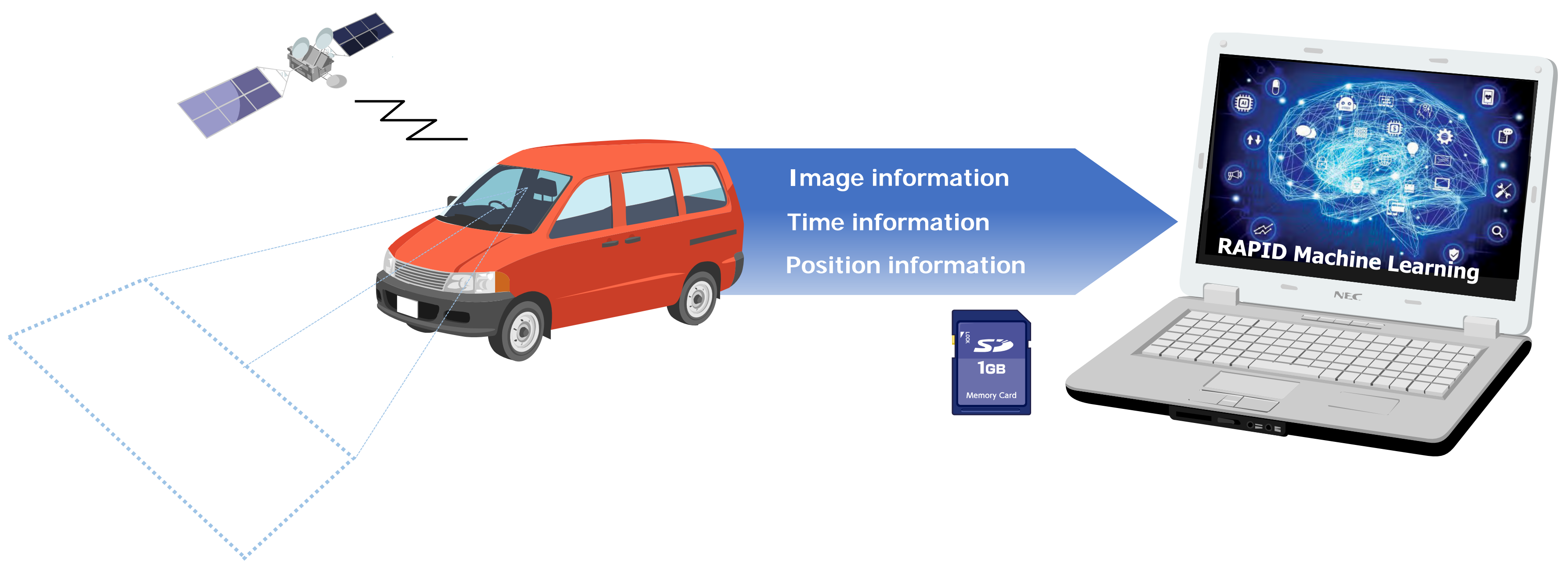


Multi Fine Eye: AI-assisted pavement inspection system

نظام فحص الطرق المعبدة باستخدام الذكاء الاصطناعي

Features of Multi Fine Eye

- ◆ Facilitates road surface inspection.
- ◆ AI^{*1} capability allows automatic detection of cracking and rutting from in-vehicle video camera recording.
- ◆ Identifies repair-required locations from a vast control area.
- ◆ Classifies each GPS coordinate section (20 to 100 meters long) into cracking and rutting severity levels.
- ◆ Three levels of cracking and rutting are specified.

