

## **Summary report of Essential Recording Patents for DVD Recorder and Recordable Disc Drive (Japan)**

### **Hitachi, Ltd. Essential DVD Recorder Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
1,920,117	1	DVD-RAM Part 1, 5.2.11.9
1,933,525	1	DVD-RAM Part 1, 2.8.1.3.3, 2.8.1.3.4
2,538,865	1	DVD-RAM Part 1. 2.8.1.3.1 Annex F
2,559,362	1	DVD-RAM Part 1, 2.8.1.3.1, 2.8.1.3.2 Annex F (Ver 1)
2,592,086	1	DVD-RAM Commercially Essential
2,650,940	1, 3	DVD-RAM Part 1, 2.8.1.3.3, 2.8.1.3.4
2,661,518	1	DVD-RAM Commercially Essential
2,677,325	1	DVD-RAM PH2-40, OHX-9, 10 Table F-1
2,702,923	1	DVD-RAM Part1, 2.8.1.3.2 Annex F

2,702,984	1	DVD-RAM PH5-5, 14 5.2.1.1 5.2.11
2,738,304	1	DVD-RAM Part 1, 2.7.1.3, 2.8.1.2.3 Annex E (Ver. 1.0)
2,810,035	1	DVD-RAM Part 1, 5.2.2
2,823,152	1	DVD-RAM Part1, 2.8.1.3.2 Annex F
2,830,792	1	DVD-VR Part 3 3.5.1.2.1 Table 5.3.1-2 5.4
2,856,391	1	DVD-RAM Part 1, 5.2.1.1, 5.2.8, 5.2.9
2,875,365	1	DVD-RAM PH1-11 1.5 Annex V
2,908,012	1	DVD-RAM Part 1, 2.8.1.3.1 Annex F
2,914,975	1	DVD-Video Recording VR5-34 Table 5.5.1.2-1
2,916,121	1	DVD-RAM Part 1, 5.2.1.1
2,941,703	1	DVD-RAM Part1, 2.8.1.3.2 Annex F

3,031,274	1	DVD-RAM Part 1. 2.8.1.3.2 Annex F
3,031,513	2	DVD-RAM Part 1. 5.2.1.1, 5.2.11.1
3,034,268	12	DVD-RAM Part 1, 5.1.3, Table. 5.4-1
3,036,240	1	DVD-RW Annex K, L
3,060,911	6	DVD-Video Recording Commercially Essential
3,134,869	1	DVD-RAM PH2-40 2.8.1.3 PHX-F1 Fig. F-1 DVD-RW PH2-34 2.2.6.5 PHX-K1, 2
3,134,869	1	DVD-RW 2.2.3.8.1 Annex K
3,134,873	1	DVD-RAM PH2-40 2.8.1.3.1 PHX-F1
3,134,873	1	DVD-RW 2.2.3.8.1 Annex K
3,139,497	1	DVD-Video Recording Part 3 4.3.3.3 4.3.3.3.2
3,162,234	2	DVD-RAM Fig.5.2.1.1-2
3,191,376	1	DVD-RAM/-RW/-R PH-51-53, 61
3,204,533	5	DVD-RAM/-RW/-R PH5-5, 6, 9, 15, 17
3,223,881	1	DVD-RAM/-RW/-R PH5-24, 27, 28, 31

3,231,506	3	DVD-R PH-97 Fig.4.2.1-1 Fig.4.2.201 DVD-RW PH4-3 Fig.4.2.1-1
3,242,643	4	DVD-RAM/-RW PH5-20, 22
3,251,553	1	DVD-RAM PH-5, 6, 13, 25 5.2.1.1 Fig5.2.1.1-1 5.2.9
3,296,246	10	DVD-RAM PH2-45 Technical Information P.124, 125
3,323,782	1	DVD-RAM PH2-40 2.8.1.3.1 PHX-F1
3,330,124	1	DVD-RAM PH5-6, 13, 25 Fig.5.2.1.1-1 5.2.9
3,345,932	1	DVD-RAM Technical Information page 77, 124-125
3,356,991	5	DVD-Video Recording VR4-43, 45 4.3.3.3 4.3.3.3.2
3,377,755	1	DVD-RAM Commercially Essential
3,381,628	1	DVD-ROM/-RAM/-RW/-R PH-50, 51 Fig.3.2.1-1 Fig.3.2.4-1
3,381,837	1	DVD-RAM Fig. 5.2.1.1-1
3,384,325	1	DVD-ROM/-RAM/-RW/-R PH-40, 47, 49

