Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Second Periodic Review of the	)	MM Docket No. 03-15
Commission's Rules and Policies	)	
Affecting the Conversion	)	RM 9832
to Digital Television	)	

COMMENTS OF THE CONSUMER ELECTRONICS ASSOCIATION

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EXECUTIVE SUMMARY

By any measure, the introduction of digital television to the American consumer marketplace has been a success. The adoption rate of DTV has been more rapid than that of PCs, VCRs, CD players and color TVs at a similar time after introduction. Total factory-unit sales of DTV products in 2002 represented 10.9 percent of all television sales, and we estimate that the total investment in DTV since its introduction to the market in 1998 will reach $15 billion by the end of this year.

The number of DTV products available to consumers is growing rapidly, with manufacturers offering more than 400 models of HDTV monitors and integrated sets, three times the number available only three years ago. This success led manufacturers to drop the average price of HDTV monitors 11 percent from March 2002 to March 2003, and we project higher sales figures and additional price drops this year.

While successful consumer equipment sales has helped accelerate the broadcast transition to digital television, a number of factors continue to hinder the transition. Many commercial stations still have not commenced digital broadcasts notwithstanding the FCC's May 1, 2002, deadline. Moreover, the majority of stations that are on the air are broadcasting at less than full power, depriving many in their analog audience access to their digital signal.

In addition to a lack of broadcast DTV signals, there is a lack of promotion for over-the-air digital broadcast programming. While the amount of programming continues to increase, improving consumer awareness of digital programming has been an uphill battle. This stems in part from the failure of broadcasters to promote their core strength – over the air broadcasting.

Individual manufacturers have committed tens of millions of dollars to sponsor much of the HDTV programming currently being offered by network broadcasters. CEA itself has allocated more than two million dollars over the last four years to HDTV promotion, exclusive of additional programs focused specifically on broadcasters. Yet there continues to exist a lack of promotion of DTV programming in newspapers and on broadcaster analog channels. For example, unlike for analog broadcasts, virtually no daily listing of digital programs is available in local newspapers.

The broadcast transition also is being hampered by cable operators' resistance to retransmitting broadcast DTV signals. An estimated 70 percent of television homes rely upon cable. Completion of the transition is impossible until digital broadcasts reach those homes. Rapid approval of the cable compatibility plug-and-play standards agreed to by the consumer electronics and cable industries would make sure that equipment was readily available for viewing broadcasts over cable and could be used throughout the country. Resolving issues governing copy protection also would boost the digital transition.

There are undecided regulatory issues that the Commission hopefully will resolve in short order in this proceeding. Because the DTV transition cannot be completed until broadcast stations select their final in-core channel arrangements, the Commission should ensure that all stations have their final approvals "in hand" by May 1, 2005. To ensure that consumers are actually receiving broadcasts, the Commission also should set July 1, 2004 for the network

affiliates in the top 100 markets to provide full coverage that replicates their analog service area, and July 1, 2005 as the deadline for all other commercial and non-commercial stations to do so.

Further, to ensure that consumers can enjoy the full capabilities of their DTV sets, the Commission should adopt the ATSC PSIP standard, which enables the "handshake" between the broadcast signal and the DTV receiver that enables many of the TV set's functions. Doing so would provide the basis for operation of closed captioning and program ratings functions. With respect to the V-Chip, the Commission should modify subsection 15.120(d)(2) and accord digital standards EIA/CEA-766-A and EIA-708-B the same treatment as the Commission accorded their analog counterparts in subsection 15.120(d)(1). Finally, for DTV receivers that have the 16:9 aspect ratio, the V-Chip requirement should apply only to those that are 7.8 inches or greater in height, to account for the differences in screen shape between digital and analog television screens.

Significant roll out of DTV products by consumer electronics manufacturers, declining prices, and increased sales indicate that the DTV transition is going well for many sectors of the DTV industry. The over-the-air broadcast part of the transition is not making the same progress, however. We urge the Commission to address the issues that are hindering the broadcast portion of the digital TV transition and continue its efforts to see it to a successful conclusion.

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The Consumer Electronics Association ("CEA") hereby submits comments in the above-captioned proceeding. The Commission seeks public comment on the progress of the conversion of the television broadcast system from analog to digital technology and on related proposed rules.[1] By any measure, the introduction of digital television to the American consumer marketplace has been a substantial success. Digital equipment sales continue to accelerate, resulting in more equipment entering the market in greater quantities. Indeed, the adoption rate of DTV is more rapid than that of PCs, VCRs, CD players and color TVs at a similar time after introduction.

I. Introduction

The number of DTV products available to consumers is growing rapidly, with manufacturers offering more than 400 models of HDTV monitors and integrated sets, three times the number available only three years ago. Increased sales and fierce competition have caused manufacturers to drop the average price of HDTV monitors 11 percent from March 2002 to March 2003, and CEA projects additional price drops this year. CEA estimates that total

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[1] *In re* Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, *Notice of Proposed Rulemaking*, 18 FCC Rcd 1279 (2003) (Second DTV Periodic Review NPRM).

investment in DTV since its introduction to the market in 1998 will reach $15 billion by the end of 2003.

All this has helped accelerate the transition to digital television, with total factory-unit sales of DTV products in 2002 representing 10.9 percent of total television sales. This year is already off to an impressive start with dealers already purchasing more than 766,000 DTV products in the first quarter of, a unit sales increase of 86 percent over first quarter of 2002. We project that manufacturers will sell 3.8 million DTV sets and displays in 2003.

Despite the increase in sales, however, a number of factors are hindering the DTV transition. Many commercial stations have still not commenced digital broadcasts notwithstanding the FCC's May 1, 2002, deadline. Moreover, while the National Association of Broadcasters reports that digital signals are now available to most U.S. TV households, the majority of stations that have launched their digital signal are broadcasting at less than full power, depriving much of their audience access to digital content and unnecessarily delaying the return of the analog spectrum. The lack of available digital programming, cable operators' resistance to retransmitting broadcast DTV signals, and the lack of DTV cable-compatible plug-and-play standards is further hindering the DTV rollout.

Because the DTV transition cannot be completed until broadcast stations select their final in-core channel arrangements, the Commission should ensure that all stations have their final approvals "in hand" by May 1, 2005. For that to happen, the Commission should set March 1, 2005, as the deadline for channel-election applications that request a channel change, and should set the deadline 90 days earlier for applications requiring coordination with Canada and Mexico. To ensure that consumers are actually receiving broadcasts, the Commission should also set July 1, 2004, for the network affiliates in the top 100 markets to provide full coverage, and July 1, 2005, as the deadline for all other commercial and non-commercial stations.

To ensure that consumers can enjoy the full capabilities of their DTV sets, the Commission also should adopt PSIP standard A/65B, which enables the "handshake" between the broadcast signal and the DTV receiver. With respect to the V-Chip, the Commission should modify subsection 15.120(d)(2) and accord EIA/CEA-766 and EIA-708-B for digital receivers the same treatment as EIA-744 and EIA-608 in subsection 15.120(d)(1). Doing so would not only mirror the Commission's rule for analog receivers, but would also complement the manner in which broadcasters will digitally transmit program-ratings. Finally, the V-Chip requirement should apply only to DTV receivers that are 7.8 inches or greater in height, to account for the differences in screen shape between digital and analog television screens.

II. Background

The Consumer Electronics Association is the principal U.S. trade association of the consumer electronics and information technologies industries. Our members design, manufacture, distribute and sell a wide range of consumer products that use the radio spectrum, including digital and analog television receivers and monitors, video cassette recorders, direct broadcast satellite radio (DARS) and television (DBS) equipment, broadcast AM and FM radios, and many similar devices. Our members also design and manufacture unlicensed devices such as Wi-Fi network devices that connect personal computers, PDAs and laptops to peripheral devices and networks, cordless phones, baby monitors, and wireless headsets. CEA's more than 1,200 companies include all of this country's major consumer electronics manufacturers.

III. DTV Progress in the Marketplace

The Commission requests comment on whether consumer demand for digital equipment is increasing and solicits a variety of statistics to measure the pace and price of DTV receiver

sales.[2] We discuss below the general state of the DTV marketplace and attach the latest detailed product information that CEA has compiled and published in its Spring 2003 *DTV Guide, which is attached at Appendix A.*

A. Many DTV Consumer Products Are Widely Available

The presence of DTV technology in the marketplace is increasing rapidly, as is the number of consumers enjoying digital television. Digital receivers and monitors dominate many store displays, with manufacturers offering more than 400 models of HDTV digital monitors and integrated sets, up from a little more than 100 three years ago in 2000. Stores also are beginning to carry high-definition recording equipment, and cable, satellite and terrestrial set-top boxes are beginning to incorporate digital personal video recorders (PVRs).

CEA estimates that manufacturers are making more than 100 models of flat-panel HDTV monitors under more than 30 brand names with suggested retail prices starting at $800.[3] These monitors, when used with a set-top DTV tuner, provide resolution of 720 progressive scan lines or better. Similarly, manufacturers are making more than 45 models of 480p, flat-panel, enhanced-definition monitors under more than 25 brand names with suggested retail prices starting at $700.[4] More than 30 integrated HDTV receivers that need no external tuner are available at suggested retail prices beginning at $1,400 to $8,500.[5]

More than 20 digital set-top decoders are available.[6] Depending on the model, these devices allow reception of high-definition programming from over the air-broadcasts, cable operators, and/or satellite providers for display on a television monitor. Prices range from $400

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2 *See id.* at ¶ 22.

3 *See* Appendix B.

4 *See id.*

5 *See id.*

6 *See id.*

to $2,500. More than 5 digital TV PC tuner cards also are available at prices from $200 to $400.[7]

A number of combination DTV/DVD monitors, DTV video recorders, and set-top HDTV PVRs also are available. RCA is offering four DTV/DVD monitors at prices ranging from $2,400 to $3,300.[8] JVC, Marantz, and Mitsubishi are offering three DTV recorders at prices ranging from $500 to $1,300.[9] EchoStar, JVC, and Zenith also plan to offer HDTV PVRs by the end of the Summer for approximately $1,000.[10]

B. Digital Equipment Sales Are Accelerating

Last year was a very good one for DTV sales notwithstanding the general economic downturn, and 2003 looks even more promising. DTV sales have grown approximately 10 percent per month, and total factory unit sales of DTV products in 2002 represented 10.9 percent of total television sales. This rate of consumer adoption is more rapid than that of PCs, VCRs, CD players, and color TVs at a similar time after introduction. These sales are driven in part by significant price declines. Overall, the price of HDTV monitors in March 2003 was 11 percent less than in 2002, and additional price drops are predicted for this year.

In 2002 factories sold to dealers 2.5 million units and $4.2 billion worth of DTV products,[11] outpacing 2001 by 73 percent in units and 61 percent in dollars.[12] Additionally, more

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7 *See id.*

8 *See id.*

9 *See id.*

10 *See id.*

11 CEA defines "DTV products" as monitors and integrated sets displaying active vertical scanning lines of at least 480p and, in the case of integrated sets, receiving and decoding ATSC terrestrial digital transmissions.

12 CEA, *2002 Sales Turbocharge DTV Transition into New Year* (Jan. 27, 2003), http://www.ce.org/press_room/press_release_detail.asp?id=10155.

than 110,000 stand-alone set-top boxes and 165,000 integrated sets were sold in 2002, representing a 38 percent increase over 2001.[13] In total, manufacturers sold more than 5 million DTV products to dealers from 1998 to 2002, reflecting an $8.6 billion market investment in the transition from analog to digital television.[14]

This year promises to be even better than 2002, with dealers purchasing more than 766,000 units worth of DTV products during the first quarter of 2003, totaling $519.6 million in sales. This represents a unit-sales increase of 86 percent compared to Q1 2002, and a dollar-sales increase of 86 percent. CEA expects 3.8 million DTV sets and displays to be sold in 2003, and the number is expected to reach 5.5 million in 2004.

CEA estimates that total investment in DTV since introduction to the market in 1998 will reach $15 billion by the end of 2003. Our research shows remarkable levels of consumer satisfaction in the products, with the biggest consumer disappointment being the relative lack of HDTV programming.

IV. Despite the Availability of DTV Consumer Products, The Lack of Digital Broadcasts Hinders Consumer Demand

The Commission seeks comment on impediments that are hindering the complete and rapid transition to digital television.[15] In particular, the Commission asks commenters to discuss the greatest obstacles to the transition, and to suggest steps for the Commission to take to address these obstacles.[16] As discussed above, manufacturers continue to roll out innovative DTV consumer products at increasingly competitive price points, and consumers are responding

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13 *Id.*

14 *Id.*

15 *Second DTV Periodic Review NPRM*, at ¶ 18.

16 *Id.*

positively at retail outlets. Consumer demand would be increasing at even greater rates, however, were it not for:

- the delay by many commercial broadcast stations in constructing and placing on-air their digital broadcast facilities by the May 1, 2002 FCC deadline;
- the low power of a majority of those broadcast signals that do transmit in digital, resulting in failure to deliver the digital programming to many viewers within the stations' analog service area;
- the lack of promotion for over-the-air digital broadcast programming; and
- lack of FCC-approved cable-compatibility requirements so that DTV sets can connect directly to cable networks, and cable operators' resistance to retransmitting broadcast DTV signals.

A. *Stations Are Broadcasting on Barely Half of Their Allotted DTV Channels, Depriving Consumers of Access to Digital Television*

Almost one year after the commercial DTV construction deadline it appears that digital signals occupy barely half of all channels allotted by the Commission for this purpose. The Commission allotted a total of 1,688 channels for digital broadcasting (DTV).[17] Of these, 1,315 are commercial stations that were required to broadcast in digital by May 1, 2002.[18] Only 334, or 25 percent, of commercial DTV stations are transmitting at full power.[19] In fact, only 794, or 60 percent, of all commercial DTV stations are transmitting a digital signal of any nature and of those stations more than half, 460, are operating at less than full power with a minimum-facility

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[17] FCC, Media Bureau, *DTV Stations Authorized to Be on the Air*, http://www.fcc.gov/mb/video/files/dtvonairsum.html (accessed April 21, 2003).

[18] *See id.*

[19] *See id* (indicating the number of stations operating under special temporary authority (STA)). These 334 include the 115 network affiliates in the top 30 markets required to broadcast with full power that are on the air today. *See id.; In re* Remedial Steps For Failure to Comply With Digital Television Construction Schedule, MM Docket No. 02-133, *Report and Order & Memorandum Opinion and Order on Reconsideration*, FCC 03-77 at ¶ 29 (rel. April 16, 2003) (DTV Remedial Construction Order) (denying request from Sinclair Broadcasting to allow its only station in this category to broadcast with low power).

or experimental STA.[20] These statistics demonstrate that many broadcasters have not rolled out DTV broadcasting, notwithstanding the Commission mandate adopted six years ago to do so by May 1, 2002.

The results for commercial broadcasters improved to today's levels after substantial FCC engagement. Of the 1,315 stations subject to the May 1, 2002, deadline, 843 initially requested an extension of time to complete construction of their digital facilities.[21] The Commission granted initial extensions to 772 commercial DTV stations and admonished 71 stations for failing to have good reason for missing the deadline.[22] Six months later a total of 602 commercial stations requested a second extension.[23] The Commission granted 457 of these second requests, dismissed 64, and 81 remain pending.[24] Thirty-one stations had filed third extension requests by mid-March of 2003, all of which are pending.[25]

The DTV construction deadline for non-commercial stations is May 1, 2003, so it is too early to assess the results for those stations. As of mid-March, 63 stations were on the air with licensed facilities or program-test authority and 37 additional stations were on the air with special or experimental DTV authority.[26] Thus a total of 100 of the 373 non-commercial DTV

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20 *See DTV Stations Authorized to Be on the Air.*

21 *DTV Remedial Construction Order* at ¶ 6.

22 *Id.* at ¶¶ 6-7.

23 *Id* at ¶ 6.

24 *Id.*

25 *Id.*

26 FCC, Media Bureau, *DTV Stations Authorized to Be on the Air*, http://www.fcc.gov/mb/video/files/dtvonairsum.html (accessed April 21, 2003).

licensees, or 27 percent, are on air well before the deadline.[27] An additional 192 stations have filed requests for extension of the May, 1, 2003 deadline, all of which are pending.[28]

In conclusion, only 854 of the 1,688 DTV channels the Commission allotted for DTV broadcasting—or 51 percent—were being used in early March, 2003. Of these 854, only 394 – 23 percent -- were reported to be operating at full power to replicate the service area of their analog station.

B. Low-Power Stations Fail to Reach Many of Their Analog Viewers

Even where stations are broadcasting digital signals, low-power transmissions deprive large portions of their analog audiences access to the digital signal. Broadcasting at less than full power and antenna height means that a station's audience cannot receive the digital broadcast signal even though they have excellent reception of the analog signal. Added to this is an almost total lack of cable retransmission of broadcasters' digital signals and lack of an adopted cable-compatibility standard for TV sets and system operators, discussed below, resulting in most of the 70 percent of consumers nationwide that receive broadcast programming over cable lacking access to DTV broadcast programming.

In addition, low-power broadcasting hampers consumer reception by hindering the performance of digital tuners. Low-power broadcasts force digital receivers to contend with larger than planned desired-to-undesired signal strength ratios. This causes analog signals to interfere with the desired digital signal, thereby hampering tuner performance.

The large number of stations not broadcasting on their DTV channels at full power unnecessarily delays the DTV transition and return of the analog spectrum. The Commission

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[27] *See id.*

[28] FCC, Media Bureau, *Summary of DTV Applications Filed and DTV Build Out Status*, http://www.fcc.gov/mb/video/files/dtvsum.html (accessed April 21, 2003).

therefore should redouble its efforts to ensure that broadcasters deliver digital signals to all their viewers.

C. *Promotion of Over-the-Air Digital Broadcast Programming is Lacking*

The Commission asks about promotion of digital and high-definition television (HDTV), including on-air promotion.[29] The good news is that the amount of programming continues to increase. Prime time programming on network channels is migrating to high definition on all but the FOX network. New cable channels, such as the recently launched ESPN HD, supplement what is already available on HBO, Showtime and HDNET. Over-the-air HDTV broadcasts of the Super Bowl, NCAA Basketball Championships, the Masters Golf Tournament and the Oscars also have provided compelling programming options to American consumers.

It is notable that the weekly aggregate hours of reported cable and satellite HDTV programming is 784 hours, excluding any retransmission of broadcast digital signals. By contrast, the comparable figure for broadcast HDTV programming is only 119 hours, of which 56 hours originate with PBS.[30] The existence of even this amount of broadcast HDTV programming, however, will only help drive the transition if consumers are made aware of it. For this reason the consumer electronics industry has invested extensive resources to promote the DTV transition.

Individual manufacturers have committed tens of millions of dollars to sponsor much of the HDTV programming currently being offered by network broadcasters. CEA alone has allocated more than two million dollars over the last four years to HDTV promotion, exclusive of additional programs focused specifically on broadcasters. These programs include the $300,000 allocated to the CEA-NAB "DTV Zone" program last year in which manufacturers donated more

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29 *See Second DTV Periodic Review NPRM*, at ¶ 22.

30 *See* Appendix A, HDTV Programming.

than 75 DTV and HDTV products which were placed as demonstration units in high-traffic public areas across the country. In addition, CEA allocated $300,000 over the last four years to promote the "Antenna Web" program which encouraged consumers to use over-the-air antennas to receive DTV signals by making it easy to select the optimal antenna to receive off-air DTV at consumers' respective household locations.

Still, increasing consumer awareness of digital programming has been an uphill battle. This stems in part from the failure of broadcasters to promote their core strength – over the air broadcasting.

Broadcasters, both as a group and individually, with only minor exceptions, are not doing enough to promote the use of antennas to receive over-the-air- broadcast signals. [31] In contrast, the broadcasters' focus appears to be more on obtaining federal mandates to require other transmission services (satellite and cable) to carry their signals. Indeed, the broadcaster advocacy of a mandatory tuner requirement is puzzling given their lack of advocacy in the marketplace for over the air reception using indoor or outdoor antennas.

By contrast, in 1998, CEA launched a multi-faceted antenna promotion campaign in support of Antenna Web (www.antennaweb.org) whose centerpiece is an accessible consumer guide on choosing the correct indoor or outdoor antenna. Any American consumer can today go onto the internet and quickly ascertain which antenna type is appropriate based on topography, location and nearby tower signal strength. Recently, CEA expanded this program to incorporate the Titan TV Retail Zone (www.titantvretailzone.com). This web site enables retailers to enter the addresses of their customers and quickly determine which local, off-air TV stations are broadcasting in digital and which programs are available in HDTV. Both the Antenna Web and

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[31] The most noteworthy exception is WRAL in North Carolina which promotes antennae usage as part of its excellent HDTV over-the-air promotion campaign.

Retail Zone program have been funded entirely by the consumer electronics industry. The relevant web site receives some 63,000 hits per week. CEA has sought to promote this program extensively, but without support from broadcasters and with the effective competition from cable and satellite, it has been challenging.

