

PATENT SCHEDULE of granted patents and published patent applications

Introduction

Contra Vision Ltd is an intellectual property company which licenses patents, trade marks and secret know-how related to one-way vision and other vision control panels. Its Vision Management System™ is based on two dominant patent families for the two basic types of see-through graphics:

US RE37,186, GB 2 165 292 and family member patents in 21 countries. These typically expired in July 2005.

These patents disclose Contra Vision® panels with an opaque "print pattern" ("silhouette pattern") on which is superimposed a design, the design being visible from one side of the panel but not from the other side of the panel. Although now expired, nearly all the vision control products that were covered by these patents continue to be covered by our improvement patents in the following schedule.

US 6,212,805, EP 0 880 439 and family member patents. These typically expired in January 2017.

Contra Vision® BACKLITE™ panels with a translucent "print pattern" ("base pattern") on which is superimposed a design visible from one side, a reverse (mirror) image of which is typically visible from the other side, which are capable of rear illumination or rear projection.

The patent portfolio includes many improvement patents and patent applications for see-through graphic products and their methods of production.

Contra Vision Ltd welcomes questions on its patent portfolio and how patents cover particular vision control panels – UK +44 161 439 9307

CONTRA VISION LTD PATENT SCHEDULE

Updated 30.05.17

<u>PATENT FAMILY</u>	<u>TITLE</u>	<u>COMMENTS</u>
US 7,087,291	Partial Printing of a Substrate with Edge Sealed Printed Portions	Overlap Registration System™
US 6,267,052	Printing with Differential Receptivity	exact registration printing
EP 1467870	Printing with Differential Adhesion	exact registration printing and uv inkjet Impress™
US 8,784,932	Glass Panels Partially Printed with Ceramic Ink Layers in Substantially Exact Registration	ceramic ink frit-loaded
US 8,500,268	UV Inkjet Printing of Vision Control Panels	UV inkjet (Contra Vision® Impress™)
JP 5290758	Method of Making a Vision Control Panel using Cut Film	Contra Vision® <u>Stripes</u> ™
EP 2097269	Improvements to Printing Superimposed Layers	PPM Type II exact registration
US 8,065,829	Sign Assembly	Trapeze™ sign system
US 8,394,477	Vision Control Panel Assembly with a Contrasting Colored Liner	Contra Vision® <u>Grayliner</u> ™ (all technologies)
US 8,973,501	Printing Layers of Ceramic Ink in Substantially Exact Registration by Differential Ink Medium Thermal Expulsion	ceramic ink stencil method and 2 other methods.
US 9,168,730	Printing Layers of Ceramic Ink in Substantially Exact Registration by Differential Ink Medium Thermal Expulsion	Differential frit method
US 9,469,081	Open Perforated Material and Method of Imaging to Form a Vision Control Panel	WYSIWYG when printed

Patents Licensed in

A. US 6,254,711	Method for Making Unidirectional Graphic Article	Thermal transfer backing layers to reverse-printed Clear Perforated Base Material
B. US 8,343,611	One Way Vision Film for Ink Jet Printing, Printing Film, and Method for Producing Them	

APPLICATION NO	TITLE	DATE FILED	PUBLICATION NO	APPL. PUBLISHED	PATENT NO	PATENT GRANTED
Contra Vision® ORS™ "EDGE SEALED" Method (inventor G. Roland Hill)						
PCT/IB02/01549	Partial Printing of a Substrate with Edge Sealed Printed Portions	18.01.02	WO02/070269	12.09.02		
South Africa 2002/7417	"	18.01.02			ZA2002/7417	26.05.04
Australia 20020256841	"	18.01.02		19.09.02	AU2002256841	05.01.07
EPC 20020726362.3	"	18.01.02	EP1392526	03.03.04	EP1392526	10.03.10
France	"				1392526	
Germany	"				1392526	
United Kingdom	"				1392526	
USA 09/764,276	"	19.01.01			US6,506,475B1 Reissued as RE40,024	14.01.03 22.01.08
USA 10/466,537	"	19.12.03	US2004/0091680	13.05.04	US7,087,291	08.08.06
Printing with DIFFERENTIAL RECEPTIVITY (inventors G. Roland Hill and M.D. Godden)						
PCT/GB97/01175	Printing with Differential Receptivity	30.04.97				
PCT/GB97/02788	Method for Forming Durable Images on Substrates	24.10.97	WO98/17480	30.04.98		
USA 09/297,020	Printing with Differential Receptivity	22.04.99			US6,267,052	31.07.01
Printing with DIFFERENTIAL ADHESION (UV ink) (inventors G. Roland Hill and C. Parry)						
PCT/IB03/00555	"	23.01.03	WO03/61970			
EP 03710064.1	"	23.01.03	EP1467870	20.10.04	EP1467870	29.11.06
United Kingdom	"	23.01.03			EP1467870	

