

### PT-DW6300US PT-DW6300ULS PT-D6000US PT-D6000ULS

DLP<sup>™</sup> Based Projector



PT-DW6300US PT-DW6300ULS









### A New Standard for 1-chip DLP<sup>™</sup> Projectors **Refined Image Quality with Reliablility and Easy Maintenance**

Panasonic 1-chip DLP<sup>™</sup> projectors are brighter and better than ever with a compilation of numerous Panasonic proprietary technologies. The wide-aspect PT-DW6300US/DW6300ULS\* with a brightness of 6.000 lumens, and PT-D6000US/D6000ULS\* with a brightness of 6500 lumens produce vivid colorful images with the aid of the newly engineered RGB Booster. The Dual-Lamp System makes sure that presentations aren't interrupted even if a lamp suddenly burns out. This is joined by the Auto Cleaning Filter, which makes filter cleaning unnecessary for approximately 10,000 hours, for high reliability. Both models offer easy and flexible system configuration.



The specifications are the same as those of the PT-DW6300US and PT-D6000US

### Vivid Picture Quality with High Brightness

#### **RGB Booster Significantly Improves Color Reproduction**

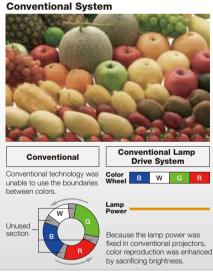
The RGB Booster achieves high image quality with levels of color reproduction (up to 145% that of conventional models) and brightness that make each color stand out. It combines Panasonic's proprietary Vivid Color Control technology with a newly engineered Lamp Modulation Drive System for a 1-chip DLP™ projector that produces bright and vivid colors.

#### Vivid Color Control

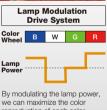
This unique control technology optimizes the use of the color segment areas of the color wheel. It increases the brightness of each RGB color by minimizing the unallocated portions between the colors, to achieve truly vivid coloring.

#### Lamp Modulation Drive System

With the new lamp modulation technology, the projector is now able to control the lamp intensity for each of the red, green, blue, and white segments of the color wheel separately. Because the actual light output is controlled in relation to each color segment, light usage is optimized and color balance is obtained without lowering the brightness. This results in bright vivid images with increased color fidelity.







#### **High Brightness** with New AC Lamp

Our newly-developed 300-watt AC lamps are used in the PT-DW6300US/ D6000US. The high-efficiency light convergence technology and the color wheel work together to achieve the high brightness of 6,000 lm for the PT-DW6300US and 6,500 lm for the PT-D6000US. Clear, crisp images are reproduced even in bright rooms.

#### **Detail Clarity Processor Brings Depth and Clarity to Details**

This advanced image-processing circuit analyzes the video signal frequency range for each scene by extracting data on the distribution of high, mid, and low-frequency components, and brings out fine details accordingly. The resulting images have a more natural, three-dimensional appearance with crisp, clear detail.



Conventional sharpness control: Sharpness is applied uniformly, which can cause a halo or ring effect and diminish the sense of depth.



Detail Clarity Processor Signal frequency is extracted real-time and necessary sharpness is applied at varying degrees for natural, life-like images

#### System Daylight View 2 for Enhanced Color Perception

Image details are less clear when a projector is used in a room with the lights on. Panasonic's System Daylight View 2 improves brightness perception by adjusting sharpness, Gamma curves, and color corrections. This produces crisper, more stunning images with vivid colors even under bright conditions.



**RGB Booster** 

#### **Easy Maintenance and Superior Reliability**

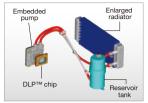
#### **Dual-Lamp System Prevents** Image Interruptions

The Dual-Lamp System increases brightness and eliminates the need to interrupt a presentation if a lamp should burn out (in dual-lamp operation mode). The Lamp Relay mode also operates the lamps alternately to enable 24/7 projector operation.



#### Liquid Cooling System Attains a High Level of Reliability

The liquid cooling system directly cools the DLP™ chip to improve performance and enable operation up to 113°F/45°C. This allows use in a wider variety of environments, while stabilizing performance and keeping the unit quiet even in harsh conditions.