A similar issue arises with lack of promotion of DTV programming in newspapers and on broadcaster analog channels. Unlike for analog broadcasts, virtually no daily listing of digital programs is readily available in print format. The vast majority of newspaper listings, for example, continue to exclude digital channels, even in major urban areas such as Washington, DC, where 6 or more digital signals are readily received over-the-air. To date, only USA Today regularly denotes high definition programming in its television guide. While the newspaper now includes the listings as a matter of course, Zenith Electronics provided the initial funding. In addition, promotion of digital programming on broadcasters' over the air channels has been minimal notwithstanding that this was one of Chairman Powell's proposed "voluntary industry actions" that broadcasters agreed to, but on which they generally do not seem to have followed through.[32]

Indeed, the lack of activity by broadcasters in promoting over-the-air broadcasting and the increasing desire of consumers to receive their video programming from paid services like cable and satellite raise fundamental questions as to why broadcasters receive favored treatment compared to other media. At the very least, the FCC should insist that broadcasters advocate for over the air broadcasting rather than increasingly relying on federal mandates on others to ensure their commercial success.

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[32] *See* letters to Senator Hollings, Chairman of the Senate Committee on Commerce, Science and Transportation and Representative Tauzin, Chairman of the House Energy and Commerce Committee dated April 4, 2002.

D. *The Lack of FCC-Approved Cable Plug-and-Play Standards and Minimal Cable Retransmission of Broadcast DTV Programs Excludes 70 Percent of TV Homes*

Approximately 70 percent of TV households view broadcast programming by access to a cable system. Satellite delivery has approximately 15 percent of the market.[33] The majority of consumers will continue to rely on cable to receive broadcast programming. The broadcast DTV market will continue to be limited to the 15 percent of households who rely on over-the-air reception until the lack of compatible TV sets and signal carriage issues are solved.

The continued lack of an FCC-approved, cable-ready plug-and-play standard that will allow national interoperability between digital cable systems and DTV products continues to be a significant obstacle to the DTV roll out. Notwithstanding Congress's clear intent in 1992 when it mandated compatibility between television sets and cable set-top boxes,[34] FCC-approved DTV plug-and-play cable-compatibility standards do not yet exist.

The Commission currently has before it an industry agreement—ten years in the making—that sets out proposed standards for cable/DTV plug-and-play standards to which the consumer electronics and cable industries agree.[35] This agreement is highly beneficial for consumers and will finally allow America's cable consumers to participate fully in the DTV transition.

The agreement also will promote increased consumer access to over-the-air DTV tuners. Since manufacturers building in a digital cable or tuner, can include the digital over-the-air tuner at incremental costs, the marketplace will dictate that televisions include both capabilities.

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[33] *In re* Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, *Ninth Annual Report*, 17 FCC Rcd 26901 (2002).

[34] *See* 47 U.S.C. § 544a; *In re* Implementation of Section 17 of the Cable Television and Consumer Protection and Competition Act of 1992, *First Report and Order*, 9 FCC Rcd 1891, 2005 (1994).

[35] *See In re* Compatibility Between Cable Systems and Consumer Electronics Equipment, *Further Notice of Proposed Rulemaking*, 18 FCC Rcd 518 (2003).

The Commission's expeditious approval of this agreement without significant modification would significantly accelerate the DTV rollout. Until that approval, TV manufacturers face unnecessary obstacles in designing and marketing the equipment necessary for most consumers to embrace DTV.

The general lack of cable retransmission of broadcast digital channels, even by cable operators that include high definition cable channels among their digital tier offerings, also continues to limit the audience for broadcast DTV audiences. Without carriage, broadcast signals will not reach cable subscribers who constitute 70 percent of their audience.

V. Permanent Channel Selection

After the transition is complete, broadcasting will be confined to channels 2-51. Broadcasters with an "in-core" analog channel of 51 or below that were also assigned an in-core digital channel therefore must elect which channel to keep for digital broadcasting after the transition. Until this is done, broadcasters without an in-core channel cannot plan their moves to in-core channels at the conclusion of the transition, which is scheduled to occur as early as December 31, 2006. In its first review, the commission deferred to this proceeding its consideration of channel election deadlines.[36] The Commission now seeks comment on the appropriate deadline.[37]

The Commission proposes to require that all stations with two in-core assignments, whether commercial or noncommercial, make their final channel election by May 1, 2005.[38] It notes that this would give commercial broadcasters three years and non-commercial broadcasters

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36 *See Second DTV Periodic Review NPRM*, at ¶ 25.

37 *See id.*

38 *See id.*

two years after their digital construction deadlines to make an election.[39] The Commission also notes that it would give licensees that must move into the core time to plan for their move before the transition period ends.[40]

Alternatively, the Commission seeks comment on whether to establish the same deadlines for channel selection as it establishes for replication and maximization protection.[41] The Commission notes that, because that date is later, doing so would give broadcasters more time to increase to full power before making their final channel election. The Commission suggests that the later date would presumably give broadcasters better operating data on which to base their decision.[42]

Because the DTV transition cannot be completed until broadcast stations select their final (and best) channel arrangements, CEA asks the Commission to ensure that all stations have FCC approvals for their final channels "in hand" by May 1, 2005. For that to happen, the Commission should set March 1, 2005, as the deadline for channel-election applications that request a channel change. Because applications for locations within 200 miles of the Canadian or Mexican border require coordination with those countries, which takes extra time, the Commission should set the deadline for such applications 90 days earlier (December 1, 2004). To implement these proposals, the Commission should establish application-processing guidelines that ensure grant of all necessary approvals within 60 days of submissions, with the exception of applications requiring foreign coordination, for which the guidelines should ensure approval within 150 days.

The Commission also proposes to allow stations that wish to swap their channels—i.e., use their current analog channels for digital service and vice versa—to do so through the

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39 *See id.*

40 *See id.*

41 *See id.* at ¶ 26.

42 *See id.*

application process if they meet minimum spacing requirements.[43] CEA support this proposal. Its adoption would help simplify the current procedure, which unnecessarily delays decisions by requiring carriers to petition for a rulemaking to amend both the Commission's analog and digital Table of Allotments.

VI. Deadline For DTV Coverage

In its first periodic review the Commission drastically scaled back its coverage requirements for digital stations. Instead of requiring commercial broadcast stations to cover their full service areas on May 1, 2002 (May 1, 2003 for non-commercial stations), at the last minute the Commission changed its rules to allow stations to cover just their communities of license. The area of required coverage is usually a relatively small area compared to a station's analog Grade B service area. In Appendix A we submit a map from the Commission's application files demonstrating a typical station's implementation of low power. In this instance the station serves well beyond its city of license, yet still leaves a large portion of its analog service area un-served with its digital signal.

A. Digital Coverage of Analog Service Area

The Commission proposes to establish a date certain by which all broadcast stations must provide digital coverage to their analog service area (or "maximized digital area," if applicable).[44] After that date broadcasters would lose protection for the area not covered, at which point the area could be served by a neighboring station that could increase its power or facilities, or by a new low-power station that could initiate operations to cover the un-served

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43 *See id.* at ¶ 28.

44 *See id.* at ¶ 29.

area.[45] The Commission proposes July 1, 2005, as the deadline for the top four network affiliates in the top 100 markets and July 1, 2006, for all other stations.[46] The Commission also asks whether it should set an "intermediate" date for coverage greater than the city of license but short of "full" coverage.[47]

The Commission should set as early a date as feasible for full-area coverage. Television sets cannot receive signals that are too weak to reach the consumer, and it is impossible to explain to a consumer outside the city of license why the analog signal is clear but the digital signal cannot be seen. CEA proposes July 1, 2004, for the network affiliates in the top 100 markets to provide full coverage; and July 1, 2005, for all others, both commercial and non-commercial.

The Commission need not establish an "intermediate" date. Every one of a station's analog viewers should be served as rapidly as possible. Nothing prevents stations from ramping up to maximum facilities at ANY time during this period, and stations should be encouraged to do so. To encourage stations to meet the deadlines, the penalty for failing should be serious and substantial.

B. Stations with Pending Applications

Approximately 140 commercial and noncommercial broadcast licensees have not yet received a DTV construction permit, mostly because of coordination problems of various types. The commercial stations, having missed the established construction deadlines, no longer are subject to any deadlines for completion. Non-commercial stations that do not meet the May 1, 2003 deadline will be in the same situation.

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45 *See id.*

46 *See id.* at ¶ 33.

47 *See id.* at ¶ 36.

The Commission proposes requiring applicants without construction permits to provide DTV service covering at least their community of license pursuant to special temporary authority (STA) within one year of adoption of the Report and Order in this proceeding.[48] The Commission also asks whether the channel-election and full service area coverage deadlines that it proposes to adopt in this proceeding should apply equally to these licensees and, if not, what deadline would be appropriate.[49]

The Commission should resolve the pending applications rapidly. It should require stations with applications it cannot resolve in time to meet the same obligations as other stations: service to their communities of license until the new deadline to be established in this proceeding for extending the DTV signal to cover their existing analog service areas. Unresolved construction permit issues, such as requests for higher power and larger service areas that cannot be reconciled with applications for other stations or coordinated with neighboring countries must not be used as an excuse to do nothing.

VII. Digital Broadcast and Simulcast Requirements

The Commission's rules required stations providing both analog and digital signals to simulcast at least 50 percent of their programming by April 1, 2003.[50] The simulcast obligation increases to 75 percent by April 1, 2004, and 100 percent by April 1, 2005.[51] The Commission asks whether it should retain, revise, or eliminate these simulcast requirements.[52] The

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48 *See id.* at ¶ 62.

49 *See id.* at ¶ 62.

50 *See id.* at ¶ 65.

51 *See id.* (citing *Fifth Report and Order*, 12 FCC Rcd at 12832, ¶ 54; 47 C.F.R. § 73.624(f)).

52 *See id.* at ¶ 66.

Commission also asks how it should construe the simulcast obligation, if it retains it.[53] In particular, the Commission proposes: (1) to consider a program to be simulcast if the station transmits it in both formats within 24 hours; (2) to allow the station to use different commercials and promotions in the two broadcasts; and (3) to allow enhanced features on the digital transmission.[54] Alternatively, the Commission asks whether, if it eliminates or reduces the simulcast obligation, it should initially require stations to broadcast prime-time digital signals for an amount of time equivalent to 50 percent of the time that they broadcast signals on their analog channels.[55] The obligation would increase to 75 percent on April 1, 2004, and to 100 percent on April 1, 2005.[56]

CEA would prefer that the stations simulcast their digital programming, and do so for 100 percent of the time. At a minimum, however, the Commission should require the stations to broadcast digital programs for at least the stated amounts of time if the simulcast rules are repealed. This required amount of time on the air would be identical to that required under the simulcast rule, with the difference that the programming would not have to be identical on the two channels. In dealing with the simulcast issue, the Commission should stay fixed on the overall goal of promoting the kind of compelling DTV and HDTV programming that will drive the digital transition.

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53 *See id.* at ¶ 67.

54 *See id.*

55 *See id.* at ¶ 68.

56 *See id.*

VIII. Defining Terms in the Communications Act's DTV Provision

A. Definition of Television Market

Section 309(j)(14)(B) requires the Commission to grant a station's request to extend the deadline for return of analog spectrum if one of three conditions exists in the requesting station's "television market."[57] The Commission seeks comment on how it should define "television market," for these purposes.[58] The Commission is considering defining the relevant television market as: 1) the designated market area (DMA) where the station is located; 2) the Grade B contour; or 3) the DMA and any adjacent DMAs within the station's Grade B contour where a significant percentage of the households, such as 85 percent, have access to digital signals.[59] CEA believes that for DTV purposes, DMAs provide the best choice. Unlike signal contours of various stations, DMA boundaries do not overlap. Since DMAs are used to define areas of coverage for purposes of applying the Commission's cable carriage rules, there is a substantial body of interpretive law that could assist the Commission in the DTV context.

B. The Network –Digital Television Test

Section 309(j)(14)(B) requires the Commission to grant an extension if one or more of the stations in the market licensed to or affiliated with one of the four largest national television networks is not broadcasting a DTV signal despite having exercised due diligence.[60] The Commission asks whether it should interpret this provision as requiring all stations in a market

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57 *See id.* at ¶¶ 69, 72.

58 *See id.* at ¶ 72.

59 *See id.* at ¶¶ 72-78.

60 *See id.* at ¶ 79 (citing 47 U.S.C. § 309(j)(14)(b)(i)).

licensed to or affiliated with a top-four network to be broadcasting in digital before analog service is ended.[61]

The Commission proposes not to consider a station broadcasting under an STA to be broadcasting a digital television service signal if the station is not in compliance with the Commission's minimum initial construction requirements.[62] This would allow an extension in any market where a top-four network affiliate is not providing digital service pursuant to the minimum requirements for community coverage and hours of operation.[63] An extension would not be available, however, to stations in a market where the broadcast stations owned by or affiliated with a top-four network were providing the minimum digital service permitted under the rules but were not providing service that fully replicates their analog service area.[64] The Commission recognizes that this interpretation could leave some viewers without service, but argues that to do otherwise would encourage stations to postpone full replication of their service areas for the purpose of obtaining an extension.[65]

By the time this is relevant, December 2006 at the earliest, all deadlines for full-power operation will have come and gone and stations should have lost any protection of their analog service areas not covered by their digital signals. Consequently, the low-power signal should count for purposes of the transition because an another station may serve the viewers left unserved by the incumbent broadcaster that fails to use the full, authorized facilities.

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61 *See id.*

62 *See id.* (citing 47 C.F.R. §§ 73.625(a)(1), 73.624(b)).

63 *See id.*

64 *See id.* at ¶ 80.

65 *See id.*

C. *The 15-Percent Test*

Section 309(j)(14)(B)(ii) requires the Commission to grant an extension request where 15 or more percent of the television households in the market do not subscribe to an MVPD that carries one of the digital channels of each of the television stations broadcasting in that market.[66]

For purposes of determining whether the 15-percent test is met, CEA believes that the Commission must include cable and satellite retransmissions. Digital satellite and cable alone sometimes control 90 percent or more of the market. Because few markets have even as much as 25 percent primary over-the-air reception, no market would reach 85 percent penetration if only over-the-air transmission counts toward the statutory requirement.

Assuming that, pursuant to the must-carry rules, the digital broadcast signal will be on the basic tier when the analog signal is shut down, all subscribers with the appropriate cable or satellite set-top box will receive the station's digital signal, and should be counted. The signal showed to counter even if the digital broadcast signal remains on a higher tier pursuant to a retransmission consent agreement. The Commission should measure availability by the percentage or number of potential cable subscribers. To do otherwise would allow a station to make its signal "unavailable" by agreeing with the cable operator or satellite provider to place the digital channel only on a premium tier.

D. *Procedures*

The Commission seeks comment on what rules and filing deadlines it should establish to govern extension requests, and who should bear the burden of demonstrating whether an extension is warranted.[67] The transition should be treated as complete in a market on December 31, 2006, unless someone files a petition in the market arguing otherwise. Normally the

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66 *See id.* at ¶ 84.

67 *See id.* at ¶¶ 69, 71, 93-94.

petitioning party bears the burden of persuasion. The Commission should resolve any such petition within 90 days. The Commission's decision should be effective for one year for that market.

IX. DTV Labeling and Notice Requirements

The Commission asks whether manufacturers plan to include labels on television equipment indicating that it cannot receive over-the-air signals without an additional device or will not receive analog signals after a certain date.[68]

CE manufacturers have every marketplace incentive to ensure that our consumers are well informed about the capabilities of the products they purchase. Misinformed consumers can easily lead to disappointed purchasers and product returns.

To this end, CEA has developed a wide range of voluntary labels to fully inform consumers about the specific capabilities of DTV products, including labels for standard definition television (SDTV), enhanced definition television (EDTV), and high definition television (HDTV). In addition, CE manufacturers are working with the cable industry on labels to describe the capabilities of cable "plug and play" DTV products.

With respect to the labels proposed by the Commission, manufacturers will address these issues in the future on a voluntary basis should they determine that a possibility for consumer confusion exists. CEA would oppose the imposition of mandatory government labels based on speculation without evidence of existing problems.

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68 *See id.* at ¶ 97.

X. Standards Issues

A. The Commission Should Adopt the Amendment to the ATSC Transmission Standard, A/53B

In the *First Periodic Review* the Commission revised its rules[69] to incorporate a later version of the ATSC Standard (A/53B), and in this proceeding requests comment on whether its rules should be updated again to reflect any later changes to the standard.[70]

The A/53B Standard remains current, but one amendment to it has been adopted and others are in various stages of consideration. The adopted amendment, Amendment 1 to A/53B, contains the technical specifications for the Active Format Description (AFD). AFD informs display devices the size of the active video area of the signal so that adjustments can be made automatically to display the active portion of the video in the best possible manner for that device. Inclusion in the FCC-adopted standard as approved by the ATSC would ensure that broadcasters will transmit this information in a consistent manner and that consumer equipment receiving the broadcast signal with this added functionality will understand and follow the instructions correctly. Broadcasters should be required to send the AFD and "bar data" whenever the active area of the video does not completely fill the coded frame. There is clear consumer benefit to including approved amendments such as this one in the Commission's rules, and that accordingly Amendment 1 should be included with A/53B.

B. The Commission Should Adopt the Program and System Information Protocol (PSIP) Standard in its Entirety

The Commission seeks comment on whether it should incorporate within its regulations a requirement to use any or all of the PSIP standard as adopted by the ATSC.[71] In the first

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69 *See* 47 C.F.R. § 73.682(d)(2002).

70 *See Second DTV Periodic Review NPRM*, at ¶ 113.

periodic review CEA supported FCC adoption of the PSIP standard and requiring stations to transmit PSIP information in its entirety in a manner similar to adoption of the ATSC standard. We continue to support doing so. The latest version of the PSIP standard (A/65B, March 18, 2003) is essential for a whole host of TV receiver functions operating correctly, including channel navigation, program guides (EPG), closed captioning, and v-chip.

Adoption of the PSIP standard in its entirety would directly benefit consumers at no cost by ensuring that all the functionalities built into DTV broadcast receivers will operate as intended, including closed captioning, V-Chip, and translator reception. Broadcasters and equipment manufacturers already have accepted the PSIP requirements by their endorsement in the ATSC process. Within the standard itself some aspects of the PSIP standard are mandatory and some are voluntary. Commission adoption of the standard as a whole would preserve the industry consensus on these elements, and have the added benefit that those implementing the voluntary aspects will do so in a universal manner so that consumer television sets will recognize the voluntary functions in the broadcast signal and respond to them correctly when included in the signal.

Standardization is necessary for a receiver to operate properly with broadcast signals and PSIP is a critical piece of the instructional chain. Adoption ensures that equipment will operate as intended and will give the consumer the most satisfaction with both the equipment and with the TV broadcast viewing. In today's marketplace, delivery of programming by over-the-air broadcast competes with delivery by DVD, satellite, and cable. The functionalities enabled by PSIP create the user experience that consumers have come to expect from these other delivery methods, and help level the competitive playing field between broadcasters and the other MVPD providers.

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[71] *See id.* at 114. A/65B (March 18, 2003) is the successor standard to A/65A.

PSIP provides for a basic data exchange between the broadcast signal and the television receiver. An example is channel number information, which enables the TV set's menus to permit tuning with clicks from the set's remote control. Also included are functions such as closed captioning, v-chip features, translator identification and display, and program listings and related information. An illustration of its usefulness to consumers is that the EPG data included in the PSIP enables equipment to support time-shifting and unattended recording of programs – features that won't work for broadcast programming without proper implementation of PSIP but which already are standard for today's satellite TV systems.

In more technical terms, PSIP data defines the service offerings contained in each broadcaster's transmitted signal. The PSIP Virtual Channel Table disconnects the "channel number" of the physical channel from the viewer's concept of that service's channel number. Important benefits of this include (1) a broadcaster can retain his familiar brand-identity, because the digital channels can continue to use the same channel number as the original analog NTSC broadcasts; (2) if a broadcaster's digital channel allocation changes, PSIP allows consumer receivers to adapt immediately to the change in a manner transparent to the viewer, eliminating any chance for confusion or disruption; and (3) in rural areas, receivers can tune to broadcast signals received through translators in a way that makes such reception transparent to the viewer. A receiver can even choose the strongest signal from among multiple translators and display it to the viewer as the same "channel."

In addition to channel numbering, PSIP can provide viewers with the textual name of each broadcast service. With analog signals each broadcaster could transmit just a single program stream on the channel, so the channel number became the primary identification for the broadcaster in advertising and program guides. DTV enables a broadcaster to deliver multiple streams of programming and other services within the same 6 MHz "channel" so descriptive

channel names associated with each separate service being provided is now essential for consumers to access the programs and related information. As mentioned, the Electronic Program Guide data offered by PSIP is essential to display to the consumer all of the available services. It is what today's viewers expect from program services, and the functionalities enabled by PSIP help level the playing field between broadcasters and other program services. But the functions work only if PSIP is implemented by all broadcasters and all TV set manufacturers in an identical manner.

Given these benefits to consumers, broadcasters, and manufacturers, CEA continues to strongly urge the Commission to make mandatory broadcast of PSIP data in accordance with the requirements of ATSC A/65B.

C. *Adopting the PSIP Standard Will Ensure Operation of Closed Captioning*

Separate from its discussion of PSIP, the Commission asks whether it should take additional action to ensure the accessibility and functioning of closed captioning for digital television.[72] In particular, the Commission notes that terrestrial broadcasters following EIA-708-B must include a caption service descriptor in the PMT of the program stream, and also in the EIT if using PSIP.[73] The Commission seeks comment on whether it needs to address the possibility that some broadcasters may put all of the closed-captioning information in the program stream while some equipment may look exclusively to PSIP for closed captioning.[74] The Commission also asks whether it should adopt the PSIP standard, discussed above, to require that all digital television broadcasters place the caption service descriptor in the PSIP.[75]

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72 *See id.* at ¶ 119.

