Tribune	High definition	480p	12 hours	NA
KCBS (CBS)	Los Angeles	Nov. 98	CBS	High definition	1080i	24 hours	Time-Warner ¹
KNBC (NBC)	Los Angeles	Oct. 98	NBC	High definition	1080i	24 hours	NA
KABC (ABC)	Los Angeles	Nov. 98	ABC	High definition	720p	24 hours	NA
KABC (ABC)	Los Angeles	Dec. 98	Chris Craft	Standard definition	480p	24 hours	NA
KTTV (Fox)	Los Angeles	May 99	Fox	Standard definition	480p	24 hours	NA
KCAL (Independent)	Los Angeles	Sept. 99	Young Broadcasting	Standard definition	480i	24 hours	NA
KCET (PBS)	Los Angeles	May 00	Public	High definition	1080i	24 hours	NA
KWHY (Independent)	Los Angeles	March 00	Harriscope	Standard definition	480i	8 hrs/Mon-Fri	NA
WFLD (Fox)	Chicago	May 99	Fox	High definition	720p	24 hours	NA
WCPX (Pax)	Chicago	Feb. 00	Paxson	Standard definition	480i	24 hours	NA
WSNS (Telemundo)	Chicago	Aug. 00	NA	Standard definition	480i	24 hours	NA
WPVI (ABC)	Philadelphia	Nov. 98	ABC	High definition	720p	24 hours	NA
KYW (CBS)	Philadelphia	Nov. 98	CBS	High definition	1080i	24 hours	Time-Warner ¹
WTFX (FOX)	Philadelphia	Oct. 98	Fox	High definition	720p	24 hours	NA
WCAU (NBC)	Philadelphia	Nov. 98	NBC	High definition	1080i	24 hours	NA
WNJN (PBS)	Trenton, NJ	Oct. 99	NJ Pub. Brdcast. Auth.	High definition	1080i	18 hours	NA
WFMZ (Independent)	Philadelphia	NA	Maranatha Brdcast.	NA	NA	Test only	NA
WHYY (PBS)	Philadelphia	May 00	Public	High & Standard	NA	NA	NA
WLVT (PBS)	Bethlehem, PA	Sept. 00	Lehigh Valley P.T.C.	High definition	1080i	varies	NA
KGO (ABC)	San Francisco	Nov. 98	ABC	High definition	720p	24 hours	NA
KPIX (CBS)	San Francisco	Nov. 98	CBS	High definition	1080i	24 hours	NA
KTVU (Fox)	San Francisco	Nov. 98	Cox	High definition	720p	24 hours	NA
KRON (NBC)	San Francisco	Nov. 98	Chronicle	High definition	1080i	24 hours	NA
KBHK (UPN)	San Francisco	June 99	Chris Craft	Standard definition	480p	24 hours	NA
KICU (Independent)	San Jose	Dec. 99	Cox	Standard definition	480i	24 hours	NA
KBWB (WB)	San Francisco	March 00	Granite Broadcasting	Standard definition	NA	NA	NA
KQED (PBS)	San Francisco	May 00	Public	High definition	1080i	20 hours	NA
WCVB (ABC)	Boston	Oct. 98	Hearst-Argyle	High definition	720p	24 hours	NA
WMUR (ABC)	Boston	Nov. 98	Imes	Standard definition	480i	24 hours	MediaOne ²
WHSN (HSN)	Boston	Nov. 98	USA Broadcast.	Standard definition	480p	8 hours	NA
WHDH (NBC)	Boston	April 99	Sunbeam Tel.	Standard definition	480i	24 hours	NA
WFXT (Fox)	Boston	April 99	Fox	High definition	720p	24 hours	NA
WBZ (CBS)	Boston	May 99	CBS	High definition	1080i	24 hours	NA
WFAA (ABC)	Dallas	Nov. 98	Belo	High definition	1080i	24 hours	NA
KDFW (Fox)	Dallas	Nov. 98	Fox	High definition	720p	24 hours	NA
KXAS (NBC)	Dallas	Nov. 98	NBC	High definition	1080i	24 hours	NA
KTVT (CBS)	Fort Worth	May 99	Gaylord	High definition	1080i	24 hours	NA
WJLA (ABC)	Washington	Nov. 98	Allbritton	Standard definition	480p	24 hours	NA
WUSA (CBS)	Washington	Nov. 98	Gannett	High definition	1090i	24 hours	NA
WRC (NBC)	Washington	Nov. 98	NBC	High definition	1080i	24 hours	NA
WETA (PBS)	Washington	Nov. 98	Public	High definition	1080i	24 hours	NA
WTTG (Fox)	Washington	July 99	NA	NA	NA	NA	NA
WXYZ (ABC)	Detroit	Oct. 98	Scripps Howard	High definition	720p	17 hours	NA
WJBK (Fox)	Detroit	May 99	Fox	High definition	720p	24 hours	NA
WDIV (NBC)	Detroit	April 99	Post Newsweek	High definition	1080i	24 hours	NA
WWJ (CBS)	Detroit	July 99	CBS	High definition	1080i	24 hours	NA
WSB (ABC)	Atlanta	Nov. 98	Cox	High definition	720p	24 hours	NA