2, 546,100	1	DVD-RAM Part 1, 2.8.1.3.1
2, 719, 130	1	DVD-RAM Part1, 2.8.1.3.2 Annex F
3,092,523	1	DVD-RAM Part 1, 2.8.1.3.1 Annex F
3,107,247	1, 10	DVD-RAM Part 1, 5.2.11.9, 5.3.3.1
3,107,297	8	DVD-RAM Part 1, 5.2.1.1
3,164,111	1	DVD-Video Recording Part 3 4.3.3.3 4.3.3.3.2

**Panasonic Corporation**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
1,866,743	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1
1,910,415	1	DVD-RAM Part 1, 5.2.11.9 Fig.5.2.11.9-1 5.3
1,956,987	3	DVD-RAM Part 1, 5.2.1.1 5.2.1.2 5.2.11.2
1,982,083	4	DVD-Video Recording VR5-79 5.5
2,134,290	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1 5.2.2 5.2.8
2,559,009	1	DVD-Video Recording Part 3 1. 1 Commercially Essential
2,559,009	1	DVD-Video Recording Part 3 1. 1 Commercially Essential
2,600,373	1.3	DVD-RAM Part 1, 5.2.1.1-1 5.2.13
2,633,817	8	DVD-RAM Part 1, Fig.5.2.1.1-2 5.1.5

2,650,357	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1 Annex P
2,679,596	1	DVD-RAM Part 1, 2.8.1.3 2.8.1.3.3
2,707,774	1	DVD-RAM Part 1, 2.8.1.3 2.8.1.3.1 Appendix F
2,715,674	2	DVD-RAM Part 1, 5.2.10 5.3
2,720,876	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1
2,720,878	1	Part 1, 5.2.1.1 Fig.5.2.1.1-1 5.2.8, 5.2.9 Annex P
2,773,606	1	DVD-RAM Part 1, Table 5.7.1.5.1-1 BP503-510
2,887,949	1	DVD-RAM Part 1, Annex R Fig. R 1-1
2,924,758	1	DVD-RAM Part 1, 2.8.1.3 Appendix F

3,023,310	1	DVD-RAM Part 1, 5.2.1.1 5.7.1.5.1 Table 5.7.1.5.1-1 (BPO)
3,024,119	1	DVD-RAM Part 1, Table 5.7.1.5.1-1 BP503- 510
3,024,120	7	DVD-RAM Part 1, Table 5.7.1.5.1-1 BP503, 507
3,025,472	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-2
3,025,498	1	DVD-RAM Part 1, 5.2.1.1 5.7.1.5.1 Table 5.7.1.5.1-1 (BPO)
3,026,808	2, 6	DVD-Video Recording Part 3 4.2.3.3.4 Fig. 4.2.3.3.4-2
3,026,809	2, 4	DVD-Video Recording Part 3 4.2.3.3.4 4.8 4.8.4.1
3,026,810	2, 4	DVD-Video Recording Part 3 4.2.3.3.4 Fig. 4.2.3.3.4-2
3,028,517	3, 7	DVD-Video Recording Part 3 4.2.3.3.4 Fig. 4.2.3.3.4-2

3,029,835	7	DVD-RAM Part 1, 5.5.5 Table 5.5.4-1 Annex R R 3.1
3,029,836	7	DVD-RAM Part 1, Table 5.4-1 Table 5.5.4-1 Annex R Part 2 2.1, 2.3.2.4
3,029,837	7	DVD-RAM Part 1, Table 5.4-1 5.6.2
3,031,241	9	DVD-RAM Part 1. 3.4.9
3,031,379	3	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.8 5.2.9 5.2.13 5.2.15
3,031,380	3	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.8 5.2.9 5.2.13 5.2.15
3,031,381	2	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.14
3,031,382	2	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.2 5.2.9 5.2.13

3,035,869	3	DVD-RAM Part 1, 5.5.5 Table 5.5.5-1 5.6.5 Table 5.6.5-1
3,036,638	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 Table 5.7.1.5.1-1 (BPO)
3,036,639	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 Table 5.7.1.5.1-1 (BPO)
3,036,640	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 5.2.2 5.2.9
3,036,641	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 5.2.13
3,039,545	1	DVD-RAM Part 1 3.4.9
3,039,546	5	DVD-RAM Part 1. 3.4.9
3,039,547	7	DVD-RAM Part 1 3.4.9 3.4.16
3,039,548	8	DVD-RAM Part 1 3.4.16 3.4.9

3,039,549	4	DVD-RAM Part 1 Fig.3.1-2 3.4.9 3.4.16
3,040,779	3	DVD-RAM Part 1, 5.5.3 5.6.3
3,042,780	9	DVD-RAM Part 1, Annex V 5.7.1.5.1 (BP16)
3,050,311	5, 9	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.5
3,050,311	5, 9	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.5
3,050,317	5, 9	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.5 4.2.2 Table 4.1.2.2-1
3,050,318	1	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.5
3,050,319	1, 5	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.5

