

Essential Philips patents relevant to Blu-ray Disc Recorder

<i>COUNTRY</i>	<i>REFERENCE</i>	<i>FILING NR</i>	<i>FILING DATE</i>	<i>PUBLICATION NR</i>	<i>GRANT DATE</i>	<i>GRANT NR</i>	<i>EXPIRY DATE</i>	<i>TITLE</i>
AR	N 012063	308926	10/6/1987		6/30/1993	243038	6/30/2008	"CD - WO: ATIP II"
AR	N 012398	312996	1/17/1989		11/21/2001	255370	11/21/2016	CD-WO: SYNCHRONISATION
AR	NL000685	P010105398	11/19/2001		6/26/2007	AR032774B1	11/19/2021	OPC-PROCEDURE USING A STRAIGHT LINE
AR	NL010727	P020100956	3/18/2002		6/29/2007	AR033047	3/18/2022	ISOLATED BIT SYNC
AT	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	E98041	1/17/2009	CD-WO: SYNCHRONISATION
AT	N 014448	94201153.7	4/27/1994	0624000-A3	7/19/2000	E194897	4/27/2014	PARITY PRESERVED CODING N-BIT WRDS I
AT	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	E184416	9/24/2016	CD-E SPEED ON DISC
AU	N 012398	89-28558	1/18/1989		1/28/1992	613292	1/18/2009	CD-WO: SYNCHRONISATION
AU	NL000685	2002221849	11/12/2001		3/22/2007	2002221849	11/12/2021	OPC-PROCEDURE USING A STRAIGHT LINE
AU	NL020067	02-353342	12/12/2002	2002353342	11/1/2007	2002353342	12/12/2022	USE OF SAME ECC DECODER FOR DIFFER
AZ	NL010730	200400552	9/23/2002		4/28/2005	005695	9/23/2022	SPLIT WORD SYNC FOR DVR
BE	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
BE	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
BR	N 012398	PI8900230.0	1/19/1989		8/10/1999	PI8900230.0	1/19/2009	CD-WO: SYNCHRONISATION
BY	NL010730	200400552	9/23/2002		4/28/2005	005695	9/23/2022	SPLIT WORD SYNC FOR DVR
CA	N 012063	548386	10/1/1987		9/7/1993	1322052	9/7/2010	"CD - WO: ATIP II"

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CA	N 012398	588616	1/19/1989		7/6/1993	1319985	7/6/2010	CD-WO: SYNCHRONISATION
CH	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
CN	N 012398	89100960.4	1/19/1989	1035575-A	4/9/1993	89100960.4	1/19/2009	CD-WO: SYNCHRONISATION
CN	N 015495	96191532.3	9/24/1996	1182497-A	5/12/2004	96191532.3	9/24/2016	CD-E SPEED ON DISC
CN	NL000685	01806158.3	11/12/2001	1416566-A	1/10/2007	01806158.3	11/12/2021	OPC-PROCEDURE USING A STRAIGHT LINE
CN	NL010154	01808427.3	12/7/2001	1426578-A	10/11/2006	01808427.3	12/7/2021	ALIGNMENT AND LINKING IN MULTI-LAYER
CN	NL010294	02801392.1	4/22/2002	1462431-A	8/2/2006	02801392.1	4/22/2022	WRITE STRATEGY FOR SLOW COOLING PH
CN	NL010727	02800697.6	3/14/2002	1459109-A	9/20/2006	02800697.6	3/14/2022	ISOLATED BIT SYNC
CZ	N 012398	89-PV377	1/19/1989		3/31/1995	279681	1/19/2009	CD-WO: SYNCHRONISATION
CZ	N 012398	89-PV377	1/19/1989		3/31/1995	279681	1/19/2009	CD-WO: SYNCHRONISATION
CZ	N 015495	97-PV1610	9/24/1996		10/10/2002	291074	9/24/2016	CD-E SPEED ON DISC
DE	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	68910993.8	1/17/2009	CD-WO: SYNCHRONISATION
DE	N 014448	94201153.7	4/27/1994	0624000-A3	7/19/2000	69425298.0	4/27/2014	PARITY PRESERVED CODING N-BIT WRDS I
DE	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	69604189.8	9/24/2016	CD-E SPEED ON DISC
DE	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	69723165.8	2/7/2017	DVD - RAM RANDOM SHIFT
DE	N 016849	98959114.4	12/28/1998		7/26/2006	69835345.5	12/28/2018	ERROR FROM WELL PROTECTED TO OTHE
DZ	NL010730	040125	9/23/2002		4/9/2006	3680	9/23/2022	SPLIT WORD SYNC FOR DVR
EA	NL010730	200400552	9/23/2002		4/28/2005	005695	9/23/2022	SPLIT WORD SYNC FOR DVR
EG	NL000685	2001-1212	11/17/2001		12/28/2003	23007	11/16/2021	OPC-PROCEDURE USING A STRAIGHT LINE

