

Styling Design of STEP WGN

Tatsuya AKIMARU*

Satoshi KAZAMA*

Satoshi UCHIDA*

Mie KOBAYASHI*

ABSTRACT

The newly released fourth-generation STEP WGN is the result of a full model change based on the concept of a “minivan maximizing comfort for everyone.” It was developed as a product creating lifestyle richness with greater functionality and space than users expect in a “5 number” (small class) utility minivan.

“Friendly Max” was chosen as the keywords for the design development.

The STEP WGN’s exterior design was conceptualized for spaciousness, ease of use and simplicity. Honda has achieved a “Friendly Max Exterior” that is at once functional, yet is simple and warm with rich surfaces, projecting fenders and a lively-looking form taking advantage of the minivan’s square frame. It gives the impression, at first glance, of a large space and the generous amount of glass surface-area evocative of the joy of driving.

The interior design uses the same concepts of spaciousness, ease of use and simplicity to achieve a “Friendly Max Interior” that embodies both functionality and friendly-feeling qualities with a form that projects both space and usability at first glance, and a display and operating system that anyone can see and use with ease. Color designs, moreover, were chosen to draw out these characteristics.

1. Introduction

The first-generation STEP WGN debuted in 1996 as a new form of family car to let families enjoy their weekends to the fullest. It became the first “5 number” (small class) FF utility minivan and created a new market in Japan.

Subsequent generations of the STEP WGN have adopted a “low floor/low center of gravity frame” that retains that same interior spaciousness while lowering the floor and enhancing cruising stability and day-to-day usability.

The latest full model change was conceptualized to take advantage of the low floor/low center of gravity frame and thereby create a tool with remarkable convenience and friendly-feeling offering maximum spaciousness and day-to-day usability in a 5 number minivan (Fig. 1).



Image not displayed for copyright reasons.

Fig. 1 Approach to development

* Automobile R&D Center

Taking “Friendly Max” as the design keywords, lifestyle richness was sought to be created in the new STEP WGN for the target family users by putting them front and center under the concept of spaciousness, ease of use and simplicity (Fig. 2).



Fig. 2 Design concept

2. Package Layout

As a convenient tool to enrich family life, the STEP WGN aims to provide maximum space and excellent usability in a 5 number minivan based on a low floor/low center of gravity package.

The package retains the door openings that rise from a low floor with no steps as used in earlier generations of the STEP WGN, while setting an overall height so that the interior would be high enough for a small child to walk without bending down between the first and third rows. Overall length is 4690 mm, the maximum for a 5 number vehicle. The minivan offers the maximum spaciousness in a 5 number FF utility minivan with 8 seats (Fig. 3).

The wider, horizontally toned window surface areas and increased head clearance (accomplished by an increase in overall height by 45 mm compared to the previous model) create an open feel where every seat offers a good view as well as comfort.

The back-edge position of the second row has been set

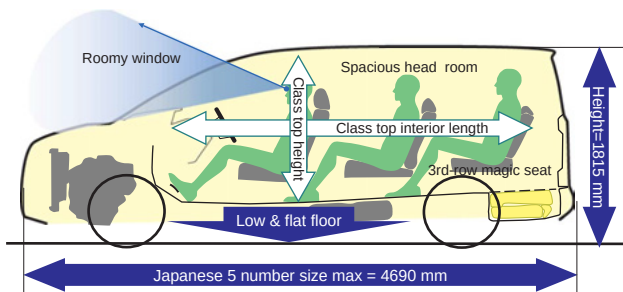


Fig. 3 Vehicle package highlights

100 mm farther back than in the previous model, and the rear-seat door opening was given bigger dimensions to ease access for young children and elderly passengers (Fig. 4).

Trunk room is a vital function of a minivan, and the STEP WGN aims to provide not only storage space for everything from daily purchases to bicycles, but a square area that functions as a new “living space,” along with a first-in-class third row that tucks into the floor (Fig. 5).