3,059,026	4	DVD-RAM Part 1, 5.2.1.1 5.2.4
3,059,172	5	DVD-RAM Part 1, 5.2.1.1 5.2.4
3,061,799	1	DVD-RAM Part 1, 5.6.2 Fig.5.6.2-1
3,061,800	1	DVD-RAM Part 1, 5.6.2 Fig.5.6.2-1 Annex K
3,063,765	4	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.2 5.2.9
3,068,093	4	DVD-RAM Part 1, 5.2.1.1 5.2.1.2 5.2.11.2
3,068,095	15	DVD-RAM Part 1, 5.5.5 Table 5.5.4-1 Annex R R 3.1
3,068,096	9	DVD-RAM Part 1, 5.5.5 Table 5.5.4-1 Annex R R 3.1
3,068,102	7	DVD-RAM Part 1, Table 5.4-1 Table 5.5.4-1 Table 5.6.4-1

3,068,103	9	DVD-RAM Part 1, Table 5.4-1 5.5.5 5.6.2
3,069,324	1	DVD-Video Recording Commercially Essential
3,069,324	1	DVD-VR Commercially Essential
3,069,338	6	DVD-Video Recording Part 3 5.1 5.2.1 5.3.3 5.5.2.1 Table 5.5.2.1-2
3,069,722	2	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.8 5.2.9
3,069,737	2	DVD-RAM Part 1, Fig.5.2.1.1-1 5.2.2 5.2.9
3,073,204	3	DVD-RAM Part 1, Fig.2.7.1.3-4 2.7.3.3 Fig.5.2.1.1-2
3,073,205	3	DVD-RAM Part 1, Fig.2.7.1.3-4 2.7.3.3 Fig.5.2.1.1-1 5.2.1.1-2
3,075,477	9	DVD-RAM Part 1, 5.5.1, 5.5.3, 5.6.3, 5.6.5

3,075,478	1	DVD-RAM Part 1, 5.5.3 Table 5.6.5-1 5.6.8
3,076,033	9	DVD-RAM Part 1, 2.8.1.3.1 2.8.1.3.3 Table 5.7.1.5.1-1
3,076,036	9	DVD-RAM Part 1, 2.8.1.3.1 2.8.1.3.3 Table 5.7.1.5.1-1
3,076,037	13	DVD-RAM Part 1, 2.8.1.3.1 2.8.1.3.3 Table 5.7.1.5.1-1
3,076,038	14	DVD-RAM Part 1, 2.8.1.3.1 2.8.1.3.3 Table 5.7.1.5.1-1
3,089,599	6	DVD-RAM Part 1, Annex V V2, V4
3,089,601	1	DVD-RAM Part 1, Annex V 5.7.1.1
3,089,637	1	DVD-Video Recording VRX-G3
3,090,316	3	DVD-RAM Part 1, Table 5.4.1 5.6.1 Table 5.6.5-1

3,090,317	1	DVD-RAM Part 1, Table 5.4.1 5.6.1 Table 5.6.5-1
3,090,318	3	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-1
3,090,319	3	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-
3,090,320	3	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-1
3,090,321	5	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-1
3,090,322	3	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-1
3,090,650	1	DVD-Video Recording Part 3 Annex I I 1 I 3
3,090,660	3	DVD-RAM Part 1, Table 5.4-1 5.6.1 Table 5.6.5-1

3,090,661	2	DVD-RAM Part 1 Fig.5.2.1.1-1 5.2.1.1-2 5.2.2 5.2.4
3,090,662	2	DVD-RAM Part 1 Fig.5.2.1.1-1 5.2.1.1-2 5.2.4
3,094,027	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 5.2.8 5.2.9
3,097,849	6	DVD-RAM Part 1 5.7.1.5.1 (BP 32)
3,097,850	7	DVD-RAM Part 1 3.1.2 5.7.1.5.1 (BP 32)
3,097,851	7	DVD-RAM Part 1 3.1.2 3.4.9 5.7.1.5.1
3,097,917	4	DVD-RAM Part 1, Annex V 5.7.1.5 5.7.1.5.1
3,097,918	2	DVD-RAM Part 2, Table 3.6.3-1 3.6.3-2 Table 3.10.2-1 3.10.2-2