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FRIT-LOADED CERAMIC INK Print Pattern (inventors G Roland Hill and H Quinn)						
GB 0222765.0	Glass Panels Partially Printed with Ceramic Ink Layers in Substantially Exact Registration	02.10.02				
PCT/GB2003/004216	"	29.09.03	WO04/030935	15.04.04		
Australia 20030267659	"	29.09.03	AU2003267659	23.04.04	AU2003267659	04.12.08
Canada 2500406	"	29.09.03	CA2500406	15.04.04	CA2500406	17.11.09
EP 03748351.8	"	29.09.03	EP1549498	13.07.06	EP1549498	09.04.14
Austria	"				1549498	
Belgium	"				1549498	
France	"				1549498	
Germany	"				1549498	
Spain	"				1549498	
United Kingdom	"				1549498	
South Africa	"	29.09.03			ZA2005/02661	28.06.06
USA 10/529,367	"	28.03.05	US2006/0150680	13.07.06	US8,784,932	22.07.14
UV INKJET Printing of Vision Control Panels (inventor G Roland Hill)						
GB 0503532.4	UV Inkjet Printing of Vision Control Panels	21.02.05				
PCT/GB2006/000601	"	21.02.06	WO2006/087583	24.08.06		
Australia 20060215439	"	21.02.06	AU2006215439	24.08.06	AU2006215439	21.01.10
Canada 2598466	"	21.02.06	CA2598466	24.08.06	CA2598466	12.06.12
EP 06709837.6	"	21.02.06	EP1851062	07.11.07	EP1851062	04.05.16
Austria	"				1851062	
Belgium	"				1851062	
France	"				1851062	
Germany	"				1851062	
Italy	"				1851062	
Netherlands	"				1851062	
Spain	"				1851062	
Switzerland	"				1851062	
United Kingdom	"				1851062	
Japan 2007-555708	"	21.02.06	JP2008-530619	07.08.08		
2011-222283 (new divisional)	"	06.10.11	JP2012-037903	23.02.12	JP5430631	13.12.13
South Africa 2007/6940	"		ZA200706940	20.08.07	ZA200706940	29.10.08
USA 11/816,765	"	21.08.07	US2008-0211866	04.09.08	US8,500,268	06.08.13
Method of Making a Vision Control Panel using CUT FILM (inventor G Roland Hill)						
PCT/IB2006/004217	Method of Making a Vision Control Panel using Cut Film	27.09.06	WO2007/113619	11.10.07		
Japan 2008-532909	"	26.03.08	JP2009510507	12.03.09	JP5290758	14.06.13

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PPM TYPE II Improvements to Printing Superimposed Layers (inventor G Roland Hill)						
USA 60/858,697	Improvements to Printing Superimposed Layers	14.11.06				
USA 12/514,714	"		US2010/0112223	05.06.10		
PCT/IB2007/004462	"	14.11.07	WO2008/084332	17.07.08		
Australia 20070343079	"	14.11.07	AU2007343079	17.07.08	AU2007343079	02.05.13
Brazil PI0718745-9	"	14.11.07	BRPI0718745	03.12.13		
EP 07872072.9	"	14.11.07	EP2097269	09.09.09	EP2097269	25.04.12
Belgium	"				2097269	
France	"				2097269	
Germany	"				2097269	
Switzerland	"				2097269	
United Kingdom	"				2097269	
TRAP SIGN Assembly (inventor G Roland Hill)						
USA 60/938,576	Sign Assembly	17.05.07				
USA 12/122,007	"	16.05.08	US2008/0282591	20.11.08	US8,065,829	29.11.11
Contra Vision® <u>Grayliner</u> ™ CONTRASTING COLORED LINER Vision Control Panels (inventors G Roland Hill and Mark Godden)						
USA 60/941,882	Vision Control Panel Assembly with a Contrasting Colored Liner	04.06.07				
USA 12/663,184	"	04.06.08	US2010/0181020	22.07.10	US8,394,477	12.03.13
PCT/IB2008/052189	"	04.06.08	WO2008/149301	04.06.08		
Australia 2008259392	"	04.06.08	AU2008259392	11.12.08	AU2008259392	24.05.14
Canada 2688609	"	04.06.08	CA2688609	11.12.08	CA2688609	16.02.16
China 200880025306.5	"	04.06.08	CN101754865B	23.06.10	ZL200880025306.5	19.06.13
EP 12169357.6 (new div. app)	"	04.06.08	EP2505376	03.10.12	EP2505376	19.10.16
France	"				2505376	
Germany	"				2505376	
Italy	"				2505376	
Netherlands	"				2505376	
Poland	"				2505376	
United Kingdom	"				2505376	
Hong Kong 10108321.1	"	02.09.10	HK1141768	19.11.10	HK1141768	13.12.13
Japan 2010-510941	"	04.06.08	JP2010529498	26.08.10	JP5802388	28.10.15