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EG	NL010730	02-1119	10/14/2002		1/25/2005	23359	10/13/2022	SPLIT WORD SYNC FOR DVR
EP	N 012063	87201902.1	10/5/1987	0265984-A1	4/15/1992	0265984	10/5/2007	"CD - WO: ATIP II"
EP	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
EP	N 014448	94201153.7	4/27/1994	0624000-A3	7/19/2000	0624000	4/27/2014	PARITY PRESERVED CODING N-BIT WRDS I
EP	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
EP	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	0821828	2/7/2017	DVD - RAM RANDOM SHIFT
EP	N 016849	98959114.4	12/28/1998	0965175-A1	7/26/2006	0965175	12/28/2018	ERROR FROM WELL PROTECTED TO OTHE
EP	N 017300 A	03101849.2	1/10/2000	1372143-A3	6/1/2005	1372143	1/10/2020	WOBBLE FOR DVD ROM DISCS
ES	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
ES	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
ES	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	0821828	2/7/2017	DVD - RAM RANDOM SHIFT
FR	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
FR	N 014448	94201153.7	4/27/1994	0624000-A3	7/19/2000	0624000	4/27/2014	PARITY PRESERVED CODING N-BIT WRDS I
FR	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
FR	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	0821828	2/7/2017	DVD - RAM RANDOM SHIFT
FR	N 016849	98959114.4	12/28/1998		7/26/2006	0965175	12/28/2018	ERROR FROM WELL PROTECTED TO OTHE
GB	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
GB	N 014448	94201153.7	4/27/1994	0624000-A3	7/19/2000	0624000	4/27/2014	PARITY PRESERVED CODING N-BIT WRDS I
GB	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC

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GB	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	0821828	2/7/2017	DVD - RAM RANDOM SHIFT
GB	N 016849	98959114.4	12/28/1998		7/26/2006	0965175	12/28/2018	ERROR FROM WELL PROTECTED TO OTHE
GR	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
HK	N 012398	NOT GIVEN	1/17/1989		10/19/1995	0951632	1/17/2009	CD-WO: SYNCHRONISATION
HK	N 015495	98114109.2	9/24/1996	1012520-A	5/12/2000	HK1012520	9/23/2016	CD-E SPEED ON DISC
HK	N 015776	98106942.9	2/7/1997	1008600-A			2/7/2017	DVD - RAM RANDOM SHIFT
HK	NL010273	04104905.2	4/18/2002	1061916-A			4/18/2022	WOBBLE PERIOD FOR DVR
HU	N 015776	P9901480	2/7/1997				2/7/2017	DVD - RAM RANDOM SHIFT
HU	NL000685	P0204230	11/12/2001	0204230			11/12/2021	OPC-PROCEDURE USING A STRAIGHT LINE
ID	N 015495	P-962786	9/30/1996	016343-A	3/10/2004	UNKNOWN	9/30/2010	CD-E SPEED ON DISC
ID	N 015776	P-970413	2/13/1997	017848-A	4/28/2004	ID0013245	2/13/2011	DVD - RAM RANDOM SHIFT
ID	NL010727	W-0202624	3/14/2002	035621-A	8/24/2006	ID0017977	3/14/2022	ISOLATED BIT SYNC
IR	NL010730	38107094	10/13/2002		7/15/2003	28736	10/13/2022	SPLIT WORD SYNC FOR DVR
IT	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
IT	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
IT	N 015776	97901214.3	2/7/1997	0821828-A1	7/2/2003	0821828	2/7/2017	DVD - RAM RANDOM SHIFT
JP	N 012398	89-7555	1/13/1989	89-220126	5/23/1997	2652443	1/13/2009	CD-WO: SYNCHRONISATION
JP	N 014448	94-93412	5/2/1994	95-50588	4/5/2002	3294936	5/2/2014	PARITY PRESERVED CODING N-BIT WRDS I
KR	N 012063	87-11135	10/6/1987		5/8/1996	99196	1/4/2011	"CD - WO: ATIP II"