3,098,237	8	DVD-RW Part 2 2.8 3.6.1 Table 3.6.1-1 3.6.2 3.6.3 Table 3.6.3-1 3.6.3-2 3.10.2 Table 3.10.2-1 3.10.2-2
3,100,961	13	DVD-RAM 2.8.1.3.3 2.8.1.3.4 2.8.2 Table 5.7.1.5.1-1
3,103,544	2	DVD-RAM 5.7.1.11.3
3,103,545	2	DVD-RAM 5.7.1.11.3
3,103,546	2	DVD-RAM 5.7.1.11.3
3,108,070	1	DVD-Video Recording Commercially Essential
3,108,071	1	DVD-Video Recording Commercially Essential
3,108,072	1	DVD-Video Recording Commercially Essential
3,108,074	1	DVD-Video Recording Part 3 5.3.3 Annex I
3,108,075	1, 11	DVD-Video Recording Part 3 5.3.3 Annex I
3,109,668	1	DVD-Video Recording Part 3 Annex I

3,119,655	12	DVD-Video Recording Part 3 3.3 Fig. 3.3-1 4.2 Fig. 4.2-1 4.2.2 Table 4.2.2-1 Annex I
3,119,656	12	DVD-Video Recording Part 3 3.3 Fig. 3.3-1 4.2.2 Fig. 4.2.2-1
3,128,220	8	DVD-Video Recording Part 3 3.4.1.2 Figure 3.4.1.2-2 Figure 3.4.1.2-3 4.8.4.1 4.8.4.2
3,130,522	1	DVD-Video Recording Part 3 Annex I
3,137,624	2	DVD-Video Recording Part 3 3.3 Fig. 3.3-1 4.2 Fig. 4.2-1 4.2.2 Table 4.2.2-1 Annex I
3,137,626	1	DVD-Video Recording Part 3 4.2.3 Table 4.2.3.3.1-1
3,143,454	4	DVD-R Part 1 3.4.1 Annex W

3,143,454	4	DVD-RW Part 1 3.4.1 Annex X
3,143,455	4	DVD-R Part 1 3.4.1 Annex W
3,143,455	4	DVD-RW Part 1 3.4.1 Annex X
3,152,651	13	DVD-Video Recording Part 3 3.4.1.1 3.4.1.4 Table 4.8.4.1.1-1, 2
3,154,703	6	DVD-Video Recording Part 3 Figure 3.2-1 3.4.1.2 3.4.1.5
3,159,692	5	DVD-VR Part 3 4.1.2 4.1.2.2 (RBP1) 4.5 4.5.3
3,170,502	5	DVD-R FS2-3 Fig.4.1.4-1 FS3-1, 7
3,170,503	4	DVD-R FS2-3 Fig.4.1.4-1 FS3-1, 7
3,170,504	9	DVD-R PHX-P2, 4.5.7 Fig. P.1-2 PH3-29, 40 Table 3.4.1.2.2-1 Table 3.4.1.8-1

3,171,584	22	DVD-RAM FS3-44 3.8.2 FSX-C1
3,171,585	13	DVD-R FS3-44 3.8.2 FSX-C1
3,171,586	15	DVD-R FS3-44 3.8.2 FSX-C1
3,183,874	5	DVD-R PHX-P2, 4.5.7 Fig. P.1-2 PH3-29, 40 Table 3.4.1.2.2-1 Table 3.4.1.8-1
3,199,250	3	DVD-RAM PH5-94 Fig.5.7.1.11-1 PH5-95 5.7.1.11.3 Fig.5.7.1.11.3-1
3,199,711	2	DVD-Video Recording VR4-17, 18, 24
3,223,907	1	DVD-RAM 2.8.1.3 Annex F
3,242,639	2	DVD-Video Recording VR4-15~18
3,267,275	2	DVD-RAM 5.1.1 5.2.1.1
3,284,252	2	DVD-RAM 2.8.1.3.3 Table 2.8.1.3.3-1
3,285,337	1	DVD-RAM PH5-94 Fig.5.7.1.11-1 PH5-95 5.7.1.11.3 Fig.5.7.1.11.3-1

3,285,338	1	DVD-RAM PH5-94 Fig.5.7.1.11-1 PH5-95 5.7.1.11.3 Fig.5.7.1.11.3-1
3,321,143	5	DVD-RAM 5.2.11 5.6.2 5.6.6 Annex K
3,321,144	1	DVD-RAM 5.2.11 5.6.2 Fig.5.6.2-1 5.6.3 Fig.5.6.3-1 5.6.6
3,360,627	1	DVD-RAM PH5-15, 20 Fig.5.2.11-1 Fig.5.2.11.7-1
3,360,629	1	DVD-RAM PH5-15, 20 5.2.11.2 Fig.5.2.11.1-1 Fig.5.2.11.7-1
3,360,630	2	DVD-RAM PH5-15, 20 Fig.5.2.11.1-1 Fig.5.2.11.7-1
3,360,631	1	DVD-RAM PH5-15, 20 Fig.5.2.11.1-1 Fig.5.2.11.7-1
3,360,681	1	DVD-RAM PH5-15, 20 Fig.5.2.11.1-1 Fig.5.2.11.7-1
3,370,660	1	DVD-R Fig.5.1-1 Fig.5.4.1-1 Table 4.5.4-1

