

Business Failures Hit Post-Depression High

NEW YORK—American companies based airline that sought the court's aid in going bankrupt since the depression. During the first three months of bankruptcy court proceedings, 4,300 companies filed for protection under Chapter 11 of the bankruptcy code in the Los Angeles area, an 86% high compared with the same period a year earlier. An official in the Phoenix court complains that the rate holds at 100 cases a day, with insufficient clerical personnel. The U.S. Trust & Pradstreet, which tracks bankruptcy filings, reports that failures are occurring at an estimated rate of 80 per 10,000 companies in 1982, up from 60 in 1981. In 1933, the rate reached 100 per 10,000 companies.

bankruptcy court, whether voluntarily or under pressure from creditors. Companies that pay off creditors and voluntarily shut their doors are not included in the failure figures. In past recessions, economists say, business failures tended to be concentrated in certain vulnerable industries. Housing construction was always one of the first hit. But this time, in recession, the failure rate has been wide. Gasoline prices have risen; uncooperative weather that slowed retail sales; winter; and a recession in Western Europe that has retarded U.S. exports and brought increasing pressure on imports.

of red ink. "We're still hopeful that sales will improve by late 1982, but there is little else we can do to reduce costs," the official, who asked for a \$2.50 per gallon increase in the price of gasoline, said. He blamed falling profits on a combination of malignant forces: a steep recession; depressed sales; high interest rates that punish business and consumers alike; a profit squeeze on producers of basic materials, whose selling prices have dropped sharply while production costs have risen; uncooperative weather that slowed retail sales; winter; and a recession in Western Europe that has retarded U.S. exports and brought increasing pressure on imports.

THE MAGAZINE FOR GROWING COMPANIES

DECEMBER 1982

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Braniff Grounds All Flights, Seeks Court Protection

Chairman Vows Will Fly Analysts Express Doubt

DALLAS—Braniff International Corp., a major domestic and international airline based here, Wednesday cancelled all flights, leaving 15,500 workers home. The airline is to make alternate plans and sought protection from its federal bankruptcy court. While Braniff executives immediately asserted that the multicolored fleet would be back in the air, analysts were skeptical. With debts toppling Braniff had run up a \$660 million deficit in the first months of 1982. Braniff, the court official said, filed a petition with the U.S. Trust & Pradstreet of the federal Bankruptcy Act, a common practice for companies seeking time to reorganize themselves while continuing operations. But Braniff had already failed when it went to court. "The airline isn't generating any cash to pay off its debts. That's absolutely crazy," said a countryman, a Harvard law professor who specializes in bankruptcy. "When

LEADING INDEX OF ECONOMIC INDICATORS DROPPED 0.9%

with Rise, Down, Problems? government's economic news conference in August showed a sharp decline in the leading index of economic indicators, raising questions about the administration's economic program. Secretary Malcolm Pease said that people should be prepared for a single national recession. The leading index of economic indicators, which had been rising since the start of the year, fell 0.9% in August. Pease said that the economy was still 1.4% below the year-earlier level. He said that the numbers could turn positive in September. Durable goods are items such as cars, appliances, and defense products that have a useful life of three or more years.

THE
500
FASTEST-
GROWING
PRIVATE
COMPANIES
IN THE
U.S.

AUTO MAKERS' '83 MODELS

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defaults rise

DETROIT—Automobile sales took mortgage loans at record levels. The rate at which mortgage borrowers were entering the foreclosure process. In the second quarter of the year, 0.2% of all mortgages were in the overdue category. The

CONTENTS



Fred Ward

92 Charles Bannerman carved out a new direction for Delta Enterprises.



Anna Davidson

35 Special report: A study of 500 of the nation's fastest-growing companies.



David Brownell

76 Preston Smith turned a love of skiing into profits that slope upward.

7 FYI

11 Letters

Speaking out

13 A better way to tax small business

Small companies should work for a new income tax that would help, not hinder, their growth.

19 People & innovations

23 News & trends

30 Update

INC. Special report

35 The INC. Private 500

39 The top 100 companies

42 Private lives (nine profiles)

46 Nos. 101-500

58 The 500 at a glance

60 Index of companies

63 Exceptions to the rule

69 Too public too soon?

Ferrofluidics seized the chance to go public, although it wasn't ready, and found the spotlight costly and harsh.

76 King of the mountain

For Killington Peak, Preston Smith battled Vermont's wilderness and bureaucracy. His success revolutionized the skiing industry.

85 Managing the right side of the brain

At Bob Bloom's ad agency, resolving conflict between the creative and marketing departments required planning and common goals.

92 Ploughing the new ground in the Delta

CEO Charles Bannerman discovered that the most effective social activism is a healthy bottom line.

103 Ideas you can use

Managing people

105 Rituals and stories, heroes and "priests"

Two authors argue that companies function best only when their basic values

create a unifying corporate culture for the employees.

Selling & marketing

111 If the corporate image calls for a facelift

Three companies find that paying attention to how they look can boost sales as well as egos.

The law

116 When a union demands recognition

In the early stage of a union drive, the wrong move on the part of management can lead to the company's inadvertent unionization.

Taxes

118 A tax package that stings

The new tax bill limits business cash-flow, speeds up payment schedules, and scales back maximum contributions to company pension plans.



Jeffrey Coolidge

69 Ronald Moskowitz's *Ferrofluidics* didn't welcome the public glare.

Financial tactics

122 How an employee perk can be a tax advantage

One small company owner, with a preference for profit-sharing, ended up with a pension plan instead.

Capital

127 The equity partnership as a seed for start-ups

Since the limited partners get the early losses, they take a lower equity stake at a preset conversion point.

130 Investing in growth companies/Street talk

Using technology

132 Still sharing after all these years

Computer time-sharing is an old standby. But with recent updating, it is still useful for small companies.

140 Books

The buck stops here

148 Satchel Paige: Another man for all seasons

Cover

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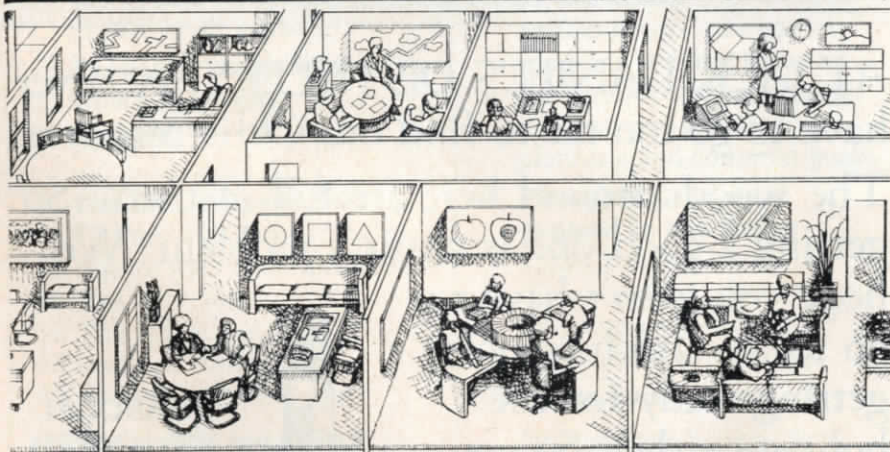
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FYI

THE INC. 500 Compared to the top 100 companies, the top 100 are in size, faster in growth, and...

Company (by rank)	Sales Growth 1977-81		'81 sales (\$000)	'77 sales (\$000)	Profit range*		No. of employees	
	Percent increase	Compound annual rate			'81	'77	'81	'77
31. W-B Pump & Supply ¹ (Pampa, TX)	2,290	121	27,190	1,138	C	C	51	8
32. Tele-Com Products (Pasadena, CA)	2,248	120	2,817	120	C	B	12	1
33. Southern-Gulf (Lafayette, LA)	2,223	120	39,717	1,710	C	C	185	23
Advanced Technology ¹	2,216	119	31,827	1,374	B	B	672	5
	2,192	119	7,018	306	B	C	120	
				247	B	B	47	430

INC.'s premier issue in April 1979 staked out new turf in business journalism by ranking the 100 fastest-growing small public companies in the United States. Since then the INC. 100 has moved forward one month—it now appears each May—and has remained one of our most widely read and best-known features. Last December we expanded the concept by publishing our first listing of the 100 fastest-growing private U.S. companies. In this month's issue we have moved one step further by expanding our private growth listings to include 500 companies.