¹ Digital signal carried on Time-Warner system ² Ongoing technical trial with MediaOne ³ Comcast & Adelphia agreement to carry WB and Pax TV programming

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HDTV HDTV HDTV HDTV HDTV
HIGH DEFINITION TELEVISION



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Warning: objects aren't as real as they appear.



Tau PureFlat TV / HDTV compatible / 16:9 wide screen / Just A Bit Of Magic



Internet Keyword: Panasonic HDTV panasonic.com/hdtv or 1-800-211-PANA
(No birds were hurt in the making of this ad.)

Picture simulated. Set-top decoder box required to view HDTV programs.
An over the air antenna may also be required. As of this writing, standards for digital TV cable connectivity have not been finalized. Set-top decoder may not be capable of working with your cable system.

Panasonic
just slightly ahead of our time

DTV Broadcasters

Stations Broadcasting Digital Signal (continued from page 26)

Station	City	Date On	Owner	Signal Type	Format	Time of Day	Cable Activity
KSDK (NBC)	St. Louis	Nov. 99	Gannett	High definition	1080i	24 hours	NA
WOFL (Fox)	Orlando	Jan. 00	Meredith	Standard definition	480i	24 hours	NA
WTHR (NBC)	Indianapolis	Sept. 98	Dispatch	High definition	1080i	24 hours	NA
WISH (CBS)	Indianapolis	Dec. 98	LIN	High & Standard	1080i/480i	24 hours	NA
WXIN (Fox)	Indianapolis	Nov. 99	Tribune	Standard definition	480p	24 hours	NA
WRTV (ABC)	Indianapolis	Nov. 99	McGraw Hill	High definition	720p	24 hours	NA
KGTV (ABC)	San Diego	Nov. 99	McGraw Hill	High definition	720p	24 hours	NA
KNSD (NBC)	San Diego	Dec. 99	NBC	High definition	1080i	24 hours	NA
KFMB (CBS)	San Diego	May 00	Midwest Television	High definition	NA	24 hours	NA
KSWB (WBN)	San Diego	July 00	Tribune	Standard definition	480p	24 hours	NA
WBTV (CBS)	Charlotte	Nov. 98	Jefferson-Pilot	High definition	1080i	24 hours	NA
WSOC (ABC)	Charlotte	Oct. 99	Cox	High definition	720p	24 hours	NA
WCNC (NBC)	Charlotte	Nov. 99	Belo	High definition	1080i	24 hours	NA
WCCB (Fox)	Charlotte	Nov. 99	Bayhackle Comm.	NA	NA	NA	NA
WLWT (NBC)	Cincinnati	Nov. 98	Gannett	High definition	1080i	24 hours	NA
WCPO (ABC)	Cincinnati	Nov. 98	Scripps Howard	High definition	720p	10 - 6 (Mon. - Fri.)	NA
WKRC (CBS)	Cincinnati	Nov. 98	Jacor	High definition	1080i	Varies	NA
WXIX (Fox)	Cincinnati	Aug. 00	Raycom	Standard definition	490p	24 hours	NA
KSL (NBC)	Salt Lake City	Nov. 99	Bonneville Int.	High & Standard	480, 1080i	24 hours	NA
KTVX (ABC)	Salt Lake City	Nov. 99	United Television	NA	NA	NA	NA
WRAL (CBS)	Raleigh	May 98	Capitol Broadcasting	High definition	1080i	24 hours	Time-Warner ¹
WTVB (ABC)	Raleigh	Nov. 99	ABC	High definition	720p	24 hours	NA
WRAZ (Fox)	Raleigh	May 00	Capitol Broadcasting	High definition	1080i	24 hours	Time-Warner ¹
WBNS (CBS)	Columbus	Nov. 98	Dispatch	NA	NA	NA	NA
WKOW (ABC)	Madison	Nov. 98	Shockley	High definition	720p	18 hours	NA
KITV (ABC)	Honolulu	Jan. 98	Hearst-Argyle	High definition	720p	24 hours	NA
KHVO (ABC)	Hilo, HI	NA	Hearst-Argyle	High definition	720p	24 hours	NA
WITF (PBS)	Harrisburg	Nov. 98	Public	High definition	1080i	24 hours	NA
KCPT (PBS)	Kansas City	Nov. 98	Public	High definition	1080i	24 hours	NA
