

## Features

## Smart Theatre Basic Specifications

This is a stationary-type MRI video system that does not require any construction, and that features a function that directly projects optimized video images into the bore.

### Measures against magnetic fields

In order to deal with stray magnetic fields generated from the MRI machine (attenuated to approximately 10 mT at 1m from the MRI machine), a shield case with a small, built-in projector is installed in the corner of the examination room behind the MRI machine, which is relatively less affected by stray magnetic fields.

This shield case, which is made of stainless steel and weighs more than 10 kg, has the MRI compatibility for which the weight of the shield case is greater than the attractive force of the magnetic field even if there is a magnetic substance inside. (If reinforcing measures are required, the shield case can be attached to a wall or floor using screws.)

### Measures against noises

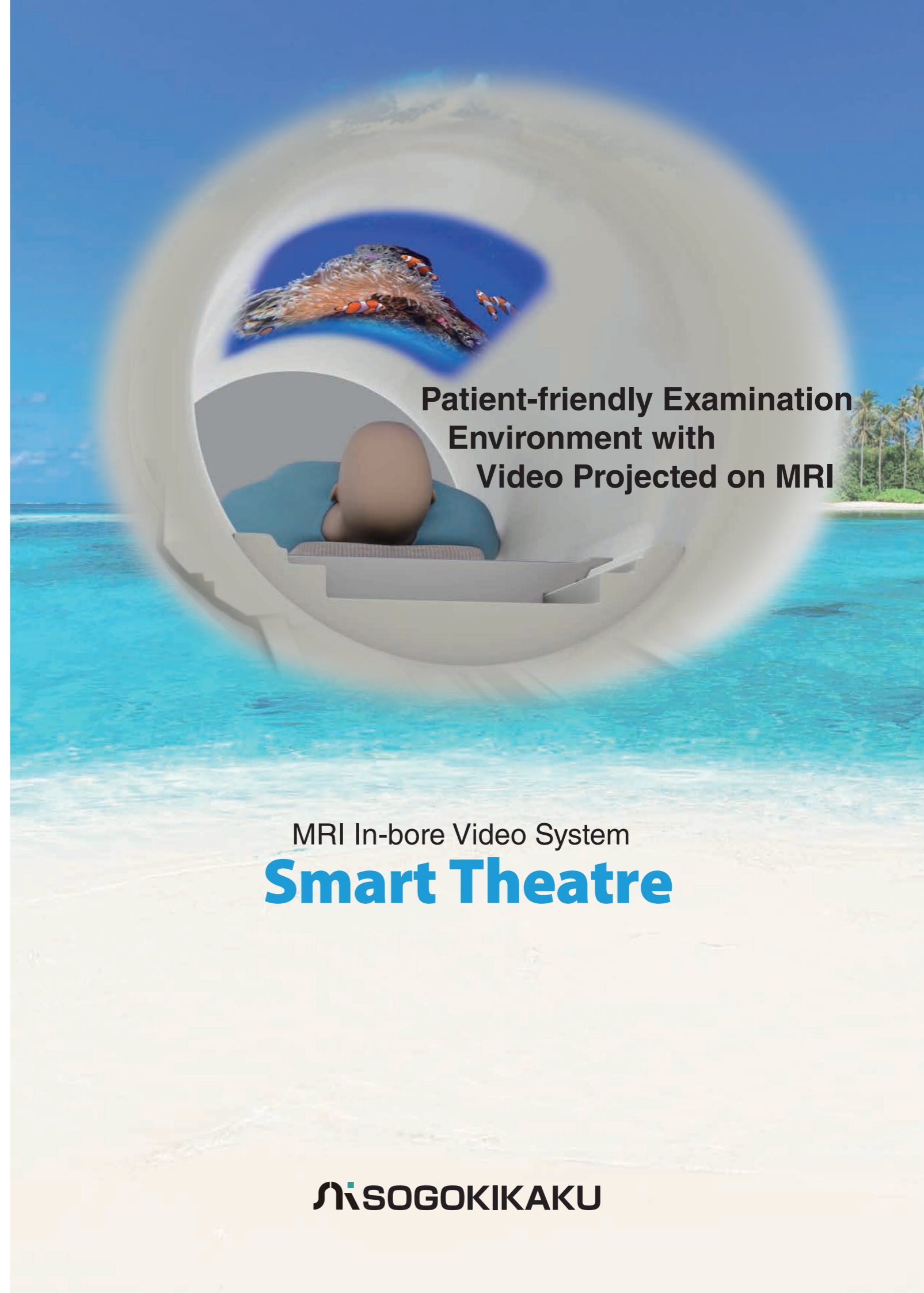
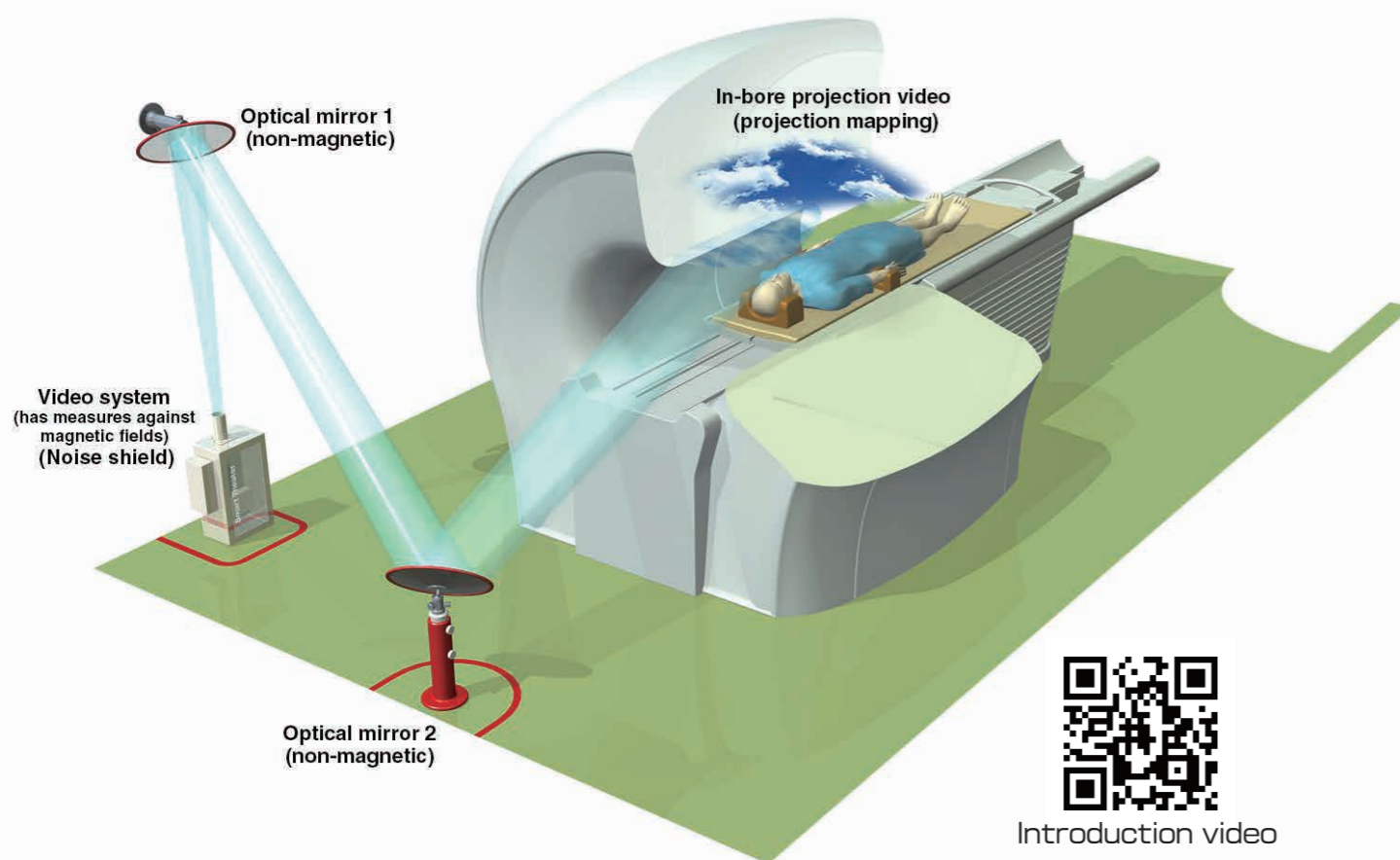
An MRI machine with a static magnetic field strength of 1.5 Tesla has a signal frequency of approximately 64 MHz. To receive this weak signal, an examination room is designed to be an electromagnetic shield room. However, if video projection equipment such as a projector is installed inside this room, high-frequency noises generated from this equipment can lead to deterioration of MRI images.