INC. originally chose to focus on growth as our leading indicator of small company progress because growth provides new jobs and increases the vitality of the economy. It is the process of growth, and accompanying innovations, that makes small companies special and important. In turn, we chose to begin ranking private company growth because the vast majority of people who run small companies—our readers—work in private rather than publicly owned businesses. In fact, the vast majority of all companies are privately owned.

For most of us, 1982 has not been a cheerful year. Yet the enormous vitality of the INC. 500 proves that our economy is far from moribund. From Altos Computer's five-year growth of 14,164%, at the top of the list, to the 235% growth rate of Termiflex, at the bottom, this is an extraordinary group of companies by any

measure. And lest one think that our present troubles have killed off such heady potential for future lists, it pays to know that the majority of INC. 500 companies began life eight years ago, in the heart of another recession.

The INC. 500 is our most ambitious project and in many ways our most important. By focusing on the private sector, the largely hidden but most significant part of our economy, we hope to add yet another dimension to business reporting. The inherent creativity and resourcefulness of business in our country is sometimes all but obscured by bad news surrounding the few giant companies at the top of the pyramid. We would be foolish to pretend that the problems of big companies and those in the economy as a whole don't affect small businesses, but by the same token it is refreshing to know that a lot of intrepid people keep right on pushing at the frontier regardless of circumstances—and succeeding spectacularly in the process.

Since INC. began publishing almost four years ago, our primary goal has been to observe and report on the methods such successful small companies and their managers use, in the hope that all our readers will learn and benefit. At the end of one of the gloomiest economic years anyone can remember, we point to the INC. 500, and to the stories behind the statistics, with pride and with hope that "better days" exist not only in the future but also in the present.

Chris Leach

Chris Leach, Managing Editor

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THE INC.
500



**THE
500
FASTEST-
GROWING
PRIVATE
COMPANIES
IN THE
U.S.**

In an ailing economy, smaller businesses have become the pacesetters of the 1980s. Led by 100 companies that have chalked up sales gains of more than 1,100%, the INC. 500 emerges as an elite club in which 500% growth in the last five years is more the rule than the exception.

THE INC. 500

Each company on the Private 500 has more than tripled its sales in the last five years. Among the top 100 companies, the five-year growth rates exceed 1,100%.

Business failures, layoffs, battered P&Ls, and loan defaults: While the headlines continue to blurt bad news, American business winds up 1982 sputtering about Reaganomics and straining to justify optimism about the year ahead. For many, innovation, determination, and sheer momentum have become the keys to success in an economy that has left no industry unscathed. Nowhere is this more true than among the 500 smaller enterprises that make up INC.'s list of fastest-growing privately held companies. As Jake Morse, president and founder of Marliss Industries Inc. (#18), a Jonesboro, Ark., farm-equipment maker, quips, "We've chosen not to participate in the recession."

While many companies have not had such a choice, every company on the INC. Private 500, like Marliss, rode into 1982 on the crest of sales gains that represent three times the momentum of many counterparts and most larger corporations. For example, while total sales posted by the nation's 500 largest corporations rose 70% from 1977 to 1981, sales for the INC. 500 skyrocketed 571%. No company qualified for the list that had not at least tripled its sales in the past five years.

From California's Altos Computer Systems at the top of the list to New Hampshire's Termiflex, the 500 companies are ranked according to their percentage increase in sales from 1977 to 1981. Five years ago, the 500 companies averaged \$1.3 million in sales, with about 60% of them generating less than \$1 million and only 24 topping the \$5 million mark. Today, the average volume for the INC. 500 is \$8.6 million, with 225 companies topping \$5 million.

The ranking represents a diverse range of industries, from air courier services to oil and gas producers. It includes 133 manufacturers, 83 wholesalers, 42 retailers, and 29 contractors. Among the manufacturers are 18 makers of computer equipment, 8 producers of medical devices, and 6 companies in the telecommunications field. Led by 32 computer software companies, the service businesses include 10 personnel specialists, 6 plant security companies, and 5 trucking lines.

The 500 companies are headquartered in 44 states, the District of Columbia, and

Puerto Rico. Not surprisingly, however, California is the front-runner, with 84 companies—more than twice as many as runners-up Texas (39), New York (34), and Massachusetts (32).

Diverse as they are in industry and location, the INC. 500 share at least three qualities—they are young, productive, and profitable. On average, the 500 companies have been in business only 10 years. Most are products of the 1970s—346 were founded in the past decade. Using sales per employee as a yardstick, the emerging companies produce greater volume per worker than most giant counterparts. Led by Colorado Boxed Beef (#383) and International Games (#11), with sales per employee of \$2.7 million and \$1.5 million, respectively, the INC. 500 includes 173 companies that rang up more than \$100,000 per employee in 1981.

More important than employee sales statistics, however, is the growth in number of employees among the INC. 500. In the last five years, the overall size of the group's work force has soared by 315%—a significant figure compared with the meager 2% increase registered by the *Fortune* 500. As a group, the INC. 500 companies have created 53,400 jobs since 1977.

While the majority of the INC. 500 companies expanded internally during the 1977-81 period, acquisitions played a role in the growth of 110 companies. Most of the acquisition activity has been concentrated among the service companies, whose targets have been businesses similar to their own. Among the most active acquirers are security service concerns (Alarmingly Safe & Sound, #461; California Plant Protection, #458; Titan, #360). Clearly the most active among the manufacturers on the list is Brenlin Group (#441), an Akron-based combine of 12 companies that now produces everything from brake shoes to beer kegs.

As their statements testify, the INC. 500 companies are also as profitable as they are productive. Although 79 of the companies closed 1977 in the red, only 13 were wrestling with deficits at the end of 1981. More important, over 300 companies report net income exceeding 6% of sales. Of those, 54 chalked up earnings of 16% or more in 1981. Overall, when 1977 and 1981 profits are compared, the 500 growth companies appear to be holding their own. While earnings for 259 companies remained about the same in the five-year period, 160 boosted profit levels, and only 81 saw their bottom lines shrink.

Although the statistics reflect the explosive growth and diverse nature of the INC. 500, the true significance of these pacesetter enterprises is the human element. Behind each entity is an entrepreneur whose

ingenuity and perseverance has led to outstanding growth. Just how much of a role entrepreneurs have played in these companies is reflected in the extent of the chief executive officers' ownership. In three out of four companies, the CEO holds a majority interest—more than 50% of the equity. Furthermore, in at least one out of four cases, the CEO is the sole owner. Among companies in which the top officer holds less than a controlling interest, most of the CEOs (7 out of 10) share at least 25% of the action.

As with any ranking of elite companies, the INC. 500 raises curiosity about companies that finished as runners-up and those that were disqualified. At press time, Klein Associates Inc., a Salem, N.H., manufacturer of underwater detection equipment, with 1981 sales of \$5.1 million and a five-year gain of 234%, emerged as #501. Other runners-up include more than 100 companies that have at least doubled or tripled their sales in the past five years.

Among companies disqualified, the most noteworthy are those that were eliminated because their 1977 sales were less than \$100,000. These companies testify to the meteoric growth of smaller privately held concerns. Among them are Data-Chek, Microamerica Distributing, and TeleVideo Systems, all of which generated sales of less than \$50,000 five years ago. By 1981, however, Data-Chek, a Portland, Oreg., check-verification service, had soared to \$9.2 million; Microamerica, a Needham, Mass., distributor of microcomputers, had reached \$16.9 million; and TeleVideo, a Sunnyvale, Calif., maker of computers, had surpassed \$35 million.

Where will the INC. 500 go from here? As experience shows, several—already marking time until the market turns—will cross the threshold to public ownership. Several others will be drawn into the take-over game, emerging as willing or reluctant prizes. And, unfortunately, one or two will end up in the casualty column as further testimony to the turbulence and entrepreneurial risks of the early 1980s.