WMVT (PBS)	Milwaukee	Oct. 98	Public	High & Standard		Varies	NA
WMPN (PBS)	Jackson	Nov. 98	Public	High definition	1080i	24 hours	NA
WTNH (ABC)	New Haven, CT	Dec. 98	LIN	High definition	720p	24 hours	NA
WFSB (CBS)	Hartford, CT	Aug. 00	Meredith	High definition	1080i	NA	NA
WNDU (NBC)	South Bend	Dec. 98	Michiana Telecast. Corp.	High definition	1080i	Varies	NA
KXLY (ABC)	Spokane, WA	Sept. 99	Morgan Murphy	High definition	720p	24 hours	NA
WMFD (Ind.)	Mansfield, OH	Feb. 99	Independent	Standard definition	480i	24 hours	NA
WKPC (PBS)	Louisville, KY	Aug. 99	Public	High definition	1080i	18 hours	NA
WOOD (NBC)	Grand Rapids	Aug. 99	Lin Television	High definition	1080i	24 hours	NA
WCCB (PBS)	Lewiston, ME	Nov. 99	Public	High definition	1080i	24 hours	NA
KNTV (ABC)	Monterey, CA	Dec. 99	Granite Broadcasting	High definition	720p	24 hours	NA
WRDW (CBS)	Augusta, GA	March 00	Gray Comm.	High definition	NA	24 hours	NA
WRLK (PBS)	Columbia, SC	March 00	Public	High & Standard	480i/1080i	24 hours	Time-Warner ¹
KLAS (CBS)	Las Vegas	April 00	Landmark Comm.	High definition	1080i	24 hours	NA
WGBY (PBS)	Springfield, MA	March 00	Public	High & Standard	480p/1080i	12 hours	NA
KFOR (NBC)	Oklahoma City	May 00	New York Times Co.	NA	NA	NA	NA
WCYB (NBC)	Bristol, TN	May 00	Lamcro Comm.	High & Standard	1080i	24 hours	Comcast & Adelphia ³
WSPA (CBS)	Greenville, SC	April 00	Media General	High definition	1080i	24 hours	NA
WGEM (NBC)	Quincy, IL	Aug. 00	Quincy Broadcast. Co.	High definition	1080i	24 hours	NA
WENH (PBS)	Durham, NH	Sept. 00	Public	High & Standard	480i/1080i	Varies	NA

¹ Digital signal carried on Time-Warner system ² Ongoing technical trial with MediaOne ³ Comcast & Adelphia agreement to carry WB and Pax TV programming

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"I was blown away by the spectacular picture. The SME-34WHD5 has the sharpest, clearest, most noise-free image of any consumer direct-view I have seen."

-- Gary Merson of etown.com on the SME-34WHD5

Powerful Performance



Plasma Monitor

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DVD Player

A Name You Can Trust



Digital Camera

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CEA Tracks Consumer and Owner Attitudes on DTV

Recent surveys—of DTV owners and consumers who haven't made the switch—show us that consumer enthusiasm for the technology is high and interest is growing. CEA recently surveyed DTV owners (with the help of HDTV Magazine) and general consumers about DTV. The results are outlined here.

HDTV Owners—"I'd Do It Again"

Regardless of the product, word of mouth advertising plays a vital role to its success or failure. With this mind, the emerging product category, high-definition television, should benefit tremendously from the positive experience of current HDTV owners. Nearly 9 in 10 owners say that if they had to do it all over again they still would have purchased a HDTV.

The bulk of HDTV owners (46%) purchased their set during 2000. Although some bought an HDTV because they were in need of a new television to replace a broken or older TV, the overwhelming majority (82%) made the purchase to satisfy their need for the ultimate viewing experience.

