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DVR-110. DVR-610, & DVR-R100 FAQs

General Questions About the Drives:

1)   What are the maximum write speeds of these drives?
- DVD-/+ R single layer 16X
- DVD-/+ R dual layer 8X
- DVD-RW 6X
- DVD+RW 8X

2)   What type of DVD and CD discs can the drive read?
- DVD-ROM, DVD-Video (single and dual layer), DVD-/+R, DVD-/+RW, DVD-R (dual layer), +R (double layer)
- CD-ROM (Mode 1 & 2), CD-ROM XA, CD-DA (CD-Audio), Video CD, Photo CD (single/multi session), CD-EXTRA, CD-Text, CD-R, CD-RW

3)   Is the drive WHQL (Microsoft® Windows® Hardware Qualification Lab) qualified?
- Yes, the drive has been qualified by Microsoft to work with Windows (98SE, 2K, ME, XP). The drive is Plug-N-Play compliant and does not require specific drivers to work in these operating systems.

4)   Is the drive supported by non-Microsoft operating systems (Unix, Linux, Apple, etc)?
- The drive was officially designed to work with current Microsoft Windows operating systems; however, we are aware that the drive has been successfully used on Unix® and Apple® operating systems with third-party software.
- The drive is designed to be Plug-n-Play compliant and does not require a specific driver to be installed; however, a third-party application may be required to record to the drive. Pioneer does no provide technical support for third-party applications. Please contact the application manufacturer for support.

5)   Can the drive be installed Vertically and Horizontally?
- Yes, the drive can be installed vertically or horizontally.

6)   What is the interface of the drive?
- ATAPI (ATA-5 & SFF-8090 V5)
- IDE DATA Transfer of PIO Mode 4, Multi Word DMA Mode 2, Ultra DMA Mode 2, and Ultra DMA Mode 4 (Ultra DMA 66)

7)   How much does the drive weigh?
- 2.2 pounds (1.0 kg)

8) **Can the drive set/record a region code on a DVD-/+R DVD-Video disc?**
   - No, DVD recordable drives, like the R110 cannot set region codes on DVD recordable videodiscs.

9) **Can the drive be used as a replacement unit in a duplicator?**
   - Pioneer highly recommends that you contact your duplicator manufacturers to see if they have qualified the Pioneer Recordable drive for that specific duplicator, before proceeding.

10) **What type of ribbon cable should be use to connect the drive to a PC?**
    - There are two types of ribbon cables normally available: a standard 40 conductor cable, and a UDMA 80 conductor cable. Pioneer recommends the UDMA 80 conductor type of cable for proper performance of the drive.

11) **Is it ok to clean the drive with a cleaning disc?**
    - Pioneer does not recommend the use of cleaning disc products for DVD drives. These discs were originally designed for CD drives and could damage the DVD drive. If the unit looks very dirty/dusty and is not under warranty, you might try a short blast of Electronics-grade (sterile, filtered, moisture-free) canned air aimed at the center of the drive to see if that will resolve the issue, otherwise it would be best to have the drive serviced.

12) **Does the drive support credit card-shaped or unique-shaped discs?**
    - No, the drive supports circular 120MM and 80MM disc types only.
    - An 80MM disc cannot be used when the drive is vertically mounted.

General Questions About DVD Recording Technology:

13) **How can I get the full 4.7 GB of data on a disc?**
    - The total usable disc space available on 4.7GB DVD-R/RW media is approximately 4.37 Gigabytes. The apparent discrepancy is because DVD formats use one billion bytes (1000 x 1000 x 1000) to represent a gigabyte, whereas traditional data storage calculations use a 1024 x 1024 x 1024 value. This amounts to an apparent 7% difference in the total number of bytes when DVD capacities are compared with the traditional calculation; in other words, 4.37 GB = 4.7 billion byte.

14) **Can stickers or labels be used on DVD recordable discs?**
    - Labels can cause the disc to become unbalanced and are not recommended. This imbalance may damage the drive. Pioneer recommends the use of printable DVD-R/RW media.

15) **How many times can a DVD-RW disc be written/re-written to?**

- The media is rated for 1,000 rewrites.

16) How much recording time is there on a recordable single-layer DVD disc?

- The bit-rate affects the production length. Encoding content at 10 Mbps provides approximately 60 minutes on 4.7 GB DVD-R/RW media. Encoding at 5 Mbps will provide about 2 hours on 4.7 GB DVD-R/RW media.

17) What tools can I use to test/verify a Pioneer drive?

- *Nero CD/DVD Speed* is one of several free applications on the market that is recommended to evaluate the drive's performance. Please follow the link to the latest version of CD/DVD Speed, manual and user interface: http://www.cdspeed2000.com

18) What is a region code?

- Region codes were created as a request by Hollywood movie studios in an effort to allow them controlled distribution of Hollywood movies.

- These region codes cover regional areas around the world.

- North America, including the US and Canada are known as region 1. For more information on region codes, please visit the DVD Forum website at http://www.dvdforum.org

19) Is there a copy protection scheme on DVD Recordable media to protect from copying?

- For the most part, NO. DVD-/+R does not contain a copy protection scheme. However, DVD-RW includes the CPRM scheme. This is know as Content Protection for Recordable Media, which is a mechanism for controlling the copying, moving and deletion of digital media. Please visit the DVD Forum website at http://www.dvdforum.org for more information on CPRM.

- DVD+RW uses the VCPS Scheme. This is the Video Content Protection Scheme for +RW discs. Please visit the +RW Alliance website at http://www.dvdrw.com for more information on VCPS.

20) What is Firmware?

Firmware is the internal programming of the drive, which allows it to recognize various types of media and perform the correct write strategy for the particular type of media that is in the drive.

To check the firmware level for drives and other devices installed with your computer, download the free Pioneer application, **Device data & firmware level detector**, from the Pioneer website: www.pioneerelectronics.com