#### Auto Cleaning Filter Reduces **Maintenance Hassles**

The Auto Cleaning Filter (ACF) provides a clean filter surface whenever it senses clogging, and brushes dust from the filter. This enhances the Micro Cut Filter's performance, so no filter replacement is needed for over 10,000 hours\*, reducing maintenance.



Micro Cut Filter An electrostatic filter in the air intake section traps particles that are 1 micron or larger. It guards the optical block and keeps dust from entering the interior to provide stable operation.

The replacement cycle given here is a guideline. It may differ depending on the usage environment.

#### **System Integration Flexibility**

#### Flexible Installation

The wide adjustment range of the powered horizontal/vertical lens shift function assures virtually distortion-free images and adds convenience and versatility. It lets you easily make adjustments with the remote control. The unit can also be rotated 360° vertically. This means you can install it at any angle you want, to accommodate different installation conditions.



an be projected straight down or straight up

#### Side-by-Side Function PT-DW6300US/DW6300ULS

The PT-DW6300US can simultaneously display images from two sources\* onto a single screen. For example, you can display a PC image on the left and

a video image on the right. Taking advantage of the wide-screen projection, this function gives you a host of new application possibilities to explore.

With the wide-aspect-ratio

\*Some source combinations are not supported

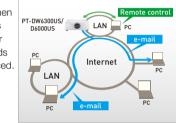


capability, you can project two large 4:3 images side-by-side

#### Web Browser Control/Monitoring and E-mail Message Alert

The PT-DW6300US/D6000US can be easily operated remotely over a LAN network, because it is all done using the computer's familiar web browser. Furthermore, the projector sends an e-mail message

to notify the operator when an error has occurred, or a lamp needs to be replaced.



**PJLink**<sup>®</sup>

#### PJLink<sup>™</sup> Compatibility

The LAN terminals support PJLink™ Class 1 connection, which is highly convenient for system construction.

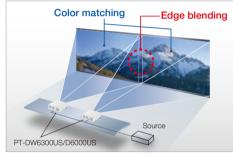
#### Multi Proiector Monitoring & **Control Software**

Panasonic's original "Multi Projector Monitoring & Control" freeware allows the user to control and monitor multiple projectors at the same time via LAN. Projectors can be scheduled to turn on and off at a certain hour everyday. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.

#### **Ecology-conscious Design**

Panasonic works from every angle to minimize environmental impact in the product design, pro and delivery processes, and in the performance of the product during its life cycle. The PT-DW6300US/D6000US reflects the following ecological considerations.

#### Multi-Screen Support System Seamlessly Connects Multiple Screens



#### Edge Blending

The edges of adjacent screens can be blended and their luminance controlled.

#### Color Matching

This function corrects for slight variations in the color reproduction range of individual projectors.

#### Multi-screen Processor

The PT-DW6300US/D6000US can project large, multi-screen images without any additional equipment. Up to 100 units (10 x 10) can be edge-blended at a time.

#### Standby Mode: eco\*

The PT-DW6300US/D6000US has attained a low standby power level of 0.2 W, which is a top-class level in its class. It also helps to slash running costs, and reduces environmental impact.

\*During eco standby mode operation, network functions such as standby-on from a LAN network and the serial output terminal will not operate

#### **Other Features**

•Full 10-bit Signal Processing •3D Color Management System •HD IP Converting Circuitry Digital Signal Noise Reduction Circuitry

 Dynamic Sharpness Control Circuitry Mechanical Lens Shutter •30m Long Range Wireless Remote Control Direct Power Off

- No halogenated flame retardants are used in the cabinet.
- Lamp power switching further reduces power consumption.
  Auto Power Save activates standby mode when no signal is input
- Standby power consumption of only 0.2 W has been achieved.

**Recommended Applications** 



The PT-DW6300US/D6000US boasts superior image quality, flexible installation, and easy maintenance, making either model an ideal choice for use in classrooms, auditoriums, houses of worship, museums, and much more.