3,384,562	1	DVD-R/-RW VI14-133 4,5 Table 4.5-1
3,150,136	3	DVD-Video Recording Part 3 4.1.2 4.1.2.2 (RBP8-135) 4.5 4.5.3
3,150,136	3	DVD-Video Recording Part 3 4.1.2 4.1.2.2 (RBP8-135) 4.5 4.5.3
3,152,653	12	DVD-Video Recording Part 3 3.4.1.1 3.4.1.4 4.2.3.3.1 Table 4.2.3.3.1-1 4.3.3.3.1 Table 4.3.3.3.1-1
3,152,653	12	DVD-Video Recording Part 3 3.4.1.1 3.4.1.4 4.2.3.3.1 Table 4.2.3.3.1-1 4.3.3.3.1 Table 4.3.3.3.1-1
3,152,654	15	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.4
3,152,654	15	DVD-Video Recording Part 3 3.4 3.4.1.1 3.4.1.4

3,162,044	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,045	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,046	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,047	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,048	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,049	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,050	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1

3,162,051	4	DVD-Video Recording Part 3 4.2.2 Table 4.2.2-1 5.2.1 Table 5.2.1-1
3,162,052	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 Figure 5.2.1-1 5.3.1 5.5.4.2 Table 5.5.4.2-3 Part 2 2.6.7 Table 2.6.7-1
3,162,053	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,053	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,162,054	2	DVD-Video Recording Part 3 5.2.1 Table 5.2.1-1 5.5.4.2 Table 5.5.4.2-1
3,167,289	1	DVD-R Part 1 3.2 3.2.1 3.2.6

3,167,289	1	DVD-RW Part 1 3.2 3.2.1 3.2.6
3,167,302	1	DVD-RW Part 1 3.2 3.2.1 3.2.6
3,167,302	1	DVD-R Part 1 3.2 3.2.1 3.2.6
3,169,366	7	DVD-R Part 1 4.2.1 4.2.3 Annex W
3,169,368	1	DVD-Video Recording Part 3 4.2.3 Table 4.2.3.3.1-1
3,173,607	1	DVD-RW Part 1, 3.4.1.1 Fig. 3.4.1.1-1 3.4.1.3 Fig 3.4.1.3-1 3.4.1.4. Fig 3.4.1.4-1
3,173,607	1	DVD-R Part 1, 3.4.1.1 Fig. 3.4.1.1-1 3.4.1.2 Fig 3.4.1.2-1 3.4.1.4. Fig 3.4.1.4-1

3,169,366	7	DVD-RW Part 1 4.2.1 4.2.3 Annex X
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**Mitsubishi Electric Industrial Corporation**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
1,627,483	1	DVD-R Commercially Essential
1,627,483	1	DVD-RAM Commercially Essential
1,627,483	1	DVD-RW Commercially Essential
1,739,697	1	DVD-R Commercially Essential
1,739,697	1	DVD-RAM Commercially Essential
1,739,697	1	DVD-RW Commercially Essential
1,804,821	1	DVD-R Commercially Essential
1,804,821	1	DVD-RAM Commercially Essential
1,804,821	1	DVD-RW Commercially Essential
1,920,835	1	DVD-RAM/-RW/-R Part 1 Fig. 2.8.2-1 Fig.5.2.11.6-1 Table 5.2.11.6-1
2,088,711	1	DVD-R Part 1 2.2.3.8-1 Fig. 2.2.3.8.1-1 4.2.3.6.3
2,088,711	1	DVD-RAM Part 1 2.8.1.3 Annex F
2,088,711	1	DVD-RW Part 1 2.2.3.8-1 Fig. 2.2.3.8.1-1 4.2.3.6.3 Annex K

