

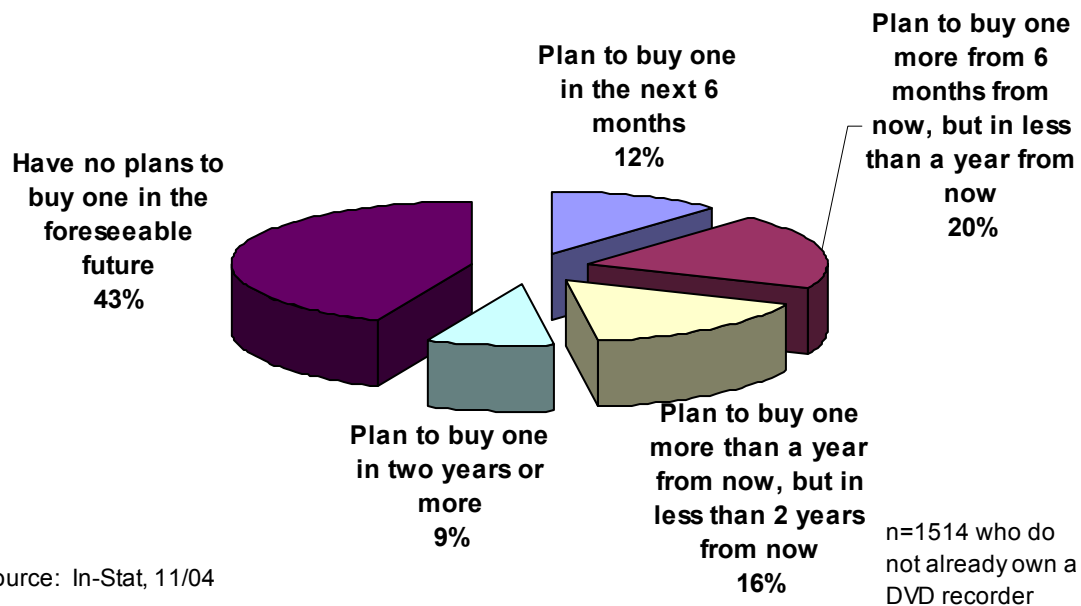
DVD Recorders

As shipments of DVD players have slowed down, DVD recorders are poised for growth. In-Stat expects DVD recorder unit shipments will reach over one million in the US in 2004. By 2008, annual DVD recorder shipments will increase to 20 million as the price difference between a DVD recorder and a DVD player declines.

The DVD recorder market has not taken off as quickly as manufacturers had hoped. DVD recorder prices have been a factor in slower sales, but are becoming less of an issue. DVD recorders were offered for prices as low as \$129.99 on Black Friday, which is about \$20 less than the previous low. We expect a number of DVD recorders to be available for \$99 during the holidays in 2005. Component suppliers are certainly gearing up for the downward price spiral.

In November 2004, In-Stat conducted a survey of our Technology Adoption Panel with regard to their interest in DVD recorders and its features. We found that lower prices will not be enough to convince all consumers to buy DVD recorders. Less than 50% of respondents plan to buy a DVD recorder in the next two years. These respondents are more technology savvy than the general population. Over 90% of the respondents own a DVD player and 66% have a broadband connection.

Which of the Following Best Describes Your Plans to Buy a DVD Recorder in the Future?