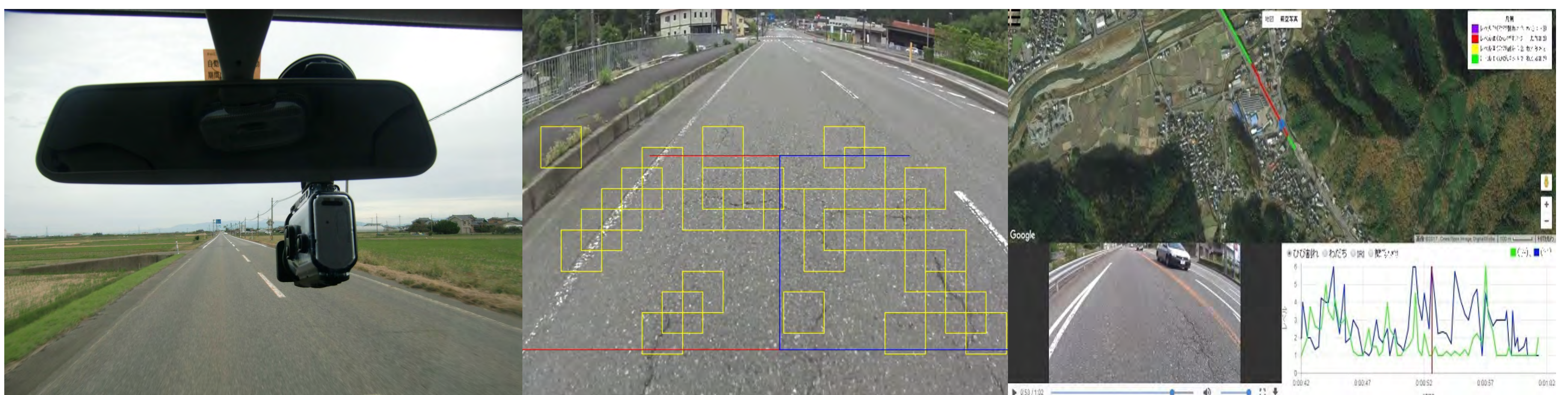


How to use

Step 1: Record a video of the road surface with the in-vehicle 4K camera system.

Step 2: Employ an AI^{*1} feature to determine the cracking and rutting severity levels for each specified section of the road.

Step 3: Graphically present the result on GIS.



Record the road

Have the AI system inspect
the recording

Graphically present
the result

*1 NEC Advanced Analytics - RAPID machine learning



Fine Tape: Pavement jointing tape made with butyl rubber compounds

شريط تغطية فواصل باستخدام خليط من مطاط البوتيل

Features of Fine tape

- ◆ Creates an aesthetically pleasing pavement joint.
- ◆ Strengthens the joint between pavement sections.
- ◆ Double-sticky tape made from butyl rubber composition.
- ◆ Self-adhesive tape does not need glue.
- ◆ Heating is not required.
- ◆ Will not melt at high temperatures.
- ◆ Will not stiffen at low temperatures.



General product size:

50mm × 1mm (10 meters in one roll)

Fine Tape applied over a joint

How to apply

Step 1: Dry the installation area and remove dirt and foreign matter from the surface.

Step 2: Apply the tape continuously over the joint with the already sticky side against the road.

Step 3: Remove the release liner.

Step 4: Coat the taped section with sand.

Step 5: Clean the area and open the road to traffic.