Brad Ketchum Jr.

Bradford W. Ketchum Jr., Senior Editor

The information published in this report is based on material supplied by the companies. In each case it has been verified in writing by a company officer, by supporting financial statements, and by telephone interviews between INC. editors and company principals. The published information is the only material that INC. will make available.

THE INC. 500/CONTENTS

INC. 500: The top 100 companies	page 39
Private lives (nine profiles)	42
INC. 500: Ranking Nos. 101-500	46
The 500 at a glance	58
Index of INC. 500 companies	60
Exceptions to the rule	63

THE INC. 500

America's fastest-growing private companies.

Company (by rank)	Sales Growth 1977-81		'81 sales (\$000)	'77 sales (\$000)	Profit range*		No. of employees		Acquisitions '77-'81	Date founded	Business description
	Percent increase	Compound annual rate			'81	'77	'81	'77			
1. Aitos Computer Systems (San Jose, CA)	14,164%	246%	\$21,396	\$ 150	A	A	250	14	No	1977	Mfr. multi-user microcomputers
2. Terminals Unlimited (Falls Church, VA)	9,332	212	16,730	177	B	B	98	4	Yes	1976	Computer sales, services
3. A-America¹ (Seattle)	8,501	205	9,633	112	C	C	56	4	No	1974	Importer/wholesaler, furniture
4. Florida Food Industries (Winter Park, FL)	6,654	187	7,231	107	B	D	55	6	No	1977	Popeyes Famous Fried Chicken franchise
5. International Postal Mktg. (Montville, NJ)	6,408	184	7,212	111	B	D	68	8	No	1974	Mkt., distrib., mfr., collectibles
6. CompuShop (Richardson, TX)	5,433	173	8,374	151	C	C	76	8	Yes	1977	Retail computer stores
7. J.A. Cornwell (Pasco, WA)	5,203	170	18,522	349	B	D	9	5	No	1975	Project developers service
8. Paychex (Rochester, NY)	5,083	168	14,358	277	C	B	300	11	No	1970	Automated payroll service
9. Furniture Consultants¹ (New York)	5,063	168	11,100	215	C	C	41	2	No	1976	Office furniture dealer
10. Homestead Products (Ramona, CA)	5,003	167	10,700	210	C	A	150	8	No	1975	Mfr., ceiling fans
11. International Games (Joliet, IL)	4,952	167	32,391	641	B	B	22	8	No	1972	Mkt., card/board, related games
12. Management Improvement (Durham, NC)	4,707	163	15,670	326	D	D	125	12	Yes	1977	Technical finance/mgmt. service
13. Technology for Energy¹ (Knoxville, TN)	4,512	161	12,918	280	C	D	195	8	No	1975	Products, services, electric utilities
14. Texas Tumbleweed (Houston)	4,434	160	14,918	329	B	C	650	45	No	1977	14 steakhouses
15. Sharper Image (San Francisco)	4,259	157	27,985	642	B	B	110	8	No	1976	Mail-order catalogues
16. Commercial/Industrial Admin. (Santa Clara, CA)	4,079	154	14,000	335	A	C	48	2	No	1977	Third-party insurance admin.
17. Metier Mgmt. Systems (Houston)	4,079	154	22,803	546	B	B	350	5	No	1977	Develop/mkt., turnkey computer sys.
18. Marliss Industries (Jonesboro, AR)	3,937	152	5,127	127	B	D	125	5	No	1977	Mfr. farm equip.
19. Hill International (Willingboro, NJ)	3,759	149	7,100	184	B	D	131	5	Yes	1976	Mgmt. consultants, construction ind.
20. Ronald Hsu Construction (Capitol Heights, MD)	3,300	142	4,256	125	C	D	100	5	No	1976	General contractor
21. Delta Business Systems (Orlando)	3,085	138	5,988	188	C	B	120	12	No	1976	Sales/leasing/service, office equip.
22. TSR Hobbies¹ (Lake Geneva, WI)	3,061	137	17,251	546	A	B	187	12	No	1974	Publisher, games/books/magazines
23. Mini-Pak (New York)	2,839	133	3,389	115	B	C	30	4	No	1976	Software sys., communications ind.
24. Polaris Vac-Sweep (San Marcos, CA)	2,825	133	11,782	403	B	D	65	15	No	1957	Mfr., mkt. swimming-pool cleaner
25. Kassout Parking¹ (Cleveland)	2,750	131	4,842	170	C	C	60	12	No	1972	Operate parking facilities
26. R.W.P. Johnson Associates (Bridgewater, CT)	2,715	130	6,868	244	B	C	7	4	No	1970	Design/erect cooling towers; ductwork
27. Energy Supply (Wayne City, IL)	2,532	127	19,328	734	B	B	145	25	No	1977	Coal producers/brokers
28. Ghent Mfg. (Lebanon, OH)	2,382	123	9,094	366	B	C	85	6	No	1977	Mfr. visual communication aids
29. Sun Hill Industries¹ (Stamford, CT)	2,378	123	4,980	201	A	A	32	4	No	1974	Mfr. holiday goods, candy molds, clocks
30. Seaboard Electronics (New Rochelle, NY)	2,355	123	2,700	110	B	D	78	5	No	1976	Telemetry monitoring & central systems

1/ Ranked among the INC. Private 100 companies in 1981. */ Net income as % of sales: A. 16% or more; B. 6%-15%; C. 1%-5%; D. loss.

THE INC. 500

Compared with the INC. 100 fastest-growing public companies, the top 100 privately held businesses are smaller in size, faster in growth, and far more diverse.