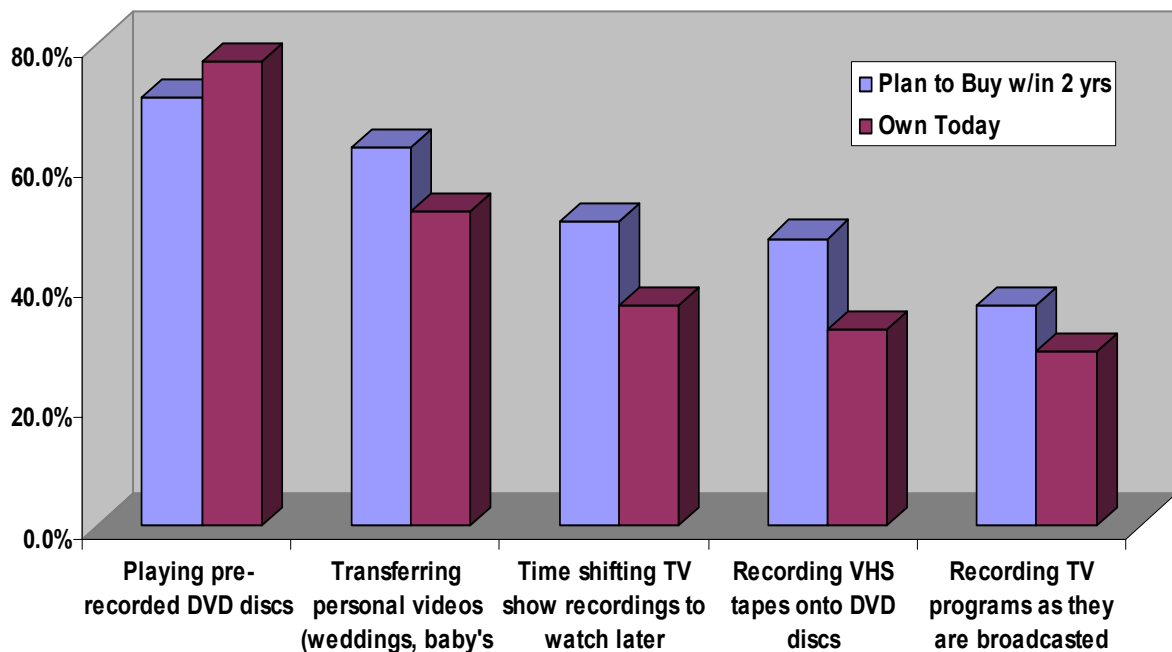


Source: In-Stat, 11/04

DVD recorder manufacturers and retailers have their work cut out for them. Currently, DVD recorders sell despite poor retail displays. In many retail locations, DVD recorders are displayed on rows of shelves. They are not connected to a TV, so there is no way to demonstrate to the prospective buyer the benefits of DVD recorder features such as Electronic Program Guides.

Based on our survey, the most important feature for a DVD recorder is still to play prerecorded DVD discs. Transferring personal videos rated second in our survey. DVD recorder manufacturers can improve the personal video transfer process by offering simple and easy to use personal video editing applications, such as YesDVD. The problem then becomes demonstrating these additional features at retail to help the consumer understand why they may be interested in one DVD recorder over another.

Interest Level in the Following Capabilities of a DVD Recorder



Source: In-Stat,
11/04

n=724 who plan to buy in next 2 yrs
n=132 who own a DVD recorder

Time shifting TV with a DVD recorder generated the third highest interest. About half of the respondents who own a DVD recorder or plan to buy one in the next two years were extremely or very interested in a DVD recorder with a hard drive. Over 75% want to spend less than \$100 extra for that option.

However, we do not expect DVD recorders with hard drives to be as popular in the US as they have been in Japan, where over 75% of DVD recorders shipped in 2004 have hard drives. The greatest difference between the two markets is that cable and satellite

providers in the US are offering their set top receivers with hard drives at subsidized prices. Why buy a more expensive DVD recorder with a hard drive when a cable set top box with a Digital Video Recorder (DVR) can be rented from the cable operator for \$10 a month? Or a satellite receiver with a DVR purchased for \$49 after rebates? Although owning a DVR does not preclude interest in DVD recorders. In our survey, those with DVRs were more likely to buy a DVD recorder within the next 12 months.

On the other hand, VCR/DVD recorder combination products have proven popular in the US. Consumers easily understand the concept of combining VCR and DVD recorder functions in one box. VCR/DVD recorders make it easy to copy VHS tapes, though they are not supposed to enable the copying of those that are copy protected. Consumers can easily find their way around this restriction. We have heard of sales people in the stores handing out lists of web sites that can be consulted for copying instructions.

One future feature that is a big question mark is the addition of digital TV tuners to DVD recorders. By FCC mandate, all DVD recorders shipped after July 1, 2007 must have an ATSC tuner or no tuner at all. In 2007, we expect to see some DVD recorders on the market without tuners and some with tuners. The number of US homes with set top boxes for TV reception keeps climbing, thereby decreasing the number of homes that would need a tuner in their DVD recorder. DVD recorders without tuners will be less expensive and can still be used for personal video storage as well as recording TV programming output via a set top box.

36% of our survey respondents want to be able to record HDTV programs. This is good news for those developing DVD recorders based on blue laser technology that enable recording of HD. These higher capacity DVD recorders are available now in Japan. They are expected to be available at retail in the US for the 2005 holiday season. Though the over-\$1,000 price point will be a deterrent with many waiting for prices to decline.