During the buying process, more owners turned to the Internet for information than any other source. Seventy-two percent of HDTV owners used the Internet to assist in their buying decision, followed by

newspapers/magazines, retailers, manufacturers, friends/ family members, and television programs. The large number of owners using the Internet as a research tool highlights the degree of tech savvy of these early adopters.

HDTV owners paid a premium to enjoy a movie-theater like experience in their homes. As a result, it's likely owners had high expectations that HDTV would deliver. Given these high expectations, it should be expected that 40% of owners say that their HDTV has just met their expectations. Surprisingly however, 48% of owners claim their HDTV has exceeded or greatly exceeded their expectations. This translates to good news for manufacturers and content providers when HDTV exceeds already high owner expectations.

When early adopters are wowed by a new product they anxiously seek opportunities to share the experience with friends and family members. Not only are HDTV owners watching more television and movies since making their purchase, they are spending more time watching with friends and family members. Eighty-three of owners have invited friends or family members to their home specifically to showcase a program on their HDTV.

Interest in DTV Grows Among Consumers

To be sure, not everyone thinks they need a better TV. While 70% of consumers feel television programming can be improved a lot, only 31% feel the picture and sound quality have a lot of room to improve. In addition, 69% say they are satisfied with television the way it is.

But here is the catch: satisfaction does not equal complacency, especially when it comes to the heartbeat of the American household. Two-thirds of consumers (67%) say they are interested in improving their television experience. Furthermore, in addition to the one-third of consumers who feel the picture and sound quality of their television can improve a lot, 57% believe it can improve a little. Only 12% say it can not be improved.

So, do Americans really want a better TV? Yes, the majority of consumers really do want a better TV. Specifically, 50% of consumers say that a new television with a crystal clear picture, twice as sharp as their current TV, is somewhat or very appealing to them. In addition, half of consumers say their interest increases in this television if it has a wide, rectangular screen, like a movie theater. This same number of consumers say interactive features, such as browsing the Internet,

checking e-mail, or shopping would increase the appeal of this television. Most importantly, 61% indicate surround sound audio would increase their interest in this type of television.

Methodology

The HDTV owner survey was fielded via an online web form during September 2000. The sample consisted of the HDTV Magazine readership, of which 318 completed the survey.

The non-owner consumer survey was fielded to a random national sample of 1,000 U.S. adults via telephone interview during September 2000.

CEA Market Research analysts designed the studies, analyzed the data, and prepared the written reports. All questions regarding the data should be directed to CEA Market Research staff. ■

Comments from HDTV Owners Responding to the Question:

“What is your greatest frustration with your HDTV?”

- * “The HDTV set is outstanding. Both video and audio are outstanding. The frustration is with the broadcasters. Here in Kansas, there will be no off-air HDTV until the end of 2002, if we are that lucky. We are lucky to receive PBS, NBC and ABC via Satellite.”
- * “Lack of available programming OTA and DirecTV should be offering more channels in HD NOW! Plus they should have HD feeds of networks not broadcasting OTA yet in my area (South Florida). Plus MORE SPORTS IN HD NOW! TENNIS, HOCKEY, FOOTBALL!”
- * “Lack of programming, ABC not renewing MNF, lack of set-top boxes, inability to record, lack of Dolby 5.1 surround, political battles between broadcasters, CEA and government.”
- * “No content. No PPV. We will never have on the air HDTV where I live. How could Dish and DirecTV not do the Super Bowl in HDTV? I would have paid \$100 for the event and invited everyone over to see it. The greatest marketing opportunity for HDTV and they blew it.”
- * “Our local CBS channel broadcasts a Digital Signal but not a HD signal. For example “Everyone Loves Raymond” is in 480i. Also Monday night Football this Year not being in HD.”
- * “The lack of programming. For example NBC still shows a demo loop.”
- * “Seeing ABC drop Monday Night football in HDTV!”

New CEA Definitions Provide Clarity for Consumers

In response to the proliferation of new digital television (DTV) products available at a range of price points, the Consumer Electronics Association (CEA) has introduced more detailed definitions for the DTV products now available to consumers. The new product definitions, with corresponding logos identifying each class of products, are designed to give retailers and consumers a clearly defined explanation of the various choices in the growing digital TV marketplace.

New Category Offers More Choice

A new digital TV product category called Enhanced Definition TV (EDTV) has been added between High Definition TV (HDTV) and Standard Definition TV (SDTV). EDTV products are digital TVs with higher display performance than SDTV. This new category offers consumers another range of options when purchasing DTV products.