73 *See id.*

74 *See id.*

75 *See id.* at ¶ 120.

As stated above, CEA urges the Commission to adopt the current PSIP standard in its entirety. Doing so will eliminate any confusion and ensure that the closed captioning function will properly operate on all television sets.

D. Adopting the PSIP Standard Will Ensure Operation of V-Chip Functions

The Commission notes that like closed captioning information, broadcasters can provide certain ratings information in the program stream as well as in the PSIP and expresses concern that particular broadcasters and manufacturers may implement V-Chip information in inconsistent ways, and seeks comment on this.[76] The Commission also requests comment on our earlier petition in ET Docket No. 97-206 to incorporate the EIA/CEA-766 and EIA-708-B standards into Section 15.120 of its rules to achieve uniformity in V-Chip compliance in digital receivers.[77]

We again request that the Commission modify subsection 15.120(d)(2) and accord EIA/CEA-766-A[78] and EIA-708-B for digital receivers the same treatment as EIA-744 and EIA-608 for analog receivers in subsection 15.120(d)(1). These are the digital standards that parallel the standard for analog television that the Commission adopted by reference in 1998.[79]

Manufacturers currently are required to design and build digital television receivers so that they will react in a manner similar to analog receivers when programmed to block specific

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[76] *See id.* at ¶ 121.

[77] *See id.* at ¶ 122.

[78] EIA/CEA-766-A is the latest version of EIA/CEA-766 and is the version the FCC should adopt.

[79] *See* Technical Requirements to Enable Blocking of Video Programming based on Program Ratings and Implementation of Sections 551(c), (d), and (e) of the Telecommunications Act of 1996, *Report and Order*, 13 FCC Rcd 11248 (1998). Also, the Commission should note that CEA is transitioning all its standards to be redesignated with a "CEA-XYZ" label, and this should be completed in 2003. Accordingly, to the extent final rules are adopted, including reference to these standards, we urge the Commission to use the current designations.

ratings categories.[80] As the Commission notes, because it has not adopted the PSIP standard, ratings information can be transmitted through use of the PSIP or in the data stream. Until the FCC adopts one certain method – and PSIP clearly would be the easiest and quickest way – ratings information can be transmitted by broadcasters in either fashion. Note must be taken that cable systems also must pass through and recognize he method of carrying ratings. We believe that most digital receivers recognize both methods of ratings information right now, assuming that the broadcast signals carry such information in one of the two approved methods.

A more reliable and certain method of insuring that DTV receivers and broadcast signals are working together to implement ratings would be to adopt the full PSIP standard as well as related standards EIA/CEA-766-A, which augments the ATSC PSIP standard, discussed above. Incorporating EIA/CEA-766-A and EIA-708-B into the FCC's rule would mirror the Commission's rule for analog receivers and complement the manner in which broadcasters digitally transmit program-ratings.

CEA requests that the Commission adopt these standards and phase in compliance. EIA/CEA-766-A is a new standard and many manufacturers need development and design time. Second, EIA/CEA-766-A requires full implementation of the PSIP standard, which also should be adopted in this proceeding by the Commission, discussed *supra* . Third, manufacturers and broadcasters need time to design and fabricate silicon IC for this technology. For these reasons, manufacturers should have 24 months to come into full compliance with the new standard.

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[80] 47 C.F.R. § 15.120(d)(2)

E. Adopting the PSIP Standard Will Ensure Reception of All Translators

The Commission also seeks comment on how to provide proper PSIP information on TV translator facilities, which rebroadcast the programs and signals of a primary TV station on a different channel for the purpose of extending the range of reception.[81]

As discussed above, the PSIP standard was designed to work with translators and adoption of the entire standard by the Commission will resolve the problems related to translators set forth by the Commission in the NPRM. It would be impractical for translators to change the PSIP data of the signals that they retransmit. The standard itself avoids any need for the broadcaster to change or adjust PSIP data for use with translators through use of TSID values, which the receiver will recognize and use to make the proper association even though the translated signal is on a different channel than the main channel and the PSIP data is passed through without alteration.

Requiring broadcasters to use unique, assigned coordinated values of TSID is important for proper operation of consumer receivers because they rely on accurate, stable and unique TSID values for tuning and navigation among broadcast signals. The FCC should either require use of the TSID assignment list created by the Association of Maximum Service Telecasters (MSTV) or use that list as its own starting point to mandate a list.[82]

Note that there are unique values for both the "analog TSID" and the "Transport Stream ID" defined in MPEG. The Commission should require broadcasters to follow ATSC standards and transmit "analog TSID" in any NTSC broadcast referenced by PSIP data delivered in a digital signal. TSID data is necessary for this reason for proper operation of broadcast translators

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81 *See Second DTV Periodic Review NPRM*, at ¶ 123.

82 *See* http://www.mstv.org/downloads/TSIDASGN.doc.

and other receiver tuning functions, and therefore broadcasters should be required to include this data in their signals.

XI. Conclusion

Significant roll out of DTV products by consumer electronics manufacturers, declining prices, and increased sales indicate that the DTV transition is going well from an equipment perspective. The over-the-air broadcast part of the transition is not making the same progress. To help the transition continue swiftly, the Commission should ensure that broadcast stations begin broadcasting digital signals as soon as possible, and to do so at full power. To allow consumers full enjoyment of the capabilities of their DTV sets, the Commission should address the lack of available digital programming and cable operators' reluctance to retransmit broadcast DTV signals. The Commission also should adopt the recent DTV cable-compatibility plug-and-play agreement, the PSIP standard (ATSC A/65B) in its entirety, and the EIA/CEA standards related to ratings functionality. Doing so will speed completion of the transition as intended by Congress.

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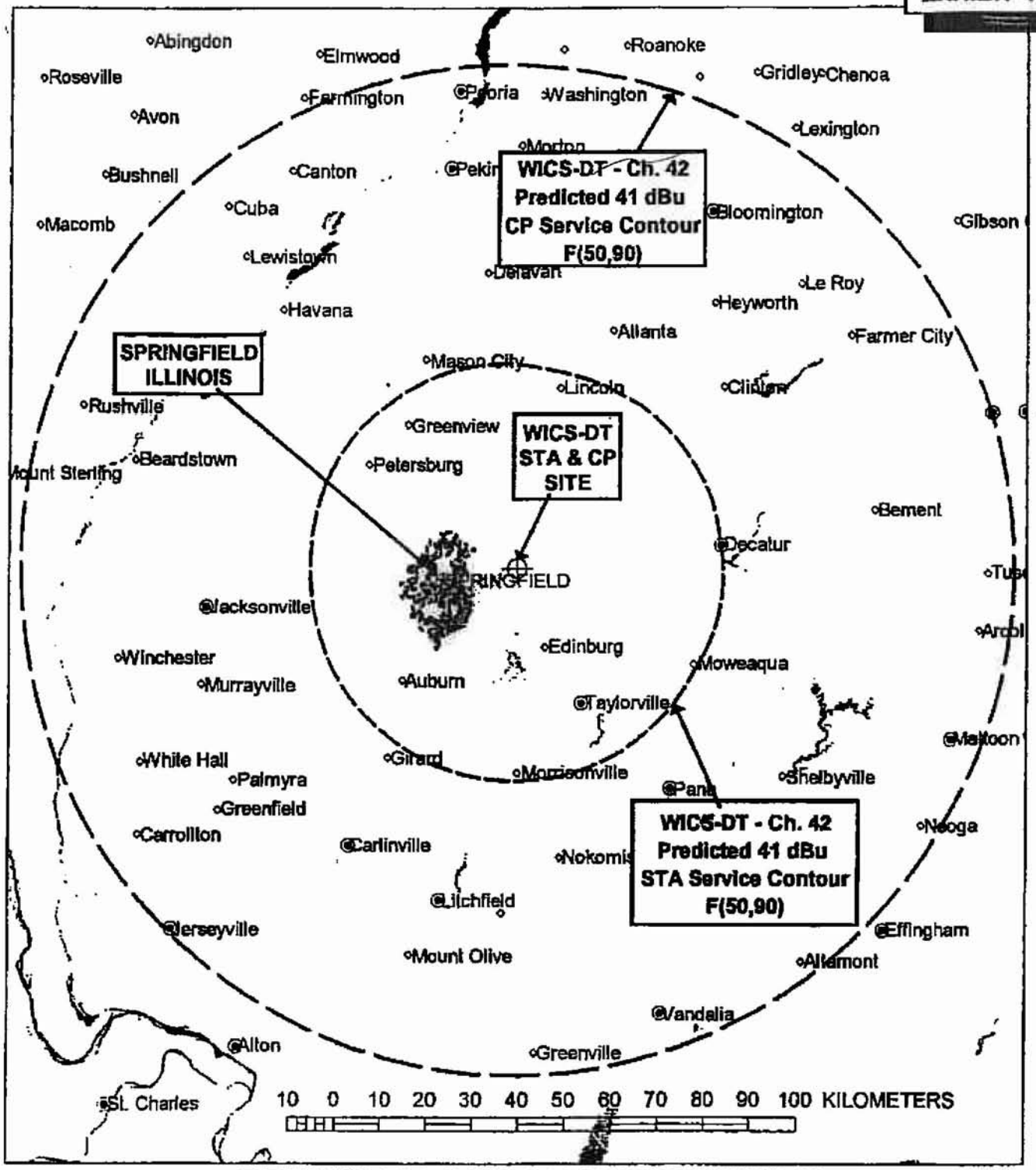
April 21, 2003

Appendix A

Predicted Low-Power Coverage Contour Compared to Full-Power Contour for Sample Station, as Submitted to the FCC

EXHIBIT 4



PREDICTED COVERAGE CONTOURS

STA COMPARED TO CONSTRUCTION PERMIT

WICS-DT, SPRINGFIELD, ILLINOIS
SPECIAL TEMPORARY AUTHORIZATION
REQUESTED FACILITY
CH. 42 - 2.0 kW - 95.8 m HAAT

PREDICTED 41 dBu F(50,90)
STA FACILITY SERVICE CONTOUR

PREDICTED 41 dBu F(50,90)
CP FACILITY SERVICE CONTOUR
CH. 42 - 725 kW - 436 m HAAT

OCTOBER 2002

CARL T. JONES

Appendix B

DTV Products List From HDTV Guide, Spring 2003

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

- **Monitors**, which, with the addtion of a digital set-top box, offer a complete HDTV system.
- **Integrated Sets** that include a digital reciever and display; or
- **Digital Set-top Boxes** designed to work with high-definition and digital displays, or current analog systems.

FLAT PANEL HDTV MONITORS (720p or better, external DTV Tuner required, as of 3/3/03)

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Scaling/ video processor?	NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
Albatron	PD 3231	Plasma Panel Display	32W" (16:9)	852p (1024x852)	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$4,950.00
Akai	PDP3290L	Plasma Display Panel	32W" (16:9)	852p (1024x852)	Yes	1	BNC. Component, 15 pin D-Sub, DVI	Q2- 2003	$4,499.99
Akai	PDPH4298	Plasma Display Panel	32W" (16:9)	1024p (1024x1024)	Yes, 3:2 Pulldown	1	BNC. Component, 15 pin D-Sub	Q2- 2003	$5,499.99
Apex Digital	PL-42HD12W	Plasma Display Panel	42W" (16:9)	1024p (1280x1024)	Yes	0	RGB via VGA, HD Component Video, DVI	May-03	$4,499.00
APEX Digital	LD30HD12W	Direct View TFT LCD Panel	30W" (16:9)	760p (1280x760)	Yes	2	HD Component, DVI, RGB	Q2- 2003	$2,999.00
APEX Digital	LD23HD12W	Direct View TFT LCD Panel	23W" (16:9)	760p (1280x760)	Yes	2	HD Component, DVI, RGB	Q2- 2003	$1,999.00
APEX Digital	LD1705	Direct View TFT LCD Panel	17" (4:3)	760p (1280x760)	Yes	2	HD Component, DVI, RGB	Q2- 2003	$999.00
Bang & Olufsen	BeoVision 4	Plasma Display Panel	50W" (16:9)	768p (768x1366)	Yes	0	HD Component	Now	$13,900.00
Dwin	HD50TS	Plasma Display Panel	50W" (16:9)	768p (1,366x768)	Scaler in outboard controller box	0	15-pin D-Sub , HD Component	Q1-03	$12,995.00
Elite Video Elitevision	EV-61HD	Plasma Display Panel	61W" (16:9)	720p (1365x768)	Scaler	0	HD Component, RGBHV, DVI	Now	$16,995.00
Elite Video Elitevision	EV-50HD	Plasma Display Panel	50W" (16:9)	720p (1280x768)	Scaler	0	HD Component, RGBHV, DVI	Now	$12,995.00
Elite Video Elitevision	EV-42HD	Plasma Display Panel	42W" (16:9)	720p (1024x1024)	Scaler	0	HD Component, RGB, DVI	Now	$9,995.00
Faroudja	Plasma Package with NRS-DVI	Plasma Display Panel	61W" (16:9)	1365x768	Scaler in outboard NRS-DVI Processor	0	HD Component, RGB, DVI	NOW	$29,995
Faroudja	Plasma Package with NRS-DCS	Plasma Display Panel	61W" (16:9)	1365x768	Scaler in outboard NRS-Digital Cinema Source Processor	0	HD Component, RGB, DVI	Now	$39,995
Faroudja	Plasma Package with NRS-DVI	Plasma Display Panel	50W" (16:9)	1365x768	Scaler in outboard NRS-DVI Processor	0	HD Component, RGB, DVI	TBA	TBA
Faroudja	Plasma Package with NRS-DCS	Plasma Display Panel	50W" (16:9)	1365x768	Scaler in outboard NRS-DCS	0	HD Component, RGB, DVI	TBA	TBA
Faroudja	Plasma Package with NRS-DVI	Plasma Display Panel	42W" (16:9)	1024x768	Scaler in outboard NRS-DVI Processor	0	HD Component, RGB, DVI	Now	$12,995
Faroudja	Plasma Package with NRS-DCS	Plasma Display Panel	42W" (16:9)	1024x768	Scaler in outboard NRS-Digital Cinema Source Processor	0	HD Component, RGB, DVI	Now	$18,995
Fujitsu	P42HHA10 Silver	Plasma Panel	42W" (16:9)	1024p (1024x1024)	AVM Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA; DVI-D with HDCP	Now	$7,999.00
Fujitsu	P50XHA10 Silver	Plasma Panel	50W" (16:9)	768p (1366x768)	AVM Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA; DVI-D with HDCP	Now	$10,999.00
Fujitsu	PDS-6101 Silver	Plasma Panel	61W" (16:9)	768p (1366x768)	AVM Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA; DVI-D	Now	$24,999.00

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FLAT PANEL HDTV MONITORS (720p or better, external DTV Tuner required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Scaling/ video processor?	NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
Helios	HPTV-5000A	Plasma Panel	50W-inch (16:9)	768p (1,366x768)	Scaler	1	HD Component, RGB via 15-pin D-Sub	Now	$8,995.95
Helios	HLTV-15S5	Direct View LCD TV	15W-inch (4:3)	768p (1024x768)	Scaler	1	RGB via 15-pin D-Sub	Now	$950.00
Hitachi	42HDT20	Plasma Television	42"W (16:9)	1024p (1024x1024)	Yes (VirtualHD)	2	DVI w/HDCP and (2) HD Component	Now	$8,999.99
Hitachi	32HDT20	Plasma Television	32"W (16:9)	852p (1024x852)	Yes (VirtualHD)	2	DVI w/HDCP and (2) HD Component	Now	$6,999.99
JVC	AV42WX84	Plasma Television	42"W (16:9)	768p (1024x768)	Yes with 3-2 pulldown	1	DVI w/HDCP, IEEE 1394 and 2 HD Component	TBA	$8,499.95
Luce	PDTV-6100A	Plasma Display Panel	61W" (16:9)	720p (1280x720)	scaler	1	HD Component Video, RGB via15-pin D-sub	Now	$24,999.95
Luce	LCTV-2201A	Direct View LCD TV	22W" (16:9)	720p (1600x1200)	scaler	1	RGB via 15-pin D-Sub	Now	$4,199.95
Luce	LCTV-1702A	Direct View LCD TV	17" (4:3)	720p (1280x1024)	scaler	1	RGB via 15-pin D-Sub	Now	$1,999.95
Luce	LCTV-1513S	Direct View LCD TV	15" (4:3)	768p (1024x768)	scaler	1	RGB via 15-pin D-Sub	Now	$1,299.95
Luce	LCTV-1515A	Direct View LCD TV	15" (4:3)	768p (1024x768)	scaler	1	RGB via 15-pin D-Sub	Now	$1,399.95
Marantz	PD5020D	Plasma Display Panel	50W" (16:9)	768p (1365x768)	Yes	0	HD Component, DVI, RGB via 15-pin D-sub	Now	$15,999.00
Marantz	PD6120D	Plasma Display Panel	61W" (16:9)	768p (1365x768)	Yes	0	HD Component, RGB via 15-pin D-sub	Now	$25,999.00
Marantz	LC1510	Direct View LCD	15W" (16:9)	768p (1024 x 768)	Yes	1	VGA Input	Now	$1,299.00
Mitsubishi Plasma	PD-5010	Plasma Display Panel	50" (16:9)	768p (1336x768)	Yes with 3-2 pulldown	0	HD Component, RGB, RGBHV or VGA (D-sub15)	Now	$11,000.00
NetTV	LCTV-15	LCD Direct View	15" (4:3)	480i, 480p, 720p, 1080i	Yes	1	(1) VGA 15-pin D-sub, HD Component	Now	$1,299.00
NetTV	LCTV-17	LCD Direct View	17" (4:3)	480i, 480p, 720p, 1080i	Yes	1	(1) VGA 15-pin D-sub HD Component	Now	$1,499.00
NetTV	DTV-42V	Plasma Display Panel	42W" (16:9)	480p, 720p, 1080i	No	Optional	RGB D-sub 15 pin, HD Component RCA Pin (2)	Now	$7,999.00
Norcent Technology	46PXGA1800	Plasma Display Panel	46W" (16:9)	768p (1280x768)	Yes	0	RGB D-sub 15 pin, HD Component	now	$5,995.00
Norcent Technology	PT420	Plasma Display Panel	42W" (16:9)	1024p (1024x1024)	Yes	0	RGB D-sub 15 pin, HD Component	now	$2,999.99
Panasonic	PT-50PHD4-P	Plasma Display Panel	50W" (16:9)	1080i, 720p 480p	Yes	0	(1) HD Component	Now	$10,999.95
Panasonic	PT-42PHD4-P	Plasma Display Panel	42W" (16:9)	1080i, 720p 480p	Yes	0	(1) HD Component	Now	$6,999.95
Panasonic	PT-42PD3-P	Plasma Display Panel	42W" (16:9)	1080i, 720p 480p	Yes	0	(1) HD Component	Now	$4,999.95
Panasonic	PT-40LC12	LCD Direct View	40W" (16:9)	1080i 720p 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$2,999.95
Panasonic	PT-45LC12	LCD Direct View	45W" (16:9)	1080i, 720p 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$3,499.95
Philips	50FD9955 w/FTR9964	Plasma	50W" (16:9)	1365p (1365x768)	Yes	2	HD Component	Now	$10,999 (w/o ebox)
Philips	42FD9954 w/FTR9964	Plasma	42W" (16:9)	1024 (1024x1024)	Yes	2	HD Component	Now	$6999 (w/o ebox)
Philips	32FD9954 w/FTR9964	Plasma	32W" (16:9)	1024 (1024x1024)	Yes	2	HD Component	Now	$4999 (w/o ebox)
Pioneer	PureVision PDP-5030	Plasma Panel	50W" (16:9)	768p (1280 x 768)	Yes with 3-2 pulldown	2 in external media receiver	RGB, HD Component	Now	$11,000.00

