

# Locomotive for Growth

Despite the continued strength of the yen, Japan's exports of industrial electronic products posted some growth in 1987. Domestic sales also rose, supported by higher demand from manufacturers of information-related equipment. The value of production of industrial electronic goods increased by an estimated 7-8% over the previous year, further boosting the sector's role as the locomotive for the entire electronic and electric machinery industry.

Exports of computer-related equipment surged by double digits. The strong advance was due primarily to increased exports of floppy disk drives, printers and other peripherals to the U.S., a major export market, where demand for personal computers has been recovering gradually since last spring.

Exports of communications equipment also began recovering last spring from the 1986 slump. Exports to Europe of PBXs (private branch exchanges—computer-controlled telephone switching systems used by large businesses) and facsimile machines soared by more than 40% in yen terms over the previous year.

On the domestic front, the flurry of orders for large computers by major commercial banks intent on installing their third generation of on-line, real-time data processing systems ran its course. The construction boom in "intelligent" buildings with computer-controlled environmental and other systems continued, however, while both manufacturing and nonmanufacturing industries had strong office- and factory-automation needs.

Personal computers, workstations,

PBXs and facsimile machines all sold particularly well during the year. Most of the information and communications equipment sold was earmarked for use in networks.

In the electronic components sector, exports have been expanding since the latter half of 1986. Shipments to Asian countries were especially strong, rising 20% in yen terms from the previous year. The surge was due in part to stepped-up production of electronic machinery by South Korean and Taiwanese enterprises, and in part to an increase in the amount of local production in these countries by Japanese subsidiaries.

Reflecting a decline in unit prices for electronic components, recovery of domestic demand was delayed in value terms. However, the outlook brightened in mid-1987 as electronic manufacturers rushed new models of home electronic appliances onto the market, spurring orders for industrial electronic components.

The semiconductor slump finally ended last spring after lasting longer than had been expected. Semiconductor makers have held down production since early in 1987 under strict administrative guidance from the Ministry of International Trade and Industry (MITI).

On the demand side, the U.S. market for personal computers has turned upward, while the slump in domestic demand for semiconductors bottomed out during 1987. Semiconductor demand has firmed, with the market looking better every month.

Demand for both industrial electronic products and components is expected to



Demand for office automation and factory automation equipment among manufacturers and nonmanufacturing industries rose in 1987 largely due to the construction boom of "intelligent" buildings.

be relatively firm in 1988. Industrial electronic products will benefit from continued solid U.S. demand for information equipment, most notably personal computers. Exports are projected to grow by 7-8%, about the same as in 1987, led by peripherals. Domestic demand for 32-bit personal computers, the center of attention for their great processing speed, will also increase somewhat, as will orders for workstations and peripherals.

Exports of electronic components to Southeast Asia and the European and U.S. markets are expected to continue to increase, together with the mild expansion in domestic demand. Production will likely grow 5-6% overall.

The recovery in semiconductor demand begun in 1987 will continue through the end of 1988, though 1M DRAMs (1-megabit dynamic RAMs) are expected to take over as the main product, displacing 256K DRAMs. The market for ICs for special-use chips (ASIC) should also continue to grow, boosted by the trend toward more sophisticated and compact equipment.

Yet elements of uncertainty remain. Given semiconductor trade frictions and the pending U.S. trade bill, demand for industrial and household electronic products and components may not go as smoothly as hoped in 1988. Manufacturers will continue take a cautious stance toward capital spending.

(Koichi Hasegawa, economist)

### Output and Exports of Industrial Electronics

(¥ billion)

	FY 1987 (estimate)			FY 1988 (forecast)		
	1st half	2nd half	Total	1st half	2nd half	Total
<b>Industrial electronic machinery</b>						
<b>Output</b>	3,994.7 (7.8)	4,231.1 (8.3)	8,225.8 (8.0)	4,293.8 (7.5)	4,567.3 (7.9)	8,861.1 (7.7)
<b>Exports</b>	1,414.2 (9.6)	1,525.7 (6.7)	2,939.9 (8.1)	1,524.8 (7.8)	1,651.5 (8.2)	3,176.3 (8.0)
<b>Industrial electronic components</b>						
<b>Output</b>	3,064.4 (1.9)	3,118.1 (8.2)	6,182.5 (5.0)	3,228.9 (5.4)	3,305.9 (6.0)	6,534.8 (5.7)
<b>Exports</b>	1,606.0 (10.1)	1,659.4 (8.8)	3,264.5 (9.4)	1,736.9 (8.2)	1,804.1 (8.7)	3,541.0 (8.4)

Note: Figures in parentheses represent percentage growth over the previous year.