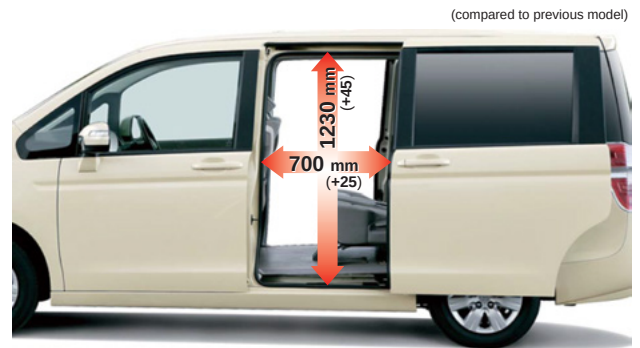


Fig. 4 Easy rear sliding door access



Fig. 5 For my family room

3. Exterior Design

To achieve the “Friendly Max Exterior,” Honda aimed to use the concepts of spaciousness, ease of use and simplicity to create a new frame not previously available in a 5 number utility minivan.

The basic motif was to surround passengers in the long-loved “simple” style consisting of a square “box section” which, with just a glance at the exterior, gives the impression of being able to hold plenty of cargo, and a “glassy-surround cabin” enclosed by large, horizontally toned windows to keep the interior bright and make driving feel easier and more enjoyable (Fig. 6).

The “dynamic form” based on this frame that gives the impression of a refreshing and pleasant drive is brought to life by a roof line with a smooth profile that looks like wings in cross-section, a rear bumper that angles upward,

and character lines that run up to the edge of the tailgate. In addition, the use of wide grooves to make the front and rear fenders appear to stretch beyond their actual dimensions lets the STEP WGN express a “wide tread” for the feeling of stable and confidence-inspiring driving (Fig. 7).

By working on such characteristics, including carefully examining the processing of pliant-tension, high-quality surfaces and corner parts, the STEP WGN aims to express a new sense of functionality giving a warmer, more people-friendly impression of a family car while remaining functional and simple.

The front design is built around a solid hood that has the appearance of a strong block of material, the chrome plated grill and headlights are lined up horizontally to seem wide and intrepid, and the large, round, multi-reflector headlights with four lamps aim for a bright, highly functional expression.

The rear design expresses strength and richness with a large three-dimensionally rounded rear window, a pliant-tension rear panel, and a rear bumper designed to appear as if it were in a higher position. Rear combination lamps wrap widely around the side while leaving a generous tailgate opening with the chrome plated housing and inner

lens cut expressing a high-class look. (Figures 8 and 9 show the final rendering.)

The “Friendly Max Exterior” was created as a new design for a 5 number utility minivan that is simple and people-friendly even as the frame gives the appearance of spaciousness, ease of use and functionality. (Figures 10 and 11 show the final exterior design.)



Fig. 8 Final rendering



Fig. 9 Final rendering



Fig. 10 Final exterior



Fig. 11 Final exterior

Friendly Max Exterior

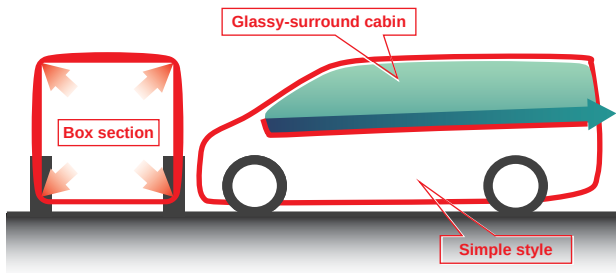


Fig. 6 Exterior design highlights (1)

