

## Vodafone K.K. Unveils 5 New Models for Summer 2004

*Features include world's first optical zoom camera and built-in TV and FM radio tuners*

**Tokyo, May 10, 2004**—Vodafone K.K. announced today the development of 5 new mobile handsets for summer 2004. The V602SH by Sharp, V601T by Toshiba, V401D by Mitsubishi Electric, V401SA by Sanyo and V402SH by Sharp are scheduled to go on sale after late June in phases.

Among these 5 summer models, the V602SH is the world's first\*<sup>1</sup> mobile handset to feature an optical zoom function. Combined with its high specification 2.02 megapixel autofocus CCD camera, the V602SH approaches the ease-of-use of true digital cameras without compromising the size and functionality of current mobile handsets. To achieve this, the V602SH uses a 'swivel style' design that allows the LCD screen to be reversed 180 degrees. The V602SH also represents a new handset to be commercialized as part of Vodafone K.K.'s new handset design initiative, a process where Vodafone K.K. offers its own original handset style concepts to the market. The main theme of this design project was to provide a handset that not only focuses on exterior design, but also takes into consideration enhanced services, functionality and usability for new methods of use and lifestyles.

The V602SH and V601T are the first 2G handsets in Japan that can play Chaku-uta<sup>®</sup> ringsongs and also feature a multitude of new features and services such as Movie Mask facial motion capture technology, Keitai Karaoke V-kara to let customers enjoy karaoke by connecting to a TV and 256K Ver. 2 Java applications for high-speed mobile games with beautiful graphics.

The new handset lineup also meets various customer needs with notable features such as the V402SH's built-in analog TV tuner, the V401SA's FM radio tuner and V401D's Super CCD Honeycom camera capable of recording 2.00 megapixels and a control pad that can be operated by finger tracing, an industry first\*<sup>2</sup>.

For more information on the 5 new models for summer 2004, please see the attached appendixes.

\*1: As of May 10, 2004

\*2: As of May 10, 2004 in Japan (according to Mitsubishi Electric)

## **About Vodafone K.K.**

Vodafone K.K., formerly J-PHONE Co., Ltd., is a leading mobile operator in Japan with over 15 million customers and a subsidiary of Vodafone Group Plc, the world's largest mobile community. The Tokyo-based company offers a wide range of sophisticated mobile voice and data services including Vodafone live!, which provides e-mail and internet access to 86% of its customers, and Sha-mail, the pioneering picture messaging service first introduced in November 2000 that now has over 11 million users. In December 2002, Vodafone K.K. launched the world's first commercial 3G W-CDMA service based on 3GPP, the international standard. Vodafone K.K.'s 3G service offers its customers fast data speeds in Japan and roaming on 127 networks in 93 countries and regions as of April 19, 2004. For more information, please visit [www.vodafone.jp](http://www.vodafone.jp)

- The V602SH, V601T, V401D, V401SA and V402SH are available in the Japanese market only for use on Vodafone K.K.'s PDC network.
- Chaku-uta® is a trademark of Sony Music Entertainment Inc.
- Movie Mask is powered by N-Vision's Virtual Accessory Engine.
- Super CCD Honeycom is a registered trademark of Fuji Photo Film, Co. Ltd.
- Powered by JBlend™.
- Java and Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.
- JBlend and all JBlend-based trademarks and logos are trademarks or registered trademarks of Aplix Corporation in Japan and other countries.
- V-appli compatible Vodafone K.K. handsets are powered by JBlend®, developed by Aplix Corporation, to speed up the execution of Java™ applications.
- V-appli and Movie Mask are trademarks or registered trademarks of Vodafone K.K.
- Vodafone and the speech mark symbol are trademarks or registered trademarks of Vodafone Group Plc.
- Vodafone Group is the world's leading mobile carrier and as of the end of December 2003, had equity interests in 26 countries and 327.1m venture customers, with a further eleven partner networks.

## Main Features of the V602SH (Manufactured by Sharp)

## Appendix 1

### - World's first optical zoom

The V602SH is the world's first mobile handset to feature an optical zoom function. Combined with its high specification 2.02 megapixel autofocus CCD camera, the V602SH can be used as a true digital camera in a variety of settings. The handset can also capture or play high-quality video at a maximum QVGA size (320 x 240 pixels) at 15 frames per second. By connecting the handset to a TV, customers can also enjoy viewing their photos and video on a larger screen.

### - Swivel Style for taking pictures while handset is closed

The V602SH approaches the ease-of-use of true digital cameras without compromising the size and functionality of current mobile handsets. To achieve this aim, the V602SH uses a 'swivel style' design that allows the LCD screen to be reversed 180 degrees. The V602SH also represents a new handset to be commercialized as part of Vodafone K.K.'s new handset design initiative, a process where Vodafone K.K. offers its own original handset style concepts to the market. The main theme of this design project was to provide a handset that not only focuses on exterior design, but also takes into consideration enhanced services, functionality and usability for new methods of use and lifestyles.

