

# Developing Super Green Recycling

Sharp is engaged in the recycling of various used products in line with three concepts: 1) improve the recycling rate and aim for zero landfill disposal, 2) improve the efficiency of the recycling system to reduce recycling costs, and 3) incorporate recycling technologies into the development and design of products.

Objectives for Fiscal 2006	Achievements for Fiscal 2006	Future Objectives
Boost domestic recycling of used home appliances	Improved recycling rate (up 3 points over the previous fiscal year in four home appliances in total)	Respond to the increased number of items requiring recycling

## Recycling Four Kinds of Home Appliances in Japan (Air Conditioners, TVs, Refrigerators, and Washing Machines)

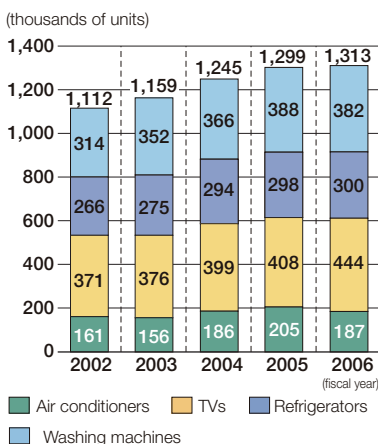
Sharp is constructing a highly efficient recycling system by collaborating with five other consumer electronics companies<sup>\*1</sup> to operate 190 designated sites for picking up old appliances and 18 sites for recycling in Japan.

In fiscal 2006, four types of home appliances designated under the Japanese Home Appliances Recycling Law—about 1.31 million units in total (up 1% over the previous fiscal year)—were recovered and recycled. The processing rates in the recycling plants satisfied the legal standard for all four kinds of appliances.

In future, Sharp will improve its system in response to changes, such as an increase in the amount of products collected, and will work to further improve the recycling rate.

<sup>\*1</sup> Five collaborating companies: Fujitsu General Ltd., Hitachi Appliances, Inc., Mitsubishi Electric Corporation, Sanyo Electric Co., Ltd., Sony Corporation (in alphabetical order)

### Sharp Corporation's recycled units for the four home appliances



### Sharp Corporation's recycling rates for the four home appliances (fiscal 2006)

	Air conditioners	TVs	Refrigerators	Washing machines
Recycling rate (%)	87	74	72	80
Legal standard (%)	60	55	50	50

## Second Plant of Kansai Recycling Systems Starts Operation

Kansai Recycling Systems Co., Ltd., a consumer electronics recycling company created with investment by seven companies including Sharp Corporation and Mitsubishi Materials Corporation, began operation of a second recycling plant in December 2006. Located in Iga City, Mie Prefecture, it recycles TV sets exclusively, with an annual capacity of about 500,000 units.

In the time leading up to the end of analog broadcasting in 2011 in Japan, there is expected to be a sharply increased demand for TV recycling. This plant has state-of-the-art automated facilities for integrated processing—everything from dismantling TVs to refining glass cullet<sup>\*2</sup>. The plant totally recycles materials contained in the TV sets, such as plastic, copper, iron, aluminum, and glass.

It is located not far from the Kameyama Plant and Mie Plant, both of which are Sharp's main manufacturing bases for

LCD panels and LCD TVs, as well as from the Tenri Plant, an R&D base for LCD technology. By strengthening the collaboration between the recycling plant and Sharp's manufacturing and research departments, Sharp hopes to develop new recycling technologies and easy-to-recycle environmentally conscious products.

<sup>\*2</sup> Refining glass cullet: Remove foreign matter from the glass of used CRTs and refine the glass into a near-pure substance.



Second plant of Kansai Recycling Systems

## Reusing and Recycling Copiers in Japan

Collected used copiers with minor deterioration are remanufactured: after being tested, they are dismantled, and their parts are cleaned and tested before being returned to the production line. New parts are also added to guarantee performance and quality equal to new products.

In fiscal 2006, approximately 33,000 copiers (up 25% over the previous fiscal year) were recovered, and 179 units (down 62% over the previous fiscal year) were remanufactured and shipped. The decrease in the number of remanufactured copiers was due to model changes. Sharp will work to increase the number of remanufactured copiers by introducing more recyclable models.

Approximately 695,000 toner cartridges (up 38% over the previous fiscal year) were recovered, and about 250,000 remanufactured toner cartridges (up 2% over the previous fiscal year) were shipped.

Models and parts not targeted for reuse are sorted manually by type of component material to facilitate recycling.

## Recycling PCs in Japan

In compliance with the Japanese Law for Promotion of Effective Utilization of Resources, Sharp is recycling business- and home-use PCs.

For home-use PCs, the PC industry is working with Japan Post in a collection system in operation at more than 20,000 post offices around Japan.

In fiscal 2006, recovered and recycled PCs amounted to approximately 4,300 business- and home-use desktop and notebook PCs (up 20% over the previous fiscal year) and about 2,000 monitors (up 5% over the previous fiscal year).

### Information on website

<http://sharp-world.com/corporate/eco/report2007/>  
● Data on recycling of used products