2,616,969	1	DVD-RAM Part 1 5.2.1.1 Fig.5.2.1.1-1 Fig.5.2.1.1-2 5.2.3 5.2.4
2,663,152	1	DVD-RAM Ver. 1 Part 1 2.3.5 2.7.1.2.3
2,697,827	1	DVD-RAM/-RW PH5-14, 20
2,691,087	8	DVD-RAM/-RW/-R Part 2 Figs. 2.2-1 2.3-1, 3.1-1 Tables 2.5.1-1 2.6.7-1, 3.2-1, 3.4.1-1, 3.6.1-1 3.6.2-1 3.7.1-1 Annex D
3,027,818	3	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1 5.2.1.1-2
3,030,303	2	DVD-RAM Part 1, Table 5.4-1 5.2.11
3,063,613	5	DVD-RAM Part 1, 5.2.1.1 Table 5.4-1
3,070,467	3	DVD-RAM Part 1, Table 5.4-1. 5.2.11

3,073,745	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-2
3,085,536	11, 12	DVD-ROM PH-37, 41,47
3,085,536	11.12	DVD-R Part 1, 3.1.4 3.2.2 4.2.3.2
3,085,536	11.12	DVD-RAM Part 1, 5.1.3 5.1.4 5.2.1.1 5.2.4
3,085,536	11.12	DVD-RW Part 1, 3.1.4 3.2.2 4.2.3.2
3,085,538	5	DVD-RAM Part 1, Table 5.4-1 5.2.11 Table 5.5.5-1
3,090,925	1	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-1 2.3.5 2.7.1.3 Annex E Annex L
3,091,198	1,3	DVD-RAM Part 1, 5.2.1.1 Fig.5.2.1.1-2 Fig.2.7.1.3-5 Fig.2.7.1.3-8 Annex L

3,092,510	3	DVD-RAM Part 1, 5.2.1.1 5.2.4 Annex L (2)
3,316,573	1	DVD-Video/Video Recording, VI5-9 Fig.5.2.1-1
3,363,859	2, 3, 4	DVD-RAM/-RW/-R/-ROM PH5-5 5.2 Table 5.5.5-1
3,363,860	2, 3, 4	DVD-RAM/-RW/-R/-ROM PH5-63, 65 5.7.1.5.1
3,370,457	3, 5	DVD-Video, VI4-61, 77, 83
3,370,468	1	DVD-Video, VI4-135(4) Fig.4.5.1-1 VI5-11 Fig.5.2.2-1
3,375,431	3	DVD-Video/Video Recording, VR3-15, 40, 41 VR4-31, 34
3,375,616	4, 6, 7, 9	DVD-Video VI4-133, 135, 137 VI5-3.9
2, 545, 302	1, 5	DVD-Video Recording Commercially Essential
2, 766, 919	8, 17	DVD-Video Recording Part 3 1.2 5.5.1.2 5.5.2.3

**Sanyo Electric Co., Ltd.**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
2,726,033	1	DVD-RAM/-RW/-R Fig. 2.1-1 5.1.1 Table 5.4-1 Fig.5.7.1.1-1 Fig.5.7.1.5-1 Table 5.7.1.5.1-1
3,177,503	3	DVD-RAM/-RW Fig. 2.1-1 5.1.1 Table 5.4-1 Fig.5.7.1.1-1 Fig.5.7.1.5-1 Table 5.7.1.5.1-1

**Sharp Corporation**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
2,801,510	5	DVD-RAM 2.8.1.3.2 Annex F Figure F-1 DVD-RW 2.2.3.8.1-1
3,111,168	1	DVD-RW/R 3.2, 3.2.1 Fig. 3.2.1-1 4.2 Fig. 4.2.1-1
3,359,745	5	DVD-Video Recording VR3-5, 35, 39, 43 VR4-1, 31, 32, 34, 55, 64

**Toshiba Corporation**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
2,977,513	16	DVD-Video Recording Part 3 5.3.4 Fig 5.3.4-1 5.5.3 Fig.5.5.3-1,2 5.5.3.1, 5.5.5.3
2,954,083	3	DVD-RAM Part 1, 5.2.1.1 5.2.3
2,954,129	3	DVD-RAM Part 1, 5.2.1.1 5.2.2 5.2.3
2,954,130	3	DVD-RAM Part 1, 5.2.1.1 5.2.3
2,954,132	3	DVD-RAM Part 1, 5.2.1.1 5.2.2 5.2.3
2,954,135	5	DVD-RAM Part 1, 5.2.1.1 5.2.2 5.2.3
3,080,902	4	DVD-RAM Part 1, 5.2.1.1 5.2.4 Annex L
2,848,809	1	DVD-RAM Part 1, 5.6.2 Annex K