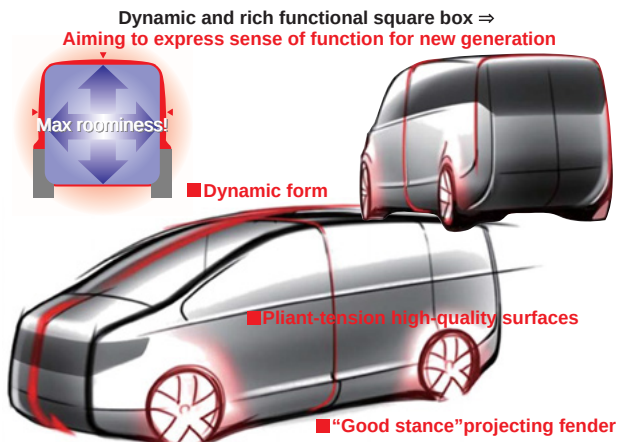


Fig. 7 Exterior design highlights (2)

4. Interior Design

To make the “Friendly Max Interior” a reality, Honda designed for spaciousness, ease of use and simplicity while pursuing all the functionality expected of a 5 number utility minivan (Fig. 12).

The instrument panel aims to provide utility (such as storage), as well as display and operation interfaces. The mass of the upper part is offset with the left side brought closer to the front row and the right pushed forward away from the front row. The space thereby created can function as a tray with the part brought closer to the driver housing the controls to the audio and navigation systems (Fig. 13).

Displays for meters, air conditioner and the like are set farther forward away from the driver, which makes them easier to read instantly and helps to create wider cockpit space. When the vehicle is being driven in a fuel-efficient way, the light in the center ring of the meter changes to green providing instantly comprehensible information on fuel economy.

Another aim was to achieve more intuitive operation of the close-up air conditioner interface by making the switch position consistent with the display position (Fig. 14).

The seats pay attention to lateral space while giving the appearance of a spacious, comfortable place to sit. The third row of seats in particular was designed to provide the function of cargo space when tucked neatly into the floor (Fig. 15).

The door lining was given a clean horizontal tone to increase the sense of space from front to back while providing a convenient place to stow away goods.

To express unprecedented spaciousness, the sky roof with a large opening and the plain wood-like flooring were utilized for greater brightness and pleasant feel (Fig. 16).

Taken together the overall interior space succeeds in creating a “Friendly Max Interior,” a functional space with simple design and all the spaciousness and usability one would expect from a utility minivan (Fig. 17).