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FLAT PANEL HDTV MONITORS (720p or better, external DTV Tuner required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Scaling/ video processor?	NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
Pioneer	PureVision PDP-4330	Plasma Panel	43W" (16:9)	768p (1024x768)	Yes with 3-2 pulldown	2 in external media receiver	RGB, HD Component	Now	$7,000.00
Pioneer Elite	PureVision PRO-800HD	Plasma Display Panel	43W" (16:9)	768p (1024x768)	Yes with 3-2 pulldown	0	RGB, HD Component	Now	$9,000.00
Pioneer Elite	PureVision PRO-1000HD	Plasma Display Panel	50W" (16:9)	768p (1,280x768)	Yes with 3-2 pulldown	0	RGB, HD Component	Now	$13,000.00
Photonics Systems	XR32	Plasma Display Panel	32W" (16:9)	852p (1024x852)	Yes	0	RBG via 15-pin D-Sub,	Now	$8,495.00
RCA Scenium	PHD50400	Plasma Display Panel	50W" (16:9) 1365x768 pixels	720p	Yes with 3:2 pull down	0	DVI-HDTV, (2) HD Component Video RGB	Now	$14,999
RCA Scenium	PHD50500	Plasma Display Panel	50W" (16:9) 1366x768 pixels	720P	Yes with 3:2 Pull down	0	DVI-HDTV, (2) HD Component Video RGB	May-03	$9,999
ReVox	E615	LCD	15.1W (16:9)	720p, (1024x768)	No	1	RGB via VGA,	Now	$2,295.00
ReVox	E632	Plasma Display Panel	32W" (16:9)	720p (1024x852)	Yes with 3-2 pull-down	1	HD Component Video, RGB H&V via VGA	Now	$9,000.00
Runco	PL-43HDX	Plasma Panel with Runco PFP Processor	43W" diagonal (16:9)	(1024x768) XGA and 720p; 1080i, 480p and 540p signals scaled	Yes via external scaler with 3:2 pulldown	0	HD RGB & HD Component via 15-pin D-Sub, DVI	Now	$12,995.00
Runco	PL-50HDX	Plasma Panel with Runco PFP Processor	50W" diagonal (16:9)	(1280x768) XGA, & 720p; 1080i, 480p, and 540p signals scaled	Yes via external scaler with 3:2 pulldown	0	HD RGB & HD Component via 15-pin D-Sub, DVI	Now	$16,995.00
Runco	PL-61cx	Plasma Panel with Runco PFP Processor	61W" diagonal (16:9)	(1366x768) XGA, 720p, & 1080i. 480p and 540p signals scaled	Yes via external scaler with 3:2 pulldown	0	HD RGB & HD Component via 15-pin D-Sub	Now	$29,995.00
Runco	Cinema Wall CW-42	Plasma panel	42W" diagonal (16:9)	(852x480) 480p and VGA.720p and 1080i signals scaled	Yes (with 3:2 pull-down)	0	RGB or HD Component via BNC or RCA	Now	$9,995.00
Runco	CinemaWall CW-61	Plasma panel	61W" diagonal (16:9)	(1366x768) XGA and 720p; 1080i, 480p and 540p signals scaled	Yes (with 3:2 pull-down)	0	RGB or HD Component via BNC or HD Component via RCA	Now	$24,995.00
Sampo	LME-17S1	LCD Direct View	17" (4:3)	480p (1,280x1024)	Yes	1	RGB via VGA	Now	$1,199.00
Sampo	PME-42S6	Plasma Display Panel	42W" (16:9)	480p (852 x 480)	Yes	1	HD Component Video (Y, Pb, Pr), RGB, and DVI	Now	$3,999.00
Sampo	PME-42X6	Plasma Display Panel	42W" (16:9)	1024p (1024x1024)	Yes	1	HD Component Video (Y, Pb, Pr), RGB, and DVI	Now	$4,999.00
Sampo	PME-50X6	Plasma Display Panel	50W" (16:9)	768p (1366x768)	Yes	1	HD Component Video (Y, Pb, Pr), RGB, and DVI w/HDCP	May	$6,999.00
Samsung Tantus	HPN6339	Plasma Display Panel	63W" (16:9)	768p (1366x768)	Scaler	2	HD Component (Y, Pb, Pr)	June-03	$19,999.99
Samsung	HPN5039	Plasma Display Panel	50W" (16:9)	768p (1366x768)	Scaler	2	HD Component (Y, Pb, Pr)	June-03	$8,999.99
Samsung	LTM1575W	Direct View TFT LCD Panel	15W" (16:9)	all formats scaled to 768p (1280x768)	Yes	1	HD Component (Y, Pb, Pr)	Now	$1,099.99
Samsung	LTN1565	Direct View TFT LCD Panel	15" (4:3)	all formats scaled to 768p (XGA 1024x768)	Yes	1	HD Component (Y, Pb, Pr)	May-03	$899.99
Samsung	LTN1785W	Direct View TFT LCD Panel	17W" (16:9)	all formats scaled to 768p (1280x768)	Yes	1	HD Component (Y, Pb, Pr)	June-03	$1,399.99

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FLAT PANEL HDTV MONITORS (720p or better, external DTV Tuner required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Scaling/ video processor?	NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
Samsung	LTN1765	Direct View TFT LCD Panel	17" (4:3)	all formats scaled to 1024p	Yes	1	HD Component (Y, Pb, Pr)	May-03	$1,099.99
Samsung Tantus	LTM225W	Direct View TFT LCD Panel	22W" (16:9)	720p (1280x720)	Yes	1	HD Component (Y, Pb, Pr)	Now	$2,999.99
Samsung Tantus	LTN325W	Direct View TFT LCD Panel	32W" (16:9)	all formats scaled to 768p (1280x768)	Yes	1	HD Component (Y, Pb, Pr)	June-03	$4,499.99
Samsung Tantus	LTM405W	Direct View TFT LCD Panel	40W" (16:9)	all formats scaled to 768 (1280x768)	Yes	1	HD Component (Y, Pb, Pr)	Now	$7,999.99
Sanyo	PDP-32H1W	Plasma Display Panel	32W" (16:9)	852p (1024x852)	Yes	0	HD Component via BNC and RCA	Now	$3,999.00
Sanyo	PDP-42H1W	Plasma Display Panel	42W" (16:9)	1024p (1024x1024)	Yes	0	HD Component via BNC and RCA	Now	$5,999.00
Sharp	PZ-50HV2U	Plasma TV	50W" (16:9)	768p (1280x768)	Yes (CV-IC)	2	(2) HD Component, HD-RGB	Now	$11,995.95
Sharp	PZ-43HV2U	Plasma TV	43W" (16:9)	480p, 720p (1024x768)	Yes (CV-IC)	2	(2) HD Component, HD-RGB	Now	$8,995.95
Sharp	LC-37HV4U	AQUOS Liquid Crystal Television	37W" (16:9)	480p, 720p (1366x768)	Yes (CV-IC2)	2	(2) HD Component, DVI	Mar-03	$7,999.95
Sharp	LC-30HV4U	AQUOS Liquid Crystal Television	30W" (16:9)	480p, 720p (1280x768)	Yes (CV-IC2)	2	(2) HD Component, DVI	Mar-03	$4,999.95
Sony	PFM-32C1	Plasma Panel	32W" (16:9 & 4:3)	852p (1024 x 852)	Line Doubler, Scaler	0	RGBHV, HD, Composite video	Now	$5,199.00
Sony	PFM-42B1	Plasma Panel	42W" (16:9 &4:3)	1024p (1024x1024)	Line Doubler, Scaler	0	RGBHV, HD Component	Now	$6,499.00
Sony	KE-32TS2	Plasma Wega	32W" (16:9)	852p (852x1024)	Yes -- Pixel by Pixel I/P Conversion CineMotion 3-2 pulldown	1	(1) HD Component DVI	Now	$6,000.00
Sony	KE-42TS2	Plasma Wega	42W" (16:9)	1024p (1024x1024)	Yes -- Pixel by Pixel I/P Conversion CineMotion 3-2 pulldown	1	(1) HD Component DVI	Now	$8,000.00
Sony	KLV-30XBR900	LCD Plasma WEGA	30W" (16:9)	768p (1280X768)	Yes -- WEGA Engine: DRC MultiFunction, CineMotion 3-2 pulldown	1	(1) HD Component DVI	February	$5,500.00
Sony	KE-42XBR900	Plasma Wega	42W" (16:9)	768p (1024x768)	Yes -- WEGA Engine: DRC MultiFunction, CineMotion 3-2 pulldown	1	(1) HD Component DVI	Now	$12,000.00
Sony	KE-50XBR900	Plasma Wega	50W" (16:9)	768p (1365x768)	Yes -- WEGA Engine: DRC MultiFunction, CineMotion 3-2 pulldown	1	(1) HD Component DVI	Now	$15,000.00
Toshiba	42HP82	Plasma Display Panel	42W" (16:9)	768p (1,024x768)	Yes IDSC Digital	0	HD Component, RGB via 15-pin D-Sub, DVI-HDTV with HDCP	Now	$7,999.99
Toshiba	50HP82	Plasma Display Panel	50W" (16:9)	768p (1,365x768)	Yes IDSC Digital	0	HD Component, RGB via 15-pin D-Sub, DVI-HDTV with HDCP	Now	$10,999.99

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FLAT PANEL HDTV MONITORS (720p or better, external DTV Tuner required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Scaling/ video processor?	NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
Toshiba	15DL72	Direct View LCD	15W" (16:9)	768p (1,024x768)	Yes IDSC Digital	1	HD Component	Now	$1,499.99
Yamaha	PDM-1	Plasma Display Panel	50W" (16:9)	768p (1,366x768)	Yes with 3:2 pull down	0	HD Component	Now	$12,000.00
Zenith	L15V26B	Direct View LCD TV	15" (4:3)	720p	Yes	1	RGB & Hi-Res (HD) Component Video	Now	$799.00
Zenith	L15V26C	Direct View LCD TV	15" (4:3)	720p	Yes	1	RGB & Hi-Res (HD) Component Video	1Q	$799.00
Zenith	L15V36	Direct View LCD TV	15" (4:3)	720p	Yes	1	RGB & Hi-Res (HD) Component Video	3Q	$799.00
Zenith	L17W36	Direct View LCD TV	17W" (16:9)	720p	Yes	1	RGB & Hi-Res (HD) Component Video	3Q	$1,399.00
Zenith	L17W36DVD	Direct View LCD TV W/BUILT IN DVD	17W" (16:9)	720p	Yes	1	RGB & Hi-Res (HD) Component Video	4Q	$1,799.00
Zenith	L30W36	Direct View LCD Monitor	30W" (16:9)	720p	Yes	1	RGB, DVI & Hi-Res (HD) Component Video	NOW	$4,699.00
Zenith	L23W36	Direct View LCD TV	23W" 16:9	720p	Yes	1	RGB & Hi-Res (HD) Component Video	3Q	$2,499.00
Zenith	P42W36	Plasma HDTV Monitor Display Panel	42" 16:9	720p	Faroudja	0	RGB via 15-pin D-sub DVI, Hi-Res Component Video	3Q	$5,999.00
Zenith	P50W28B	Plasma Display Panel	50W" (16:9)	720p	Rembrandt	0	RGB, DVI, RS-232, Hi-Res (HD) Component Video	Now	$3,499.00
Zenith	P60W26P	Plasma Display Panel	60W" (16:9)	720p	Faroudja	0	RGB, RS-232, Hi-Res (HD) Component Video	Now	$14,999.00
Zenith	ZLD15A1B	Direct View LCD Monitor	15.1" (4:3)	1080i	No	1	RGB & Hi-Res (HD) Component Video	Now	$999.00

FLAT PANEL EDTV MONITORS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size (aspect ratio)	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Price
Akai	PDP4290	Plasma Display Panel	42W" (16:9)	480p (852x480)	Scaler	0	(3) HD Component Video, (1) RGB via 15-pin D-sub	Now	3,499.99
Apex Digital	PL-42D12W	Plasma Display Panel	42W" (16:9)	480p (852x480)	Yes	0	HD Component Video,	May-03	$3,499.00
Apex Digital	LD1505	LCD TFT Direct View	15" (4:3)	480p (640x480)	Yes	1	HD Component	02-03	$899.99
Bang & Olufsen	BeoVision 5	Plasma	42W" (16:9)	480p (852x480)	Yes	1	RGB/YPbPr	Now	$19,500.00
BenQ	PDP46W1	Plasma Display Panel	42W" (16:9)	480p (852x480)	Yes	0	HD Component, RGB BNC, and RGB via 15-pin D-sub	Now	$6,995.00
BenQ	H200	Direct View TFT LCD Panel	20" (4:3)	600p (800x600)	Yes	1	HD Component, 15-pin D-sub	Now	$1,995.00
Cornea Systems	MP4200	Plasma Display Panel	42W" (16:9)	480p (852x480)	Scaler	0	HD Component	Now	$4,995.00
Cornea Systems	MP4204	Plasma Display Panel	42W" (16:9)	480p (852x480)	Scaler	0	HD Component	Now	$3,500.00
Cornea Systems	MP4205	Plasma Display Panel	42W" (16:9)	480p (852x480)	Scaler	1	HD Component,	Now	$3,700.00
CyberHome	CH-LCTV 150	Direct View TFT LCD Panel	15" (4:3)	768p (1024x768)	Yes	1	RGB via 15-pin D-Sub	Now	$499.99
Daewoo	DP-42SM	Plasma Display Panel	42W"	480P	Yes	0	(2) Component RGB	Now	$4,995.00
Daewoo	DSP-4210GM	Plasma Display Panel	42W" (16:9)	480i, 480p	Yes	0	HD Component	Now	$4,995.00

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FLAT PANEL EDTV MONITORS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size (aspect ratio)	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Price
Daewoo	DSP-4280GM	Plasma Display Panel	42W" (16:9)	480i, 480p Improved Brightness	Yes	1	HD Component	Now	$4,995.00
Elite Video	EV-42	Plasma Display Panel	42W" (16:9)	420p (852x480)	Scaler	0	RGB, HD Component,	Now	$7,995.00
Fujitsu	P42VHA20 Silver	Plasma Panel	42W" (16:9)	480p (852x480)	AVM Scaler	0	RGBHV via BNC, Component BNC, RGB via VGA; DVI-D with HDCP	Now	$4,999.00
Gateway	Plasma 42" Plasma TV	Plasma Panel	42W" (16:9)	480p (852x480)	Scaler with 3:2 pulldown film conversion	0	(2) HD Component, RGB via 15-pin D-sub, DVI	Now	$2,999.00
Helios	HPTV-4200A	Plasma Panel	42W-inch (16:9)	480p (853x480)	Scaler	1	RGB via 15-pin D-Sub	Now	$5,299.99
Helios	HLTV-20SS	Direct View LCD TV	20-inch (4:3)	480p (640x480)	Scaler	1	RGB via 15-pin D-Sub	Now	$1,899.95
Luce	PDTV-4203A-MK II	Plasma Display Panel	42W" (16:9)	480p (853x480)	scaler	2	HD Component Video, RGB via15-pin D-sub	Now	$7,999.95
Luce	PDTV-4220A	Plasma Display Panel	42W" (16:9)	480p (853x480)	scaler	1	HD Component Video, RGB via15-pin D-sub	Now	$8,499.95
Luce	LCTV-2210S	Direct View LCD TV	22W" (16:9)	480p (854x480)	scaler	1	RGB via 15-pin D-Sub	Now	$4,295.95
Marantz	PD4293D	Plasma Display Panel	42W" (16:9)	480p (853x480 pixels)	Yes	0	HD Component, DVI, RGB via 15-pin D-sub	Now	$9,999.00
Norcent Technology	46WVGA850	Plasma Display Panel	46W" (16:9)	480p (854x480)	Yes	0	RGB D-sub 15 pin, HD Component	Now	$3,999.99
Norcent Technology	PT425	Plasma Display Panel	42W" (16:9)	480p (852x480)	Yes	0	RGB D-sub 15 pin, HD Component	now	$2,999.99
Panasonic	TC-22LT1	LCD Direct View	22W" (16:9)	480p	Yes, progressive cinema scan with 3-2 pulldown	1	(2) HD Component	Now	$2,999.95
Panasonic	TC-11LV1	LCD Direct View	11" (16:9)	480p	Yes, progressive cinema scan with 3-2 pulldown	1	(1) HD Component	Now	$1,499.95
Panasonic	TC-15LV1	LCD Direct View	15" (16:9)	480p	Yes, progressive cinema scan with 3-2 pulldown	1	(1) HD Component	Now	$1,799.95
Panasonic	PT-37PD4-P	Plasma Panel	37W" (16:9)	480p	Yes	0	(1) HD Component, VGA 15-pin D-sub	Now	$4,499.95
Panasonic	PT-42PD3-P	Plasma Panel	42W" (16:9)	480p	Yes	0	(1) HD Component, VGA 15-pin D-sub	Now	$4,999.95
Planar Systems	XP20SSA-01	Direct View TFT LCD Panel	20" (4:3)	480p, (640 x 480)	Yes, with 3:2 pulldown	1	HD Component (Y, Pb, Pr)	Now	$1,999.00
Planar Systems	XP22WSA-01	Direct View TFT LCD Panel	22W" (16:9)	480p, (854 x 480)	Yes, with 3:2 pull-down	1	HD Component (Y, Pb, Pr)	Now	$2,599.00
ReVox	E042	Plasma Panel	42W" (16:9)	480p, (852x480)	Yes	0	HD Component Video, RGB via VGA,	Now	$12,995.00
RCA	PR42300	Plasma Panel	42W" (16:9)	480p	Yes	0	RGB via VGA, HD Component Video	Now	$8,499.00
Runco	Crystal CR-22HD	LCD Direct View	22" (diagonal)	854 x 480	Yes with 3:2 Pull down	1	HD RGB & HD Component via 15-pin D-Sub, DVI	02-03	$TBA
Sampo	PME-42S6	Plasma Display Panel	42W" 16:9	480p (852x480)	Yes	1	HD Component Video, RGB H&V via VGA and BNC, DVI	Now	$4,999.00
Samsung	SPL4225K	Plasma Display Panel	42W" 16:9	480p (852x480)	Scaler	0	Component (Y, Pb, Pr)	Now	$4,499.99
Samsung	SPN4235	Plasma Display Panel	42W" 16:9	480p (852x480)	Scaler	2	Component and DVI - HDTV	April-03	$4,999.99
Sony	PFM-42B1	Plasma Panel	42W"	With Controller: 1024p, (1024X1024)	Yes	0	RGBHV HD Component	Now	$7,999.00

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FLAT PANEL EDTV MONITORS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size (aspect ratio)	Native Scan Formats	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Price
V Inc.	Vizio-32SDP	Plasma Display Panel	32W" (16:9)	1024x852	Yes	1	RGB via 15-pin D-sub, HD Component Video	Now	$2,995.00
V Inc.	Vizio-42SDP	Plasma Display Panel	42W" (16:9)	420p (852x480)	Yes	1	DVI (HDCP), RGB via 15-pin D-sub, HD Component Video	Mar-02	$2,995.00
V Inc.	Vizio-46SDP	Plasma Display Panel	46W" (16:9)	420p (852x480)	Yes	1	DVI (HDCP), RGB via 15-pin D-sub, HD Component Video	Mar-02	$3,995.00
Vidikron	VP-46	Plasma Panel	46" diagonal 16x9	(852x480) 480p and VGA,720p and 1080i signals scaled	Yes with 3:2 Pulldown	0	HD RGB & HD Component via 15-pin D-Sub, DVI	02-03	TBA
ViewSonic	VPW425	Plasma TV	42"W-inch (16:9)	480p (852X480)	Scaler with 3:2 pulldown	1	HD Component, RGB, DVI	Now	$3,999.00
ViewSonic	VPW505	Plasma TV	50"W-inch (16:9)	480p (852X480)	Scaler with 3:2 pulldown	1	HD Component, RGB, DVI	Now	$7,999.00
Zenith	L13V36	Direct View LCD TV	13" (4:3)	480p (640 x 480)	TBD	1	TBD	3Q	$699.00
Zenith	L20V26	LCD Direct View	20" 4:3	480p (640X480)	No	1	RGB via 15-pin D-sub, Component Video Hi-Res	Now	$1,499.00
Zenith	L20V36	LCD Direct View	20" 4:3	480p (640x480)	No	1	Component Input	3Q	$1,499.00
Zenith	P42W22B	Plasma EDTV Monitor Display Panel	42" 16:9	480p (852x480)	Farouqja	0	RGB via 15-pin D-sub, Component Video Hi-Res	Now	$4,499.00
Zenith	P42W24B	Plasma EDTV Monitor Display Panel	42" 16:9	480p (852x480)	Rembrandt	0	RGB via 15-pin D-sub, DVI, Hi-Res Component Video	Now	$4,499.00
Zenith	P40V24	Plasma EDTV Monitor Display Panel	40" 4:3	480p (640x480)	Scaler	0	RGB via 15-pin D-sub, Component Video Hi-Res	Now	$4,999.00

INTEGRATED HIGH DEFINITION TV SETS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size	Aspect Ratio	DTV Native Scan Formats	Scan Conversion	Line Doubling/ Scaling For NTSC?	Built-In AC-3 Decoder?	Digital Interface Type	Available	Suggested Retail Price
Daewoo	DSC-30W160N	Pure Flat Direct View	30W"	16:9	1080i	All Formats>1080i	Yes	Yes	None	Now	$1,795.00
Hitachi	65XWX20B	7" CRT Rear Projection	65W"	16:9	1080i	480i>540p or 1080i 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD – with 3:2 pull down)	Yes	DVI-HDTV with HDCP, IEEE-1394 with DTCP (DTV-Link)	Now	$5,299.99
Hitachi	57XWX20B	7" CRT Rear Projection	57W"	16:9	1080i	480i>540p or 1080i 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD – with 3:2 pull down)	Yes	DVI-HDTV with HDCP, IEEE-1394 with DTCP (DTV-Link)	Now	$4,799.99
Hitachi	51XWX20B	7" CRT Rear Projection	51W"	16:9	1080i	480i>540p or 1080i 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD – with 3:2 pull down)	Yes	DVI-HDTV with HDCP, IEEE-1394 with DTCP (DTV-Link)	Now	$4,299.99
JVC	AV-56WP94 I'ART PRO	7"CRT Rear PTV	56W"	16:9	D.I.S.T. 1500i	All Formats to15 00i	Yes with 3:2 pull down	no	DVI with HDCP, IEEE-1394	Sep-03	$3,099.95
JVC	AV-65WP94 I'ART PRO	7"CRT Rear PTV	65W"	16:9	D.I.S.T. 1500i	All Formats to 15 00i	Yes with 3:2 pull down	no	DVI with HDCP, IEEE-1394	Sep-03	$3,699.95

