PRODUCT INFORMATION BULLETIN **Document # 273801**

DVD ROM – Regional Play Control (RPC)

Overview

To play a *region-coded* DVD videodisc through a DVD-ROM drive requires either a software or hardware MPEG-2 decoder. Through a handshaking process between the drive and the decoder, region codes are recognized and stored. If the disc's Region Play Code and the drive's Code match, playback may begin. However, if the codes are different, the disc fails to play. Some DVD-ROM drives provide a jumper setting called the Regional Play Control (RPC) to change a Region Play Code on a drive thus allowing a DVD videodisc to play. This bulletin reviews RPC Phase Modes for Pioneer DVD-ROM (Atapi) drives built prior to model DVD-114 and DVD-104S.

Note: For the models DVD-114, DVD-104S, DVD-113 and DVD-103S, download the utility labeled RPC2SET.EXE from the Pioneer New Media Technologies website. The file is exclusively designed for these Atapi models.

Note: Once the jumper has been removed, the drive remains in RPC Phase Mode 2. Replacing the jumper fails to switch the drive back to RPC Phase Mode 1. All Pioneer DVD drives manufactured after January 1, 2000 will be RPC Phase Mode 2 only.

Background

Manufacturers cooperated with the Hollywood studios to provide a way to guard against pirated (illegally copied) discs being played back on DVD devices. Region Codes protect movies distributed on DVD discs.

Region Playback Codes segment the globe into 6 distinct areas (listed below).

Region Code 1:	United States, Canada, Puerto Rico, Bermuda, the Virgin Islands and some islands in the Pacific
Region Code 2:	Japan, Western Europe (including Poland, Romania, Bulgaria and the Balkans), South Africa, Turkey and the Middle East (including Iran and Egypt)
Region Code 3:	Southeast Asia (including Indonesia, South Korea, Hong Kong and Macao)
Region Code 4:	Australia, New Zealand, South America, most of Central America, Papua New Guinea and most of the South Pacific
Region Code 5:	Most of Africa, Russia (and former Russian states), Mongolia, Afghanistan, Pakistan, India, Bangladesh, Nepal, Bhutan and North Korea
Region Code 6:	China and Tibet
Region Code ALL	Global access

Note: Region Playback Codes on a Pioneer DVD-ROM drive may be changed up to five (5) times. However, the fifth setting becomes PERMANENT.

- RPC Phase Mode 1 - The DVD Video decoder stores the region code key of the DVD system
- RPC Phase Mode 2 - The DVD-ROM drive stores the region code key of the DVD system

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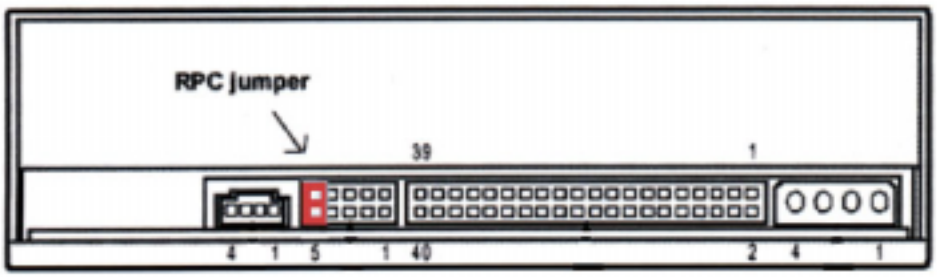
Note: RPC is an acronym for Regional Play Control. RPC does NOT represent the industry-recognized Region Playback Codes.

Explanation

Pioneer DVD-ROM drives have a jumper position labeled RPC Mode. There are two modes, Phase 1 and Phase 2. RPC Phase Mode 1 is shown (*jumpered*) in the graphic below.



The RPC mode jumper must be in place before the unit is powered ON. Use the RPC Phase Mode 1 for standard operation. To play a DVD videodisc, remove the jumper to select RPC Phase Mode 2. Once the jumper is removed, replacing it does not return the drive to RPC Phase Mode 1. Drives in RPC Phase Mode 2 accept all DVD Media types. Additional information is provided below regarding RPC modes.

Note: Region Code 1 and RPC Phase Mode 1 have different values and are NOT interchangeable.

RPC PHASE MODE 1

RPC Phase Mode 1 is for DVD-ROM media that disregard region code settings.

For Software DVD Video Playback:

The RPC function disallows playback unless the region code on the disc matches the region setting of the DVD device. When a mismatch occurs, the system returns a regional error message. The region code setting is permanent after the initial setting.

For Hardware DVD Video Playback:

The DVD decoder card controls the region code selection rather than the DVD-ROM drive. The card's region code may be re-set up to five (5) times but remains locked on the fifth setting.

RPC PHASE MODE 2

RPC Phase Mode 2 is for DVD-ROM drives that implement RPC in the drive firmware or fixed in the drive's hardware. The DVD -ROM controls the region code selection. The region code may be re-set up to five (5) times but remains locked on the fifth setting.