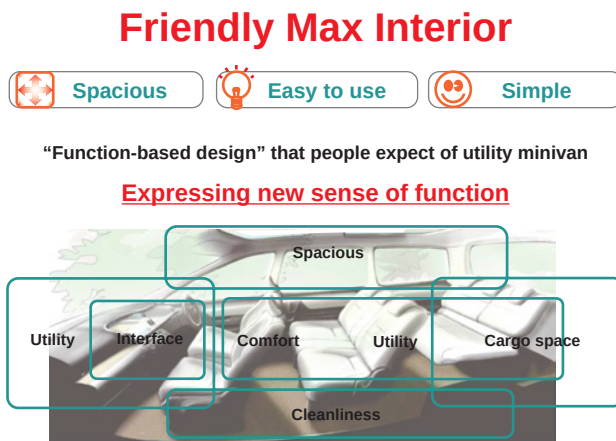


Fig. 12 Approach to interior design

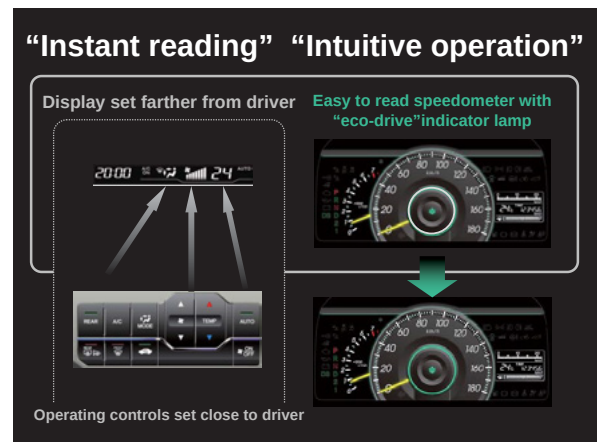


Fig. 14 Driver's interface

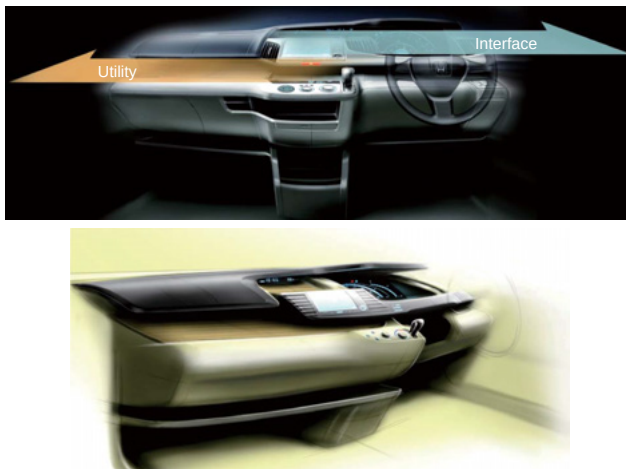


Fig. 13 Instrument panel

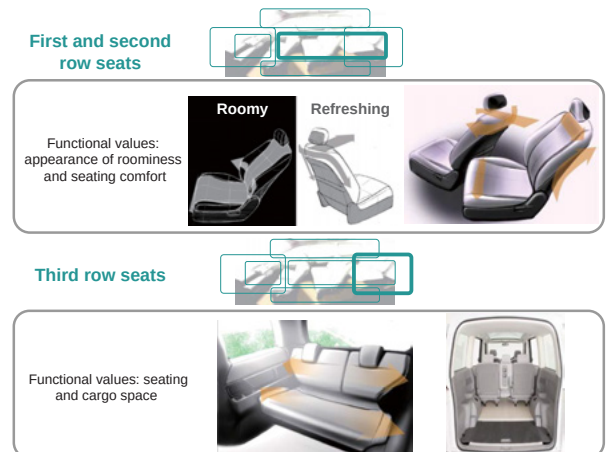


Fig. 15 Seats

Cabin
floor

Fig. 16 Roof and floor



Fig. 17 Final interior

5. Color Design

5.1. Exterior

The styling of the STEP WGN is intended to be warm even as the auto is the functional result of a “box-shaped, people-friendly form with pliant-tension quality surfaces.” The theme of color development was to use the synergy between these characteristics and color to create a tool that is even easier to use and more friendly-feeling.

The theme colors chosen were Premium Hidamari Ivory Pearl and Aozora Blue Metallic: colors that are gentle and fit naturally into people’s family lives.

Expressed with three-coat pearl, Premium Hidamari Ivory Pearl shares some of the composition of bright existing colors that draw out the warmth and brightness of a spot of sunlight while following expressive surface changes that reveal changes in color.

This emphasizes the vehicle’s characteristic warmth and makes the vehicle look larger.

Aozora Blue Metallic simply emphasizes the pliant-tension quality of the new STEP WGN’s forms. Aozora

Blue Metallic has a feeling of depth and a look of transparency which brings out the color of a perfectly clear, blue sky (Fig. 18).

The lineup of other body colors includes Super Platinum Silver (with greater brightness and metallic feel than standard Light Silver), Deep Bordeaux Pearl (refined yet showy), Crystal Black Pearl, White Pearl and Polished Metal Metallic (gunmetal color) (Fig. 19).

5.2. Interior

The aim of the interior’s design was to create “a bright and comfortable space with natural elements,” presenting a spacious area suitable for many different uses.

The colors of the interior were coordinated by contrasting the coloring of the overhead space with that of the utility space below. The color scheme projected images of natural elements throughout the interior, with seat cover and ceiling colors, for example, emphasizing the interior spaciousness of the vehicle (Fig. 20).

The interior colors selected were Gray and Black. Bright Max Ivory pillars and ceiling areas impress the occupants with the interior’s spaciousness enhanced by the floor’s Dark Gray and Black.



