

MASK

In 1995, a car audio having two vastly different "faces"
— on and off — was born.

The MASK from Kenwood.

It keeps the existence of car audio a secret, while not requiring the
user to do anything.

Where did this breakthrough idea come from, and how did it evolve?

This is where you can uncover the story behind the MASK.



KENWOOD

CONCEPT

Not requiring the user to do anything

One day a few years ago, one of our product planning personnel stationed in Europe had gone to the airport to meet a friend arriving from America, and there he heard an interesting story. In the conversation, the friend said "I want to get an

audio system for my car, but I

won't. Why? Because it's too

much of a hassle to remove the

front panel, and too trouble-

some to have to then carry it

around with you." Of course,

this person's opinion may have been a bit extreme, but it was nevertheless a good starting

point from which to develop a product idea.

There is no denying that in this day and age, where people are carry-

ing around cellular phones and much more, it would be an

extra burden to have them carry their car audio's

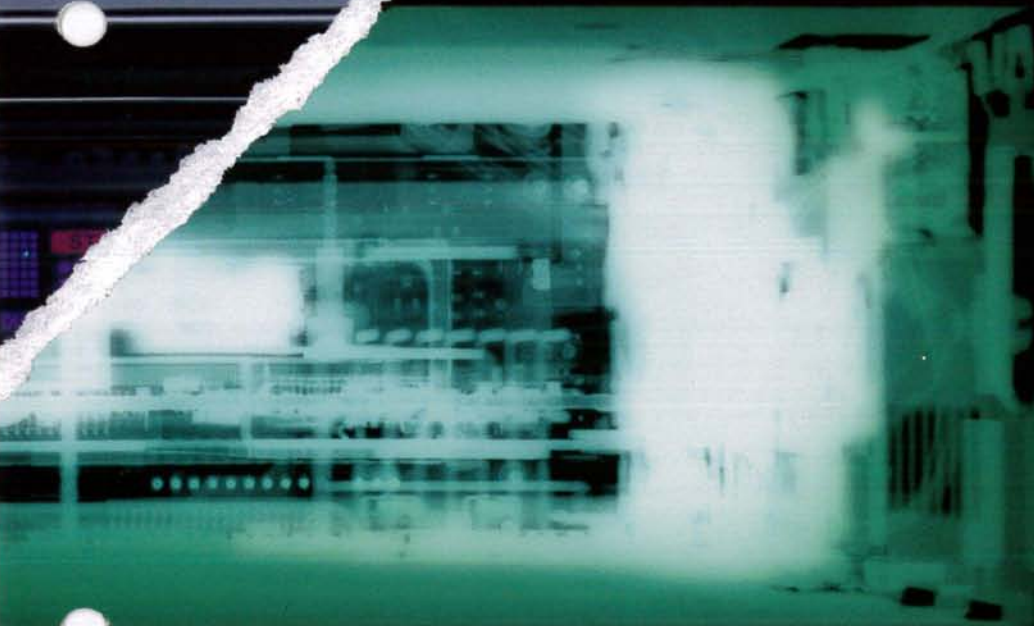
front panel as well.



Having said that, would it then be best to not detach the front panel and somehow make it “invisible” instead? And for the user,

what constitutes a truly convenient car audio?

“Not requiring the user to do anything”, while not taking anything away that would ruin the functionality, performance or



fun of car audio — Kenwood’s concept for a new car audio was crystal clear.

Through the tenacious pursuit of “car audio enjoyment from the user’s standpoint” and “not requiring the user to do anything” as the key concepts, the MASK was born.