Company (by rank)	Sales Growth 1977-81		'81 sales (\$000)	'77 sales (\$000)	Profit range *		No. of employees		Acquisitions '77-'81	Date founded	Business description
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32. Tele-Com Products (Pasadena, CA)	2,248	120	2,817	120	C	B	12	1	No	1977	Distrib. electronic telephone prod.
33. Southern-Gulf (Lafayette, LA)	2,223	120	39,717	1,710	C	C	185	23	No	1976	Marine transport. to offshore oil ind.
34. Advanced Technology ¹ (McLean, VA)	2,216	119	31,827	1,374	B	B	672	51	No	1976	High-tech. professional services
35. Columbia Data Products ¹ (Columbia, MD)	2,192	119	7,018	306	B	C	120	10	No	1976	Mfr., mkt., develop computer/software
36. Charles River Data Systems (Natick, MA)	2,187	119	5,645	247	B	B	47	7	No	1973	Mfr. computers, peripherals
37. Vermont Castings (Randolph, VT)	2,185	119	29,070	1,272	B	C	430	78	No	1975	Mfr./sale cast-iron stoves
38. Lawson Associates (Minneapolis)	2,082	116	2,529	116	C	C	101	5	No	1975	Software consultant
39. Aquidneck Data (Middletown, RI)	2,051	115	5,883	274	C	C	159	22	No	1976	Software design, develop., consult.
40. Microtech Mfg. ¹ (St. Louis Park, MN)	2,033	115	12,800	600	D	B	310	15	Yes	1973	Precision metalworking
41. World Wide Chemicals (Indianapolis)	2,005	114	2,095	100	B	D	18	4	No	1977	Mfr. automotive products
42. Wolfberg/Alvarez/Taracido (Miami, FL)	1,927	112	3,264	161	B	B	146	10	No	1976	Architec., int. design., mgmt.
43. Can-Am Communications (Ontario, CA)	1,925	112	6,890	340	B	C	150	25	No	1972	Cable-TV construction
44. Inacomp (Troy, MI)	1,922	112	8,713	431	C	B	50	6	No	1976	Mktg., microcomputer syst., software
45. Parker Construction ¹ (Charleston, SC)	1,903	112	3,522	176	C	B	100	10	No	1976	Industrial/commercial contractors
46. SAS Institute ¹ (Cary, NC)	1,894	111	10,086	506	B	B	120	13	No	1976	R&D computer software
47. American Pump & Supply (Cushing, OK)	1,880	111	3,502	177	C	C	24	2	No	1977	Dealer, oil-field supplies, equip.
48. Comark (Elmhurst, IL)	1,872	111	2,253	114	B	A	18	1	No	1977	Distributor, computer supplies
49. Conference Management (Norwalk, CT)	1,830	110	7,102	368	B	C	30	4	No	1976	Mgr., trade shows/conferences
50. Rustman Bus (St. Louis)	1,813	109	7,677	401	B	B	30	3	No	1975	School bus contractor/distributor
51. Willis Cos. ¹ (Houston)	1,749	107	13,917	753	B	C	111	8	No	1976	Personnel services
52. TeleCheck Texas (Houston)	1,740	107	3,477	189	B	D	79	14	Yes	1977	Check-verification services
53. Kirke-Van Orsdel ¹ (Des Moines)	1,688	106	11,408	638	B	D	290	42	Yes	1974	Insurance broker/administrator
54. Vital Signs ¹ (East Rutherford, NJ)	1,678	105	5,760	324	B	C	26	5	No	1972	Mfr., anesthesia equipment
55. Finals Racing Swimsuits (New York)	1,671	105	2,596	146	A	D	40	5	No	1976	Mail-order racing swimsuits
56. ACSIS ¹ (New York)	1,666	105	3,090	175	B	C	100	15	No	1975	Computer consultants
57. Red Calliope & Assoc. (Culver City, CA)	1,661	105	4,749	270	B	C	26	12	No	1969	Mfr., infant nursery accessories
58. F.J. Sciamme Construction ¹ (New York)	1,629	104	11,427	661	C	C	45	10	No	1975	General contractor
59. Auto-Line Manufacturing (Copiague, NY)	1,614	104	6,000	350	B	B	250	12	No	1977	Mfr., ignition wire sets
60. Flight Int'l. Group (Atlanta)	1,600	103	12,759	751	B	A	150	14	Yes	1976	Aviation serv./defense contracts
61. PBM Office Products ¹ (Cleveland)	1,596	103	2,867	169	B	A	52	12	No	1974	Distributor office products
62. Graham Brake & Diesel (Chatsworth, CA)	1,594	103	3,133	185	C	D	18	3	Yes	1977	Distrib. transit replacement parts
63. Agrigenetics (Denver)	1,574	102	85,364	5,100	C	C	730	30	Yes	1975	Agrigenetics research; mktg. seeds
64. Techexport ¹ (Waltham, MA)	1,568	102	13,014	780	B	B	78	10	No	1971	Export computer peripherals
65. Applied Process Tech. (Santa Clara, CA)	1,503	100	3,647	228	C	B	38	8	Yes	1975	Mfr. equip., semiconductor ind.

^{1/} Ranked among the INC. Private 100 companies in 1981. * / Net income as % of sales: A. 16% or more; B. 6%-15%; C. 1%-5%; D. loss.

How extensive is the private ownership? In three out of four cases, the chief executive holds majority interest. Furthermore, in 30% of the companies, the CEO is sole owner of all equity in the business.

Company (by rank)	Sales Growth 1977-81		'81 sales (\$'000)	'77 sales (\$'000)	Profit range *		No. of employees		Acquisitions '77-'81	Date founded	Business description
	Percent increase	Compound annual rate			'81	'77	'81	'77			
66. Convex (Washington, DC)	1,488	100	2,241	141	B	B	33	11	No	1976	Mfr./sell data communication equip.
67. Industrial Training (Rockville, MD)	1,477	99	3,084	196	B	D	36	7	No	1977	Produce ind. training video program
68. Nat'l Business Commun. (Pompano Beach, FL)	1,473	99	3,502	223	B	D	50	2	Yes	1972	Bus. telephone/communication sys.
69. Bank Earnings Int'l. (Atlanta)	1,472	99	3,627	231	C	A	44	4	No	1976	Bank consulting
70. Yankee Group (Boston)	1,471	99	5,500	350	A	A	62	6	No	1970	High-technology market analysis
71. Ad-Tek Engineering Services¹ (Irvine, CA)	1,464	99	3,420	219	C	C	66	8	No	1974	Temporary technical personnel
72. McCormack & Dodge¹ (Needham, MA)	1,430	98	26,225	1,714	C	C	350	57	No	1969	Develop, mkt. financial software
73. Shallow Waterbeds (Lubbock, TX)	1,400	97	5,400	360	B	C	68	9	Yes	1976	Waterbed retailer
74. Neuro (W. Chicago, IL)	1,370	96	14,700	1,000	B	D	65	4	No	1976	Design, mfr. loading equip.
75. Katek (Middlesex, NJ)	1,355	95	1,518	104	B	C	126	16	No	1975	Repair cable-TV terminals
76. B.W. Levy Security Cnsit.¹ (Chicago)	1,355	95	1,600	110	B	A	110	20	No	1975	Public safety/security consulting
77. Memphis Glove (Memphis)	1,354	95	8,806	605	C	C	21	4	No	1974	Importers/distrib. industrial gloves
78. Delphi Glass (Lansing, MI)	1,336	95	2,154	150	B	A	50	20	No	1972	Wholesale/retail stained-glass supplies
79. Ashcraft Trucking (Shelbyville, IN)	1,328	94	4,988	349	C	C	85	15	No	1970	General commodities common carrier
80. Piedmont Mechanical (Spartanburg, SC)	1,327	94	11,118	779	B	C	245	48	No	1977	Mechanical contractors, HVAC
81. Data Electronics¹ (San Diego, CA)	1,309	94	11,834	840	B	C	419	25	No	1974	Mfr. magnetic tape-drive
82. Telecommunications Spec.¹ (Houston)	1,305	94	11,065	787	B	B	190	30	No	1974	Telecommunication equip. sales/service
83. Virginia Textiles (Richmond, VA)	1,255	92	2,229	164	C	C	40	3	Yes	1976	Imprinted sportswear
84. HTC (Concord, MA)	1,255	92	1,902	140	C	C	30	3	No	1974	Mfr. vapor-phase soldering system
85. Datamaxx USA (Tallahassee, FL)	1,237	91	6,075	454	B	B	35	7	No	1973	Sales/develop., computer peripherals
86. Computech (Wethersfield, CT)	1,222	91	1,603	121	B	A	30	3	No	1977	Data processing consulting/sys. dev.
87. Corvette America (Boalsburg, PA)	1,220	91	2,976	225	C	D	30	4	No	1977	Mfr./distrib., Corvette parts
88. Pillsbury Chemical & Oil (Detroit)	1,213	90	5,250	400	B	C	48	10	Yes	1924	Mfr. coolant/lubricants, for metalwork
89. Three Rivers Computer (Pittsburgh)	1,212	90	3,371	257	D	B	108	10	No	1976	Mfr. computer workstations
90. Univox-California (Los Angeles)	1,212	90	10,100	770	C	D	212	50	No	1970	Electronics, water-purification equip.
91. Dorman Bogdonoff (Andover, MA)	1,206	90	2,482	190	C	D	65	9	No	1975	Mfr. membrane, tactile keyboards
92. Harmony Foods (Santa Cruz, CA)	1,204	90	23,566	1,807	C	C	200	30	No	1969	Natural snacks, confectionary foods
93. J. Nageldinger & Son (Westbury, NY)	1,202	90	3,216	247	B	D	19	8	Yes	1880	Respiratory-therapy equip.
94. State Machine Products (Dry Ridge, KY)	1,191	90	3,726	289	B	B	115	18	No	1970	Mfr. food service/lighting equip.
95. American Passage Mktg. (Seattle)	1,180	89	2,713	212	C	C	75	1	Yes	1976	College media, mktg./mail order
96. Early Winters—Omnipotent¹ (Seattle)	1,171	89	9,100	716	C	C	167	39	No	1973	Mfr./retailer, outdoor clothing, equip.
97. Apoca Industries (Deer Park, NY)	1,168	89	2,500	197	C	D	94	7	No	1974	Mfr. telecommunication equip. sys.
98. Computer Systems Research (Avon, CT)	1,146	88	1,430	115	B	C	24	1	No	1974	Computer systems software/training
99. Seko Air Freight (Rosemont, IL)	1,133	87	9,722	789	C	C	60	10	No	1976	Air-freight forwarding
100. Commercial Pipe Services (Morgan City, LA)	1,126	87	1,456	119	A	A	60	8	No	1977	Oil-field hydrostatic testing, maint.