3,029,399	1	DVD-RAM Part 1, 5.6.3 Annex K
3,029,400	1	DVD-RAM Part 1, 5.6.2 Annex K
2,862,850	1	DVD-RAM Part 1, 5.2.1.1 Fig. 5.2.1.1-1 Annex K
3,071,828	15	DVD-RAM Part 1, 5.2.11.7 Fig. 5.2.11.7-1
2,920,065	3	DVD-RAM Part 1, 5.2.11 Fig. 5.2.11-1 5.2.11.7 Fig 5.2.11.7-1
2,883,554	6	DVD-RAM Part 1, 5.2.11.9 Fig. 5.2.11.9-1
3,383,601	1	DVD-Video Recording VRX-H Commercially Essential
3,383,663	1	DVD-Video Recording VR3-9, 22 VR4-25, 26, 65, 66 VRX-H3
3,356,691	3	DVD-Video Recording VRX-H VR4-25, 26
3,353,247	1	DVD-Video Recording VR2-1 FS2-2 PH5-40, 41, 47
3,376,295	1	DVD-Video Recording VR2-1 FS3-3, 4, 15, 23, 44

3,353,250	1	DVD-Video Recording FSX-C, G
3,376,363	1	DVD-Video Recording FSX-C, G VRX-G4
3,376,364	1	DVD-Video Recording FSX-C, G VRX-G4
3,376,288	2	DVD-Video Recording FS2-33, 35
3,389,086	1	DVD-RW PH4-1 FS2-2, 4 FS3-15 VR3-35 VRX-H8
3,389,089	1	DVD-RW PH4-1 FS2-2, 4 VRX-H5~9
3,389,230	2	DVD-RW PH4-1 FS2-2, 4, 33, 35
3,389,231	1	DVD-RW PH4-1 FS2-2, 4 VR3-9, 10, 22 VR4-31
3,389,088	2	DVD-RW PH4-1 FS2-2, 4 VRX-H4 FSX-C5, C7
3,389,238	1	DVD-RW PH4-1 FS2-2, 4 FSX-C4, 5 VRX-H8, 9
3,113,200	3	DVD-RAM PH-128, 134, 155, 160-162, 167

3,113,201	1	DVD-RAM PH-128, 134, 155, 160-162, 167 PHX-18 Annex K
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**Victor Company of Japan**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
2,023,593	1	DVD-R/-RW 4.2.1 Fig. 4.2.1-1 Table 4.2.1-1
2,073,584	1	DVD-Video Recording Commercially Essential
2,133,528	1	DVD-Video Recording Commercially Essential
2,138,621	1,2	DVD-RAM Part 1., 5.2.11.6
2,138,621	1,2	DVD-R Part 1., 3.2.6
2,138,621	1,2	DVD-RW Part 1., 3.2.6
2,516,041	1	DVD-Video Recording Commercially Essential
2,516,082	2	DVD-Video Recording 5.5.1.1 5.5.1.2 Commercially Essential
2,521,160	1, 2	DVD-Video Recording Table 5.5.1.2.1-2 Commercially Essential
2,532,906	1	DVD-RAM Part 1, 5.2.11.9
2,532,906	1	DVD-R Part 1, 3.2.1, 3.2.2, 3.2.9
2,532,906	1	DVD-RW Part 1, 3.2.1, 3.2.2, 3.2.9
2,591,029	2	DVD-Video Recording 4.2.3.3.4.2 4.2.3.3.4.3

2,591,030	2	DVD-Video Recording 4.2.3.3.4.3
2,617,772	2	DVD-Video Recording 5.3.1 Fig.5.3.1-2 5.5.1 Fig.5.5.1-1
2,734,805	1	DVD-Video Recording Commercially Essential
2,745,805	1	DVD-R Commercially Essential
2,745,805	1	DVD-RW Commercially Essential
2,760,827	6	DVD-VR 3.6.2 Annex G.3 Table G.3-1
2,760,828	1	DVD-Video Recording 3.1 (1) Commercially Essential
2,864,950	1	DVD-Video Recording 4.1.1 Table 4.1.1-3
2,906,950	1	DVD-Video Recording 3.5.2 Figure 3.5.2-1
2,924,880	1	DVD-RAM Part 1, 2.7.3.3 Annex L
2,925,043	1	DVD-Video Recording 5.5.3 5.5.3.2.1 Table 5.5.3.2.1-1 5.5.3.3.1
2,925,047	1, 2	DVD-Video Recording 5.5.3.2 5.5.3.2.1 5.5.3.2.2
2,927,163	11,13	DVD-RAM Part 1, 5.2.11.6