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INTEGRATED HIGH DEFINITION TV SETS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size	Aspect Ratio	DTV Native Scan Formats	Scan Conversion	Line Doubling/ Scaling For NTSC?	Built-In AC-3 Decoder?	Digital Interface Type	Available	Suggested Retail Price
Mitsubishi Diamond	WS-73711	9" CRT Rear Projection	73W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$8,499.00
Mitsubishi Diamond	WS-65711	7" CRT Rear Projection	65W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$5,499.00
Mitsubishi Diamond	WS-55711	7" CRT Rear Projection	55W"	16:9	480p, 1080i	NTSC>480p 480i>480p 80p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$4,999.00
Mitsubishi Platinum Plus	WS-65611	7" CRT Rear Projection	65W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$4,099.00
Mitsubishi Platinum	WS-65511	7" CRT Rear Projection	65W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$3,799.00
Mitsubishi Platinum	WS-55511	7" CRT Rear Projection	55W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$3,299.00
Mitsubishi Platinum	WS-48511	7" CRT Rear Projection	48W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$3,099.00
Mitsubishi	WS-855	7" CRT Rear Projection	55W"	16:9	480p, 1080i	NTSC>480p 480i>480p 480p>480p 1080i>1080i (Tuner converts 720p to 1080i)	Yes	2-channel with 5.1 channel bitstream output	3) IEEE-1394 with DTCP (5C) and HAVi	Now	$3,299.00
RCA Scenium	HD65W140	7" CRT Rear Projection	65W"	16:9	480p, 1080i	NTSC/Vid/ Comp/480i>480p Component 480i>480p ATSC HD 1080i/ 720p>1080i	Yes (SceniVision -- with 3:2 pull down)	Optical Out pass through	DVI-HDTV with HDCP, (2) IEEE-1394 with DTCP (aka DTVLink) and AVC networking	Now	$4,299.00
RCA Scenium	HD61W140	7" CRT Rear Projection	61W"	16:9	480p, 1080i	NTSC/Vid/ Comp/480i>480p Component 480i>480p ATSC HD 1080i/ 720p>1080i	Yes (SceniVision -- with 3:2 pull down)	Optical Out pass through	DVI-HDTV with HDCP, (2) IEEE-1394 with DTCP (aka DTVLink) and AVC networking	Now	$3,499.00
RCA Scenium	HD52W140	7" CRT Rear Projection	52W"	16:9	480p, 1080i	NTSC/Vid/ Comp/480i>480p Component 480i>480p ATSC HD 1080i/ 720p>1080i	Yes (SceniVision -- with 3:2 pull down)	Optical Out pass through	DVI-HDTV with HDCP, (2) IEEE-1394 with DTCP (aka DTVLink) and AVC networking	Now	$2,999.00

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INTEGRATED HIGH DEFINITION TV SETS (480p External) as of 3/3/03

Brand	Model	Display Type	Screen Size	Aspect Ratio	DTV Native Scan Formats	Scan Conversion	Line Doubling/ Scaling For NTSC?	Built-In AC-3 Decoder?	Digital Interface Type	Available	Suggested Retail Price
RCA Scenium	L50000*	LCOS Rear Projection	50W"	16:9	720p	NTSC/Vid/ Comp/480i>720p Component 480i>720p SD 480i/ 480p>720p ATSC HD 1080i/ 720p>720p DIRECTV HD>720p	Yes	Optical Out pass through	No	Now	$7,999.00
Samsung	HCN559W	7" CRT Rear Projection	55W"	16:9	1080i	All Formats>1080i	1080i	Yes	DVI	May 2003	$2,599.99
Samsung	HCN5529W	7" CRT Rear Projection	55W"	16:9	1080i	All Formats>1080i	1080i	Yes	DVI	May 2003	$2,399.99
Samsung	HCN529W	7" CRT Rear Projection	52W"	16:9	1080i	All Formats>1080i	1080i	Yes	DVI	June 2003	$2,299.99
Samsung	TXN3084 WHD	Direct View	30W"	16:9	1080i/480p	1080i/480p	1080i/480p	Yes	DVI	May 2003	$1,399.99
Sony	KDP-51WS550	7" CRT Rear PTV	51W"	16:9	480p, 960i, 1080i	NTSC>960i 480i>960i 480p>480p 720p>1080i 1080i>1080i (QAM Cable Compatible)	DRC	Yes	DVI, IEEE-1394 (iLink)	Sep-03	$2,700
Sony	KDP-57WS550	7" CRT Rear PTV	57W"	16:9	480p, 960i, 1080i	NTSC>960i 480i>960i 480p>480p 720p>1080i 1080i>1080i (QAM Cable Compatible)	DRC	Yes	DVI, IEEE-1394 (iLink)	Sep-03	$3,000
Sony	KDP-65WS550	7" CRT Rear PTV	65W"	16:9	480p, 960i, 1080i	NTSC>960i 480i>960i 480p>480p 720p>1080i 1080i>1080i (QAM Cable Compatible)	DRC	Yes	DVI, IEEE-1394 (iLink)	Sep-03	$3,500
Zenith	IQD61W35	7" CRT Rear PTV	61W"	16:9	1080i	All Formats>10 80i	Yes, Includes: HD Component Inputs, RGB via VGA input	Yes	None	Now	$4,999.00
Zenith	C32V23	Direct View CRT	32"	4:3	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	None	Now	$1,299.00
Zenith	C34W23	Direct View CRT	34W"	16:9	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	None	Now	$2,299.00
Zenith	C36V23	Direct View CRT	36"	4:3	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	None	Now	$1,799.00
Zenith	C34W37	Direct View CRT	34W"	16:9	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	DVI/HDCP	2Q	TBD
Zenith	C30W37	Direct View CRT	30W"	16:9	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	DVI/HDCP	4Q	TBD
Zenith	C32V37	Direct View CRT	32"	4:3	1080i	All Formats>1080i	yes, upconverts to 1080i	Yes	DVI/HDCP	3Q	$1,299.00
Zenith	P50W39	Plasma Display Panel	50W" (16:9)	16:9	720p	All Formats>720p	Includes Hi-Res Component Inputs	Yes	DVI/HDCP	3Q	TBD
Zenith	P42W38	Plasma Display Panel	42" 16:9	16:9		All Formats>720p	Includes Hi-Res Component Inputs	Yes	DVI/HDCP	3Q	TBD

DIGITAL TV SET-TOP DECODERS (Connects to TV monitors) as of 3/3/03

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	Digital Interface Type	Available	Suggested Retail Price
EchoStar	6000U**	Core 18 Table 3 Formats (with optional tuner module)	All Formats>480i All Formats>1080i All Formats>720p	"RGB via VGA, HD Component "	Has Upgradable Expansion Slot for optional Terrestrial NTSC/ATSC Tuner module	Yes	"Yes (2-channel, passes through 5.1)	None	Now	$499.00; optional ATSC tuner module $149
EchoStar	DishPVR 921**	Core 18 Table 3 Formats	All Formats>480i All Formats>480P All Formats>1080i All Formats>720p	DVI-HDTV with HDCP HD Component	Yes	Yes	Yes (2-channel, passes through 5.1)	DVI-HDTV with HDCP; IEEE-1394 with DTCP (enabled through future software update)	3rd Quarter 03	TBD
Motorola/ General Instruments	HDD200*** Adapter module for 4DTV digital C-Band Decoder	C-Band; No ATSC tuner included	Selectable: All Formats>480p All Formats>720p All Formats >1080i	"HD Component, RGBHV"	No	"Yes, multiplies externally tuned NTSC signals"	No	None	Now	"$1,599.99"
Hughes Network Systems	HSYS-E8674 Platinum HD*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component	Yes	No	Yes (2-channel, optical 5.1 channel pass through)	None	Now	$799.95 with multi-satellite dish
Hughes Network Systems	HIRD-E86 Platinum HD*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component	Yes	No	"Yes (2-channel, optical 5.1 channel pass through)	None	Now	$499.99 without dish
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, passes through 5.1)	None	Now	$499.95; optional ATSC tuner module $149
JVC	"TU-PVR9000DU** (HD recordable PVR)"	Core 18 Table 3 Formats	Selectable: DVI Auto All Formats> 480i, 720p> 1080i All Formats> not converted	"HD Component, DVI-HDTV with HDCP	No	No	"Yes (2-channel, optical 5.1 channel pass through)	DVI-HDTV with HDCP; i.LINK(IEEE-1394) with DTCP	Estimated 2nd Quarter	TBD
Macro Image Technology	MDR-100	Core 18 Table 3 Formats	Switchable: All Formats>480i All Formats>480p All Formats>720p All Formats>1080i	RGB 15-pin D-sub, HD Component"	Yes	Yes	Yes, 5.1 channel analog output"	None	Now	$450.00
Macro Image Technology	MDR-500	Core 18 Table 3 Formats	Switchable: All Formats>480i All Formats>480p All Formats>720p All Formats>1080i All Formats>1080p	"RGB 15-pin D-sub, HD Component, DVI	Yes	Yes	Yes, 5.1 channel analog output"	Optional	Now	"$2,500.00"
Philips	DSHD600R*	Core 18 Table 3 Formats	All Formats>480i All Formats>1080i	HD Component Video	Yes	No	"Yes (2-channel, passes through 5.1)	No	Now	$999.00
RCA	DTC200*	Core 18 Table 3 Formats	Switchable: All Formats>480i, All Formats>480p, All Formats>720p, All Formats>1080i	"RGB via VGA, HD Component, DVI-HDTV with HDCP "	Yes	Yes	Yes	DVI-HDTV with HDCP	Now	$549.99 without dish
Samsung	SIR-T165 (with third gen. chip)	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i All Formats>NTSC	"HD Component; RGB via VGA, DVI-HDTV with HDCP, IEEE-1394 with DTCP"	Yes	No	"Yes (2-channel, passes through 5.1)	DVI-HDTV with HDCP; IEEE-1394 with DTCP	Now	$799.00

*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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DIGITAL TV SET-TOP DECODERS (Connects to TV monitors) as of 3/3/03

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	Digital Interface Type	Available	Suggested Retail Price
Samsung	SIR-TS160* (with third gen. Chip)	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i All Formats>NTSC	HD Component ; RGB via VGA; DVI-HDTV with HDCP	Yes	No	"Yes (2-channel, passes through 5.1) "	DVI-HDTV with HDCP	Now	$699.00
Samsung	SIR-T151 (with third gen. chip)	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i All Formats>NTSC	HD Component; RGB via VGA	Yes	No	"Yes (2-channel, passes through 5.1) "	None	Now	$499.00
Samsung	SIR-T150 (with third gen. chip)	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i All Formats>NTSC	HD	Yes	No	"Yes (2-channel, passes through 5.1)	None	Now	$699.00
Sanyo	DIR-2000	Core 18 Table 3 Formats	All Formats>480i All Formats>480p	HD Component Video	Yes	No	"No, Passes through DD over optical S/PDIF"	None	Now	$399.99
Sony	HD-200*	Core 18 Table 3 Formats	Switchable: All Formats>480p All Formats>720p All Formats>1080i All Formats>NTSC/ 480i	"HD Component Video, DVI-HDTV, RGB via VGA"	Yes	Yes	"Yes (2-channel, passes through 5.1) "	DVI-HDTV with HDCP	Now	$899.99
Toshiba	DST-3000*	Core 18 Table 3 Formats	Switchable: All Formats>480i All Formats>1080i	HD Component Video	Yes	No	"Yes (2-channel, passes through 5.1) "	None	Now	$799.99 w/o dish
Zenith	HDV420	Decodes all 18 ATSC formats	"1080i, 720p, 480p"	HD Component Video	No	No	Yes	No	Now	$399.95
Zenith	HD-SAT520*	Decodes all 18 ATSC formats	"All Formats>1080i, 720p, 480i, All Formats>NTSC"	"DVI with HDCP, calibration port"	Yes	"Yes, Enhanced Up Converter"	Yes	Yes	Now	$699.95
Zenith	HD-SAT530*	Decodes all 18 ATSC formats	"All Formats>1080i, 720p, 480i, All Formats>NTSC"	"DVI with HDCP, calibration port"	Yes	"Yes, Enhanced Up Converter"	Yes	Yes	3Q-03	$699.00
Zenith	HDV430	Decodes all 18 ATSC formats	"All Formats>1080i, 720p, 480i, All Formats>NTSC"	"DVI with HDCP, calibration port"	no	No	Yes	Yes	3Q-03	$399.00
Zenith	HDX330****	Decodes all 18 ATSC formats	"All Formats>1080i, 720p, 480i, All Formats>NTSC"	"DVI with HDCP, calibration port"	No	No	Yes	Yes	3Q-03	$599.00

*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.

HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Accurate Imaging Technologies	Accurate 9	CRT Front PTV	variable	2048x1536 pixels	yes/optional	0	n/a	Now	50,000.00
Accurate Imaging Technologies	Accurate 8	CRT Front PTV	variable	2048x1536 pixels	yes/optional	0	n/a	Now	34,000.00
Accurate Imaging Technologies	Accurate XL	CRT Front PTV	variable	2048x 536 pixels	yes/optional	0	n/a	Now	25,500.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Price
Advent	HT2751A	True Flat Direct View	27" (4:3)	1080i 480p, 480i	Yes 3:2 Film Pulldown	1	HD Component Video	Jun-03	$599.99
Advent	HD3061A	True Flat Direct View	30W" (16:9)	1080i, 480p 480i	Yes 3:2 Film Pulldown	1	HD Component Video	Aug-03	$999.99
Advent	HT3251A	True Flat Direct View	32" (4:3)	1080i, 480p 480i	Yes 3:2 Film Pulld own	1	HD Component Video	Jun-03	$899.99
Akai	PT4298HD	7" Rear PTV	42" (16:9)	1080i, 480p	Yes	2	HD Component Video	May-03	$1,499.99
Akai	PT4798HD	7" Rear PTV	42" (16:9)	1080i, 480p	Yes	2	HD Component Video	May-03	$1,599.99
Akai	PTH5498	7" Rear PTV	54" (4:3)	1080i, 480p	Yes	2	HD Component Video	Now	$1,999.00
Akai	PT5598HD	7" Rear PTV	55W" (16:9)	1080i, 480p	Yes	2	HD Component Video	Apr-03	$1,999.99
Akai	CF3090HD	PureFlat Direct View CRT	30W" (16:9)	1080i, 480p	Yes	2	HD Component Video	Feb-03	$899.99
Akai	CF2798HD	PureFlat Direct View CRT	27" (4:3)	1080i, 480p	Yes	2	(2) HD Component Video	Apr-03	$699.99
APEX Digital	HD2710	Direct View CRT	27" (4:3)	1080i, 480p display	2:3 Pulldown Progressive Scan	2	HD Component	20- 2003	$999.95
APEX Digital	HD3210	Direct View CRT	32" (4:3)	1080i, 480p display	2:3 Pulldown Progressive Scan	2	HD Component	20- 2003	$1,499.99
APEX Digital	HD3012W	Direct View CRT	30" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	20-2003	$1,299.95
APEX Digital	HD3412W	Direct View CRT	34" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	20- 2003	$1,999.95
APEX Digital	GB40HD12W	7" Rear PTV	40" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$999.95
APEX Digital	GB43HD12W	7" Rear PTV	43" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$1,299.95
APEX Digital	GB51HD10	7" Rear PTV	51" (4:3)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$1,199.95
APEX Digital	GB51HD12W	7" Rear PTV	51" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$1,499.95
APEX Digital	GB57HD12W	7" Rear PTV	57" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$1,799.95
APEX Digital	GB65HD12W	7" Rear PTV	65" (16:9)	1080i, 720p, 480p (1080i, 480p display)	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$1,999.95
APEX Digital	GB38HD10	7" Rear PTV	38" (4:3) Table top	1080i, 480p	2:3 Pulldown Progressive Scan	2	HD Component, DVI	03-03	$899.95
BenQ	PE8700	DLP Front	Variable (16:9)	720p (1280 x 720)	Yes	0	S-Video, Composite Video, Component (YCbCr), Progressive Component (YPbPr) NBC, RGB	Mar-03	$9,995.00
BenQ	PB8220	DLP Front	Variable (16:9)	768p (1024 x 768)	Yes	0	S-Video, Composite Video, Component (YCbCr)	May-03	$5,995.00
BenQ	HT-480W	DLP Front PTV	Variable	768p (1024x768)	Scaler	0	HD Component, RGB via BNC, RGB via 15-pin D-sub	Now	$4,500.00
Crystal View	Crystal View 2	CRT Front PTV	Variable	480p , 540p, 720p, 960p, 1080i, 1080p	No	0	RGBS via BNC	Now	$44,999.00
Crystal View	Crystal View 3	CRT Front PTV	Variable	480p , 540p, 720p, 960p,1080i, 1080p	No	0	RGBS via BNC	Now	$35,999.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interlacer for DTV Tuner/ Decoder	Available	Retail Priceaaaa
Daewoo	DSC-34W70N	Flat Screen Direct View CRT	34W" (16:9)	1080i, 480p	Yes	2	(2) HD Component	Now	$1,795.00
Daewoo	DSJ-6000LN	LCD Rear PTV	60W" (16:9)	720p	Yes	2	(2) HD Component	Now	$5,995.00
Digital Projection	HIGHlite 4100gv	3-chip DLP projection system	Variable	1024 x 768	Scaler	0	HD Component, DVI, RGBHV	Now	$29,995
Digital Projection	HIGHlite 5100gv	3-chip DLP projection system	Variable	1025 x 768	Scaler	0	HD Component, DVI, RGBHV	Now	$44,995
Digital Projection	HIGHlite 4000Dsx	Dark metal 3-chip DLP projection system	Variable	1280 x 1024	Scaler	0	HD Component, DVI, RGBHV	Now	$46,995
Digital Projection	HIGHlite 6000Dsx	Dark metal 3-chip DLP projection system	Variable	1280 x 1024	Scaler	0	HD Component, DVI, RGBHV	Now	$57,995
Digital Projection	HIGHlite Gold HC	Dark metal 3-chip DLP projection system	Variable	1280 x 1024 1200:1 contrast	Scaler	0	HD Component, DVI, RGBHV	Now	$69,995
Digital Projection	HIGHlite Platinum HC	Dark metal 3-chip DLP projection system	Variable	1280 x 1024 1200:1 contrast	Scaler	0	HD Component, DVI, RGBHV	Now	$84,995
DWIN	Transvision TV3	1-chip DLP Front PTV	Variable	480p, 540p, 720p 1080i>720P (1280x1024)	Transcaner built in	0	RGB via VGA; HD Component; DVI	Now	$10,500.00
DWIN	Transvision TV2	1-chip DLP Front PTV	Variable	480p, 540p, 720p 1080i>720P (1280x1024)	Transcaner built in	0	RGB via VGA; HD Component	Now	$10,250.00
Elite Video Elitevision	PLC-XP46	LCD Front PTV	Variable	720p (1024x768)	Yes	0	(2) RGBHV (HD-15)	Now	$16,995.00
Elite Video Elitevision	PLV-70	LCD Front PTV	Variable	720p (1366x768)	Yes	0	(2) RGBHV (HD-15)	Now	$9,995.00
Elite Video Elitevision	P-1200	LCD Front PTV	Variable	720p (1024x768)	Yes	0	(2) RGBHV (HD-15)	Now	$6,995.00
Elite Video Elitevision	P-1400	LCD Front PTV	Variable	720p (1024x768)	Scaler	0	RGB via VGA, HD component	Now	$7,995.00
Elite Video Elitevision	P-1500	LCD Front PTV	Variable	720p (1024x768)	Scaler	0	RGB via VGA, HD component	Now	$5,995.00
Elite Video Elitevision	P-2800	LCD Front PTV	Variable	720p (1024x768) (2800 ANSI Lumens)	Scaler	0	RGB via VGA, HD component	Now	$17,995.00
Elite Video Elitevision	DLA-M2000U	DILA Front PTV	Variable	720p, 480p (2000 ANSI lumens)	Scaler	0	RGB via VGA, HD component	Now	$23,995.00
Elite Video Elitevision	DLA-G15	DILA Front PTV	Variable	1080i, 720p, 480p(1500 ANSI lumens)	Scaler	0	RGB via VGA, HD component	Now	$17,995.00
Elite Video Elitevision	DLA-G150CL	DILA Front PTV	Variable	720p, 480p (1000 ANSI lumens)	Scaler	0	RGB via VGA, HD component	Now	$20,995.00
Elite Video Elitevision	LP530	DLP Front PTV	Variable	1080i, 720p, 480p (800 ANSI lumens)	Scaler	0	RGB via VGA	Now	$7,495.00
Elite Video Elitevision	EV-2800	3-chip DLP Front PTV	Variable	720p (1024x768)	Scaler	0	RGB via VGA	Now	$54,995.00
Elite Video Elitevision	EV-3000	3-chip DLP Front PTV	Variable	720p (1280x1024)	No	0	RGBHV	Now	$79,995.00
Elite Video Elitevision	EV-3600	8" CRT Front PTV	Variable	1080i, 720p, 480p	No	0	RGBHV via BNC, HD component	Now	$22,995.00
Elite Video Elitevision	EV-4600	9" CRT Front PTV	Variable	1080i, 720p, 480p	No	0	RGBHV via BNC, HD component	Now	$32,995.00
Elite Video Elitevision	EV-100	3 panel LCD Front PTV	Variable	720p	Yes, Faroudja DCDi processing with 3:2 pulldown	0	15-pin D-Sub, DVI-HDTV with HDCP	Now	$5,995.00
Epson	PowerLite TW-100	3 panel LCD Front PTV	Variable	720p	Yes, Faroudja DCDi processing with 3:2 pulldown	0	HD Component Video, 15-pin D-Sub, DVI-HDTV with HDCP	Now	$4,499.00
Faroudja	FDP-DLPHD10	HD2 1 chip DLP Projector	Variable	720p (1280x720)	Yes, Faroudja DCDi processing with 3:2 pulldown	0	HD Component Video, 15-pin D-Sub, DVI-HDTV	Now	$14,500.00
Faroudja	FDP-DLPHD10 Package	HD2 1 chip DLP Projector	Variable	720p (1280x720)	With Ext. DCS Processor	0	HD Component Video, D15, DVI-HDTV	Now	$23,995.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfaces for DTV Tuner/ Decoder	Available	Suggested Retail Price
Faroudja	FDP-DILA1 Projector Package	DILA Projector	Variable	1024p (1365 x1024)	Scaler in outboard NRS Processor	0	HD Component Video, D15	Now	$35,000.00
Faroudja	FDP-DILA1 Projector Package with NRS-Digital Cinema Source	DILA Projector	Variable	1024p (1365 x1024)	Scaler in outboard NRS-Digital Cinema Source Processor	0	HD Component Video, D15, DVI	Now	$41,000.00
Faroudja	FDP-DILA2HD Digital Projector Package	DILA Projector	Variable	1024p (1365 x1024)	Scaler in out-board NRS-DVI Processor	0	HD Component Video, D15	TBA	TBA
Faroudja	FDP-DILA2HD Digital Projector Package	DILA Projector	Variable	1024p (1365 x1024)	Scaler in outboard NRS-Digital Cinema Source Processor	0	HD Component Video, D15, DVI	TBA	TBA
Hitachi	65SWX20B	7" CRT Rear PTV	65W" (16:9)	480i>540p or 1080i 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	DVI-HDTV with HDCP, (2) HD Component	Now	$3,999.99
Hitachi	57SWX20B	7" CRT Rear PTV	57W" (16:9)	480i>540p or 1080i 480p> 540p or 1080i, 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	DVI-HDTV with HDCP, (2) HD Component	Now	$3,499.99
Hitachi	51SWX20B	7" CRT Rear PTV	51W" (16:9)	480i>540p or 1080i, 480p> 540p or 1080i, 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	DVI-HDTV with HDCP, (2) HD Component	Now	$2,999.99
Hitachi	57UWX20B	7" CRT Rear PTV	57W" (16:9)	480i>540p or 1080i, 480p> 540p or 1080i, 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	DVI-HDTV with HDCP, (2) HD Component	Now	$2,999.99
Hitachi	51UWX20B	7" CRT Rear PTV	51W" (16:9)	480i>540p or 1080i, 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	DVI-HDTV with HDCP, (2) HD Component	Now	$2,499.99
Hitachi	43FWX20B Tabletop	7" CRT Rear PTV	43W" (16:9)	480i>540p or 1080i, 480p> 540p or 1080i 720p>540p or 1080i 1080i>1080i	Yes (VirtualHD)	2	(2) HD Component	Now	$2,399.99
Hitachi	53SDX20B	7" CRT Rear PTV	53" (4:3)	1080i/540p	Yes (VirtualHD)	2	(2) HD Component	Now	$2,699.99
Hitachi	53FDX20B	7" CRT Rear PTV	53" (4:3)	1080i/540p	Yes (VirtualHD)	2	(2) HD Component	Now	$2,399.99
Hitachi	43FDX20B	7" CRT Rear PTV	43" (4:3)	1080i/540p	Yes (VirtualHD)	2	(2) HD Component	Now	$1,799.99
InFocus	SP7200	1-chip DLP Front PTV	Variable	720p (1280 x 720)	Yes Faroudja DCDi+	0	HD Component, RGB, DVI	Now	$9,999.00
InFocus	LS110	1-chip DLP Front PTV	Variable	480p (848 x 600)	Yes Faroudja DCDi	0	HD Component, RGB, DVI	Now	$4,999.00
JVC	AV-48WP74 I'ART PRO	7"CRT Rear PTV	48W" (16:9)	D.I.S.T. 1080i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Apr-03	$1,899.95
JVC	AV-56WP74 I'ART PRO	7"CRT Rear PTV	56W" (16:9)	D.I.S.T. 1080i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	May-03	$2,199.95
JVC	AV-65WP74 I'ART PRO	7"CRT Rear PTV	65W" (16:9)	D.I.S.T. 1080i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Mar-03	$2,899.95
JVC	AV-56WP84 I'ART PRO	7"CRT Rear PTV	56W" (16:9)	D.I.S.T. 1500i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Aug-03	$2,699.95