PRIVATE LIVES

Microcomputers, welding equipment, wheelchairs, prefabricated churches, and five other businesses earned their companies a spot on this year's INC. 500.

#1 **Altos Computer Systems; manufacturer of multi-user microcomputers; San Jose, Calif.**

It is clear that there isn't much room in microcomputers for two companies named after fruit. Luckily, although the 200,000-square-foot San Jose, Calif., headquarters of Altos Computer Systems is located in an apricot orchard, founder David Jackson chose to style his company after his hometown of 15 years, Los Altos Hills. Still, it was close: The corporation's slick promotion theme features fruit-packing crates labeled with "Altos Brand" contents.

But there is more to comparing apples and apricots than mere namesakes. Apple Computer and Altos each happens to be INC.'s 1982 fastest-growing small business—Apple among public companies (see INC., May, page 59), and now Altos among the private. Each company was conceived in a California basement (or reasonable facsimile), and each was born in 1977. In that fecund year, Apple had only 10 employees, Altos but 14. And their initial growth was relatively unspectacular: In the first 12 months, each company posted less than \$1 million in sales.

But here the limbs diverge. Ex-computer salesman Jackson, a round-faced, curly-haired Englishman who was then barely 40, went straight for the high end of the microcomputer market. Staking out a broad but well-defined niche—business processing and communications systems that didn't demand the full power of minis—Jackson assumed that the technology of micros would soon usurp territory firmly held by well-established minimakers. Jackson aimed to be there when it did. And he wagered his \$100,000 personal nest egg that Altos could do it far more cheaply than prospective competition.

In 1979 Altos expanded from one-user to multi-user systems, and it has gone on to take as prodigious leaps in its sector as Apple has (even more so in the scorching personal computer market that Jackson eschewed) in the other. The Altos figures shout for themselves:



Founder David Jackson has been breeding Altos to be like a Doberman, "mean and lean."

from \$8 million in sales in fiscal 1980 to \$21 million in fiscal '81 and to an announced \$51 million for fiscal '82, ended on June 30 (a figure not included in INC.'s listing criteria). That is a gain of 143% in a dismal year that slowed down many another high-tech high-flier.

Jackson grudgingly recognizes that the growth slope inevitably must start to flatten—but not necessarily by much. This September, Altos was shipping at the rate of \$80 million a year. In three more years, say some forecasts, it will be a \$500 million company.

Altos has just introduced a line of single-card, 16-bit machines that can be networked to as many as 800 individuals. Thus increasingly more powerful microcomputer systems have been placed firmly on the doorsteps of established minicomputer outfits. Indeed, says Jackson, "any OEM that DEC is selling is a target for us." This competitive turn is not going unchallenged. DEC, IBM, Wang, Data General, and even Apple—to name just a few—are trying to squeeze into a niche already occupied by Altos and a handful of

small companies. So, predictably, will the Japanese.

Most of them won't last, Jackson feels. Many smaller entries "don't seem to be making it." For one thing, no longer does only \$200,000 suffice to gear up for the 16-bit market; rather, \$20 million is needed. And the bigger companies suffer from self-defeating stubbornness. Some, for example, manufacture their own peripherals, which gluts inventory in slow times; others insist on imposing their own operating systems, a conceit Jackson likens to each phonograph-record company devising its own rate of RPM. "I'm watching them make mistakes that it will take them a couple of years to recover from," he gloats.

Meanwhile, Jackson has been breeding Altos like a Doberman—to be "mean and lean." Its pretax margins are a slim 20%, but in 1981, its net income was a highly profitable 11.2% of sales. It manufactures only its board and acquires the rest from vendors. Its control methods can respond to threatened inventory excesses within two months. It utilizes

(continued top of page 43)

standard chips like Intel's and standard operating systems like CP/M and UNIX. Thus 300 "happy but serious" employees (largely because of liberal employee stock ownership, Altos enjoys low turnover) were able to produce 1982 revenue at the exceptionally high ratio of \$170,000 each. "That's the key to this business. If Japan can do it," challenges Jackson, "good luck to them. No competitor can underprice us and survive."

Another unassailable Altos strength, says Jackson, is marketing and promotion. Altos extends up to \$1 million in credit to dealers—a lure that would-be pursuers will find hard to match. All told, it spends 12% of sales on dealer support and end-user advertising.

So far Altos's growth has been largely self-financed, but additional capital is needed just to expand accounts receivables, Jackson figures. To finance the next phase, the company was expected to go public in November, with about \$38 million in new stock. Some of the money probably will be plowed into research and development—an area in which ratios have fallen behind, mainly because of rapid sales expansion. "If you're going to stay significant, you've

got to be spending it," says Jackson, who intends to bring R&D expenditure up to 10% of sales from mid-'82 levels of 6½% to 7%. On the drawing board are some "sexy-looking," low-end products (one is a 16-bit model for about \$5,000), and "mind-boggling" developments in networking and communications. "We want the total sale," says the seemingly insatiable Jackson, "from desktop to mainframe."

Despite the apparent ease with which Altos was steered into eight-digit revenues, Jackson figures that one successful launch per lifetime is enough. The last time he started a business, in the late '60s, he had to sell it for lack of capital. "I learned then that if you want to meet the payroll you'd better have some money in the bank."

Now that the money is there (in 1981 Altos had \$4 million in cash and a credit line for another \$5 million), he intends to keep it there. "I'm really not an entrepreneur," Jackson explains. "It's too stomach-churning to realize that the business stops when you go home at night and doesn't start up again unless you return in the morning. The bigger this one gets, the better."—R.A.M.

#175 Jewell Building Systems; manufacturer and fabricator of metal buildings and homes; Dallas, N.C.

"The down economy has accrued to our benefit," says Everett Jewell, owner of Jewell Building Systems, a Dallas, N.C., manufacturer and fabricator of pre-engineered metal agricultural, industrial, and commercial buildings, houses, and churches. "In hard times, people are looking for alternatives."

Jewell has built his five-year-old business to more than \$2 million in sales by continually looking for innovative alternatives himself. When he started, with \$30 in his pocket and a part-time secretary, he advertised farm storage buildings. Rather than try to secure credit, he first made the sale, then had

the product manufactured under his name and delivered. Today, although his company has grown to be a manufacturer with 30 full-time employees, he still does a strictly cash business, even though "our bankers tell us we can't do business that way."

His expansion into housing came about as an attempt to provide alternatives. "I had spent 10 years in the mobile-home business," he says, "and I discovered that a person who bought a mobile home would rather have had a conventional home if he could have afforded it." Estimating that some 80% of prospective buyers nationwide had been priced out of conventional houses, Jewell developed a vinyl-coated, wood-grain house that could be sold for \$28,000. "Anytime you have an 80% market and an effective product, you might as well hitch up the locomotive and go," he says. Besides national sales, he is negotiating a deal for 20,000 steel homes in Colombia, South America, part of an overseas market whose potential he believes is enormous.

The latest alternative to engage Jewell's attention is the church market, where costs range from \$42 to \$105 a square foot for sanctuaries constructed by church contractors. "We applied our system to come up with a series of churches where you can turn the key and walk in for \$26 a square foot, including furniture, pews, baptistry, steeple, and cross," he says. "The future market is unreal."—C.H.



Everett Jewell makes use of alternatives.

Jeep Humeir/Black Star



Ed Pierratti/Black Star

Irene Dugger opened a world to women.

#213 Queen Oxygen Co.; supplier of welding equipment; Worthington, Ohio.

The welding-supply business, Irene Dugger admits, is a man's world. "But I can go into a welding shop and talk to the foreman and the superintendent, and I can relate to them," she says.

