Basic Policies

When designing new measuring instruments, Advantest works to ensure that the instruments offer low power consumption, are compact, lightweight, and can be easily recycled. Life cycle assessments are thus used at the design level to reduce the environmental impact of our products by ensuring that they can be easily disassembled and recycled after having run the course of their useful life.

In fiscal 2000, we performed life cycle assessments on our R3172 and R3182 Spectrum Analyzers. In addition, we also made changes to improve the packaging material used for our measuring instruments.

Life cycle assessment

Basic Policies

Goal	Main steps
Low power consumption, compact and lightweight designs	Increase use of hybrid ICs and ICs with higher integration
Easy to recycle	(1) Label plastics
	(2) Ban on new use of composite components (metals and plastics)
	(3) Designs for shorter disassembly times
Easy to dispose of packaging	(1) Label packaging and use of single-material packaging
	(2) Use of pulp molds
	(3) Designs that make it easy to sort the product's various components

Success Story #1: D3371 Transmission Analyzer

The life cycle assessment for the D3371 has helped make the product both more compact and more energy-efficient. By using field-programmable gate arrays (FPGAs), we achieved denser integration of the logic circuitry within its printed board, helping to reduce the board's surface area by 85% and thereby reducing product mass by roughly 65%. And by adopting the use of a highly efficient switching power supply with a power factor of 99%, we were able to reduce power consumption by roughly 60%.

D3371 Transmission Analyzer

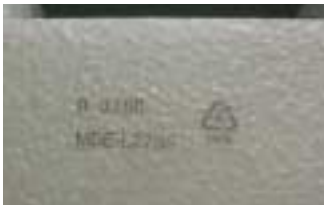
Comparison of the D3371 with Preceding Models

	D3371	Preceding Models (D3186, D3286)	% Difference
Power consumption (VA)	450	1,050	–57%
Mass (Kg)	30	83	–64%
Volume (cm^3)	46,900	134,000	–65%
No. of mechanical components	152 types	340 types	–55%

Success Story #2: Measuring Instrument Packaging

To reduce the environmental impact of disposed packaging, we are striving to completely eliminate the use of polyurethane foam and corrugated cardboard that are bonded together by switching to the use of single-material padding, which is easier to sort and recycle. By the end of March 2001, we were using this new padding for 70 of the 76 types of measuring instruments produced by our Company.

Pulp-based product padding



Label for polyethylene padding