Fig. 18 Inspirations for exterior colors

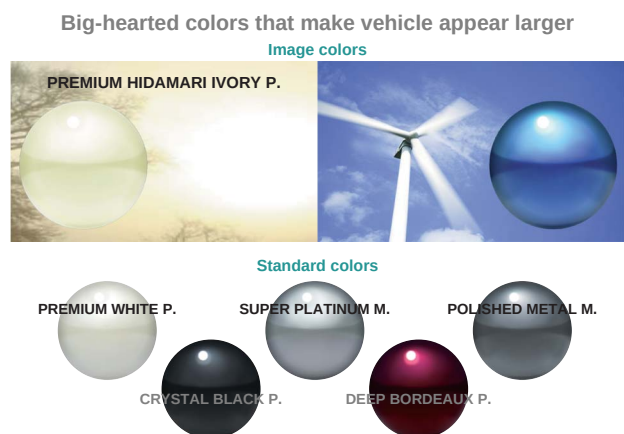


Fig. 19 Exterior color options

The grain of the overall surface evokes an image of layers of sunlight filtering through trees, with the synergy between it and the color coordination presenting a neutral, easy-to-use space (Fig. 21).

Max Ivory was used on the ceiling to maximize the brightness of the overhead space thus giving the occupants a feeling of spaciousness. This color choice makes the light from outdoors look brighter and makes the interior space seem larger than its actual size.

Light Gray and Black were chosen as colors for the seat fabric. Light Gray seats offer two tones of gray, one for the seating surface and one for the back, which brings variety to the space and makes it easier to use.

Patterning was chosen to bring out the interior design's characteristic horizontally toned form and sense of spaciousness, while the horizontal tone itself evokes an image of the wind. The base design is processed to add a sense of depth to the interior while resisting soiling.

The suede tricot fabric is pleasant to the touch.

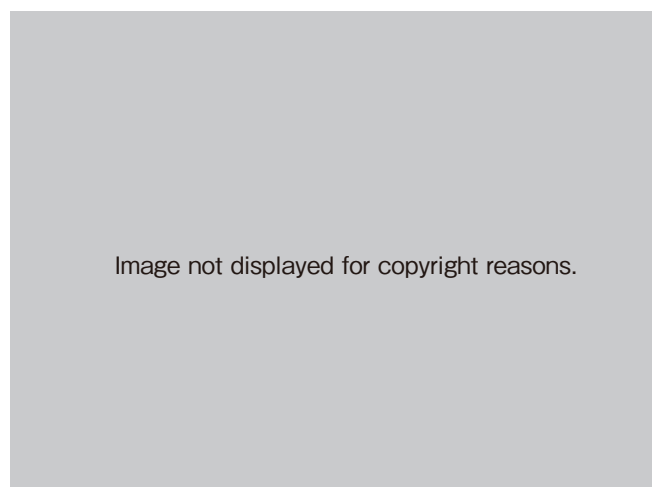


Fig. 20 Interior inspirations



Fig. 21 Coordinated interior color scheme

6. Conclusion

The STEP WGN's debut pioneered a new genre in Japan known as FF 5 number utility minivan. Since then it has continued to offer solutions for family happiness and fun. In its 13 years of evolution, Honda has created minivan value beyond customer expectations with unprecedented spaciousness, usability and economy. The new, people-friendly design of the fourth-generation model brings the high functionality of the vehicle into sharp focus and enhances product appeal.

STEP WGN aims to express a new sense of functionality including: the package layout that offers open feel unprecedented in the class within the frame of 5 number utility minivan and usability as typically seen in the third row of seats that tucks into the floor; the exterior design that gives the impression of a refreshing and pleasant drive in a box shape; the interior design that projects spaciousness and functionality; Color designs that were chosen to draw out the vehicle characteristics with friendly-feeling and comfort.

Honda believes that more customers will come to accept the new STEP WGN as a vehicle that puts the family users front and center while working with them to realize bigger dreams.

■ Author ■



Tatsuya AKIMARU



Satoshi KAZAMA



Satoshi UCHIDA



Mie KOBAYASHI