Ten years ago Dugger was 40 years old, a publishing-company clerk with some door-to-door selling experience, and dreaming of owning her own business. Today she is the chief executive officer and majority stockholder of Queen Oxygen Co. in Worthington, Ohio, a company with sales last year of almost \$3.5 million and a five-year growth rate of 618%.

The company's success, Dugger claims, has come largely from its female ownership and predominantly female staff. The president and all eight salespeople are women. "We've tried men," secretary-treasurer Delbert Thomas says, "but they just haven't cut the mustard."

Typically, most welding-supply distributors sell in a limited geographical area, delivering goggles, helmets, solder, torches, and accessories from a route truck. But the female ownership of Queen Oxygen has led to an expanded, nationwide customer base as well, selling supplies to large corporations eager to fulfill their affirmative-action requirements.

As Queen Oxygen has grown, so have Dugger's horizons. Some two-thirds of the company's sales growth has been in used compressed-gas cylinders, which Dugger purchases for reconditioning from dealers and government-surplus sources across the country and in Europe, Africa, and the Orient. "Irene had never been farther west than Indiana when we started," marvels Thomas. Now she's been all over the world—and made it a woman's world, too.—C.H.



Allan Thieme's staff respects the product.

#212 Amigo Sales Inc.; manufacturer of electric wheelchairs;

Bridgeport, Mich. For plumbing contractor Allan R. Thieme, designing a better wheelchair was easy—the hard part was selling it.

In 1968, when his wife, Marie, contracted multiple sclerosis, Thieme saw the disadvantages of the conventional wheelchair firsthand. Not only was it too wide to maneuver, it also forced his wife to sit still, unable to move, looking far more crippled than she really was. The replacement he developed, a motorized scooterlike device with a swivel seat and handlebars like a bicycle's, enabled Marie to exercise her legs as the doctor had ordered.

But most medical-equipment distributors had little interest in a wheelchair produced by a plumbing contractor with neither capital nor a reputation behind him. Thieme talked to dozens of distributors, but in five years Amigo Sales Inc. managed to sell only a few hundred wheelchairs, 90% through direct contact with handicapped people.

"I was broke, and I was going to drop it," Thieme remembers—until the very effectiveness of the product suggested a novel marketing approach. Handicapped people who had been limited to conventional wheelchairs found the machine gave them the mobility to lead a full and nearly normal life. Why not let us sell the chair, several users suggested—and so was born the Amigo direct-sales staff, 80% of whom are either handicapped themselves or have relatives who are handicapped.

Sales for the Bridgeport, Mich., company began to rise, topping \$9 million in 1981. The market remains huge. And no one can tap that market better than Amigo's sales staff. "Many of these people might have trouble finding regular employment; society still makes it hard for the handicapped to find a job," Thieme says. "But the people using the Amigo have a distinct advantage: They know what the Amigo can do. It has touched their lives directly."—R.C.W.

#118 Cook Machine Co.; manufacturer of oil- field equipment; Dun-

can, Okla. When Henry and Dorothy Cook established Cook Machine Co. in 1956, its stock-in-trade was repairing and rebuilding automobile engines and selling car accessories. But over the years, as oil-well drilling became more intense in its own backyard, the Duncan, Okla., company began to use its machining expertise to move beyond autos. First it began fixing oil-field engines for oil companies producing in the area. Soon the Cooks started to see orders for custom-machined parts from Halliburton Services Division, a big oil-field service company based in Duncan. In 1976, sensing a market opportunity, Henry Cook decided to design and build oil-well pumping units from scratch.

For a while, the pumping units, selling for \$1,500 to \$15,000, were a modest sideline. But by 1978, as drilling activity heated up, demand for Cook Machine's CMC pumping units, which

featured a patented design using heavy-duty chains instead of gears, was so strong that the Cooks invested more than \$3 million in a new plant, inventory, and machines.

During 1980 and 1981, when sales shot to more than \$5.6 million, Cook Machine built about 200 oil-well pumps a month, near its capacity, and employed more than 30 workers, including 12 skilled machinists. Besides Henry, now 59, who supervises production, and Dorothy, 56, the family business also includes their two sons—one working as a programmer and personnel manager, the other as a designer, buyer, and salesman—and their wives.

Lately, due to slackness in the world oil market, Cook Machine is no longer producing pumps at anywhere near its capacity—and many of its competitors have gone under. But, says Dorothy Cook, "it's our feeling that the activity will begin to come back, and when it does we're ready to manufacture as many pumps as anyone wants to buy."—B.G.P.

#24 Polaris Vac-Sweep Corp.; manufacturer and marketer of swim- ming-pool cleaner; San Marcos, Calif.

"Get the sale and then worry" was once the catchy philosophy of family-owned Polaris Vac-Sweep Corp. of San Marcos, Calif. The catch was that pursuing that credo swept the swimming-pool equipment company straight into bankruptcy court in 1976. But in a rapid turnaround worthy of Mark Spitz, not only did its president, James H. Edmiston, snatch Polaris from the jaws of liquidation, but he has also managed to increase sales an amazing thirtyfold in the five years since then.

The court allowed Edmiston to run the business as debtor in possession. "It was a hell of a learning experience," Edmiston says of the reorganization plan. "You get an understanding of everything that went wrong because you're forced to correct it all." To insulate the crippled company from angry creditors, Edmiston had to replace his father as chief executive officer. "No one was mad at me," the younger Edmiston explains.

Although the creditors did have some rights of control, he says, fortunately, "they weren't interested in running the business. They just wanted to get some money back." He sold off Polaris's inventory of some 4,200 pool items that the company then handled, and the debt that remained was traded for Polaris preferred stock. Bit by bit, over the succeeding six years, Edmiston bought the stock back from his creditors. When the repurchase was completed, a year ahead of plan, debts had been paid at about 58¢ on the dollar.

Edmiston rejected the only loan he was able to float—a second mortgage on his home. Thus Polaris's recovery was virtually self-financed. The catalog items were jettisoned and Polaris established a distribution network for the \$500 pool-cleaning device on whose development the company had spent \$1.5 million just before going under.

Edmiston followed this with aggressive trade and consumer promotion. Now the company is preeminent in its field, claims Edmiston, and enjoys a large, unsecured credit line. Indeed, living testament to the efficacy of bankruptcy law in keeping a business afloat, Polaris is awash in so much cash that it is currently seeking acquisitions.—R.A.M.



James Edmiston learned from past errors.

#6 CompuShop; computer-store retailer; Richardson, Tex.

As the market for personal computers has exploded, CompuShop, a computer retailing chain based in Richardson, Tex., has resisted the temptation of going after rapid growth through national franchising. Instead, the company, which has opened 18 stores in the past five years, believes that owning its retail outlets, though they demand precious capital, is a better way to go. The corporate staff takes care of advertising, accounting, and purchasing for all the outlets. "The only things the people at the stores have to do is sell computers and service customers," says Warren Winger, founder and chairman.

In early 1977, Winger, now 40, had been a manager for General Electric Information Services, marketing its computer time-sharing services, when he read an article in *The Wall Street Journal* on the incipient market for personal computers. In three months—just before the first Apple II models became available on the market—Winger had

his first store in northern Dallas.

While Dallas, Houston, and Chicago are CompuShop's major markets today—a Denver store opened last August—Winger says that by mid-1985 the company will have 100 stores and be in new markets. The expansion, he claims, could be financed internally; the company projects its return on equity will increase 80% per year.

Specializing in Apple and IBM personal computers, CompuShop saw 1981 sales rise around 65%, to \$8.4 million. But Winger anticipates increasingly stiff competition from national retailers like Sears, Roebuck & Co. and retail outlets owned by computer manufacturers. To meet these challenges, CompuShop is tightening quality standards throughout the chain and building a strong management organization. For instance, it recently hired a veteran Sears executive who had helped launch the giant retailer's new business systems centers. Explains Winger: "There isn't anyone who knows retailing and service better than Sears."—B.G.P.



Paul Munsen is carefully attentive to the concerns of his special group of customers.

#245 Munsen's Discovery Enterprises Ltd.; chartering and leasing tours; Hinsdale, Ill.