### - Movie Mask and other fun features

The V602SH is compatible with Movie Mask, a feature that lets customers append hats, neckties, teardrops and other fun items to faces that are captured on video with the handset's camera. The morphed images can be saved as still photo\* and video\* files and attached to mails. In addition, the V602SH supports a multitude of other features such as the first Chaku-uta<sup>®</sup> ringsongs available on 2G networks in Japan and Keitai Karaoke V-kara for enjoying karaoke by connecting to a TV. The handset also has 64 ring tone voices for greater enjoyment of call alerts along with Chaku-uta<sup>®</sup>. The V602SH also features the industry's first T4G graphics accelerator chip and Mascot Capsule Ver. 4 3D polygon engine for 256K appli Ver. 2 compatibility in order to offer extremely realistic and speedy game applis.

## Main Specifications\*

Size (Width x Height x Thickness)	Approx. 50 x 98.5 x 24.9mm (when folded)	
Weight	Approx. 132g	
Continuous talk time/standby time	Approx. 130 min./approx. 400 hours (when folded)	
Display	2.4-inch (320 x 240 pixel) System LCD (max. 260,000 colors)	
Mobile camera	Pixels/type	2.02 million effective pixels/CCD
	Zoom	Optical 2x zoom, max. 40x digital zoom (in 120 x 160 resolution, combined with optical and digital zoom)
Ring tone voices	64	
External memory	SD Memory Card	
Other main features	V-appli (256K appli ver. 2) support, music player* <sup>1</sup> , Bowlingual Connect dog bark translator, weather indicator, bilingual menus, bar code reading and composition	
Handset colors	Ceramic White (pictured), Jet Blue, Ruby Red	

\*Above specifications are subject to change as the V602SH is currently in development

\*1: Music key download (charged) required to use Music Player

## Availability

After late June 2004

- Loads of features for enjoying Chaku-uta®

The V601T is compatible with Chaku-uta® ringsongs so customers can download the songs of their favorite artists and set them as call alerts. To make the Chaku-uta® listening experience even more enjoyable, the V601T features a large 20mm front speaker. Other features include a special player for easy playback of Chaku-uta® while the handset is closed and an 'intro quiz' function that plays the first parts of Chaku-uta® ringsongs. Call alerts have also been made even more enjoyable since the V601T can play ringtones with 64 voices. In addition, the V601T comes with a multitude of features such as Movie Mask facial motion capture technology and Keitai Karaoke V-kara for enjoying karaoke singing by connecting to a TV. A special microphone is also included on the side of the handset for singing karaoke.

- 256K appli Ver. 2 support for realistic and speedy 3D games

To enjoy 256K appli Ver. 2 game applis that are even faster and more realistic than previous ones, the V601T features the T4G graphics accelerator chip and Mascot Capsule Ver. 4. Customers can also enjoy authentic 3D games on a wide screen by connecting the handset to a TV.

\*For TV output compatible V-applis are required

- Video recording at QVGA size and 15 frames per second

The V601T features video recording features that allow a maximum QVGA (320 x 240 pixels) size and 15 frames per second for high-quality video. Captured photos and video can be displayed on a large screen by connecting the handset to a TV.

**Main Specifications\***

Size (Width x Height x Thickness)		Approx. 49 x 94 x 24mm (when folded, excluding antenna protrusion)
Weight		Approx. 119g
Continuous talk time/standby time		Approx. 120 min./approx. 330 hours (when folded)
Display	Main	2.2-inch (320 x 240 pixel) Super Fine Poly-silicon TFT LCD (max. 260,000 colors)
	Sub	1-inch (112 x 112 pixel) TFCC LCD (max. 65,000 colors)
Mobile camera	Pixels/type	1.30 million effective pixels/CMOS
Ring tone voices		64
External memory		SD Memory Card
Other main features		V-appli (256K appli ver. 2) support, Mobile Rupo, Multi-window mail viewing function, weather indicator, bilingual menus, barcode reading and composition
Handset colors		Orange (tentative name, pictured), White (tentative name), Navy Black (tentative name)

\*Above specifications are subject to change as the V601T is currently in development

**Availability**

After mid-July 2004

- Super CCD Honeycom camera can record 2.00 megapixels

The V401D's back side features a Super CCD Honeycom camera capable of recording 2.00 megapixels. The handset also comes with multiple lens covers to protect the camera lens and the camera can be activated instantly by opening the cover. The V401D can also record up to 60 seconds of video in addition to still photographs.

- Industry's first control pad operated by finger tracing

The V401D features a control pad on its side so a customer can easily operate functions like screen scrolling and camera zoom by finger tracing. The handset also comes with a jump touch feature that allows one to record often-used functions under different tracing methods so desired functions can be called up instantly.