#### **Specifications**

Models		PT-DW6300US/DW6300ULS	PT-D6000US/D6000ULS						
Power supply		120 V AC 50/60 Hz							
Power consu	umption	780 W (780 VA), (Standby mode eco*1: 0.2W, Standby mode normal: 8 W. Both with fan stopped.)							
DLP <sup>™</sup> chip	Panel size	0.65" diagonal (16:10 aspect ratio)	0.7" diagonal (4:3 aspect ratio)						
	Display method	DLP <sup>™</sup> chip x 1	, DLP™ system						
	Pixels	1,024,000 (1,280 x 800) x 1, total of 1,024,000 pixels	786,432 (1,024 x 768) x 1, total of 786,432 pixels						
Lens PT-DW6300US/D6000US		Powered zoom/focus lenses (1.8–2.4:1), F 1.7–2.0, f 25.6–33.8 mm							
PT-DW6	6300ULS/D6000ULS	Optional powered zoom/focus lenses							
Lamp		300 W UHM lamps (x 2) (dual lamp system)							
Screen size		50–600 inches (50–200 inches with the ET-DLE055), 16:10 aspect ratio	50–600 inches (50–200 inches with the ET-DLE055 4:3 aspect ratio						
Brightness*2	2	6,000 lumens (dual-lamp, high power mode)	6,500 lumens (dual-lamp, high power mode)						
Center-to-co	orner uniformity*2	90 %							
Contrast*2		2,000:1 (full on/full off,	contrast mode: high)*3						
Resolution		1,280 x 800 pixels (Input signals that exceed this resolution will be converted to 1,280 x 800 pixels.)	1,024 x 768 pixels (Input signals that exceed this						
Scanning	DVI-D	Horizontal: 15–91 kHz, Vertical: 50–85 Hz, Dot clock: 162 MHz or lower							
frequency	RGB	Horizontal: 15–91 kHz, Vertical: 50–85 Hz, Dot clock: 150 MHz or lower							
	YPBPR (YCBCR)	525i (480i), 625i (576i), 525p (480p), 625p (576p), 750 (720)/60p, 750 (720)/50p, 1035/6 1125 (1080)/60i, 1125 (1080)/50i, 1080/25p, 1080/24p, 1080/24p, 1080/24p, 1080/30p, 1080/60p, 10							
	S-Video/Video	Horizontal: 15.75/15.63 kHz, Vertical: 50/60 Hz, (NT	SC, NTSC4.43, PAL, PAL60, PAL-N, PAL-M, SECAN						
Optical axis shift		Vertical: +60 % (powered), horizontal: ±10 % (powered) Vertical: +50 % (powered), horizontal: ±10 % (powered)							
Keystone correction range		Vertical: ±40° (±30° with the ET-DLE055)							
Installation		Ceiling/floor, front/rear							
Terminals*4	DVI-D IN		24-pin						
	RGB 1/YPBPR IN	BNC x 5							
	RGB 2/YPBPR IN	D-sub HD 15-pin							
	VIDEO IN		VC						
	S-VIDEO IN	Mini DIN 4-pin							
	SERIAL IN	D-sub 9-pin (RS-	-232C compliant)						
	SERIAL OUT	D-sub	9-pin						
	REMOTE 1 IN	M3	jack						
	REMOTE 1 OUT	M3 jack							
	REMOTE 2 IN	D-sub	9-pin						
	LAN	RJ-45 for network connection, 10Base-	T/100Base-TX, compliant with PJLink™						
Power cord	length	9'10" (3.0 m)							
Cabinet mat		Molded	Molded plastic						
Dimensions (W x H x D) PT-DW6300US/D6000US		19-19/32" x 6-7/8" x 17-5/16" (498 mm x 175 mm x 440 mm) (with supplied lens)							
PT-DW6300ULS/D6000ULS		19-19/32" x 6-7/8" x 17" (498 mm x 175 mm x 432 mm) (without lens)							
Weight*5 PT-DW6	6300US/D6000US	Approx. 35.3 lbs (16.0 kg) (with supplied lens)							
PT-DW6	6300ULS/D6000ULS	Approx. 33.5 lbs (15.2 kg) (without lens)							
Operating te	mperature	32-113°F (0-45°C)							
Operating hu	umidity	20-80 % (no condensation)							
Supplied acc	recepties	Dower cord, Wireloog/wired remote control up	it, Batteries for remote control (x 2), Wire rope						

During eCo standoy indee operation, network functions such as standoy-on mona 2 by network and use and output terminar with output operate. \*2 Measurement, measuring conditions, and method of notation all comply with ISO 2111B international standards. \*3 Brightness: 3000 lumens (PT-DW6300US/D%0300US), 3,250 lumens (PT-D6000US/D6000ULS), \*4 The HD/SYNC and Vb inputs do not accept the tri-level sync signal. \*5 Average value. May differ depending on models.