Component Products Clearly Defined

The new definitions and logos also address the component nature of many manufacturers' television product lines. With new definitions and logos for "monitors" and "tuners," consumers and retailers will now be able to distinguish sets with integrated DTV tuners from monitors and tuners sold separately.

Therefore, consumers can be sure that the EDTV or HDTV monitor they purchase can be combined with the appropriate tuner to receive digital broadcasts and display at Enhanced Definition (ED) or High Definition (HD) quality levels.

New Clarity for Retailers and Consumers

The definitions are expected to be incorporated into manufacturers' television marketing materials in the coming months. CEA's Video Division Board developed the definitions to more clearly define parameters for the varying levels of DTV products available and to make it easier for consumers to differentiate between the types of DTV products offered. The Board defined minimum attribute resolution requirements that, until now, had not existed for High Definition televisions and monitors. Specifically, HDTV displays must have active top-to-bottom scan lines of 720 progressive, 1080 interlaced, or higher. For the first time, consumers will be able to understand the different technical approaches taken by manufacturers to the display of widescreen high definition programming, particularly on 4:3 aspect ratio HDTV displays. (Manufacturers will disclose the number of active scan lines for a high definition image within a 16:9 aspect ratio "letter boxed" image area on an HDTV display).

The CEA Video Division Board also adopted two resolutions that provide clear guidelines to manufacturers and retailers for the advertising of DTV products to consumers. The first resolution will allow consumers to clearly differentiate between the new DTV sets and analog-only televisions. The resolution states that analog-only televisions (televisions/monitors with a scanning frequency of 15.75 kHz) should not be marketed or designated to consumers as having any particular DTV capability or attributes.

In a second related resolution, the Board agreed that the new definitions for monitors and tuners should be used by all manufacturers and retailers to replace general, non-industry terminology like "DTV-ready" or "HDTV-ready."

This new terminology will give consumers a 'good-better-best' choice when shopping for digital TV products. Manufacturers created this range of definitions so that consumers will be armed with the information they need to make informed buying decisions across varying budget levels.

HDTV HIGH-DEFINITION TELEVISION (HDTV): HDTV

refers to a complete product/ system with the following minimum performance attributes:

Receiver—Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Display Scanning Format—Has active vertical scanning lines of 720 progressive (720p), 1080 interlaced (1080i), or higher

Aspect Ratio—Capable of displaying a 16:9 image¹

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

HDTV HIGH-DEFINITION TELEVISION (HDTV) MONITOR

MONITOR: HDTV Monitor refers to a monitor or display with the following minimum performance attributes:

Display Scanning Format—Has active vertical scanning lines of 720 progressive (720p), 1080 interlaced (1080i), or higher

Aspect Ratio—Capable of displaying a 16:9 image¹

HDTV HIGH-DEFINITION TELEVISION (HDTV) TUNER

TUNER: HDTV Tuner refers to a RF receiver with the following minimum performance attributes:

Receiver—Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Outputs—Outputs the ATSC Table 3 720p and 1080i/p formats in the form of HD with minimum active vertical scanning lines of 720p, 1080i, or higher. Additionally, it may output HD formats converted to other formats. The lower resolution ATSC Table 3 formats can be output at lower resolution levels. Alternatively, the output can be a digital bitstream with the full resolution of the broadcast signal.

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

EDTV ENHANCED DEFINITION TELEVISION (EDTV): EDTV

refers to a complete product/ system with the following minimum performance attributes:

Receiver—Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Display Scanning Format—Has active vertical scanning lines of 480 progressive (480p) or higher

Aspect Ratio—None Specified

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

EDTV ENHANCED DEFINITION TELEVISION (EDTV) MONITOR

MONITOR: EDTV Monitor refers to a monitor or display with the following minimum performance attributes:

Display Scanning Format—Has active vertical scanning lines of 480 progressive (480p) or higher

Aspect Ratio—None specified

EDTV ENHANCED DEFINITION TELEVISION (EDTV) TUNER

TUNER: EDTV Tuner refers to a RF receiver with the following minimum performance attributes:

Receiver—Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats

Outputs—Outputs the ATSC Table 3 720p and 1080i/p and 480p formats with minimum active vertical scanning lines of 480p. Alternatively, the output can be a digital bitstream output capable of transporting 480p, except the ATSC Table 3 480i format can be output at 480i.