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KR	N 012398	89-562	1/20/1989		6/26/1998	152430	6/26/2013	CD-WO: SYNCHRONISATION
KR	N 012399	89-563	1/20/1989		12/12/1997	132674	12/12/2012	ATIP III
KR	N 015495	97-703582	9/24/1996	10-1998-0700646	1/26/2005	0470007	9/24/2016	CD-E SPEED ON DISC
KR	N 015776	97-707294	2/7/1997		4/27/2005	0487680	2/7/2017	DVD - RAM RANDOM SHIFT
KR	N 016849	10-1999-7007933	12/28/1998	00-75855	7/4/2006	10-0599225	12/28/2018	ERROR FROM WELL PROTECTED TO OTHE
KR	N 017534	10-2001-7003156	7/5/2000	10-2001-0079792	3/22/2007	10-0701257	7/5/2020	ONE ECC FOR DIFFERENT DATA
MA	NL010730	27632	9/23/2002		7/1/2004	26226	9/23/2022	SPLIT WORD SYNC FOR DVR
MX	N 015495	973953	9/24/1996		3/11/2003	213185	9/24/2016	CD-E SPEED ON DISC
MX	NL010727	02-011273	3/14/2002		7/2/2007	246907	3/14/2022	ISOLATED BIT SYNC
MY	N 015495	PI9604010	9/27/1996		12/30/2005	120906	12/30/2020	CD-E SPEED ON DISC
MY	N 015776	PI9700546	2/14/1997		8/30/2004	MY-117846-A	8/30/2019	DVD - RAM RANDOM SHIFT
MY	NL000685	PI20015234	11/15/2001		7/31/2007	MY-131219-A	7/31/2022	OPC-PROCEDURE USING A STRAIGHT LINE
MY	NL010727	PI20020933	3/14/2002		2/28/2007	128703	2/28/2022	ISOLATED BIT SYNC
NL	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
NL	N 015495	96929488.3	9/24/1996	0852796-A1	9/8/1999	0852796	9/24/2016	CD-E SPEED ON DISC
PK	NL010730	2002-884	10/12/2002		7/12/2004	138332	10/12/2022	SPLIT WORD SYNC FOR DVR
PL	N 015776	P322824	2/7/1997	P322824	6/3/2002	184577	2/7/2017	DVD - RAM RANDOM SHIFT
RU	N 012398	4613311	1/19/1989		8/20/1997	2087950	1/19/2009	CD-WO: SYNCHRONISATION
RU	NL010273	2003133983	4/18/2002	2003133983-A	7/27/2006	2280907	4/18/2022	WOBBLE PERIOD FOR DVR

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RU	NL010727	03130465	3/14/2002	2003130465-A	9/10/2006	2283516	3/14/2022	ISOLATED BIT SYNC
RU	NL010730	200400552	9/23/2002		4/28/2005	005695	9/23/2022	SPLIT WORD SYNC FOR DVR
SE	N 012398	89200092.8	1/17/1989	0326206-A1	12/1/1993	0326206	1/17/2009	CD-WO: SYNCHRONISATION
SG	N 012398	9591725.8	1/17/1989		1/29/1996	23938	1/17/2009	CD-WO: SYNCHRONISATION
SG	N 015495	9803014.1	9/24/1996		12/30/2004	53769	9/24/2016	CD-E SPEED ON DISC
SG	N 015776	9705144.5	2/7/1997		11/16/1999	46833	2/7/2017	DVD - RAM RANDOM SHIFT
SG	NL000685	200204342.0	11/12/2001		11/30/2005	90548	11/12/2021	OPC-PROCEDURE USING A STRAIGHT LINE
SG	NL010273	200207828.5	4/18/2002		1/27/2006	94047	4/18/2022	WOBBLE PERIOD FOR DVR
SG	NL010727	200206813.8	3/14/2002		11/30/2005	92998	3/14/2022	ISOLATED BIT SYNC
SG	NL010730	200303448.5	9/23/2002		4/28/2006	97521	9/23/2022	SPLIT WORD SYNC FOR DVR
SK	N 012398	89-PV0377	1/19/1989		2/28/1997	278453	1/19/2009	CD-WO: SYNCHRONISATION
TH	NL010730	077242	10/11/2002				10/11/2022	SPLIT WORD SYNC FOR DVR
TW	N 012398	77103927	6/11/1988		7/26/1989	31633	6/11/2008	CD-WO: SYNCHRONISATION
TW	N 015495	85115279	12/10/1996		11/14/2000	117476	12/10/2016	CD-E SPEED ON DISC
TW	N 015776	85106262	5/27/1996		10/29/1997	87771	5/27/2016	DVD - RAM RANDOM SHIFT
TW	N 016849	88100894	1/21/1999		5/3/2001	124993	1/21/2019	ERROR FROM WELL PROTECTED TO OTHE
TW	NL000685	091106018	3/27/2002		2/21/2006	I-249736	3/27/2022	OPC-PROCEDURE USING A STRAIGHT LINE
TW	NL010154	090129060	11/23/2001		9/8/2004	NI-201714	11/22/2021	ALIGNMENT AND LINKING IN MULTI-LAYER
TW	NL010191	091104689	3/13/2002		3/21/2005	I229854	3/13/2022	WOBBLE FOR DVR