#### **Multiple terminals**

1 LAN Terminal	Remote 1 Input	0	00		4	6	Ģ
<ul> <li>2 Video Input</li> <li>3 S-Video Input</li> <li>4 RGB 1 Input</li> <li>5 RGB 2 Input</li> </ul>	and Output 3 Remote 2 Input 9 Serial Input 10 Serial Output						
6 DVI-D (HDCP C	ompatible) Input		0	8	9	0	

#### **Optional accessories**



## Panasonic

#### **Black color models**

Models	PT-DW6300UK/D6000UK	PT-DW6300ULK/D6000ULK					
Color variation	0	0					
	Black	Black					
Lens	Included	Not included					
Special order	Yes	Yes					
*The specifications are the same as those of the PT-DW6300US and PT-D6000US.							

**Dimensions**  $(\bigcirc)$ 75 (6-7) 498 (19-19/32)



#### **Projection distance**

PT-DW	6300U scree	en size (16:1	10)		Throw distance						
Diagonal			With supplied lens		With ET-DLE250 2.4-3.8:1		With ET-DLE350 3.8-5.7:1		With ET-DLE450		With
image size	1.4-2 min.	2.0:1 max.	min.	mov	2.4-3 min.	3.8:1 max.	3.8- min.	5.7:1 max.	5.6-9.0:1 min. max.		ET-DLE055 0.8:1
	1.447mm	2.116mm	1.922mm	max. 2.557mm	2.542mm			6.112mm	5.957mm		871mm
50"	4.8'	7.0	6.4'	8.4'	8.4	13.4	13.2	20.1	19.6	31.5'	2.9'
80"	2,348mm 7.8'	3,416mm 11.3'	3,114mm 10.3'	4,130mm 13.6'	4,116mm 13.6'	6,548mm 21.5'	6,479mm 21.3'	9,860mm 32.4'	9,711mm 31.9'	15,531mm 51.0'	1,423mm 4.7'
100"	2,949mm 9.7'	4,282mm 14.1'	3,909mm 12.9'	5,178mm 17.0'	5,165mm 17.0'	8,204mm 27.0'	8,133mm 26.7'	12,359mm 40.6'	12,215mm 40.1'	19,488mm 64.0'	1,791mm 5.9'
150"	4,450mm 14.6'	6,448mm 21.2'	5,896mm 19.4'	7,799mm 25.6'	7,787mm 25.6'	12,346mm 40.6'	12,266mm 40.3'	18,605mm 61.1'	18,473mm 60.7'	29,382mm 96.4'	2,710mm 8.9'
200"	5,952mm 19.6'	8,614mm 28.3'	7,884mm 25.9'	10,420mm 34.2'	10,410mm 34.2'	16,488mm 54.1'	16,400mm 53.9'	24,852mm 81.6'	24,731mm 81.2'	39,276mm 128.9'	3,629mm 12.0'
300"	8,955mm 29.4'	12,946mm 42.5'	11,858mm 39.0'	15,662mm 51.4'	15,654mm 51.4'	24,771mm 81.3'	24,668mm 81.0'	37,345mm 122.6'	37,248mm 122.3'	59,063mm 193.8'	_
400"	11,958mm 39.3	17,278mm 56.7'	15,832mm 52.0'	20,903mm 68.6'	20,899mm 68.6'	33,055mm 108.5'	32,936mm 108.1'	49,838mm 163.6'	49,764mm 163.3'	78,850mm 258.7'	_
500"	14,960mm 49.1'	21,610mm 70.9'	19,807mm 65.0'	26,145mm 85.8'	26,144mm 85.8'	41,338mm 135.7'	41,203mm 135.2'	62,331mm 204.5'	62,280mm 204.4'	98,637mm 323.7'	_
600"	17,963mm 59.0'	25,942mm 85.2'	23,781mm 78.1'	31,387mm 103.0'	31,389mm 103.0'	49,622mm 162.9'	49,471mm 162.4'	74,824mm 245.5'	74,797mm 245.4'	118,425mm 388.6'	=
PT-DW	6300U scree	en size (16:9	3)								
50"	1,489mm 4.9'	2,176mm 7.2'	1,977mm 6.5'	2,630mm 8.7'	2,615mm 8.6'	4,178mm 13.8'	4,114mm 13.5'	6,286mm 20.7'	6,131mm 20.2'	9,870mm 32.4'	897mm 3.0'
80"	2,415mm 8.0'	3,512mm 11.6'	3,203mm 10.6'	4,246mm 14.0'	4,233mm 13.9'	6,732mm 22.1'	6,663mm 21.9'	10,138mm 33.3'	9,990mm 32.8'	15,971mm 52.4'	1,464mm 4.9'
100"	3,032mm 10.0'	4,403mm 14.5'	4,020mm 13.2'	5,324mm 17.5'	5,311mm 17.5'	8,435mm 27.7'	8,362mm 27.5'	12,706mm 41.7'	12,563mm 41.3'	20,038mm 65.8'	1,842mm 6.1'
150"	4,576mm 15.1'	6,629mm 21.8'	6,062mm 19.9'	8,017mm 26.4'	8,006mm 26.3'	12,692mm 41.7'	12,611mm 41.4'	19,126mm 62.8'	18,995mm 62.4'	30,207mm 99.2'	2,786mm 9.2'
200"	6,119mm 20.1'	8,855mm 29.1'	8,105mm 26.6'	10,711mm 35.2	10,701mm 35.2'	16,948mm 55.7'	16,860mm 55.4'	25,546mm 83.9'	25,427mm 83.5'	40,376mm 132.5'	3,731mm 12.3'
300"	9,205mm 30.3'	13,307mm 43.7'	12,189mm 40.0'	16,099mm 52.9'	16,092mm 52.8'	25,462mm 83.6'	25,358mm 83.2'	38,387mm 126.0'	38,292mm 125.7'	60,713mm 199.2'	=
400"	12,292mm 40.4'	17,760mm 58.3'	16,274mm 53.4'	21,486mm 70.5'	21,482mm 70.5'	33,976mm 111.5'	33,855mm 111.1'	51,227mm 168.1'	51,156mm 167.9'	81,051mm 266.0'	_
500"	15,378mm 50.5'	22,212mm 72.9'	20,359mm 66.8'	26,874mm 88.2'	26,873mm 88.2'	42,490mm 139.5'	42,353mm 139.0'	64,068mm 210.2'	64,020mm 210.1'	101,388mm 332.7'	=
600"	18,464mm 60.6'	26,665mm 87.5'	24,444mm 80.2'	32,261mm 105.9'	32,264mm 105.9'	51,004mm 167.4'	50,850mm 166.9'	76,908mm 252.4'	76,885mm 252.3'	121,725mm 399.4'	=
PT-D60	00U screen	size (4:3)									
Diagonal	With ET-	DLE150	With supp	olied lens	With ET-	DLE250	With ET-	DLE350	With ET-	DLE450	With