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

SDTV STANDARD DEFINITION TELEVISION (SDTV): SDTV

refers to a complete product/ system with the following performance attributes:

Receiver—Receives ATSC terrestrial digital transmissions and decodes all ATSC Table 3 video formats, and produces a useable picture

Display Scanning Format—Has active vertical scanning lines less than that of EDTV

Aspect Ratio—None specified

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

SDTV STANDARD DEFINITION TELEVISION (SDTV) TUNER

SDTV Tuner refers to a RF receiver with the following minimum performance attributes:

Receiver—digital transmissions and decodes all ATSC Table 3 video formats

Outputs—Outputs all ATSC table 3 formats in the form of NTSC output

Audio—Receives and reproduces, and/or outputs Dolby Digital audio

¹In specifications found on product literature and in owner's manuals, manufacturers are required to disclose the number of vertical scanning lines in the 16:9 viewable area, which must be 540p, 810i or higher to meet the definition of HDTV.

DTV Retail

Retailers

CEA is tracking retailers carrying DTV. Here is the latest information about DTV retailers.

ATLANTA MARKET

Audio Forest	Atlanta
Laserdisc Enterprises	Smyrna
Georgia Music	Macon
Best Buy	Athens
Circuit City	Atlanta
Hi-Fi Buys	Atlanta
Mundy's Audio Video	Gainesville
Roberds	Decatur
Sears	Atlanta

BALTIMORE MARKET

Audio Video Interiors	Reisterstown
Bryn Mawr Stereo	Glen Burnie
The Big Screen Store	Lutherville
Circuit City	Catonsville
Gramophone	Lutherville
Sears	Baltimore
White Marsh TV Sales	White Marsh

BOSTON MARKET

Best Buy	Cambridge
Cambridge	Somerville
Doyons TV & Appliance	Reading
Goodwin's High End Audio	Waltham
Huntington TV	Chestnut Hill
Natural Sound	Frammingham
Percy of Worcester	Worcester
Sears	Cambridge
Stereo Shop	Boston
Tweeter	Boston

CHARLOTTE MARKET

Audio Video Systems	Charlotte
Best Buy	Charlotte
Circuit City	Charlotte
Queen City TV	Charlotte
Sears	Charlotte
Sound Systems	Charlotte
Stereo Showcase	Charlotte

CHICAGO MARKET

Abt Electronics	Morton Grove
Absolute Audio Video	Rockford
Barretts Audio-Video	Elmhurst
Best Buy	Addison
Columbia Audio Video	Highland Park

Dan's TV	Aurora
Douglas TV	Chicago
Plass Appl. & Electronics	Oak Lawn
Quintessence	Naperville
Sears	Chicago
Steger TV	S. Chicago
Trage Bros	Forest Park
United Audio Centers	Chicago

CINCINNATI MARKET

Alamo Electronics	Cincinnati
Best Buy	Cincinnati
Circuit City	Cincinnati
Marvine's TV	Franklin
Roberds	Springdale
Sears	Cincinnati

CLEVELAND MARKET

Audio Craft	Cleveland
B&B Appliance	Middleburg Heights
Best Buy	Cleveland
Circuit City	Cleveland
Mentor TV	Cleveland
Sears	Cleveland

DALLAS/FT. WORTH MARKET

Best Buy	Dallas
Circuit City	Plano
Consumer Electronics	Arlington
Dillard's	Dallas
Ed Kellum & Son	Dallas
Fry's	Dallas
Hillcrest High Fidelity	Dallas
Home Entertainment	Dallas
Goodman Radio	Dallas
Jim Gunter TV & VCR	Fort Worth
Home Theater Store	Dallas
Krystal Clear Audio Video	Dallas
Marvin Electronics	Fort Worth
Sears	Dallas
Sound Idea Stereo & Video	Arlington
Star Power Home Theater	Dallas
Stereo East	Dallas

DENVER MARKET

Best Buy	Denver
Circuit City	Denver

Kacey's Fine Furniture	Denver
Laserland	Denver
Listen Up	Denver
Soundtrack	Denver
Valas TV	Denver

DETROIT MARKET

ABC Warehouse	Dearborn
AMJ Electronics	Gross Pointe
Alma's Hi Fi Stereo	Dearborn
Audio Video Alternatives	Royal Oak
Bekins Audio Video	Grand Rapids
Best Buy	Dearborn
Circuit City	Detroit
The Gramophone	Birmingham
Listening Room	Saginaw
NBS	Clair Shores
Northern Television & Video	Royal Oak
Pecar Electronics	Detroit
Sears	Detroit