Clean the area

Apply the tape

Provide a top coat

Open the road
to traffic

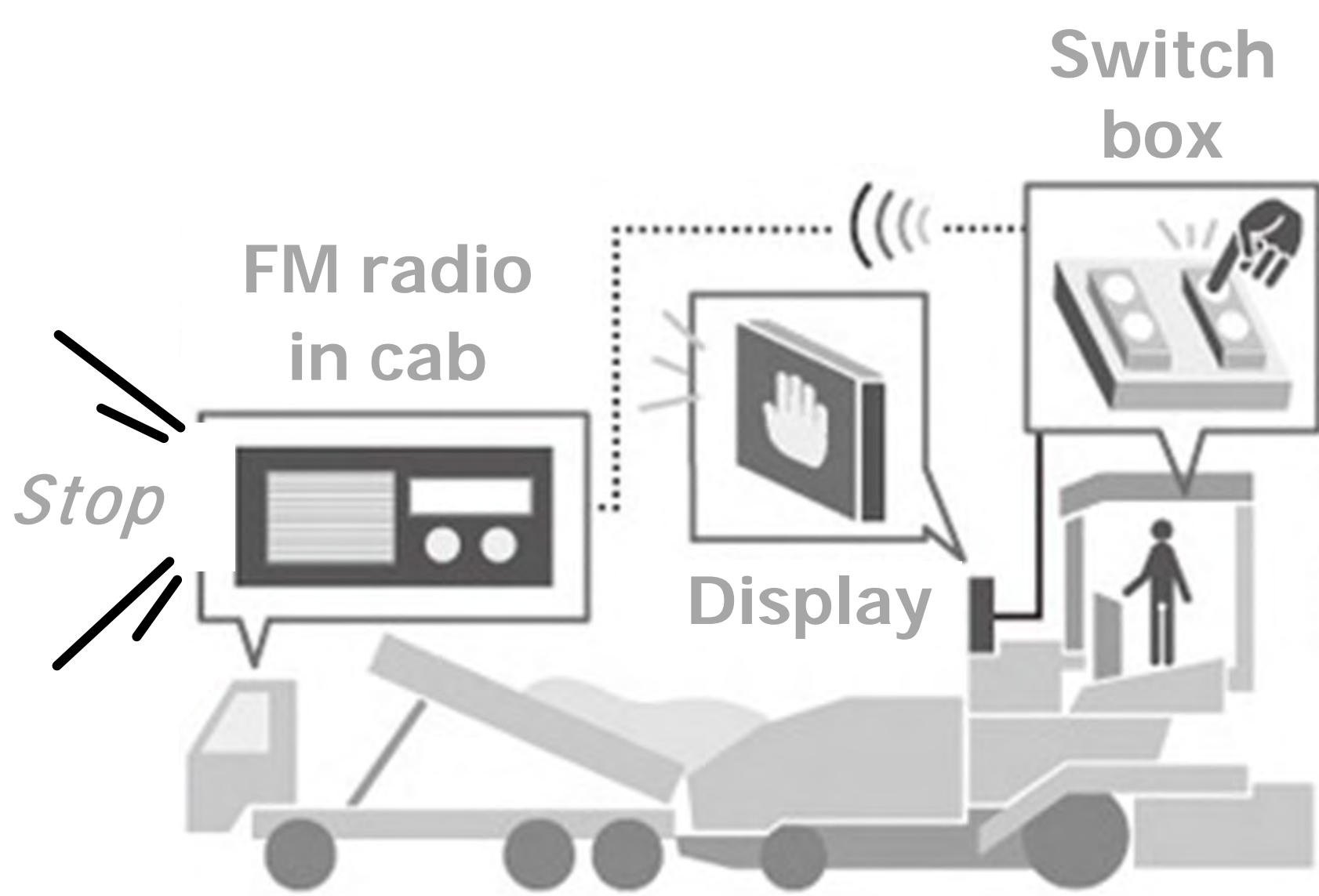


Otonashi-kun: Communication system with FM radio and LED panel features

نظام اتصال باستخدام راديو FM لوحة LED

Features of Otonashi-kun

- ◆ Facilitates communication between the paving equipment operator and the feed vehicle.
- ◆ Instructions are given via FM radio audio.
- ◆ Audio-synchronized animation is provided on the display.
- ◆ Audio and animation can be customized (for other work types).



Audio and Animation

"Dock with the finisher"