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Native Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfaces for DTV Tuner/ Decoder	Available	Suggested Retail Price
JVC	AV-65WP84 I'ART PRO	7" CRT Rear PTV	65W" (16:9)	D.I.S.T.1500i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Aug-03	$3,399.95
JVC	AV-32DF74 I'ART PRO	I'ART PRO Flat Direct View	32" (4:3)	D.I.S.T.1080i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Jul-03	$1,399.95
JVC	AV-36DF74 I'ART PRO	I'ART PRO Flat Direct View	36" (4:3)	D.I.S.T. 1080i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Jul-03	$1,799.95
JVC	AV-34WP84 I'ART PRO	I'ART PRO Flat Direct View	34W" (19:9)	D.I.S.T. 1500i	Yes with 3-2 Pulldown	2	(2) HD Component, DVI/HDCP	Jul-03	$2,199.95
Loewe	Articos 30 (in high-gloss basalt)	Flat screen CRT Direct View	30W" (16:9)	480p, 540p, 1080i	Yes, Deinterlacing + 3-2 Pulldown	2	HD Component Video, RGB via 15-pin D-sub	Now	$4,200.00
Loewe	Articos 30 (in Platinum)	Flat screen CRT Direct View	30W" (16:9)	480p, 540p, 1080i	Yes, Deinterlacing + 3-2 Pulldown	2	HD Component Video, RGB via 15-pin D-sub	Now	$4,000.00
Loewe	Aventos 30 (in Graphite)	Flat screen CRT Direct View	30W" (16:9)	480p, 540p, 1080i	Yes, Deinterlacing + 3-2 Pulldown	2	HD Component Video, RGB via 15-pin D-sub	Now	$2,000.00
Loewe	Aventos 30 (in Platinum)	Flat screen CRT Direct View	30W" (16:9)	480p, 540p, 1080i	Yes	2	HD Component Video, RGB via 15-pin D-sub	Now	$2,000.00
Loewe	Aconda AC09303 LS Light Silver	"Real-Flat" Direct View	30W" (16:9)	480i, 480p, 540p, 1080i	Deinterlacing + 3-2 Pulldown	2	RGB via VGA,	Now	$2,700.00
Loewe	Aconda AC09303PB Gloss Piano Black	"Real-Flat" Direct View	30W" (16:9)	480i, 480p, 540p, 1080i	Deinterlacing + 3-2 Pulldown	2	RGB via VGA, HD Component	Now	$3,000.00
Loewe	Aconda AC09303S Gloss Stratosmetallic	"Real-Flat" Direct View	30W" (16:9)	480i, 480p, 540p, 1080i	Deinterlacing + 3-2 Pulldown	2	RGB via VGA, HD Component	Now	$3,000.00
Loewe	Aconda AC09383G Matte Graphite	Direct View	38W" (16:9)	480i, 480p, 540p, 1080i	Deinterlacing + 3-2 Pulldown	2	RGB via VGA, HD Component	Now	$4,000.00
Loewe	Aconda AC09383S Gloss Stratosmetallic	Direct View	38W" (16:9)	480i, 480p, 540p, 1080i	Deinterlacing + 3-2 Pulldown	2	RGB via VGA, HD Component	Now	$4,500.00
Loewe	Aconda AC09383PB Gloss Piano Black	Direct View	38W" (16:9)	480i, 480p,540p, 1080i	Deinterlacing+ 3-2 Pulldown	2	RGB via VGA, HD Component	Now	$4,500.00
Madrigal	MP-8	8" CRT Front PTV	Variable	1080i, 720p	Yes	0	RGBHV via BNC	Now	$35,000.00
Marantz	VP-12S2	1-chip Front DLP (HD-2 chip)	Variable	720p (1,280x720)	Scaling, (3-chip Sage/Faroudja system)	0	HD Component, RGB via 15-pin D-sub, DVI	Now	$12,499.00
Marantz	PV6111W	7" CRT Rear PTV	61W" (16:9)	1080i, 540p	Yes	2	HD Component, RGB	Now	$4,299.00
Mitsubishi Gold Plus	WS-73411	9" CRT Rear PTV	73W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$5,199.00
Mitsubishi Gold Plus	WS-65411	7" CRT Rear PTV	65W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$3,399.00
Mitsubishi Gold Plus	WS-55411	7" CRT Rear PTV	55W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,799.00
Mitsubishi Gold	WT-65311	7" CRT Rear PTV	65W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$3,199.00
Mitsubishi Gold	WS-55311	7" CRT Rear PTV	55W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,599.00
Mitsubishi Gold	WS-48311	7" CRT Rear PTV	48W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,199.00
Mitsubishi Gold	WT-42311	7" CRT Rear PTV	42W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$1,899.00
Mitsubishi Silver	VS-60111	7" CRT Rear PTV	60" (4:3)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,299.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Natives Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Mitsubishi Silver	VS-50111	7" CRT Rear PTV	50" (4:3)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$1,899.00
Mitsubishi	WT-A65	7" CRT Rear PTV	65W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$3,199.00
Mitsubishi	WS-A55	7" CRT Rear PTV	55W" (16:9)	NTSC>480p 480p 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,599.00
Mitsubishi	WS-A48	7" CRT Rear PTV	48W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$2,199.00
Mitsubishi	WT-A42	7" CRT Rear PTV	42W" (16:9)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$1,899.00
Mitsubishi	VS-A50	7" CRT Rear PTV	50" (4:3)	NTSC>480p 480p, 1080i	Yes with 3-2 pull-down	2	HD Component, RGB or RGBHV	Now	$1,899.00
Monivision	DM-5948ST	CRT Direct View	27-inch (4:3)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$1,208.00
Monivision	DM-5952SFT	Full Flat CRT Direct View	27-inch (4:3)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$1,579.00
Monivision	DM-6952ST	CRT Direct View	32-inch (4:3)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$1,948.00
Monivision	DM-7752ST	CRT Direct View	36-inch (4:3)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$2,978.00
Monivision	DM-6952SFT	Flat-Faced Direct View	32" (4:3)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$2,348.00
Monivision	DM-7352SFT	Flat-Faced Direct View	34W" (16:9)	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$3,499.00
Monivision	DM6552SWT	CRT Direct View	30-inch 16:9	1080i, 720p, 480p, 480i	Yes	1	HD Component, RGBHV via BNC, RGB via VGA	Now	$1,500
NetTV	DTV-29XF	Direct View	27" (4:3)	1080i 720p 480p	No	optional	(2) VGA 15-pin D-sub HD Component	Now	$1,399.00
NetTV	DTV-29XFT	Direct View TrueFlat	27" (4:3)	1080i 720p 480p	No	optional	(2) VGA 15-pin D-sub HD Component	Now	$1,499.00
NetTV	DTV-29XRT	Direct View	27" (4:3)	1080i 720p 480p	No	1	(2) VGA 15-pin D-sub, HD Component	Now	$1,099.00
NetTV	DTV38XT	Direct View	36" (4:3)	1080i 720p 480p	No	1	(2) VGA 15-pin D-sub, HD Component	Now	$2,999.00
NetTV	DTV-34XR	Flat Faced Direct View	32" (4:3)	1080i 720p 480p	No	optional	(2) VGA 15-pin D-sub HD Component	Now	$1,699.00
NetTV	DTV34-XRT	Flat Faced Direct View	32" (4:3)	1080i 720p 480p	No	1	(2) VGA 15-pin D-sub HD Component	Now	$1,799.00
NetTV	DTV39-XW	Flat Faced Direct View	34W" (16:9)	1080i 720p 480p	Yes	1	(2) VGA 15-pin D-sub HD Component	Now	$2,999.00
Optoma	H55	0.7" DLP Front PTV	Variable	768p (1,204x768)	Scaler	0	RGB via 15-pin D-sub	Now	$4,495.00
Optoma	H56	DLP Front PTV	Variable	768p (1,204x768)	Scaler	0	DVI; HD15-pin D-Sub Connector, HD Component	Now	$4,399.00
Optoma	RD-50	DLP HD-2 Rear PTV	50W-inch	720p (1280x720 pixels)	DVDO Scaling	2	HD Component, RGB via BNC, DVI-HDTV,	Now	$4,995.95
Panasonic	PT-52DL52	1-chip DLP Rear PTV (HD-2 chip)	52W" (16:9)	720p (1280x720)	Yes	2	(3) HD Component	Now	$4,999.95
Panasonic	PT-65WX51	7" CRT Rear	65" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$2,799.95
Panasonic	PT-56WX52	7" CRT Rear	56" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$2,499.95
Panasonic	PT-56WX42	7" CRT Rear	56" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$2,299.95

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Tupe	Screen Size	Natives Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Panasonic	PT-53WX52	7" CRT Rear	53" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$1,999.95
Panasonic	PT-53WX42	7" CRT Rear	53" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$1,799.95
Panasonic	PT-47WX52	7" CRT Rear	47" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$1,799.95
Panasonic	PT-47WX42	7" CRT Rear	47" (16:9)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$1,599.95
Panasonic	PT-61HX42	7" CRT Rear	61" (4:3)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$2,399.95
Panasonic	PT-51HX42	7" CRT Rear	51" (4:3)	1080i 480p	Yes, Progressive Cinema Scan with 3-2 pulldown	2	(2) HD Component	Now	$1,799.95
Panasonic	PT-D7600	3-chip DLP Front PTV	Variable	720p	Yes with 3-2 pull-down	0	HD component	Now	$29,999.95
Philips	60PP9753	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes with 3-2 pull-down	2	DVI and HD Component	June	$2,999.00
Philips	60PP9502	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,699.00
Philips	60PW9383	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,699.00
Philips	60PW9363	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,499.00
Philips	60PP9352	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes	1	HD Component	Now	$2,599.00
Philips	60PP9202	7" CRT Rear PTV	60" (4:3)	1080i 480p	Yes	1	HD component	Now	$2,199
Philips	55PP9753	7" CRT Rear PTV	55W" (16:9)	1080i 480p	Yes with 3-2 pulldown	2	DVI and HD Component	June	$2,699.00
Philips	55PP9502	7" CRT Rear PTV	55W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,599.00
Philips	55PW9383	7" CRT Rear PTV	55W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,399.00
Philips	55PW9363	7" CRT Rear PTV	60W" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$2,199.00
Philips	55PP9352	7" CRT Rear PTV	55W" (16:9)	1080i 480p	Yes	1	HD Component	Now	$2,199.00
Philips	51PW9363	7" CRT Rear PTV	51" (16:9)	1080i 480p	Yes	2	DVI and HD Component	Now	$1,999.00
Philips	50PP9202	7" CRT Rear PTV	50" (4:3)	1080i 480p	Yes	1	HD component	Now	$1,799.00
Philips	46PP9302	7" CRT Rear PTV	46" (16:9)	1080i 480p	Yes	1	HD Component	Now	$1,899.00
Philips	43PP9202	7" CRT Rear PTV	43" (4:3)	1080i 480p	Yes	1	HD componet	Now	$1,699.00
Philips	34PW9818	Flat Screen Direct View	34W" (16:9)	960i 480p 1080i	Yes with 3-2 pulldown	2	HD Component	Now	$2,799.00
Philips	30PW9818	Flat Screen Direct View	30W" (16:9)	960i 1080i 480p	Yes with 3-2 pulldown	2	HD Component	Now	$2,299.00
Philips	34PW8520	Flat Screen Direct View	34W" (16:9	1080i 480p	Yes	2	HD Componenet	Now	$2,799.00
Philips	30PW8520	Flat Screen Direct View	30W" (16:9)	1080i 480p	Yes	2	HD Component	Now	$1,999.00
Philips	27PW8320	Direct View	27" (4:3)	1080i 480p	Yes	1	HD Component Video	Now	$999.00
Philips	32PW8320	Direct View	32" (4:3)	1080i 480p	Yes	1	HD component video	Now	$1,499.00
Philips	36PW8320	Direct View	36" (4:3)	1080i 480p	Yes	1	HD Component Video	Now	$1,999.00
Philips	36PW8320	Direct View	36" (4:3)	960i 480p 1080i	Yes	2	HD Component Video	Now	$1,999.00
Philips	cBright SV2	LCD front projector	Variable	720p (800x600)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$3,999.00
Philips	cBright XG2	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$4,899.00
Philips	cBright XG2 Impact	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$5,099.00
Philips	cSmart	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$3,299.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativve Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Philips	Pro Screen PXG20	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component via 15-pin D-Sub switchable with RGB	Now	$8,899.00
Philips	UGO X-lite Impact	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub	Now	$4,999.00
Philips	UGO S-lite Impact	LCD front projector	Variable	720p (800x600)	Yes	0	RGB 15-pin D-Sub	Now	$3,199.00
Philips	bSure SV1	LCD front projector	Variable	720p (800x600)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$3,159.00
Philips	bSure SV1	LCD front projector	Variable	720p (1024x786)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$3,599.00
Philips	cBright XG2+	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$4,899.00
Philips	cBright XG2+ Impact	LCD front projector	Variable	720p (768x1024)	Yes	0	RGB 15-pin D-Sub, HD Component	Now	$5,099.00
Philips	PRO-530HD	7" CRT Rear PTV	53W" (16:9)	480p, 1080i,	Yes with 3-2 pulldown	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$5,900.00
Philips	PRO-630HD	7" CRT Rear PTV	58W" (16:9)	480p, 1080i,	Yes with 3-2 pulldown	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$6,700.00
Philips	PRO-730HD	7" CRT Rear PTV	64W" (16:9)	480p, 1080i,	Yes with 3-2 pulldown	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$7,500.00
Philips Epic Series	Cineos 55PL9523	1-chip LCoS Rear PTV	55W" (16:9)	720p (1280x720)	Yes with 3-2 pulldown	2	HD Component, DVI-HDCP	Summer	$3,899.00
Philips Epic Series	Cineos 44PL9523	1-chip LCoS Rear PTV	44W" (16:9)	720p (1280x720)	Yes with 3-2 pulldown	2	HD Component, DVI-HDCP	Summer	$3,199.00
Philips MatchLine Series	Cineos 55PL9773	1-chip LCoS Rear PTV	55W" (16:9)	720p (1280x720)	Yes with 3-2 pull-down and PixelPlus	2	HD Component, DVI-HDCP	Summer	$4,199.00
Philips MatchLine Series	Cineos 44PL9773	1-chip LCoS Rear PTV	44W" (16:9)	720p (1280x720)	Yes with 3-2 pull-down and PixelPlus	2	HD Component, DVI-HDCP	Summer	$3,499.00
Pioneer	SDP-533HD5	7" CRT Rear PTV	53W" (16:9)	480p, 1080i,	Yes with 3-2 pull-down	2	(2) HD Component 15-pin D-sub	Now	$3,499.00
Pioneer	SDP-643HD5	7" CRT Rear PTV	64W" (16:9)	480p, 1080i,	Yes with 3-2 pull-down	2	(2) HD Component 15-pin D-sub	Now	$4,799.00
Pioneer Elite	PRO-530HD	7" CRT Rear PTV	53W" (16:9)	480p, 1080i,	Yes with 3-2 pull-down	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$5,000.00
Pioneer Elite	PRO-630HD	7" CRT Rear PTV	58W" (16:9)	480p, 1080i,	Yes with 3-2 pull-down	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$6,000.00
Pioneer Elite	PRO-730HD	7" CRT Rear PTV	64W" (16:9)	480p, 1080i,	Yes with 3-2 pull-down	2	(2) HD Component 15-pin D-sub, 2 DVI	Now	$7,000.00
Princeton Arcadia	AR3.6TX	Multi-Scan Direct View	36" (4:3)	480p, 540p, 720p, 1080i	Yes	1	RGBHV via dSub 15-pin, Optional HD Component with Vision Box	Now	$2,499.00
Princeton Arcadia	AR3.0TW	Multi-scan Wide Direct View	30W" (16:9)	480p, 540p, 720p, 1080i	Yes	1	RGBHV via dSub 15-pin, Optional HD Component with Vision Box	Now	$1,999.00
Princeton Arcadia	AR3.4FTW	Perfectly Flat Wide Direct View	34W" (16:9)	480p, 540p, 720p, 1080i	Yes	1	RGBHV via dSub 15-pin, Optional HD Component with Vision Box	Now	$2,499.00
Proton	HWT-36A Wide Screen	True Pro Flat Direct View	34W" (16:9)	480p, 480i, 720p, 1080i	Yes with 3-2 pull-down	2	RGBHV via BNC, HD Component via BNC	May-03	$3,000.00
Proton	HT-29A	True Pro Flat Direct View	27" (4:3) VC 16:9	480p, 480i, 720p, 1080i	Yes with 3-2 pull-down	2	RGBHV via BNC, HD Component via BNC	May-03	$1,500.00
Proton	HT-34A	True Pro Flat Direct View	32" (4:3) VC 16:9	480p, 480i, 720p, 1080i	Yes with 3-2 pull-down	2	RGBHV via BNC, HD Component via BNC	May-03	$2,400.00
RCA Scenium	D61W130	7" CRT Rear PTV	61W" (16:9)	480p, 1080i,	Yes	2	DVI-HDTV, (2) HD Component Video	Now	$2,899
RCA	D52W20	7" CRT Rear Projection	52W" (16:9)	480p, 1080i,	Yes	2	DVI-HDTV, (2) HD Component	Now	$2,099.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Natives Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
RCA	D40W20	7" CRT Rear Projection	40" (16:9)	480p,	Yes	2	DVI-HDTV, (2) HD Component	Now	$1,899.00
RCA	D34W20	Multi-scan Direct View	TruFLAT 34W" (16:9)	480p, 1080i,	Yes	2	DVI-HDTV, (2) HD Component	Now	$2,299.00
Runco	Radiance Series DLC-2000HD	LCD Projector with Runco PFP Processor	16:9 Variable	(1365 x 768) XGA and 720p; 1080i, 480p and 540p signals scaled	Yes via external scaler with 3:2 pulldown	0	HD RGB & HD Component via 15-pin D-Sub	Now	$19,995 to $23,495 depending on lens
Runco	Reflection Series CL-500	1 Chip DLP Projection TV	16:9 or 4:3 Dual Mode	(848 x 600) 848x480 or 800x600, VGA, 480p; 720p, XGA, and 1080i signals scaled	Yes (with 3:2 pull-down)	0	RGB or HD Component via BNC	Now	$4,995.00
Runco	Reflection Series CL-500c	1 Chip DLP Projection TV with PFP Processor	16:9 or 4:3 Dual Mode	(848 x 600) 848x480 or 800x600, VGA, 480p; 720p, XGA, and 1080i signals scaled	Yes via external scaler with 3:2 pulldown	0	RGB or HD Component via BNC or HD Component via RCA	Now	$6,995.00
Runco	Reflection Series CL-700	16:9 - 1 chip DLP Projection TV	16:9 Variable	(1280 x 720)	Yes (with 3:2 pull-down)	0	RGB or HD Component via BNC	Now	$9,995.00
Runco	Reflection Series CL-710	16:9 1 chip DLP Projection TV	16:9 Variable	1280 x720	Yes with 3:2 pull-down	0	RGB or HD Component via BNC, DVI	2Q2003	$11,995.00
Runco	Reflection Series CL-700c	1 Chip DLP Projection TV with PFP Processor	16:9 Variable	(1280 x 720)	Yes via external scaler with 3:2 pulldown	0	HD RGB & HD Component via 15-pin D-Sub	Now	$11,995.00
Runco	Reflection Series VX-1000ci	16:9 - 1 chip DLP Projection TV with PFP Processor	16:9 Variable	(1280 x 720) 720p	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub, DVI	2Q2003	$16,995.00
Runco	Reflection Series VX-5000ci	16:9 - 1 chip DLP Projection TV with PFP Processor	16:9 Variable	(1280 x 720) 720p	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub, DVI	2Q2003	$26,995.00
Runco	Reflection Series VX-3c *with Anamorphic lens option	3-chip DLP Projection TV with PFP Processor	Variable	(1024 x 768) XGA, 480p, 600p, & 720p; 1080i Signal Scaled	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub	Now	$64,995.00 *29,995.00
Runco	Reflection Series VX-5c *with Anamorphic lens option	3-chip DLP Projection TV with PFP Processor	Variable	(1280 x 1024) SXGA, 720p, SVGA, 480p, & 600p; 1080i, & 1080p Signals Scaled	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub	Now	$89,995.00 *29,995.00
Runco	DTV-947	7" CRT Projection TV	Variable	720P to 480i & 1080i	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub	Now	$18,995.00
Runco	DTV-992 Ultra	8" CRT Projection TV with VHD Processor	Variable	960P to 480i & 1080i	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub	Now	$32,995.00
Runco	DTV-1200	9" CRT Projection TV with VHD Processor	Variable	1080P to 480i & 1080i	Yes via external scaler (with 3:2 pulldown)	0	HD RGB & HD Component via 15-pin D-Sub	Now	$44,995.00
Sampo	SME-32DL5	Direct View CRT	32" (4:3)	480i, 480p, 720p, 1080i	No	1	HD Component, RGB via VGA	Now	$1,599.99
Sampo	SME-27FDL5	Pure Flat Direct View	27" (4:3)	480i, 480p, 720p, 1080i	No	1	RGB	Now	$1,299.99
Samsung	HLN437W	1-chip DLP Rear PTV (HD-2 chip)	43W" (16:9)	All Formats>720p	Yes Faroudja DCDi (with 3:2 pulldown)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$3,699.99