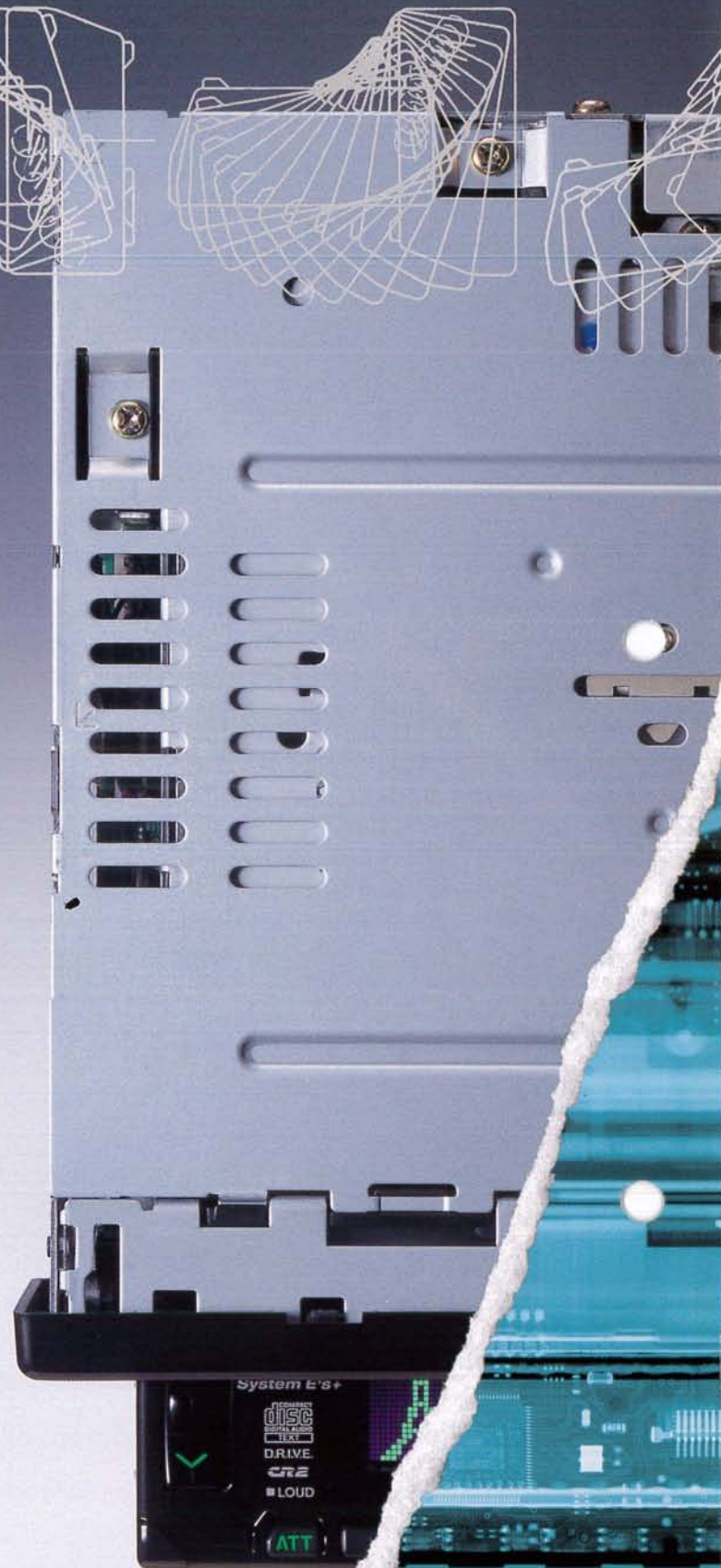
Achieving both a sophisticated rotation mechanism and high quality sound

To hide the existence of car audio, making it impossible to see from the outside. To use a full size display to provide a large display area. To increase reliability of the mechanism.