Therefore, a waveguide has been installed in the shield case so that only projection light passes through. This waveguide is a circular cylindrical electrical conductor that has a shielding effect of 80 db and a mechanism to attenuate high frequency noises of 64 MHz by having a length 3.5 times or longer than the diameter. When transmitting video images from a terminal outside the examination room, this system supplies image signals using the optical fiber's communication radio waves, and also supplies commercial AC power using an AC noise filter appropriately.

### Video content

It is best that video images are projected directly above the examinee's eyes because video images featuring a lot of movement or fast motions can cause motion sickness. There are many issues such as determining the optimal image size when the head coil for a head examination is attached, however, this system offers content optimized for MRI examinations that reflects the know-how of our content business and examinees' opinions.

Body dimensions	H650mm W300mm D170mm	Noise shield	-80dB or more 64MHz
Weight	10kg	Magnetic field resistant performance	10mT or less
Mirror dimensions	H250mm W250 ~ 350mm	Projection size	H800mm W400mm (adjustable)
Maximum illuminance	600 lumen		



**Patient-friendly Examination Environment with Video Projected on MRI**

MRI In-bore Video System  
**Smart Theatre**

**SOGOKIKAKU.CO.,LTD.**

\* This product does not have to be electrically or mechanically connected to the MRI machine.  
\* "Smart Theatre" is the name of a product produced by Sogokikaku Co., Ltd.

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**SOGOKIKAKU**

# Smart Theatre

## MRI In-bore Video System

With the aim of alleviating the feeling of confinement or oppression related to being in a narrow space when taking MRI examinations, this system uses a projector to project video images onto the ceiling in the bore of the MRI machine in order to reduce patient stress during examinations.

Smart Theatre provides a pleasant examination environment.

Patent pending



This product is being used and receiving favorable reception at over 50 medical institutions and university research institutes nationwide.

## Smart Window

### MRI/CT Examination Room Video System

By projecting a large image equivalent in size to that of a 100-inch monitor onto the wall of an examination room, the system creates a space with a sense of openness, almost as if there is a window in the examination room. This helps relieve patient anxiety and tension before an examination. Smart Window provides a pleasant examination environment.

Patented  
Patent No.7156595

1

#### Virtual skylight window

Video images spread out in front of you provide a sense of openness and depth, creating the feeling of lying down and looking up at the sky.

2

#### Diverse content

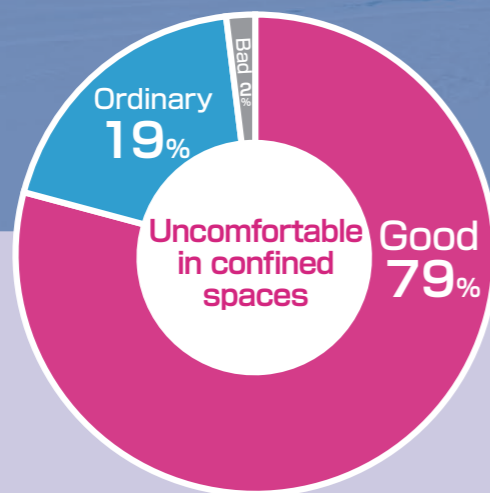
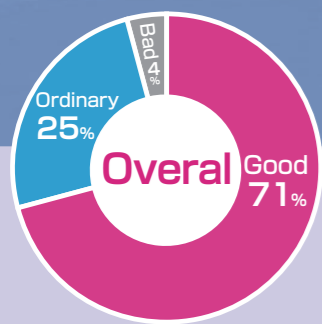
You can use a tablet to select your favorite video and music from blue sky, aquarium, animals, animations, and others.

3

#### No construction required

No construction is required to use this system. It can also be installed in addition to the existing Smart Theatre.

### Customers' comments



#### Opinions based on a "Good" experience

- The examination was not painful at all.
- The feeling of being smothered was alleviated.
- The inside of the machine felt spacious.

#### Opinions based on a "Bad" experience

- I felt motion sickness.
- I am not too fond of fish videos.

Number of outpatients and inpatients at Neurosurgical hospital: **269** people

Questionnaire survey results