Diagonal	With ET-DLE150		With supplied lens		With ET-DLE250		With ET-DLE350		With ET-DLE450		With
image	1.3-2.0:1		1		2.4-3.7:1		3.7-5.6:1		5.5-8.9:1		ET-DLE055
size	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	0.8:1
50"	1,344mm 4.5'	1,967mm 6.5'	1,785mm 5.9'	2,376mm 7.8'	2,361mm 7.8'	3,777mm 12.4'	3,713mm 12.2'	5,681mm 18.7'	5,525mm 18.2'	8,912mm 29.3'	808mm 2.7'
80"	2,183mm 7.2'	3,177mm 10.5'	2,895mm 9.5'	3,840mm 12.6'	3,826mm 12.6'	6,090mm 20.0'	6,023mm 19.8'	9,170mm 30.1'	9,020mm 29.6'	14,438mm 47.4'	1,322mm 4.4'
100"	2,742mm 9.0'	3,983mm 13.1'	3,635mm 12.0'	4,816mm 15.9'	4,803mm 15.8'	7,633mm 25.1'	7,562mm 24.9'	11,496mm 37.8'	11,351mm 37.3'	18,123mm 59.5'	1,664mm 5.5'
150"	4,140mm 13.6'	6,000mm 19.7'	5,485mm 18.0'	7,256mm 23.9'	7,244mm 23.8'	11,489mm 37.7'	11,411mm 37.5'	17,312mm 56.8'	17,177mm 56.4'	27,333mm 89.7'	2,519mm 8.3'
200"	5,537mm 18.2'	8,016mm 26.3'	7,335mm 24.1'	9,696mm 31.9'	9,686mm 31.8'	15,344mm 50.4'	15,259mm 50.1'	23,127mm 75.9'	23,004mm 75.5'	36,544mm 119.9'	3,375mm 11.1'
300"	8,333mm 27.4'	12,049mm 39.6'	11,035mm 36.3'	14,576mm 47.9'	14,568mm 47.8'	23,056mm 75.7'	22,956mm 75.4'	34,758mm 114.1'	34,656mm 113.8'	54,966mm 180.4'	=
400"	11,129mm 36.6'	16,082mm 52.8'	14,735mm 48.4'	19,456mm 63.9'	19,451mm 63.9'	30,768mm 101.0'	30,653mm 100.6'	46,389mm 152.2'	46,309mm 152.0'	73,387mm 240.8'	_
500"	13,924mm 45.7'	20,115mm 66.0'	18,435mm 60.5'	24,336mm 79.9'	24,334mm 79.9'	38,480mm 126.3'	38,350mm 125.9'	58,020mm 190.4'	57,961mm 190.2'	91,809mm 301.3'	=
600"	16,720mm 54.9'	24,148mm 79.3'	22,135mm 72.7'	29,216mm 95.9'	29,217mm 95.9'	46,192mm 151.6'	46,047mm 151.1'	69,651mm 228.6'	69,614mm 228.4'	110,231mm 361.7'	_