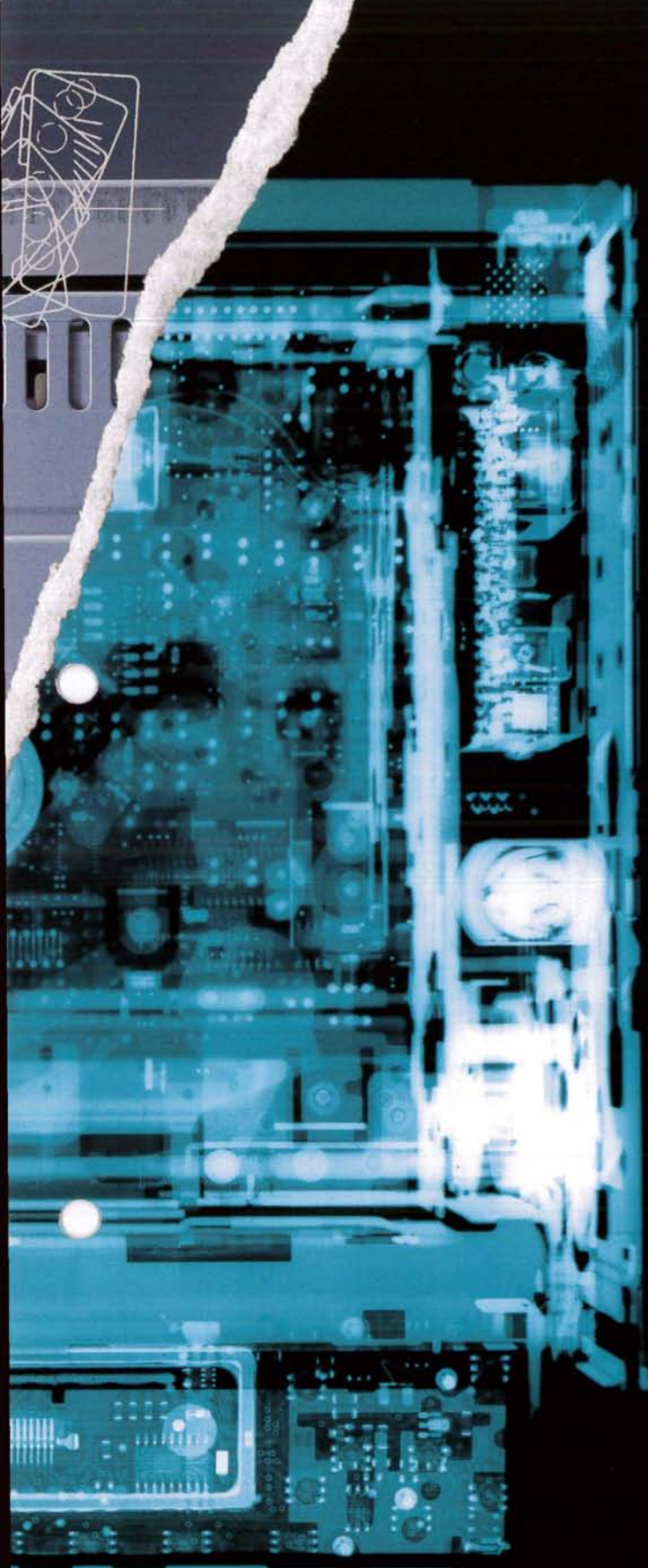
Clearing these three objectives, and based on the concept of "not requiring the user to do anything", what was brought forth by our engineering staff was a MASK prototype which automatically rotated, linked with the ignition key.

The first problem we faced was the rotation of the panel. To merely rotate the panel is one thing, but we had to also contend with the 1 DIN size limitation of car audio, having to equip audio controls on the panel surface, and provide a large display area as well. And since the panel needs to rotate, it had to be rendered as thin as possible.

As a result of painstaking research and experimentation, we arrived at a movement which not only simply rotated, but had the panel move outward, then rotate over, and then move back in to a closed position. And the movement was far from simplistic — by using a combination of numerous gears and differentials, we were able to change the center of rotation vertically while sliding the panel in and out while rotating, resulting in a very sophisticated movement.



TEC



Now that the MASK's rotation had been worked out, for it to be viable as a car audio product, it would be necessary to fit all head unit controls within the limited confines of 1 DIN size, including depth. Needless to say, space for motor and gears necessary for the rotating mechanism had to be considered, and high sound quality was a prerequisite for car audio to be truly meaningful.

The answer was found in further condensing the audio circuitry, into what became the amazingly compact MASK-exclusive audio circuit. In order to achieve high quality audio reproduction, this exclusive circuitry featured reorganized circuit patterns to increase efficiency, as well as a completely separated power supply to eliminate interference and noise.