When 23-year-old Paul M. Munsen set up a company in 1974, he planned to market low-cost, group motor coach tours to students and organizations. But within a year he discovered that there was more gold in another market: the golden-agers. Although the number of senior citizens was growing rapidly, there were no companies that had developed tour programs to meet the special needs of the group. "The Discovery Experience" was born, limited to men and women over 55 years of age.

Everything about Discovery tours has been calculated with the needs of the group in mind—even the travel brochure is printed in boldface type for easy reading. Trips are carefully planned, with travel time never more than 2½ hours without a stop. Long walks and steep steps at attractions are kept to a minimum. One price covers virtually everything—meals, hotels, at-

tractions, and trips—so that seniors on a budget get no unwelcome surprises.

Such attention to detail has paid off. Over the last five years sales have climbed 563%, to nearly \$8 million in 1981. Careful planning has been the hallmark of Munsen's growth. In 1980, Munsen purchased his own fleet of buses, buying the Illinois company from which he had originally leased his coaches, thus ensuring the quality of equipment. Later that year, he bought a bus company in Florida. Traditionally the business in the Midwest is slow in the winter and busy in summer and fall, while the business pattern in Florida is reversed. By having two companies, Discovery can get maximum use of its equipment and ensure a smooth, rather than seasonal, cash flow. In addition, the company has opened a commuter operation and a company offering one-day coach tours, both of which further increase utilization of equipment and generate income. Gross sales for the entire system are expected to hit the \$11 million mark this year.—R.C.W.



Dan LeKander's wife is in the driver's seat.

#87 Corvette America Inc.; manufacturer and distributor of Corvette automobile parts; Boalsburg, Pa.

For Dan LeKander, it was a lucky accident. In 1974, LeKander wrecked his 1966 Corvette.

"I was going to rebuild the car," he remembers, "but I got discouraged and advertised the parts for sale." Some parts he sold, others he swapped. By the end of the year he had \$6,000 in-cash, \$4,000 worth of parts, and an idea. The idea became, in 1977, Corvette America Inc., a Boalsburg, Pa.-based manufacturer and nationwide wholesaler and retail distributor of Corvette parts and accessories with almost \$3 million in sales for fiscal 1981.

A huge market and a strict credit policy have been responsible for LeKander's success. There are more than 500,000 Corvette owners in the United States today. Rather than selling them the parts most dealers supply, LeKander, 37, concentrates on high-profit-margin items—such as custom accessories as car covers, aluminum wheels, and interior parts. Retail customers, who account for 70% of his business, can order by credit card or COD. LeKander's 600 wholesale customers are denied credit as well; instead he encourages them to keep \$10,000 on account by offering a discount price.

The business has grown some 1,220% in five years, from one man in a garage to a 35-person staff. Now LeKander plans to promote his wife, Peggy, to the company presidency and spend his time fishing and working on a 150-page catalog for the company. He still owns a Corvette himself, but in the business it will be Peggy in the driver's seat.—C.H.

The articles in this section were researched and written by INC. staff members Curtis Hartman, Robert A. Maxis, Bruce G. Posner, and Robert C. Wood.

THE INC. 500

The Private 500 represent 44 states. Geographically, the West wins again on the strength of California's 84 companies—more than twice as many as any other state.

Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description	Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description
101. KMW Systems (Austin, TX)	1,119%	\$ 2,043	Mfr. computer data commun. equip.	141. Data Translation ¹ (Marlboro, MA)	867	6,783	Mfr. microcomputer data acquisition syst.
102. Systems Strategies (New York)	1,118	2,436	Software consult. to banks, brokerages	142. Data Systems Design (San Jose, CA)	867	23,200	Mfr. disk memory systems
103. Golden Corral ¹ (Raleigh, NC)	1,117	107,969	Family steakhouses	143. Hackney Investg. & Secty. (Greensburg, PA)	861	1,027	Security serv./private investigations
104. Brady Marketing (Concord, CA)	1,100	6,000	Wholesaler, marketing gourmet cookware	144. Fresh-Pakt Shrimp (Venice, FL)	858	4,913	Fresh, frozen seafood products
105. Metro Info. Services (Virginia Beach, VA)	1,100	1,200	Computer software	145. Dinneen Excavating (Columbus, OH)	856	2,606	Underground utility contractor
106. Thermal Engineering (Tucson)	1,087	1,768	Waste water, heat-recovery, pumping systems	146. Centec ¹ (Reston, VA)	851	4,437	Process eng./microsyst.
107. David Boland (Titusville, FL)	1,080	3,712	General contractor	147. PSI Process Systems (Memphis)	829	9,927	Engineers grain processing plants
108. Beacon Communications (Acton, MA)	1,077	16,869	Communications services	148. Polymer Plastics (Mountain View, CA)	829	1,010	Wholesale distrib. plastic materials
109. Commercial Prpty. Serv. (Cleveland)	1,077	13,423	Building-maintenance, security	149. Décor ¹ (Fairfield, AL)	820	18,326	Mfr. decorative paneling
110. Los Alamos Technical ¹ (Los Alamos, NM)	1,070	5,850	Consulting engineers, energy/environ.	150. Graphic Technology (Lenexa, KS)	817	2,858	Mfr. bar code, pressure-sensitive labels
111. LaMarca Group (New York)	1,063	15,681	Advertising media/marketing services	151. Diamond Enterprises ¹ (Salt Lake City)	816	6,293	Homeowner rental ctrs.; gas stations
112. Private Ledger Financial Serv. (San Diego)	1,058	22,000	Securities brokerage	152. Transalaska Data Syst. (Anchorage, AK)	813	4,856	Sales/service, commun. equip., microcomp.
113. Selective Personnel ¹ (East Brunswick, NJ)	1,050	2,876	Personnel agency	153. L. J. Russo Ins. Serv. (Emeryville, CA)	812	5,242	Claims adm. service, insurance
114. Sunmaster (Corning, NY)	1,040	2,850	Mfr. solar heating/cooling systems	154. Style Auto (Tarzana, CA)	809	2,700	Design, mfr. motor sports outerwear
115. Amperif (Chatsworth, CA)	1,005	10,500	Mfr. memory systems	155. Automation Electronics (Oakland, CA)	805	7,748	Mfr./sales, telecommunications equip.
116. Satter Cos. (West Palm Beach, FL)	991	26,065	Real estate development	156. Crafco ¹ (Chandler, AZ)	805	6,991	Mfr. asphalt seal., road repair mach.
117. Tarrant Service Agency (Louisville)	980	2,182	Air conditioning/heating equip. distrib.	157. Controlonics (Westford, MA)	801	20,517	Consumer electronics, communications
118. Cook Machine (Duncan, OK)	974	5,682	Mfr. oil-field equip.	158. Dav-El Livery Services (New York)	800	9,000	Chauffeured limo rentals
119. Medata (Santa Ana, CA)	961	4,504	Medical billing review service	159. Digitize (Lake Hopatcong, NJ)	798	1,058	Mfr. high-tech. alarm syst.
120. Advanced Mfg. & Devel. (Willits, CA)	960	1,598	Precision sheet metal, machining	160. Comsearch (Reston, VA)	795	2,086	Engineering service telecommun. syst.
121. Vector Group ¹ (Springfield, VA)	955	4,750	Data processing mini/micro computers	161. Summagraphics (Fairfield, CT)	790	24,000	Mfr. computer-aided design sys.
122. Sonic Air Courier (Inglewood, CA)	955	5,800	Air courier	162. Astre (Charlottesville, VA)	784	12,196	Microbio. R&D services
123. Perfusion Services (Brighton, MI)	951	3,253	Medical services, surgical personnel, equip.	163. Vanguard Plastics (McPherson, KS)	778	4,160	Mfr./sales polybutylene plumbing pipe
124. Wornick (Burlingame, CA)	946	35,063	Food processing/packaging	164. Microcomputer Systems ¹ (Sunnyvale, CA)	772	15,483	Mfr. disk-drive control. memory syst.
125. Petron Controls (Canogo Park, CA)	936	4,007	Mfr. microprocessor controllers	165. Bomark Group (Houston)	771	3,998	Mfr., wholesale sportswear
126. Granite Financial (Sacramento)	936	11,450	Mortgage banking/brokerage	166. Kent Electronics (Houston)	769	8,607	Electronics distributor
127. Kebo Contractors (Orange, CA)	935	7,969	Reinforced concrete structures	167. Roscom (Trenton, NJ)	767	2,600	Plastic raw materials
128. Digital Systems House ¹ (Batavia, IL)	933	3,100	Distrib. computers; dvp., mkt. software	168. Xentek (San Marcos, CA)	766	14,956	Mfr. DC power supplies, transformers
129. Heuston Copy (New York)	931	1,100	Quick printing, copying	169. Webb, Murray & Assoc. (La Porte, TX)	747	1,957	Loss control syst., engineer./construct.
130. American Technical Serv. (Tucker, GA)	908	13,136	Instrument-control syst. engineering	170. Corporate Funding (Grand Rapids)	743	1,425	Equipment lessor
131. Universal Energy Syst. (Dayton)	908	3,756	R&D, export, scientific instruments	171. David M. Griffith & Assoc. (Northbrook, IL)	742	4,258	Cost acctg. serv. to gov't.
132. Commercl. Glass & Glazing (Mesa, AZ)	906	4,321	Glazing contractor, retailer	172. Ruiz Food Products (Tulare, CA)	739	6,035	Mfr. frozen Mexican food
133. Alamo Consulting Group (Walnut Creek, CA)	900	1,200	Publish. license mgmt. programs	173. Chemical Oil Recovery (Bakersfield, CA)	736	3,254	Oil-recovery operations
134. D&D Services (Phenix City, AL)	898	1,762	Janitorial services	174. Service Indus. of Amer. ¹ (Tucson)	735	8,351	Indust. maint. supplies
135. Technology Transfer Inst. (Santa Monica, CA)	896	2,304	Computer education, consulting services	175. Jewell Building Systems (Dallas, NC)	734	2,023	Mfr./fabricate metal buildings, homes
136. PBS Computing (St. Paul, MN)	892	2,774	Data computer services, equip., software	176. NEOPC (Leominster, MA)	733	2,500	Mfr., distrib. natural foods
137. O'Donnell Organization (New York)	874	1,914	Advertising services, merchandise	177. SUSPA (Grand Rapids)	727	7,545	Mfr. press. cylinders for motors, computers
138. Interwest Communic. (Denver)	870	4,900	Sales/installation business telephones	178. Custom Decor (Dover, DE)	725	2,340	Importer/wholesaler of giftware
139. Sun Valley Waterbeds (Phoenix)	869	11,049	Retail waterbeds, bdrm. furniture	179. North Star Computers ¹ (San Leandro, CA)	721	21,500	Microcomputer syst. mfr.
140. Ava Care ¹ (Dallas)	868	16,784	Direct sales cosmetics/vitamins/minerals	180. Lanco Knitwear (Ephrata, PA)	719	7,091	Mfr. circular-knit fabrics, garments