#### NOTES ON USE

Notes on usal the projector in locations that are subject to excessive water, humidity, steam, or oily smoke. Doing so may result in fire, maifunction, or electric shock.
The projector uses a high-valtage lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
The projector uses a high-valtage lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
The projector uses a high-valtage lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
Never place objects on to of the morther for the purpose of multiple (stacked) projector. When stacking projector units, he sure to provide the amount of space indicated between them. These space requirements also apply to installation where only one projector units is due to be more enclosure, temperature of the air surrounding the projector mults to greating atome time and the other units used as a backyo.
If the projector is placed in a box or enclosure, temperature of the air surrounding the projector mults. The substace the control is used as a backyo.
If the projector is black in a box or enclosure, temperature of the air surrounding the projector mults between 10° (26 27 ) and 40° (104 7 h, Jko make as rule there observed in the advector in the advector engines as on to bocket. Take particular care to ensure that hot afrom the advector that may care the protector with the advector advec

For more information about Panasonic projectors -Authorised dealer: Wedgwood AV. Tel 01754 769967

Please contact Panasonic or your dealer



Weights and dimensions shown are approximate. Specifications are subject to change without notice. This product may be subject to export regulations. An application has been filed for trademark rights, or trademark or thermational Business Machines Corporation. All other trademarks are the property of their respective trademark or registreen trademarks or treas instruments. DLP, DLP logo and DLP Medalion logo are trademarks or registreen trademarks or treas instruments. (C) 2009 Panasonic Corporation All rights reserved. All information included here is valid as of March 2009. PT-D6KU1-09March P

Home Products

# Welcome to Wedgwood



UK specialist education, medical, government, MOD and business supplier since 1996 with over 9,000 audio visual products



LCD monitors

**SPECIAL OFFER:** Wedgwood AV has partnered with Repeat Software to give you a FREE Repeat Signage V4 Standalone Edition digital signage software licence with any purchase order over £500+VAT.

This means if you purchase goods to the value of £2,000+VAT you receive **4** Repeat Signage licences, each worth £145+VAT.

Medical monitors

Also please check our <u>Special Offers</u> page as we have weekly and monthly offers. Plus FREE delivery for our customers, when quoting code: WAV-V4, on your purchase orders. <u>sales@wedgwood-group.com</u> **Tel: 01754 769967**.

With <u>Repeat Signage V4</u> you can easily create a presentation in minutes for your reception area display screen, to promote your own products, services and activities. Exciting new features in V4 allow page-turning PDF's, conveyor-belt pictures and has touch screen support. <u>www.repeatsoftware.com</u>



Touch screens



<u>Digital signage</u>



Commercial TV



**Projectors** 



**Whiteboards** 



Lecterns



Mounting solutions



Document cameras



<u>Audio solutions</u>