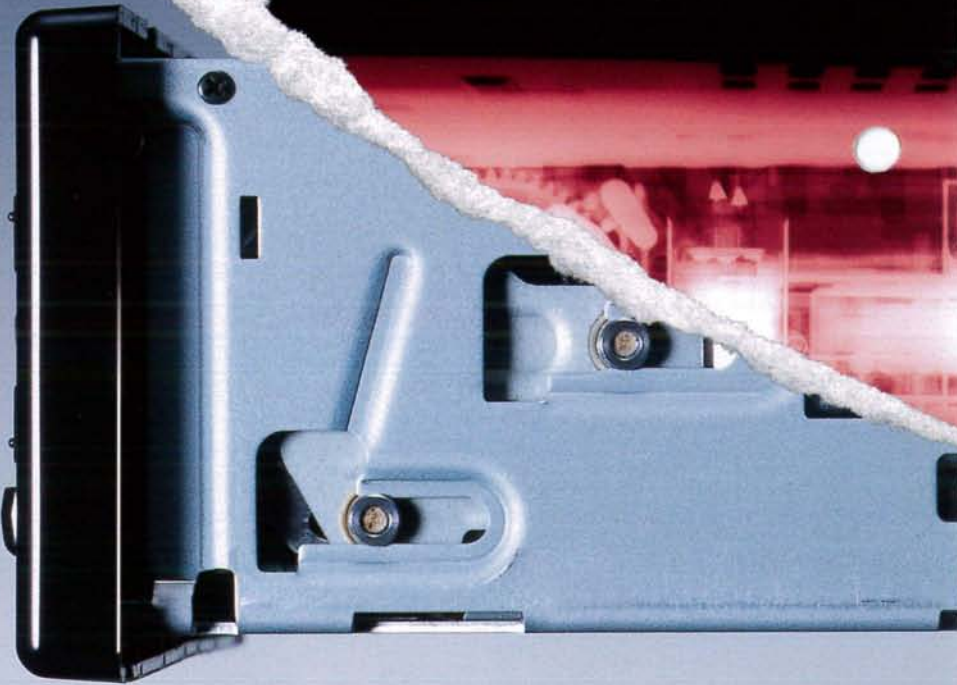
Thus a sophisticated panel rotation mechanism and high quality sound were made possible. These two "unseen" technologies, condensed into the making of the MASK, were born of the enthusiastic and uncompromising spirit of the MASK development team.

CHNOLOGY

On and off — two totally different faces

Visual attractiveness and a deluxe "feel" are prime requirements for car audio. In order to address this aspect, countless rough design layouts were drawn up by Kenwood's design staff before arriving at the final design.