HARTFORD/NEW HAVEN MARKET

Cambridge Soundworks	Farmington
Circuit City	Manchester
Sear's	Hartford
The Stereo Shop	Hartford
Tweeter	Newington

HOUSTON MARKET

All-Star Audio Video	Houston
Audio Concepts	Houston
Best Buy	Houston
Circuit City	Houston
Conn Appliance	Houston
Dillard's	Houston
Home Entertainment	Houston
Sears	Houston
Videoland	Houston

INDIANAPOLIS MARKET

Best Buy	Indianapolis
Circuit City	Indianapolis
H.H. Gregg	Indianapolis
Ovation Audio-Video	Indianapolis
Sears	Indianapolis
Sound Pro	Indianapolis

LOS ANGELES MARKET

Ahead Stereo	Los Angeles
Allen's TV	Oxnard
Ametron Audio Video	Los Angeles
Audio/Video City	Los Angeles
Audio Video Today	Westminster
Azusa Sales Audio Video	Azusa
Best Buy	Los Angeles
Caston's TV & Appliance	Newhall
Circuit City	Glendale
Cosmos	Los Angeles
Dearden's	Los Angeles
Fry's	Los Angeles
Hollytron	Los Angeles
Howard's Appliances	Laguna Hills
Good Guys!	Glendale
Ken Cranes Home Ent.	Hawthorne
LA Audio Video	Los Angeles
Marconi Radio TV Hi Fi	Glendale
Paul's TV	Los Angeles
Sears	Los Angeles
Shelley's Stereo	Woodland
Star Club	Los Angeles
Supervision	Los Angeles
Wilshire TV & Stereo	Thous. Oaks

MIAMI MARKET

Appliance TV Depot	Gables
Best Buy	Miami
Brandsmart	Miami
Circuit City	Miami
Sears	Miami
Sound Advice	Gables
Sound Components	Coral Gables

MINNEAPOLIS/ ST. PAUL MARKET

Audio King	Minneapolis
Audio Perfection	Minneapolis
Best Buy	Richfield
Circuit City	Bloomington
Edina Audio King	Edina
Elite Audio	Eau Claire
Hi-Fi Sound Electronics	Minneapolis
Robert Paul Co.	St. Paul
Ron's TV & Appliance	Forest Lake
Peterson's Entertainment	Minneapolis
Sears	St. Paul
Sound Center	Minneapolis

continued on page 38

If you can't

keep up,



you can't play.

TWICE

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DTV Retail

Retailers (continued from page 34)

CEA is tracking retailers carrying DTV. Here is the latest information about DTV retailers.

NEW YORK MARKET

6th Avenue Electronics	Springfield
49th Street Electronics	New York
AVI	Little Falls
Best Buy	Princeton
Capital Audio Electric	New York
Circuit City	Manhattan
Freehold Stereo & Video	Freehold
Harvey Electronics	New York
J&R Music World	New York
Krypton Electronics	Flushing Meadow
Lyric Hi-Fi	New York
Main Street Electronics	Flushing
MTV Electronics	Mount Vernon
Nationwide	Edison
Nobody Beats the Wiz	New York
P.C. Richard	New York
Robson's Audio Video	Paramus
Sears	Jersey City
The Sound Exchange	Summerville
Sound by Singer	New York
Stereo Effects	Great Neck
Stereo Exchange	New York
Stuarts Audio	Westfield
T.R. Technologies	New York
Ultra Hi-Fi	Flushing
Woodbridge Stereo Video	Woodbridge

ORLANDO MARKET

Absolute Sound	Orlando
Best Buy	Orlando
Circuit City	Orlando
Sears	Orlando
Sound Advice	Orlando

PHILADELPHIA MARKET

Audio Images	Whitehall
American Appliance	Montgomery
Audio Video Concepts	Cherry Hill
Best Buy	Oxford Valley
Bryn Mawr Stereo	Bryn Mawr
Circuit City	Philadelphia
Danby Radio	Ardmore
DBA Worldwide Stereo	Philadelphia
Hi Fi House	Broomall

Hi Fi Sales	Cherry Hill
Nathan Muchnick	Philadelphia
Sears	Philadelphia
Smith & Son	Medford
Soundex High End A/V	Willow Grove