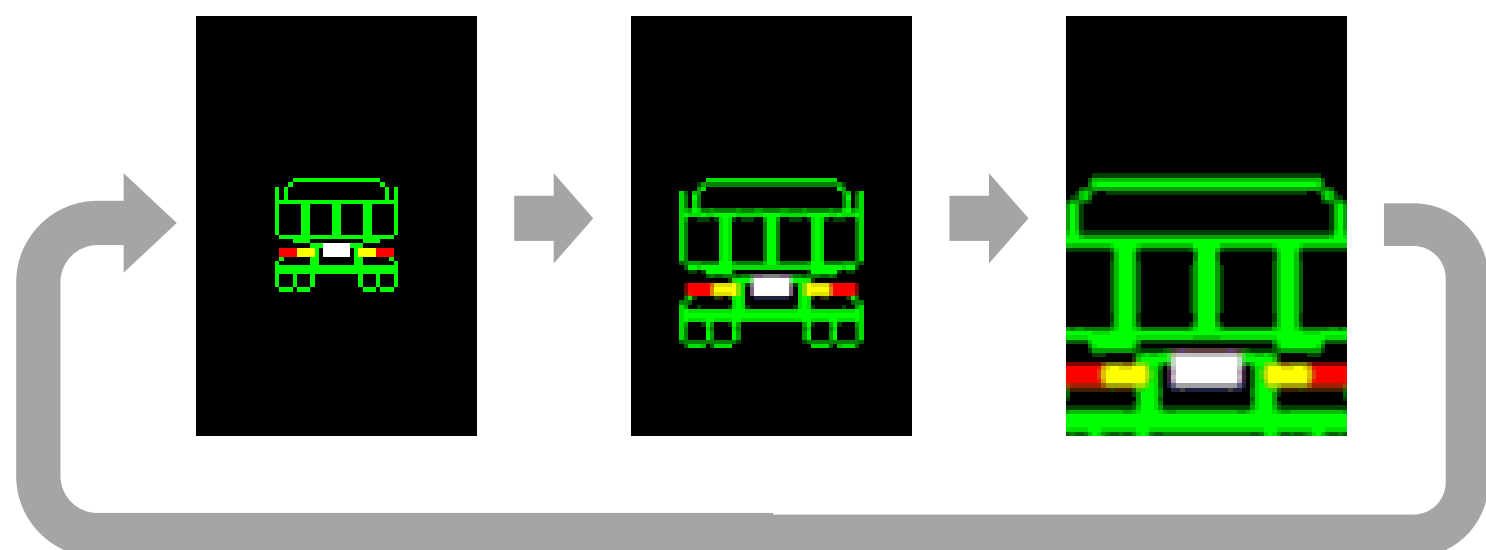
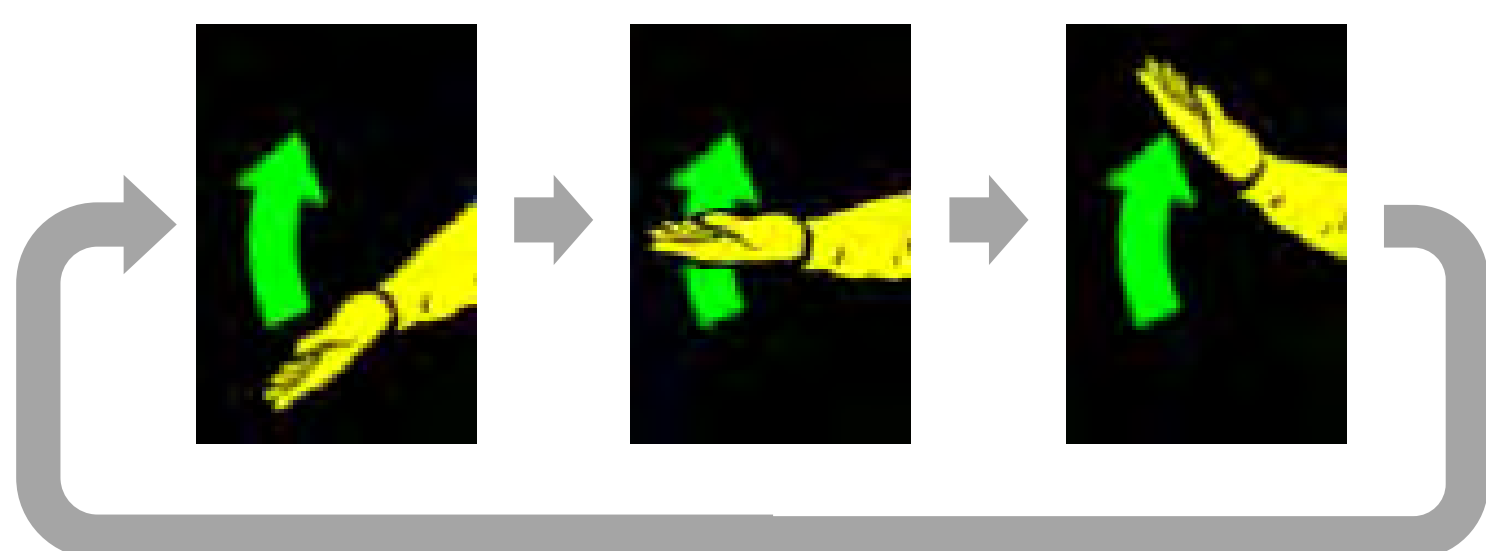
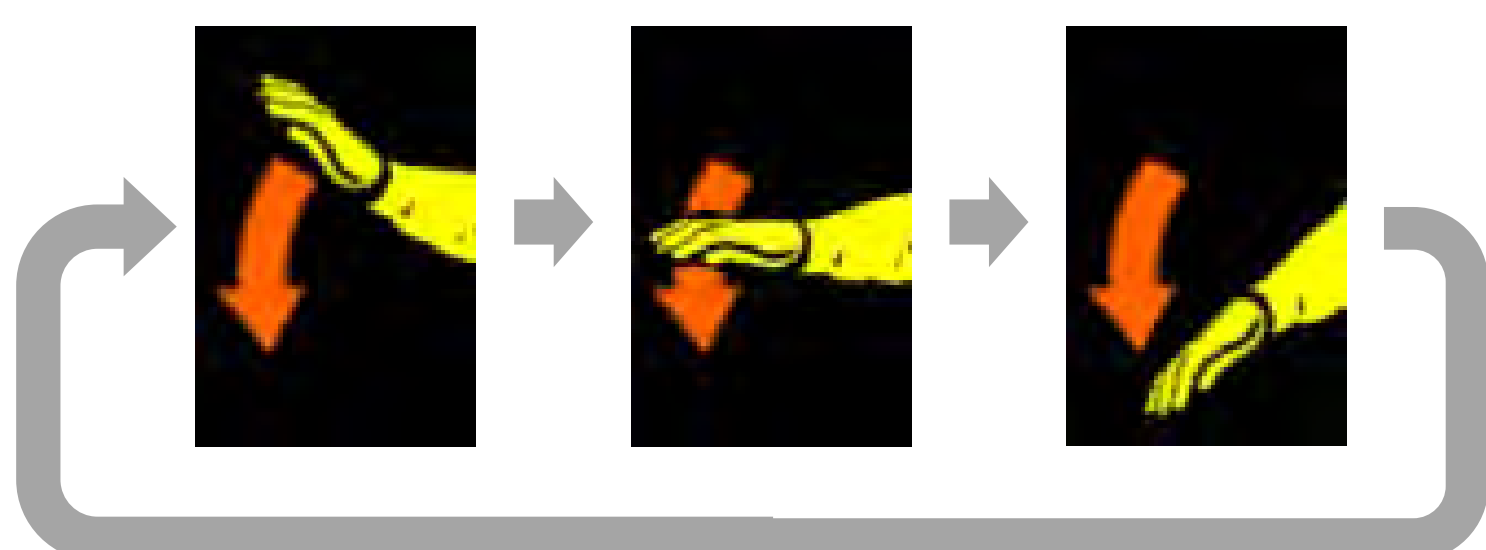


Image of a reversing tractor

"Raise the bed"



"Lower the bed"



Animation of operator gesture

Main unit



380 × 580 × 110 mm
display (320 × 480 mm)

Controller



Hard-wired
switch box



Remote
controller



Heat Dressing: Road surface refreshing technology with hot in-place recycling

تجديد أسطح الطرق باستخدام تقنية ترميم مواقع الحرارة

Features of Heat Dressing

- ◆ Refreshes the road surface with hot in-place recycling.
- ◆ Provides correction of cracks, ruts and level differences on structurally appropriate roads.
- ◆ Does not generate waste material.
- ◆ Four LPG infrared heating panels provide stepped heating.



How to use

- Step 1:** Heat and soften the deteriorated pre-installed paving.
- Step 2:** Apply the rejuvenating agent to increase asphalt viscosity.
- Step 3:** Mill and stir the softened paving to a specified depth.
- Step 4:** Mix the old paving with fresh composition.
- Step 5:** Spread and compact the mixture in place (no overlay or seal coating required).