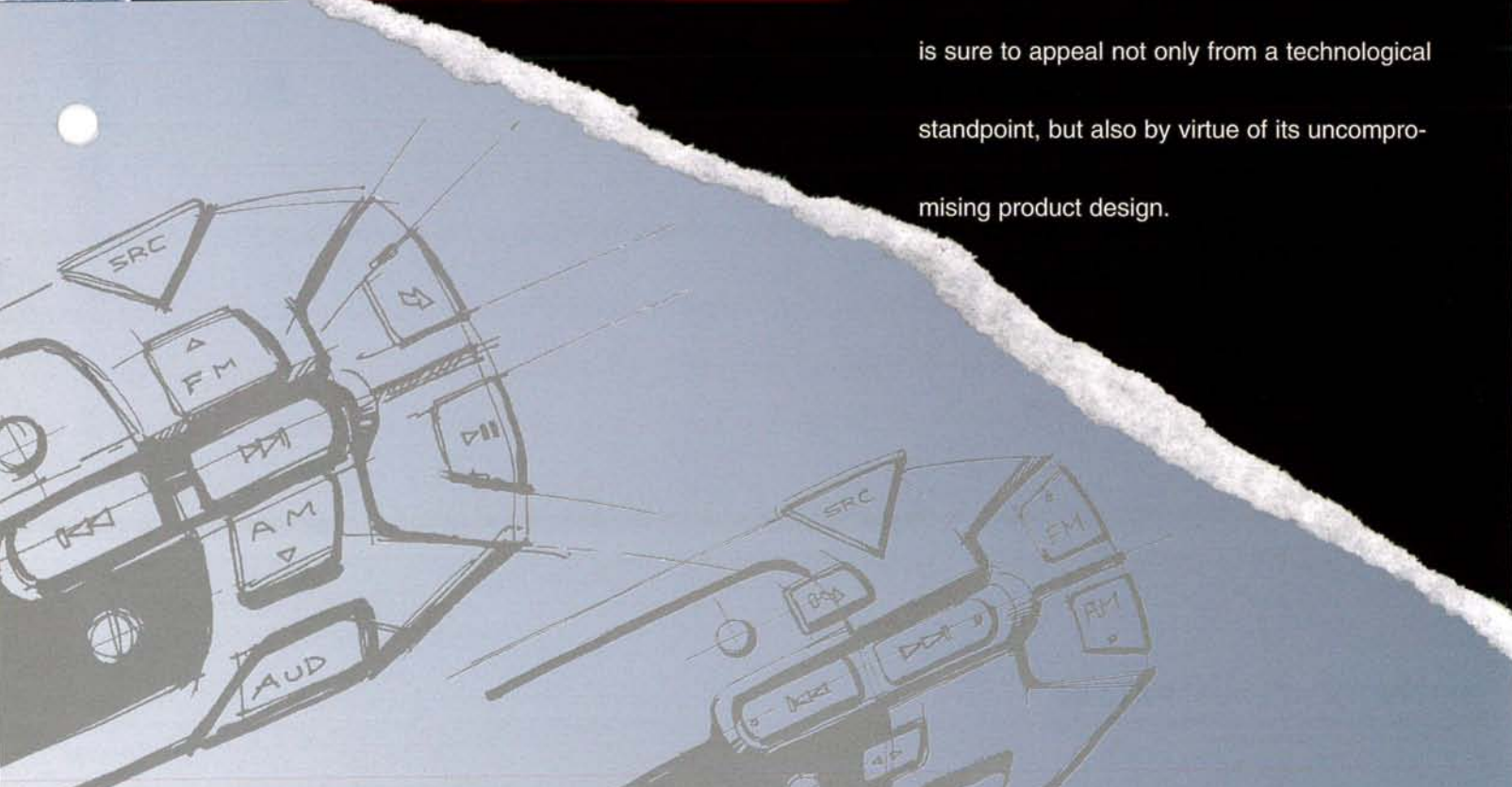
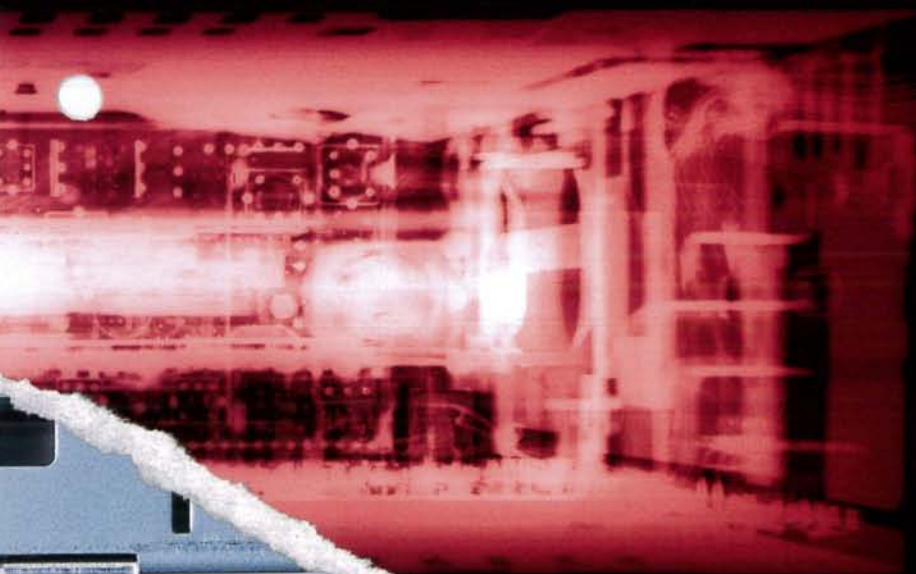
For the "on" side of the panel, we used an LCD display area that was larger than usual, and employed an exclusive display program to bring out the fun of MASK. And by incorporating illumination that was more attractive than ever, we showcased the product's high grade appearance despite having to deal with spatial limitations.



DESIGN

Then, for the "off" side of the panel, since the appearance of a non-audio-equipped car was our primary objective, we produced a variety of designs that would enable it to match and blend inconspicuously into the interior of any car when in its closed position.

While remaining very aware of the vastly different designs of the two "faces" it must offer, the MASK is able to provide an attractive and beautiful overall design for those who use it. It is sure to appeal not only from a technological standpoint, but also by virtue of its uncompromising product design.



KENWOOD CORPORATION

14-6, 1-chome, Dogenzaka, Shibuya-ku, Tokyo 150-8501, Japan
Home Page: <http://www.kenwoodcorp.com>