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DTV PRODUCTS

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Samsung	HLN507W	1-chip DLP Rear PTV (HD-2 chip)	50W" (16:9)	All Formats>720p	Yes Faroudja DCDi (with 3:2 pulldown)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$4,199.99
Samsung	HLN617W	1-chip DLP Rear PTV (HD-2 chip)	61W" (16:9)	All Formats>720p	Yes Faroudja DCDi (with 3:2 pulldown)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$5,199.99
Samsung	HLN467W	1-chip DLP Rear PTV (HD-2 chip)	46W" (16:9)	All Formats>720p	Yes Faroudja DCDi (with 3:2 pulldown)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$3,999.99
Samsung	HLN567W	1-chip DLP Rear PTV (HD-2 chip)	56W" (16:9)	All Formats>720p	Yes Faroudja DCDi (with 3:2 pulldown)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$4,699.99
Samsung	HLN4365W	1-chip DLP Rear PTV (HD-2 chip)	43W" (16:9)	All Formats>720p	Yes (with 3:2 pull-down)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$3,699.99
Samsung	HLN5065W	1-chip DLP Rear PTV (HD-2 chip)	50W" (16:9)	All Formats>720p	Yes (with 3:2 pull-down)	2	2 HD Components (Y, Pb, Pr) 15-pin D-sub DVI w/ HDCP	Now	$4,199.99
Samsung	PCN5425R	7" CRT Rear PTV	54" (4:3)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$1,599.99
Samsung	HCN5527W	7" CRT Rear PTV	55W" (16:9)	480p 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$2,099.99
Samsung	HCN4727W	7" CRT Rear PTV	47W" (16:9)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$1,599.99
Samsung	HCN4226W	7" CRT Rear PTV	42W" (16:9)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$1,499.99
Samsung	HCN653W	7" CRT Rear PTV	65W" (16:9)	480p 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$2,799.99
Samsung	HCN553W	7" CRT Rear PTV	55W" (16:9)	480p, 1080i	Yes	2	3 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$2,299.99
Samsung	HCN436W	7" CRT Rear PTV	43W" (16:9)	480p, 1080i	Yes	2	3 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$1,699.99
Samsung	HCN473W	7" CRT Rear PTV	47W" (16:9)	480p, 1080i	Yes	2	3 HD Components (Y, Pb, Pr), DVI w/HDCP	Now	$1,799.99
Samsung Tantus	TXN2798HF	DynaFlat Direct View	27" (4:3)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI	Now	$1,099.99
Samsung Tantus	TXN3298HF	DynaFlat Direct View	32" (4:3)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI	Now	$1,399.99
Samsung Tantus	TXN3098WHF	DynaFlat Direct View	30W" (16:9)	480p, 1080i	Yes	2	2 HD Components (Y, Pb, Pr), DVI	Now	$1,499.99
Samsung	TXN2771HF	DynaFlat Direct View	27" (4:3)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$899.99
Samsung	TXN3271HF	DynaFlat Direct View	32" (4:3)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$1,199.99
Samsung	TXN3071WHF	DynaFlat Direct View	30W" (16:9)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$1,199.99
Samsung	TXN2670WHF	DynaFlat Direct View	26W" (16:9)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$999.99
Samsung	TXN3275HF	DynaFlat Direct View	32" (4:3)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$1,199.99
Samsung	TXN3075WHF	DynaFlat Direct View	30W" (16:9)	480p, 1080i	Yes	1	2 HD Components (Y, Pb, Pr)	Now	$1,199.99
Sanyo	DS32830H	Direct View	32" (4:3)	480p, 1080i	No	2	HD Component (Y, Pb, Pr)	2Q- 2003	$799.00
SharpVision	XV-Z9000U	1-chip DLP Front PTV (HD-1 chip)	Variable	720p	Yes	0	HD Component Video	Now	$10,995.95
SharpVision	XV-Z10000U	1-chip DLP Front PTV (HD-2 chip)	Variable	720p (1280x720p)	Yes	0	HD Component Video, DVI-I with HDCP	Now	$11,995.95
Sim2	SVD500 HDPLUS	7" CRT PTV	Variable	480p, 1080i	Yes	0	RGB H&V via BNC, HD Component, 15-pin D-sub	Now	$10,995.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Sim2	SVD800HD	7" CRT PTV	Variable	720p, 1080i (1024x768)	No	0	RGB H&V via BNC, HD Component, 15-pin D-sub	Now	$17,695.00
Sim2	SVD800 Millennium	7" CRT PTV Hand selected	Variable	720p 1080i	No	0	RGB H&V via BNC, HD Component, 15-pin D-sub	Now	$19,995.00
Sim2	Grand Cinema HT200 SWA	1-chip DLP Rear PTV Only	Variable	720p (1024x768) 800 lumens	Yes	0	HD Component 1 RGBHV, plus 1 RGBS via RCA 15-pin D-sub	Now	$6,995.00
Sim2	Grand Cinema HT200 DMF	1-chip DLP	Variable	720p (1024x768) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component 1 RGBHV, plus 1 RGBS via RCA 15-pin D-sub	Now	$7,995.00
Sim2	Grand Cinema HT300	1-chip DLP Front PTV	Variable	720p (1280x720) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component 1 RGBHV, plus 1 RGBS via RCA 15-pin D-sub	Now	$10,995.00
Sim2	Grand Cinema HT300 Plus	1-chip DLP Front PTV (HD-2 chip)	Variable	720p (1280x720) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component, 1RGBHV, RGBS via RCA 15-pin D-sub, DVI	Now	$13,995.00
Sim2	Grand Cinema HT300 Plus Link	1-chip DLP Front PTV (HD-2 chip)	Variable	720p (1280x720) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component, 1 RGHBV, RGBS via RCA 24-pin D-sub, DVI	Spring 2003	$15,995.00
Sim2	Grand Cinema RTX 45	1-chip DLP RPTV Monitor (HD-2 chip)	Variable	720p (1280x720) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component, RGBH/V via 3 RCA and 5 BNC, DVI, DigiOptical Image Processor via fiber optics	Now	$10,995.00
Sim2	Grand Cinema RTX 55	1-chip DLP RPTV Monitor (HD-2 chip)	Variable	720p (1280x720) 800 lumens	Yes Sage/Faroudja DCDi deinterlacer	0	HD Component, RGBH/V via 3 RCA and 5 BNC, DVI, DigiOptical Image Processor via fiber optics	Now	$12,995.00
Sony	VPL-HS10 "Cineza"	LCD Front PTV	Variable	720p (1366x768)	No	0	HD Component, RGBHV, DVI with HDCP	Now	$3,000.00
Sony	VPL-VW12HT	LCD Front PTV	Variable	720p (1366x768)	No	0	HD Component, RGBHV, DVI with HDCP	Now	$8,000.00
Sony	VPH-G90U	9" CRT Front PTV	Variable	720p, 1080i	Yes (DRC)	0	RGBS-BNC, HD Component	Now	$38,000.00
Sony	VPD-D50HTU	CRT Front PTV	Variable	720p, 1080i	Yes (DRC)	0	RGBHV, HD Component	Now	$11,365.00
Sony	KV-40XBR800	FD Trinitron Wega Direct View	40" (4:3)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction Variable and CineMotion 3-2 pulldown	2	(2)HD Component, DVI-HDTV	Now	$3,000.00
Sony	KV-30HS510	FD Trinitron Wega Direct View	30" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	September	$1,500.00
Sony	KV-32HS510	FD Trinitron Wega Direct View	32" (4:3)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	May	$1,300.00
Sony	KV-30HS510	FD Trinitron Wega Direct View	34" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	August	$2,000.00
Sony	KV-36HS510	FD Trinitron Wega Direct View	36" (4:3)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	May	$1,800.00
Sony	KF-42WE610 "Grand Wega"	3-panel LCD Rear PTV	42W" (16:9)	720p	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	September	$2,500.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Sony	KF-50WE610 "Grand Wega"	3-panel LCD Rear PTV	50W" (16:9)	720p	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	September	$3,000.00
Sony	KF-60WE610 "Grand Wega"	3-panel LCD Rear PTV	60W" (16:9)	720p	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	September	$4,000.00
Sony	KF-50XBR800 "Grand Wega"	3-panel LCD Rear PTV	50W" (16:9)	720p	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	Now	$4,000.00
Sony	KF-60XBR800 "Grand Wega"	3-panel LCD Rear PTV	60W" (16:9)	720p	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	Now	$5,000.00
Sony	KV-30XBR910	FD Trinitron Wega Direct View	30W 16:9	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$2,000.00
Sony	KV-34XBR910	FD Trinitron Wega Direct View	34W 16:9	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$2,500.00
Sony	KP-46WT510	7 CRT Rear PTV	46W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$1,700.00
Sony	KP-51WS510	7 CRT Rear PTV	51W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$2,000.00
Sony	KP-57WS510	7 CRT Rear PTV	57W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$2,300.00
Sony	KP-65WS510	7 CRT Rear PTV	65W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	July	$2,800.00
Sony	KP-57WV600	7 CRT Rear PTV	57W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- Variable DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	Now	$3,300.00
Sony	KP-65WV600	7 CRT Rear PTV	65W" (16:9)	480p, 960i, 720p>1080i 1080i	Yes -- Variable DRC Multifunction and CineMotion 3-2 pulldown	2	DVI-HDTV	Now	$3,500.00
Studio Experience	Cinema 13HD	3 panel LCD Front PTV	Variable	720p (1366x768)	Yes , internal scaling	0	HD Component	Now	$5,299.00
Studio Experience	Cinema 20HD	3 panel LCD Front PTV	Variable	768p (1,366x768 pixels)	Yes, internal scaling	0	HD Component. RGBHV 15-pin, RGBHV via BNC, DVI-HDTV	Now	$7,999.00
TAW	Evolution	LCoS Front PTV	Variable	720p (1365x1024)	Scaler	0	RGBHV (BNC), VGA (15pin HD Male) DVI-D ,	Now	$24,999.00
TAW	HD-800	8" CRT Front PTV	Variable	(1800x1350)	No	0	RGBHV 3,4,5 wire sync, BNC and 15-pin D-sub, DVI without HDCP	Now	$29,999.00
TAW	HD-900	9" CRT Front PTV	Variable	(2000x1500)	No	0	RGBHV 3,4,5 wire sync	Now	$43,999.00
Toshiba Cinema Series	57HLX82	3-chip LCoS Rear Projection	57W" (16:9)	1080p (1920x1080)	Yes IDSC Digital	2	(2) HD Component, DVI-HDTV with HDCP	Now	$8,999.99

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Tape	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Toshiba Cinema Series	53HX71	7" CRT Rear PTV	53" (4:3)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$2,299.99
Toshiba Cinema Series	65HDX82	7" CRT Rear PTV	65W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component Video Inputs	Now	$3,499.99
Toshiba Cinema Series	57HDX82	7" CRT Rear PTV	57W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component Video Inputs	Now	$2,999.99
Toshiba Cinema Series	50HDX82	7" CRT Rear PTV	50W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component Video Inputs	Now	$2,699.99
Toshiba Cinema Series	42HDX82	7" CRT Rear PTV	42W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component Video Inputs	Now	$2,199.99
Toshiba Cinema Series	34HDX82	Flat CRT Direct View	34W" (16:9)	480p 1080i	Yes IDSC II	2	(2) HD Component Video Inputs	Now	$2,699.99
Toshiba Cinema Series	36HFX72	Flat CRT Direct View	36" (4:3)	480p 1080i	Yes IDSC II	2	(2) HD Component Video Inputs	Now	$2,199.99
Toshiba Cinema Series	32HFX72	Flat CRT Direct View	32" (4:3)	480p 1080i	Yes IDSC II	2	(2) HD Component Video Inputs	Now	$1,599.99
Toshiba	65H82	7-inch CRT Rear PTV	65W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$3,299.99
Toshiba	57H82	7-inch CRT Rear PTV	57W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$2,799.99
Toshiba	50H82	7-inch CRT Rear PTV	50" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$2,499.99
Toshiba	42H82	7-inch CRT Rear PTV	42W" (16:9)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$1,999.99
Toshiba	50H72	7-inch CRT Rear PTV	50" (4:3)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$2,099.99
Toshiba	43H72	7-inch CRT Rear PTV	43" (4:3)	540p 1080i	Yes IDSC Pro with 3:2 pulldown	2	(2) HD Component	Now	$1,899.99
Toshiba	34HD82	Direct View CRT	34W" (16:9)	480p 1080i	Yes IDSC II	2	(2) HD Component	Now	$2,499.99
Toshiba	36HF72	Direct View CRT	36" (4:3)	480p 1080i	Yes IDSC II	2	(2) HD Component	Now	$2,099.99
Toshiba	32HF72	Direct View CRT	32" (4:3)	480p 1080i	Yes IDSC II	2	(2) HD Component	Now	$1,499.99
Toshiba	TDPMT8U	DLP HD-2 Front PTV	Variable	720p (1,280x720)	Yes IDSC Digital	0	HD Component, DVI	Now	$9,999.99
Toshiba	TLP MT7	3-panel LCD Front PTV	Variable	720p, 1080i (1280x720)	Yes T-FORC II scaler	0	RGB via 15-pin D-sub, HD Component	Now	$5,999.99
Vidikron	Amica	1 Chip DLP Projection TV	Variable	1280 x720	Yes with 3:2 pull-down	0	RGB or HD Component via BNC	Q2-03	TBA
Vidikron	VisoinOne	LCD Projector w/ 1.8" Active Matrix TFT Panels x 3	Variable	1600 x 1200	Yes with 3:2 pull-down	0	HD RGB & HD Component via 15-pin D-Sub, DVI	Q2-03	TBA
ViewSonic	PJ250	DLP	Variable	480i, 480p, 720p, 1080i	Scaler	External box	HD component, DVD component, DVU	Now	2,499.00
ViewSonic	PJ350	DLP	Variable	480i, 480p, 720p, 1080i	Scaler	External box	HD component, DVD component, DVU	Now	2,699.00
ViewSonic	PJ500	3 -Panel LCD Front PTV	Variable	480i, 480p, 720p 1080i	Scaler	0	HD Component, Composite, RGB via 15-pin D-sub	Now	$1,399.00
ViewSonic	PJ501	3 -Panel LCD Front PTV	Variable	480i, 480p, 720p 1080i	Scaler	0	HD Component, Composite, RGB via 15-pin D-sub	Now	$1,599.00
ViewSonic	PJ550	3 -Panel LCD Front PTV	Variable	480i, 480p, 720p 1080i	Scaler	0	HD Component, Composite, RGB via 15-pin D-sub	Now	$1,995.00
ViewSonic	PJ551	3 -Panel LCD Front PTV	Variable	480i, 480p, 720p, 1080i	Scaler	0	HD Component, Composite, RGB via 15-pin D-sub	Now	$2,199.00
ViewSonic	N3600w	3-panel LCOS Rear PTV	36W" diagonal (16:9)	480i, 480p, 720p, 1080i	Scaler	0	HD Component Video DVI-HDTV, VGA, S-Video, Composite	Now	$4,995.00

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HDTV MONITORS (33.75kHz @ 60 Hz or greater scanning frequency, External DTV=Decoder Required) as of 3/3/03