PHOENIX MARKET

Best Buy	Phoenix
Buzz Jensen's Sound Advice	Phoenix
Circuit City	Phoenix
Dennis Sage Home Ent.	Phoenix
Denny's TV & Appliance	Sun City
Fry's	Tempe
Jerry's A/V	Phoenix
Hi Fi Sales	Mesa
Romano's TV & Appliance	Scottsdale
Sear's	Scottsdale
Sound Advice	Phoenix
Sounds Like Music	Phoenix
Walt's TV & Appliance	Tempe

PITTSBURGH MARKET

Best Buy	Pittsburgh
Circuit City	Pittsburgh
Daniel's	Pittsburgh
Don's Appliance	Pittsburgh
Pat's Stereo Center	Greensburg
Sears	Pittsburgh
Stereo Outlet	Washington
Stereo Shop	Greensburg
Triangle Radio & Television	Pittsburgh
Voss TV & Appliance	Pittsburgh

PORTLAND MARKET

Captain Video Lake	Oswego
Chelsea Audio Video	Portland
Circuit City	Tigert
Fry's	Portland
The Good Guys	Portland
Home Video Library	Portland
Magnolia Hi Fi	Beaverton
Northwest Home Electronics	Lake Oswego
Room Service Audio Video	Tigert
Standard TV & Appliance	Portland

RALEIGH/DURHAM MARKET

Best Buy	Raleigh
Circuit City	Raleigh
Garner TV & Appliance	Garner
Kelly's	Fayetteville
Now Audio Video	Raleigh
Sears	Raleigh

SACRAMENTO MARKET

Circuit City	Sacramento
Good Guys	Citrus Heights
Kushida TV	Sacramento
Sear's	Sacramento

SAN DIEGO MARKET

Big Screen City	La Jolla
Circuit City	San Diego
Convoy Audio Video	San Diego
Dow Stereo	San Diego
Encinitas Television	San Diego
Fry's	San Diego
Tommy's TV	San Diego
The Good Guys!	San Diego
Main Street Electronics	San Diego
Sears	San Diego
Soundhaus	El Cajon
Stereo Unlimited	San Diego

SAN FRANCISCO MARKET

Audio Excellence	San Francisco
Anderson TV & Stereo	Redwood City
Andre's Radio,	
TV & Appliance	San Francisco
Best Buy	San Francisco
Cambridge Soundworks	San Francisco
Century Stereo	San Jose
Circuit City	San Francisco
Eber Electronic Supply	San Francisco
Fry's	San Jose
The Good Guys!	San Francisco
Laser Land Home Video	San Jose
Laser City	San Francisco
Performance Audio	San Francisco
Sears	Santa Rosa
Sound Systems	Santa Clara
Stanley's Radio & TV	San Francisco

Stereo Plus	San Francisco
Telecenter Appliances	San Mateo
Wong's Audio Visual	San Francisco

SEATTLE MARKET

Circuit City	Seattle
Definitive Audio	Seattle
Dresco	Seattle
The Good Guys!	Seattle
Magnolia Hi-Fi	Seattle
Sears	Seattle

ST. LOUIS MARKET

Best Buy	St. Louis
Circuit City	St. Louis
Cohen Appliance & TV	St. Louis
Hi-Fi Fo-Fum	St. Louis
Sears	St. Louis
The Sound Room	St. Louis

TAMPA MARKET

Best Buy	Tampa
Circuit City	Tampa
Miami Audio Video	Tampa
Rex TV	St. Petersburg
Roberds	Tampa
Sears	Tampa
Sound Advice	Tampa

WASHINGTON D.C. MARKET

Belmont TV	Silver Springs
Best Buy	Reston
Big Screen Store	Rockville
Circuit City	Rockville
Domes	Chesapeake
Goryo Electronics	Lorton
Graffiti Audio Video	Washington
Myer-Emco	Washington
Multimedia Solutions	Crownsville
Murrells Television	Washington
Paul's Audio Video Center	Vienna
Pro Video	Washington
Sears	Alexandria
Soundworks Audio/Video	Kensington
Theater Vision	Rockville



DIGITAL SATELLITE SYSTEM



DVD



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HDTV

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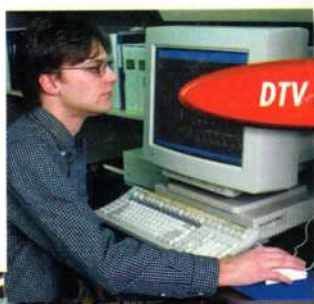


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