2,927,163	11,13	DVD-R Part 1, 3.2.6
2,927,163	11,13	DVD-RW Part 1, 3.2.6
2,932,950	1, 4	DVD-Video Recording 5.3.2, 5.3.3, 5.3.4
2,947,395	1	DVD-R/-RW/-ROM/-Video Table 4.5.4-1 VOBU_SRI
3,019,638	1	DVD-Video Recording Commercially Essential
3,019,659	1	DVD-Video Recording Commercially Essential
3,033,513	1,2	DVD-RAM Part 1, 5.2.11.6
3,033,513	1,2	DVD-R Part 1, 3.2.6
3,033,513	1,2	DVD-RW Part 1, 3.2.6
3,082,699	1,2	DVD-RAM Part 1, 5.2.11.6
3,082,699	1,2	DVD-R Part 1, 3.2.6
3,082,699	1,2	DVD-RW Part 1, 3.2.6
3,090,111	1-4	DVD-RAM Part 1, 5.1.4, 5.5.5
3,094,910	6, 7	DVD-Video Recording Commercially Essential
3,094,910	6, 7	DVD-R Part 1, 2.1.3.6 Commercially Essential

3,094,910	6, 7	DVD-RW Part 1, 2.1.3.6 Commercially essential
3,317,439	1	DVD-RAM PH5-19 5.2.11.6 DVD-RW PH3-8 3.2.6 DVD-R PH3-7 3.2.6 DVD-ROM/-Video/-Audio PH-46 3.2.6
3,356,178	1	DVD-Video Recording Fig. 3.6-1 Annex I I.4 Figure I. 4-1
3,363,146	1	DVD-Video Recording Fig. 3.6-1 Annex I I.4 Figure I. 4-1
3,363,147	1	DVD-Video Recording Fig. 3.6-1 Annex I I.4 Figure I. 4-1
3,364,594	1	DVD-Video Recording 5.5.3.2 5.5.3.2.1 VR 5-71 4) SET_CONTR Commercially Essential
3,367,657	1	DVD-R/-RW 3.2.1 3.2.7 3.2.9 3.2.10
3,375,078	1	DVD-Video Recording 5.5.3.2 5.5.3.2.1 VR 5-71 4) SET_CONTR Commercially Essential

3,375,079	1	DVD-Video Recording 5.5.3.2 5.5.3.2.1 VR 5-71 4) SET_CONTR Commercially Essential
3,375,080	1	DVD-Video Recording 5.5.3.2, 5.5.3.2.1 VR 5-71 4) SET_CONTR Commercially Essential
3,376,831	1	DVD-Video Recording 5.5.3.2 5.5.3.2.1 VR 5-71 4) SET_CONTR Commercially Essential
3,379,703	2	DVD-Video Recording Table 4.1.1-1 Table 4.1.1-2 4.1.2.2
3,381,342	2	DVD-Video Recording Table 4.1.1-1 Table 4.1.1-2 4.1.2.2
3,381,630	1	DVD-Video Recording VR 3-5 Fig. 3.4.1.4-1 4.2.3.3.4.3
3,381,723	1	DVD-Video Recording VR 3-5 Fig. 3.4.1.4-1 4.2.3.3.4.3
3,381,724	1	DVD-Video Recording VR 3-5 Fig. 3.4.1.4-1 4.2.3.3.4.3
3,381,725	1	DVD-Video Recording VR 3-5 Fig. 3.4.1.4-1 4.2.3.3.4.3

3,389,988	3	DVD-R/-RW Ver.1. 1 3.4.1.4 Fig. 3.4.1.4-1 Commercially Essential
3,389,990	1	DVD-R/-RW Ver.1. 1 3.4.1.4 Fig. 3.4.1.4-1 Commercially Essential
3,389,991	1	DVD-R/-RW Ver.1. 1 3.4.1.4 Fig. 3.4.1.4-1 Commercially Essential
3,389,992	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,993	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,994	1	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,995	1	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,996	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,997	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,389,998	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1

3,389,999	3	DVD-R/-RW Ver.1. 1 3.4.1, 3.4.1.1, 3.4.1.4 Table 3.4.1.4.1-1
3,391,385	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,386	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,387	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,388	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,389	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,390	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,391	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,392	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential

3,391,393	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,394	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,395	2	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,396	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,397	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,398	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,399	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,391,400	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential

3,391,401	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential
3,395,779	1	DVD-RW Ver.1. 1 3.4.1.4 Annex Y Commercially Essential

**Warner Bros. Home Entertainment Inc.**  
**Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
NONE		

**Panasonic/ Toshiba****Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
3,313,928	1	DVD-RAM 3.3 3.3.1 Table 3.3-1 3.3.2 Table 3.3-2

**Panasonic/ Mitsubishi  
Essential DVD DVD Recorder and Recordable Disc Drive Patents (Japan)**

Japanese Patent No.	Claim	Relevant sections of DVD Specification
3,103,505	5	DVD-RAM PH2-17 PH5-1~11 Fig.5.2.1.1-1