Brand	Model	Display Type	Screen Size	Nativee Display Resolution	On-Board Doubling/Scaling?	NTSC Tuners	Interfacer for DTV Tuner/ Decoder	Available	Suggested Retail Price
Yamaha	DPX-1000	1-chip DLP Front PTV (HD-2 chip)	Variable	720p (1,280x720)	Yes Faroudja DCDi with 3:2 pull down	0	HD Component. RGBHV 15-pin, RGBHV via BNC, DVI-HDTV w/HDCP	Now	$12,000.00
Yamaha	LPX-500	3-panel LCD front projector	Variable (16:9)	720p (1,280x720p)	Yes Faroudja DCDi with 3:2 pull down	0	HD Component; RGB via 15-pin D-sub, DVI-HDTV	Now	$5,500.00
Zenith	D52WLCD	LCD HDTV Monitor Rear PTV	52W" (16:9)	720p	3:2 Pulldown scaler	2	Hi-Res (HD) Component, RGB via 15-pin D-sub, aspect ratio correction, high contrast screen, 118Lbs	Now	$3,499.00
Zenith	D60WLCD	LCD HDTV Monitor Rear PTV	60W" (16:9)	720p	3:2 Pulldown/scaler	2	(1) Hi-Res (HD) Component, (1) RGB via 15-pin D-sub, aspect ratio correction, high contrast screen, 132Lbs	Now	$4,499.00
Zenith	C36V22	Direct View CRT	36" (4:3)	1080i, 480p	yes	1	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$1,599.00
Zenith	C36V28	Direct View CRT	36" (4:3)	1080i, 480p, 600p, SVGA	yes	2	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$1,799.00
Zenith	C32V22	Direct View CRT	32" (4:3)	1080i, 480p	yes	1	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$1,099.00
Zenith	C32V28	Direct View CRT	32" (4:3)	1080i, 480p, 600p, SVGA	yes	2	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$1,299.00
Zenith	C27V22	Direct View CRT	27" (4:3)	1080i, 480p	yes	1	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$699.00
Zenith	C27V28	Direct View CRT	27" (4:3)	1080i, 480p, 600p, SVGA	yes	2	(1) Hi-Res (HD) Component Video, (1) RGB via 15-pin	Now	$899.00
Zenith	C32V36	Direct View CRT	32" 4:3	1080i, 480p	yes	1	(2) Hi-Res (HD) Component Video	3Q	$999.00
Zenith	C27V36	Direct View CRT	27" 4:3	1080i, 480p	yes	1	(2) Hi-Res (HD) Component Video	3Q	$699.00
Zenith	R56W36	7" CRT REAR PTV	56" 16:9	1080i, 540p, 16 sensor auto digital convergence, selectable svm, 3D/YC comb filter	3:2 Pulldown/scaler	2	(2) Hi-Res (HD) Component Video, RGB via 15-pin	1Q	$2,199.00
Zenith	R49W36	7" CRT REAR PTV	49" 16:9	1080i, 540p, 16 sensor auto digital convergence, selectable svm, 3D/YC comb filter	3:2 Pulldown/scaler	2	(2) Hi-Res (HD) Component Video, RGB via 15-pin	1Q	$1,799.00
Zenith	R44W36	7" CRT REAR PTV	44" 16:9	1080i, 540p, 16 sensor auto digital convergence, selectable svm, 3D/YC comb filter	3:2 Pulldown/scaler	2	(2) Hi-Res (HD) Component Video, RGB via 15-pin	3Q	$1,399.00

DTV/DVD COMBO MONITORS as of 3/3/03

Brand	Model	Display Type	Screen Size	Scan Formats Natively Displayed	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
RCA Scenium	D40W135D	7" CRT Rear PTV with integrated DVD Player	40W" (16:9)	480p, 1080i,	Yes with 3:2 pull down	2	DVI-HDTV, (2) HD Component Video	Now	$2,399

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DTV/DVD COMBO MONITORS as of 3/3/03

Brand	Model	Display Type	Screen Size	Scan Formats Natively Displayed	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/Decoder	Available	Suggested Retail Price
RCA Scenium	D52W135D	7" CRT Rear PTV with integrated DVD Player	52W" (16:9)	480p, 1080i,	Yes with 3:2 pull down	2	DVI-HDTV, (2) HD Component Video	Now	$2,699
RCA Scenium	D61W135D	7" CRT Rear PTV with integrated DVD Player	61W" (16:9)	480p, 1080i,	Yes with 3:2 pull down	2	DVI-HDTV, (2) HD Component Video	Now	$3,299
RCA Scenium	D34W135D	Multi-scan Direct View with integrated DVD Player	TruFLAT 34W"(16:9)	480p, 1080i,	Yes with 3:2 pull down	2	DVI-HDTV,(2) HD Component Video	Now	$2,599

DTV VIDEO RECORDERS as of 3/3/03

Brand	Model	Recorder Type	Built In MPEG 2 Decoding	Interface For HDTV Signals	D-Theater encryption Capable	S-VHS Capable	Analog VHS Capable	Available	Suggested Retail Price
JVC	HM-DH30000	D-VHS/S-VHS/ VHS VCR	Yes	HD Component Video, IEEE-1394 FireWire/iLINK with DTCP	Yes	Yes	Yes	Now	$1,299.95
Marantz	MV8300	D-VHS/S-VHS/ VHS VCR	Yes	HD Component Video, IEEE-1394 FireWire/iLINK	Yes	Yes	Yes	Q1-03	$1,599.00
Mitsubishi	HS-HD2000U	D-VHS/S-VHS/ VHS VCR	No	IEEE-1394 FireWire/iLINK with DTCP	No	Yes	Yes	Now	$749.00
Mitsubishi	HS-HD1100U	D-VHS/VHS VCR	No	IEEE-1394 FireWire/iLINK with DTCP	No	No	Yes	Now	$549.00

SET-TOP HDTV PVRs as of 3/3/03

Brand	Model	Recorder Type	Built In MPEG 2 Decoding	Interface For HDTV Signals	Hard Drive Capacity	Subscription Sevice Required	Dolby Digital Decorder	Available	Suggested Retail Price
EchoStar	DishPVR 921	Dish Network Integrated HD Satellite Receiver/PVR	Yes	DVI-HDTV with HDCP HD Component	TBD	For Satellite Service Only. No additional PVR charge	Yes (2-channel, passes through 5.1)	Q3-03	TBD
JVC	TU-PVR9000DU (HD record-able PVR)	Dish Network Integrated HD Satellite Receiver/PVR	Yes	HD Component, DVI-HDTV with HDCP, IEEE-1394 output	TBD	For Satellite Service Only. No additional PVR charge	Yes (2-channel, passes through 5.1)	Q2-03	TBD
Zenith	HDR230	HDD	yes	DVI with HDCP, calibration port	80-gigabyte	no	yes	2Q	$999.00
Zenith	HD-PVR330	HDD	yes	DVI with HDCP, calibration port	TBD	no	yes	3Q	TBD

ENHANCED DEFINTION TV MONITORS (31.5kHz @ 60Hz and higher scanning frequency) External DTV-Decoder Required as of 3/3/03

Brand	Model	Display Type	Screen Size (aspect ratio)	Native Resolution	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/ Decoder	Available	Price
BenQ	PE7800	DLP Front	Variable (16:9)	576p (1024 x 576)	Yes	0	S-Video, Composite Video, Component (YCbCr), Progressive Compnent (YPbPr) NBC, RGB	Apr-03	TBD
Elite Video Eltevision	PIV-Z1	LCD Front PTV	Variable	720p (964x544)	Yes	0	(2) RGBHV (HD-15)	Now	$2,495.00
Elite Video Eltevision	LP500	DLP Front PTV	Variable	420p (800 x 600)	Scaler	0	VGA, Composite	Now	$5,495.00
Elite Video Eltevision	LS110	DLP Front PTV	Variable	Dual-Mode 848 x 480/ 800 x 600	Scaler	0	RGB, HD Component,	Now	$4,995.00
Elite Video Eltevision	P-1208	LCD Front PTV	Variable	420p (800x600)	Scaler	0	(2) RGBHV (HD-15)	Now	$5,495.00

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DTV PRODUCTS

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ENHANCED DEFINTION TV MONITORS (31.5kHz @ 60Hz and higher scanning frequency) External DTV-Decoder Required as of 3/3/03

Brand	Model	Display Type	Screen Size (aspect ratio)	Native Resolution	On-Board Line Doubling/Scaling?	Number of NTSC Tuners	Interface for DTV Tuner/ Decoder	Available	Price
Epson	PowerLite 30c	3 panel LCD Front PTV	Variable	420p (800x600)	Scaler	0	RGB, HD Component	Now	$1,299.99
InFocus	ScreenPlay SP110	1-chip DLP Front PTV	Variable	480p (848x480)	Yes Sage/Faroudja DCDi deinterlacing	0	HD Component; DVI	Now	$4,999.00
PLUS	HE-3100 "Piano"	1-chip DLP Front Projection	Variable	480p (848 x600)	Yes (Silicon Image)	0	RGBHV via VGA, HD Component, DVI	Now	$2,699.00
PLUS	HE-3200 Avanti	DLP Front PTV	Variable	480p (848x600)	Yes	0	HD Componet, RGB via 15-pin D-sub	Now	$3,299.00
Samsung	TXN2745FP	Direct View	27" (4:3)	480p	Yes, 480p	1	2 ED components (480p/480i)	Now	$699.99
Samsung	TXN3245FP	Direct View	32" (4:3)	480p	Yes, 480p	1	2 ED components (480p/480i)	Now	$899.99
SharpVision	XV-Z90U	Dual-Mode .55-inch DLP Front PTV	Variable	480p (800x600)	Yes	0	HD Component, DVI-I with HDCP	Oct-02	$3,799.95
Sharp	Theago DT-200	Dual-Mode .55-inch DLP Front PTV	Variable	480p (800x600)	Yes	0	HD Component, DVI-I with HDCP	Oct-02	$3,499.95
Sim2	Grand Cinema HT200	1-chip DLP	Variable	480p (800x600)800 lumens	Yes	0	HD Component 1 RGBHV, plus 1 RGBS via RCA 15-pin D-sub	Now	$5,995.00
Sony	VP-HS2 "Cineza"	LCD Front PTV	Variable	480p (854 x 480)	No	0	HD Component, RGBHV	Now	$1,800.00
Studio Experience	Matinee 1HD	3 panel LCD Front PTV	Variable (16:9)	480p-964x544	Yes, Internal Scaling	0	HD Component	Now	$2,299.00
Studio Experience	Cinema 12SF	Dual Mode Single DMD/ Front PTV	Variable	480p 848x480	Faroudja DCDi	0	DVI and HD component	Now	$4,999.00
Studio Experience	Cinema 17SF	Single DMD/ Front PTV	Variable	480p-1024x768	Silicon Image Sil504	0	DVI and HD component	Now	$4,599.00
Toshiba	TDPMT5U	DLP Front PTV	Variable	480p	Yes	0	HD Component Video	Now	$5,799.99
Vidikron	Rubino	1 chip DLP Projection TV	Variable	480p (848x480)	Yes with 3:2 pulldown	0	RGB or HD Component via BNC	Q2-03	TBA

DIGITAL TV PC TUNER CARDS as of 3/3/03

Brand	Model	PC Interface	Broadcast TV Signals Received	Scan Conversion (Input>Display)	ATSC Video Hard Drive Recording?	HDTV Video Output	Output To NTSC TV	Dolby Digital Decoding?	Available	Suggested Retail Price
accessDTV	Digital Media Receiver 2.4	PCI	ATSC/NTSC	All Formats	Yes (with live pause), optional program listing service	Yes (RGB via 15-pin D-Sub; YPbPr via 15-pin D-sub)	No	2-channel, 5.1 channel pass through	Now	$379.95 system, plus optional subscription fee
Hauppauge	Win-TV-HD 698	PCI	ATSC	All Formats>20 selectable display formats	Yes (omits live pause)	Yes (RGB via 15-pin D-Sub; YPbPr via 15-pin D-sub and RCA).	No	2-channel, 5.1 channel pass through	Now	$299
Hauppauge	Win-TV-D 697	PCI	ATSC/NTSC	All Formats>480i	Yes (omits live pause)	No	Yes	Yes	Now	$199
HiPix (Global Telemann)	DTV-200	PCI	ATSC/NTSC	All Formats>480i, 480p, 720p, 1080i,	Yes (with live pause), ATSC only	Yes (RGBHV via 15-pin D-Sub)	Yes	2-channel, 5.1 channel pass through	Now	$399
Macro Image Technology (MIT)	MyHD MDP-100	PCI	ATSC/NTSC	All Formats>480i, 480p, 768p, 720p, 1080i	Yes	Yes (RGBHV or HD Component via 15-pin D-sub)	Yes	2-channel, 5.1 channel pass through	Now	$349
PC-DTV	Digital Stream HiDTV Pro Standard Edition	PCI	ATSC/NTSC	All Formats>480i, 480p, 768p, 720p, 1080i	Yes	RGB (YPbPr) via 15-pin D-sub	No	pass through	Now	$369

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DIGITAL TV PC TUNER CARDS as of 3/3/03

Brand	Model	PC Interface	Broadcast TV Signals Received	Scan Conversion (Input>Display)	ATSC Video Hard Drive Recording?	HDTV Video Output	Output To NTSC TV	Dolby Digital Decoding?	Available	Suggested Retail Price
PC-DTV	Digital Stream HiDTV Pro Premium Edition	PCI	ATSC/NTSC	All Formats>480i, 480p, 768p, 720p, 1080i	Yes	RGB (YPbPr) via 15-pin D-sub	No	pass through	Now	$399
Sasem	On Air DTV Pro	PCI	ATSC/NTSC	All Formats> 1080i, 768p, 720p, 480p, 480i	No, outputs signals in D-VHS for use with D-VHS decks	Yes (RGBHV and HD Component via 15-pin D-sub)	Yes	2-channel, 5.1 channel pass through	TBA	TBA

CABLE AND SATELLITE CARRIAGE as of 2/28/03 Courtesy of Digital Tech Consulting

The table below lists the DTV stations with cable and/or satellite carriage of their digital signal. As illustrated below, Time-Warner cable systems represent the majority of activity. There are more than 100 stations having their digital signals carried on cable or satellite systems.

DTV Station	Market	Cable/Satellite Carrier
WCBS (CBS)	New York	Time-Warner, Dish Network
WLNY (Independent)	New York	Time-Warner
WNET (PBS)	New York	Time-Warner, Comcast
WNYW (Fox)	New York	Time-Warner
WNBC (NBC)	New York	Time-Warner
WABC (ABC)	New York	Time-Warner
KCBS (CBS)	Los Angeles	Dish Network
KVMD (Independent)	Los Angeles	Time-Warner, Adelphia, DirecTV, Dish Network
WBBM (CBS)	Chicago	AT&T Broadband
KYW (CBS)	Philadelphia	Time-Warner
WCAU (NBC)	Philadelphia	Comcast
WHYY (PBS)	Philadelphia	Time-Warner, Comcast
WPVI (ABC)	Philadelphia	Comcast
WLVT (PBS)	Allentown	Service Electric Cable, Blue Ridge Cable, RCN, Comcast and Kutztown Municipal Cable
WBZ (CBS)	Boston	Bell Express View
WUTF (Telefutura)	Boston	Boston Cablevision
WFAA (ABC)	Dallas/Fort Worth	Charter Cable
WETA (PBS)	Washington, D.C.	Comcast
WJLA (ABC)	Washington, D.C.	Comcast
WRC (NBC)	Washington, D.C.	Comcast, Cox
WUSA (CBS)	Washington, D.C.	Comcast
WSB (ABC)	Atlanta	Newnan Utility
WDIV (NBC)	Detroit	DirecTV
WJBK (Fox)	Detroit	Time-Warner
WTVS (PBS)	Detroit	Time-Warner, Rogers Cable, Comcast and Star Choice
WWJ (CBS)	Detroit	Time-Warner
WXYZ (ABC)	Detroit	Time-Warner
KHOU (CBS)	Houston	Time-Warner
KPRC (NBC)	Houston	Time-Warner, DirecTV
KRIV (FOX)	Houston	Time-Warner
KTRK (ABC)	Houston	Time-Warner
KUHT (PBS)	Houston	Time-Warner
KTCI (PBS)	Minneapolis/ St. Paul	Time-Warner
WCCO (CBS)	Minnesota/St. Paul	Time-Warner
KNXV (ABC)	Phoenix	Cox
KPNX (NBC)	Phoenix	American Cable, US West
KTVW (UNV)	Phoenix	Cable America, Quest Cable
WJW (FOX)	Cleveland	Time-Warner
WFTS (ABC)	Tampa/ St Petersburg	Time-Warner
WESH (NBC)	Orlando	Time-Warner
WFTV (ABC)	Orlando	Time-Warner
WKCF (WB)	Orlando	Time-Warner
WKMG (CBS)	Orlando	Time-Warner
WOFL (Fox)	Orlando	Time-Warner
WMAR (ABC)	Baltimore	Comcast
WRTV ABC)	Indianapolis	Time-Warner
KFBM (CBS)	San Diego	Time-Warner, Cox
WCNC (NBC)	Charlotte	Time-Warner
WTVI (PBS)	Charlotte	Time-Warner
WSOC (ABC)	Charlotte	Time-Warner
WUNG (PBS)	Charlotte	Time-Warner
WNCN (NBC)	Raleigh	Time-Warner
WRAL (CBS)	Raleigh	Time-Warner
WRAZ (Fox)	Raleigh	Time-Warner
WRPX (PAX)	Raleigh	Time-Warner
WTVD (ABC)	Raleigh	Time-Warner
WUNP (PBS)	Raleigh	Time-Warner
WUNU (PBS)	Raleigh	Time-Warner
WUNC (PBS)	Chapel Hill	Time-Warner
KMBC (ABC)	Kansas City	Time-Warner
KCPT (PBS)	Kansas City	Time-Warner
WCPO (ABC)	Cincinnati	Time-Warner
WKRC (CBS)	Cincinnati	Time-Warner
WXIX (Fox)	Cincinnati	Time-Warner
WBNS (CBS)	Columbus, OH	Time-Warner
WCMH (NBC)	Columbus, OH	Time-Warner
WWHO (UPN)	Columbus, OH	Time-Warner
WUNE (PBS)	Greenville-Spartanburg	Time-Warner
KENS (CBS)	San Antonio, TX	Time-Warner
WOAI (ABC)	San Antonio, TX	Time-Warner
WHDT	West Palm Beach- Ft. Pierce	Cox, Adelphia
WPXV (PAX)	Norfolk-Portsmouth-Newport News	Cox
WUNL (PBS)	Greensboro-High Point-Winston Salem	Time-Warner
WHP (CBS)	Harrisburg-Lancaster, Lebanon	Comcast
KLAS (CBS)	Las Vegas	Cox
KLVX (PBS)	Las Vegas	Cox
KTNV (ABC)	Las Vegas	Cox
WBAY (ABC)	Green Bay-Appleton, WI	Time-Warner
WFRV (CBS)	Green Bay-Appleton, WI	Time-Warner
KITV (ABC)	Honolulu	Time-Warner
KYTV (NBC)	Springfield, MO	MediaCom, Cox
KSLA (CBS)	Shreveport	Time-Warner
WCBB (PBS)	Lewiston, ME	Time-Warner
WOLO (ABC)	Columbia, SC	Time-Warner
WRLK (PBS)	Columbia, SC	Time-Warner
WACH (FOX)	Columbia, SC	Time-Warner
WCYB (NBC)	Bristol, TN	Charter Cable, Comcast
KWTX (CBS)	Waco, TX	Time-Warner
KCEN (NBC)	Waco, TX	Time-Warner
KCEN (NBC)	Waco, TX	Time-Warner
WEHT (ABC)	Evansville, IN	Sigecom
WCTI (ABC & UPN)	New Bern, NC	Cox, Time-Warner
WUND (PBS)	New Bern, NC	Time-Warner
WUNK (PBS)	New Bern, NC	Time-Warner
WMEB (PBS)	Bangor, ME	Time-Warner
WNEM (CBS)	Presque Isle, ME	Time-Warner
WISN (ABC)	Milwaukee, WI	Time-Warner
KMAU (ABC)	Maui, HI	Time-Warner, Oceana Cable
KCTV (CBS)	Kansas City, MO	Time-Warner
WSMV (NBC)	Nashville	Comcast
WZTV (FOX)	Nashville	Dish Network, DirecTV, Intermedia Cable
WUXP (UPN)	Nashville	Dish Network, DirecTV, Intermedia Cable
WNAB (WBN)	Nashville	Dish Network, DirecTV, Intermedia Cable
KETV (ABC)	Omaha, NE	Cox
KERO (ABC)	Bakersfield, CA	Time-Warner, Country Cable, Cox
WWAC (Independent)	Atlantic City, NJ	Comcast
WSYT (Fox)	Syracuse, NY	Time-Warner
WSTM (NBC)	Syracuse, NY	Time-Warner
KFTH (HSN)	Alvin/ Houston, TX	Time-Warner
WOTV (ABC)	Battle Creek/ Kalamazoo, MI	Charter
WDTN (ABC)	Dayton/ Springfield, OH	Time-Warner

HDTV PROGRAMMING as of 2/28/03 Courtesy of Digital Tech Consulting

HDTV Program Provider	Delivery Platform	Type of Programming	Hours Per Week	Time of Day
ABC	Terrestrial, satellite and cable	Select prime-time comedies and dramas; select sporting and special events	14	Prime-time
CBS	Terrestrial, satellite and cable	18 prime-time dramas and comedies and one afternoon soap opera; select sporting and special events	27	Prime-time and daytime
Discovery	Cable and satellite (Dish Network)	Fiction and non-fiction programs	168	24 hours
HBO	Cable and satellite (DirecTV and Dish Network)	Movies and original programming	168	24 hours
HDNet	Satellite (DirecTV)	Sports including NHL and MLB games, movies and concerts	112	24 hours
DirecTV	Satellite	HDTV pay-per-view movie channel	168	24 hours
Dish Network	Satellite	Select local channels and pay-per-view movie channel.	NA	Varied times
NBC	Terrestrial, satellite and cable	10 prime-time programs and select sporting and special events	15	Prime-time; late night
PBS	Terrestrial, cable and satellite	"Great Performances" programs and nature documentaries	56	Nightly 7 p.m. to 3 a.m.
Showtime	Cable and satellite (DirecTV and EchoStar)	Original programming and movies	168	24 hours
WB	Terrestrial and satellite	Select prime-time dramas and comedies	7	Prime-time

* For regularly scheduled programming; doesn't include special-event programming.
Note: ESPN HD Channel scheduled to launch March 31, 2003. As of February 28, 2003, no carriage announcements have been made.