- Two vivid LCD displays

The main display of the V401D is a 2.2-inch QVGA LCD and the sub-display features a large-size 1.3-inch QQVGA (160 x 120 pixel) LCD. These displays can be used conveniently as view finders and can display photos in more vivid detail than before. In addition, lengthy mails can be easily read on the sub-display even when the handset is closed.

**Main Specifications\***

Size (Width x Height x Thickness)		Approx. 50 x 103 x 24mm (when folded)
Weight		Approx. 115g
Continuous talk time/standby time		Approx. 130 min./approx. 400 hours (when folded)
Display	Main	2.2-inch (320 x 240 pixel) TFT LCD (max. 260,000 colors)
	Sub	1.3-inch (160 x 120 pixel) TFCC LCD (65,536 colors)
Mobile camera	Pixels/type	2.00 million recorded pixels/Super CCD Honeycom
	Zoom	1-20x linear zoom
Ring tone voices		40
External memory		SD Memory Card
Other main features		V-appli (50K) support, bilingual, weather indicator, bar code reading and composition
Handset colors		Cyber Green (pictured), Samurai Red, Metal Silver

\*Above specifications are subject to change as the V401D is currently in development

**Availability**

After late June 2004

- Built-in FM radio tuner

The V401SA features a built-in FM radio tuner for the enjoyment of high sound quality\* stereo FM broadcasts. The tuner can also receive the audio of TV channels 1-3 in addition to FM radio.

\*Vodafone K.K. comparison. FM radio subject to interference according to usage environment.

- Advanced slide style design

The V401SA uses a thin slide style design that is approximately 20mm thick. The handset also features a large 2.4-inch QVGA LCD that can vividly display photos taken with the built-in CMOS camera of 1.30 effective megapixels.

- High capacity for saving photos, easy printing

The V401SA comes with a high-capacity 12MB data folder so many photos can be saved to memory. In addition, the V401SA is compatible with Pict Bridge so one can make print outs by directly connecting to a printer.

**Main Specifications\***

Size (Width x Height x Thickness)		Approx. 49 x 108 x 20mm (when closed)
Weight		Approx. 113g
Continuous talk time/standby time		Approx. 120 min./approx. 350 hours (when closed)
FM radio continuous play time		Maximum of approx. 40 hours (after full battery charge)
Display		2.4-inch (320 x 240 pixel) TFT LCD (65,536 colors)
Mobile camera	Pixels/type	1.30 million effective pixels/CMOS
Ring tone voices		40
Other main features		Bilingual menus, weather indicator
Handset colors		Club Khaki (pictured), Spray White, Trick Orange

\*Above specifications are subject to change as the V401SA is currently in development

**Availability**

After mid July 2004

- Analog TV tuner

The V402SH features a built-in terrestrial analog TV tuner so one can view television programming while on the go and its 2.2-inch QVGA LCD high-quality display makes for comfortable TV watching. In addition, one can listen to FM radio broadcasts by using the analog TV tuner.

\*TV reception varies on strength of signal and in some cases TV visuals or audio may encounter static or not be received. The TV tuner cannot be used outside Japan due to differing broadcast frequencies.

\*FM radio subject to interference according to usage environment.

- Swivel Style

The V402SH uses a 'swivel style' design that allows the LCD screen to be reversed 180 degrees. By reversing the screen, one can watch TV horizontally on the large screen while the handset is closed. In addition, the back side features a CCD camera that can record 1.30 million effective pixels and the reversible LCD screen can be used as a viewfinder when the handset is closed. The V402SH excels as a novel handset both for comfortable TV viewing and camera features that are easy to use.

- Picture postcard and other applications

The V402SH comes with a Postcard Maker application that allows one to easily make postcards using photographs saved to memory and a host of other fun photo applications for processing pictures are also included.

**Main Specifications\***

Size (Width x Height x Thickness)	Approx. 50 x 98 x 26.5mm (when folded)	
Weight	Approx. 129g	
Continuous talk time/standby time	Approx. 130 min./approx. 400 hours (when folded)	
TV/FM radio continuous play time	Maximum of approx. 60 min. (after full battery charge)	
Display	2.2-inch (320 x 240 pixel) System LCD (max. 260,000 colors)	
Mobile camera	Pixels/type	1.30 million effective pixels/CCD
Ring tone voices	40	
External memory	SD Memory Card	
Other main features	V-appli (50K appli) support, bilingual menus, weather indicator, bar code reading and composition	
Handset colors	Frozen Pink (pictured), Prism Beige, Sherbet Blue	

\*Above specifications are subject to change as the V402SH is currently in development

**Availability**

After late July 2004

## **V602SH**

Ceramic White  
(Manufactured by Sharp)



## **V601T**

Orange (Tentative Name)  
(Manufactured by Toshiba)



## V401D

Cyber Green  
(Manufactured by  
Mitsubishi Electric)



## V401SA

Club Khaki  
(Manufactured by Sanyo)



# V402SH

Frozen Pink  
(Manufactured by Sharp)



## Summer 2004 Models

(from left, V401D, V401SA, V402SH, V601T, V602SH)