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Japan Sereen Topies

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"INTELLIGENT" ROBOT

96 feet 2 min. 40 sec.

1. (ROBOT ROLLS IN) The latest development in the robot world... Sumitomo Electric's "intelligent robot". It can see, hear, move, speak and even pick things up.

It also minds its manners...by properly presenting its business card.

2. (TECHNICIAN) The Sumitomo robot responds to voice commands in Japanese.

This fellow responds to orders by actually acknowledging them... and after it does the job, it reports, "mission accomplished".

3. (OBSTACLE) The robot has a twin set of sonic proximity sensors that tell the robot that there's something in its path...

The robot stops about 70 cms. from the obstacle and asks for instructions from its operator.

4. (SENSORS, ROBOT HAND) It's a very clever creature...it can distinguish among 3 basic shapes...square, round and triangular.... and, with a set of object-recognition eyes, it is able to pick the right thing up...in its 2-fingered grip!

Its arm has 6 joints...and can lift objects up to 1 kg.

5. (FLOWERS) This intelligent robot is also a gentleman...but more importantly, it should be useful in a variety of jobs... assembly-line work at night, mining, and hazardous repair work on nuclear reactors.

NOTE

There are 14 microprocessors to control its hearing, sight, voice, movement, position and shape recognition.

The robot is linked to the control console by optical fiber cable. The robot's "eyes" are each made up of 30,000 l0-micron diameter optic fiber picture elements, operating through a sophisticated type of mirror in the tip of each fiber.

This unique visual system transmits image data to the robot's microcomputer for comparison with image data stored in its memory bank. The sensors inform the computer "brain" of the number and objects in front of it.

The robot is based on a microcomputer controller with a 192K memory. The robot's main body is only $90~\rm{cm}$. high and $50~\rm{cm}$. wide, weighing $100~\rm{kg}$.

It is operated on a standard 100 volt AC power source.

SCARECROW FESTIVAL

55 feet 1 min. 32 sec.

1. (FIELDS, RICE) Northern Japan...Yamagata Prefecture...the rice is almost ready for harvesting.

And every year at this time, a festival is held to honor a special kind of hero...the guardian of the fields...the scarecrow!

2. (TOWN, PREPARATIONS) In Kaminoyama City, the preparations for the big event begin nearly a year in advance.

And the whole town pitches in to make the Scarecrow Festival a great success.

3. (EXHIBITS) Scarecrows are to be found wherever there are farms.. And Japan is no exception. But the scarecrows in this town are not just made of cast-off clothes and straw...

They run from the simple and traditional to elaborate figures of firemen and popular cartoon characters.

Originally, it was put together by kids from the town's agricultural high school but now the event is the work of the whole community.

On the sidelines...the local clean-up committee sells miniature scarecrows made of empty aluminum cans!

4. (CROWDS, CHILDREN) The Kaminoyama Scarecrow Festival is now in its 12th year....

HYDROPONIC FARMING

89 feet 2 min. 28 sec.

- 1. (FARM SHOT) At this model farm in Aichi Prefecture...vegetables are being produced...without using a single speck of soil'
- 2. (TOMATOES) A revolutionary way of growing fruit and vegetables is spreading throughout Japan...HYDROPONIC farming.

The secret is in the special...polyester sponge...saturated with water and minerals...that the plants just love.

- 3. (PUMP, PIPES) Water essential to the hydroponic method of farming is carried to the growing area...and pipes keep the water in motion to keep it fresh.
- 4. (FARMER, WOMEN) It's a <u>clean</u> way to farm...the seeds are spread on the polyester sponge. This isn't the kind of back-breaking work you get with old-fashioned agriculture.

5. (SEEDLINGS, BOXES) When the seedlings have grown to a certain height, they and their polyester beds are transplanted into holes of a pre-determined diameter in a large sponge base.

In 4 to 5 weeks, half the regular time...scallions of phenomenal luster are ready for picking. In fact, 60% of Japan's scallion crop is grown this way.

- 6. (FISH TANK) Hydroponic farming uses no fertilizer...so the water is so clean that fish can be raised right along with the vegetables!
- 7. (SHAFT, PLANTS) Growing under this method...there's not a bit of wasted space with the plant boxes stacked one on top of each other.

And crop yields are dramatically higher...and maybe best of all, the consumer can enjoy the very best-tasting fruit and vegetables all year round...even in the dead of winter!

NOTE

The first such model farm was set up in 1975 in Aichi's Jushiyama-gun. The M-shiki company of Aichi Prefecture sells complete pre-feb farming units incorporating the hydroponic methos.

It takes just one day to set up a hydroponic farm like this, complete with polyurethane roof, water pipes, and computerized temperature-control equipment.

ARCHERY OF HORSEBACK

106 feet 2 min. 57 sec.

1. (RIDER, TARGET) One of the year's most coloful events around Tokyo...the Yabusame archery tournament in Kamakura.

It's a lot more complicated than ordinary archery. The Yabusame archers take aim while riding full-speed on a galloping horse!

- 2. (TRAINING HALL, STUDENTS) Training for Yabusame is strenuous... concentration is vital to hitting the target.
- 3. (BOWS, ARROWS) The bow for mounted archery is made of fine bamboo and mulberry wood...reinforced to give it strength and flexibility.

The arrow is shot from a third of the way up the bow...rather than from the center as in conventional archery.

- 4. (WOODEN HORSE) The riders do a lot of their practicing on a wooden horse that is swung around to simulate real riding conditions... and to instill a sense of precise timing.
- 5. (PROCESSION) The art of Yabusame dates back to the 12th century.. when the Shogun Yoritomo organized an archery display to keep his warriors in shape.

Today the tradition lives on...the riders dress in hunting costumes of the period.

6. (TOURNAMENT, SPECTATORS) Coordination and perfect balance are the key to Yabusame...the rider has to control the horse with his knees and feet, while putting the arrow in the bow! The riders shoot at a series of 3 targets spread out over a 200 meter course. ...and if they miss the target...somebody in the audience is liable to get hit! Luckily...they hardly ever miss.