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TW	NL010273	091112508	6/10/2002		1/11/2006	I247284	6/10/2022	WOBBLE PERIOD FOR DVR
TW	NL010727	091104690	3/13/2002		7/1/2005	I235363	3/13/2022	ISOLATED BIT SYNC
TW	NL010730	091122330	9/27/2002		10/11/2005	I241566	9/27/2022	SPLIT WORD SYNC FOR DVR
TW	NL020067	091132388	11/1/2002	200303526	6/21/2006	I257085	11/1/2022	USE OF SAME ECC DECODER FOR DIFFER
UA	N 012398	93002137	1/19/1989		8/15/2000	27217	1/19/2009	CD-WO: SYNCHRONISATION
UA	NL010273	03109559	4/18/2002		5/15/2006	75642	4/18/2022	WOBBLE PERIOD FOR DVR
US	N 009666	C 07/375620	7/25/1989		10/28/1997	5682365	10/28/2014	PREGROOVED CLOCK IN D.O.R DISC
US	N 012063	X 08/099770	7/29/1993		8/16/1994	5339301	8/16/2011	"CD - WO: ATIP II"
US	N 012398	07/265638	11/1/1988		2/13/1990	4901300	11/1/2008	CD-WO: SYNCHRONISATION
US	N 012925	W 08/041141	3/31/1993		5/23/1995	5418764	5/23/2012	ADDITIONAL INFORMATION IN ATIP
US	N 012925	X 08/390451	2/17/1995		8/5/1997	5654947	8/5/2014	ADDITIONAL INFORMATION IN ATIP
US	N 014448	08/223875	4/6/1994		12/19/1995	5477222	4/6/2014	PARITY PRESERVED CODING N-BIT WRDS I
US	N 015495	08/722651	9/30/1996		11/10/1998	5835462	9/30/2016	CD-E SPEED ON DISC
US	N 015776	08/800633	2/14/1997		9/5/2000	6115340	2/14/2017	DVD - RAM RANDOM SHIFT
US	N 016849	09/218560	12/22/1998		4/23/2002	6378100	12/22/2018	ERROR FROM WELL PROTECTED TO OTHE
US	NL000685	09/996000	11/16/2001	2002-0114235-A1	9/19/2006	7110336	5/15/2023	OPC-PROCEDURE USING A STRAIGHT LINE
US	NL010154	09/994272	11/26/2001	2002-0080705-A1	5/8/2007	7215634	12/18/2022	ALIGNMENT AND LINKING IN MULTI-LAYER
US	NL010191	10/257691	3/14/2002		8/1/2006	7085209	5/7/2023	WOBBLE FOR DVR
US	NL010273	10/131776	4/24/2002	2003-0007440-A1	9/26/2006	7113467	10/11/2023	WOBBLE PERIOD FOR DVR

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US	NL010727	10/276197	3/14/2002	2003-0174603-A1	5/16/2006	7046596	12/20/2023	ISOLATED BIT SYNC
US	NL010730	10/268445	10/10/2002	2003-0090825-A1	10/4/2005	6952381	6/12/2023	SPLIT WORD SYNC FOR DVR
US	NL020067	10/501824	12/12/2002	2005-0034047-A1	4/3/2007	7200795	3/26/2023	USE OF SAME ECC DECODER FOR DIFFER
VN	N 015495	S19970443	9/24/1996		1/16/2002	2540	9/24/2016	CD-E SPEED ON DISC
VN	N 015776	S19970933	2/7/1997		8/15/2001	2271	2/7/2017	DVD - RAM RANDOM SHIFT
ZA	NL000685	02-5675	11/12/2001		1/28/2004	2002/5675	11/12/2021	OPC-PROCEDURE USING A STRAIGHT LINE