APPLICATION NO	TITLE	DATE FILED	PUBLICATION NO	APPL. PUBLISHED	PATENT NO	PATENT GRANTED
Printing Superimposed Layers of CERAMIC Ink in Substantially Exact Registration by Differential Ink Medium THERMAL EXPULSION (inventors G. Roland Hill, R. Schroeder, G. Eaton)						
GB 0823712.5	Printing Layers of Ceramic Ink in Substantially Exact Registration by Differential Ink Medium Thermal Expulsion	31.12.08				
PCT/GB2009/002972	"	29.12.09	WO2010/076563	08.07.10		
Australia 20090334549	"	29.12.09	AU2009334549	28.07.11	AU2009334549	20.02.14
EP09808942.8	"	29.12.09	EP2370268	05.10.11	EP2370268	26.12.12
Austria	"				2370268	
Belgium	"				2370268	
France	"				2370268	
Germany	"				2370268	
Italy	"				2370268	
Spain	"				2370268	
United Kingdom	"				2370268	
Japan 2011-544079	"	29.12.09	JP2012513918	21.06.12	JP5496224	14.03.14
2013-174551 (new divisional)	"	26.08.13	JP2014012411	23.01.14	JP5496400	14.03.14
South Africa 2011/05561	"	28.07.11			ZA2011/05561	27.06.12
USA 13/142,680	"	22.02.12	US2012/0145017	14.06.12	US8,973,501	10.03.15
USA 14/327,060 (continuation)	"	09.07.14	US2014/0318396	30.10.14	US9,168,730	27.10.15

OPEN PERForated Material and Method of Imaging to Form a Vision Control Panel (Inventors: G. Roland Hill and Mark David Godden)

USA 61/505,829	Open Perforated Material and Method of Imaging to Form a Vision Control Panel	08.07.11				
USA 14/131,139	"	09.07.12	US2014/0141197	22.05.14	US9,469,081	18.10.16
PCT/IB2012/001352	"	09.07.12	WO2013008077	17.01.13		
Australia 2016200645(new divisional)	"	09.02.16	AU2016200645	03.03.16		
Canada 2841877	"	09.07.12	CA2841877	17.01.13		
China 201280041979.6	"	09.07.12	CN103826867A	28.05.14	ZL201280041979	12.12.16
EP 12745519.4	"	09.07.12	EP2729312	14.05.14		
Hong Kong 14107600.1	"	25.07.14	HK1194332	17.10.14		
India 862/CHENP/2014	"	09.07.12	IN862CHN2014	03.04.15		

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APPLICATION NO	TITLE	DATE FILED	PUBLICATION NO	APPL. PUBLISHED	PATENT NO	PATENT GRANTED
A. METHOD FOR MAKING UNIDIRECTIONAL GRAPHIC ARTICLE (Inventors Sally J. Bull, Ernest M. Rinehart and Kenneth D. Wilson)						
USA 09/094,895	Method for Making Unidirectional Graphic Article	15.06.98			US6,254,711	03.07.01
PCT/US99/00467 (and any international family member)	"	08.01.99	WO99/65708	23.12.99		
EPC 99902128.0	"	08.01.99		25.04.01	EP 1093418	28.05.03
GB Germany	" "				1093418 69908364T2	
China 99807376.8	"	08.01.99			CN1305416	14.01.04
Japan	"	08.01.99	JP2002-518217		JP4091258	30.01.08
Korea 10-2000-7014079	"	08.01.99			KR10-2001-0052777	16.05.06
B. ONE WAY VISION FILM FOR INK JET PRINTING, PRINTING FILM, AND METHOD FOR PRODUCING THEM (Inventors Tobita Joji and Koide Masaki)						
PCT/JP2007/075232	One Way Vision film for Ink Jet Printing, Printing film, and method for Producing Them	20.12.07	WO2008/078825	31.01.08		
EP 07851120.1	"	20.12.07	EP2103443	23.09.09	EP2103443	24.09.14
France	"					
Germany	"					
Netherlands	"					
Switzerland	"					
United Kingdom	"					
China CN200780047973.9	"	20.12.07			CN101583497	15.08.12
USA 12/520,908	"		US2010/0034995	11.02.10	US8,343,611	01.01.13

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