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500 More than two-thirds of the 500 companies were founded in the last decade. Four out of 5 have grown internally—and all but 13 companies are operating in the black.

Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description	Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description
181. Branson Aircraft (Denver)	715	1,250	Custom business aircraft equipment	221. Atlantic Fire Systems (Raleigh, NC)	604	1,909	Mfr. restaurant ventilation systems
182. Stoops Express ¹ (Anderson, IN)	715	15,044	Interstate regulated motor carrier	222. Urban Mgmt. Consultants (San Francisco)	602	2,530	Develop, operate training prog.
183. Danyl (Moorestown, NJ)	713	2,516	Mfr. electronic office control syst.	223. Dallas-Fort Worth Distrib. ¹ (Dallas)	602	7,420	Furniture wholesaler
184. Nutech (San Jose, CA)	712	36,501	Engineering consultants power ind.	224. Robert Douglass Assoc. (Houston)	600	2,940	Hospital/health-care consult.
185. Dr. Cully's Cartage (Hunt Valley, MD)	711	1,023	Trucking and warehousing	225. K.S. ¹ (St. Paul, MN)	600	3,500	Carpeting service
186. Contract Furnishings & Syst. (New York)	711	12,968	Office furniture, systems dealers	226. Nucleus (Oak Ridge, TN)	598	3,902	Mfr. nuclear instruments
187. Comed (Medina, NY)	708	1,121	Mfr./distrib. medical devices	227. P E Systems (Alexandria, VA)	597	2,210	Engineering, govt. communic.
188. Reef Petroleum (Traverse City, MI)	694	26,506	Oil, gas exploration	228. Phone Directories ¹ (Provo, UT)	595	1,829	Publisher, phone directories
189. Business Telephone Syst. (Columbus, OH)	693	18,899	Sales/service telephone systems	229. Pacific Envelope (Anaheim, CA)	594	1,528	Mfr. envelopes
190. Doug Martin (Charleston, WV)	692	1,224	Retailer, athletic footwear/clothing	230. Windham (Pensacola, FL)	594	15,465	Own, operate hotels, motels/condos
191. Theriault's (Annapolis, MD)	692	2,400	Auction/appraisal, antique dolls	231. Pritsker & Associates (West Lafayette, IN)	592	2,168	Computer simulation, software consulting
192. Systems Engineering (Cherry Hill, NJ)	687	15,030	Naval eng. and support serv.	232. Delta Education (Nashua, NH)	592	3,857	Mfr./publ. science, math materials
193. Morgan Manufacturing ¹ (Paris, IL)	683	3,915	Mfr., pet food flavors	233. Leichtung (Cleveland)	589	5,360	Mail order, fine tools
194. Benatty (Cambridge, OH)	682	11,337	Oil, natural-gas producers	234. Nav-Com (Deer Park, NY)	585	1,940	Marine electronic syst. distributor
195. Allegro Services (Tucker, GA)	680	4,088	Wholesaler, promotional items (fund raising)	235. Input ¹ (Mountain View, CA)	585	4,543	Consult. info. industry
196. Computer Science Press (Rockville, MD)	679	1,028	Publisher of computer/engineering texts	236. Vectran (Pittsburgh)	584	1,629	Remote control systems
197. Coastal Compression ¹ Serv. (New Iberia, LA)	678	2,461	Services to petroleum/natural gas ind.	237. Century Data Systems ¹ (Raleigh, NC)	582	6,400	Sales, serv., syst. design
198. Bloom Electric Services (Oklahoma City)	677	4,000	Electrical services	238. American Color (Phoenix)	580	11,629	Four-color separation, and film preparation
199. Pretty Neat Industries (Pompano Beach, FL)	677	3,766	Mfr. personal-care kits	239. C.M. Mascolo (Phoenix)	578	4,300	General contractor
200. Univrsty. Business Mach. (Darby, PA)	669	1,396	Retailers, calculators/microcomputers	240. Penta Systems Intl. (Baltimore)	574	10,392	Computerized photocomposition
201. Cherokee of California (Gardena, CA)	664	33,178	Mfr. women's shoes	241. Denver Spectrum ¹ (Denver)	570	2,600	Color separations/custom stripping
202. Gator Transportation (Orlando)	662	2,747	Cable-TV services, video games	242. Brock Intl. Security ¹ (Middlebury, VT)	568	5,954	Security services
203. Oxford Software (Hasbrouck Heights, NJ)	661	5,266	Computer software devlp./sales	243. East Coast Machine & Iron Works (Bridgeton, NC)	567	5,618	Steel fab./erection; rubber lining
204. Web Printing Control (Elk Grove Village, IL)	658	2,110	Aux. controls, offset print. press	244. Billings & Gage Mfg. (Mitchellville, IA)	567	1,292	Mfr. desserts
205. Hughes Drilling (Enid, OK)	656	27,991	Oil, gas drilling contractor	245. Munsen's Discovery Ent. (Hinsdale, IL)	563	7,902	Motor coach tours
206. Simtran (Medway, MA)	653	2,685	Mfr. training simulators	246. Organizational Dynamics (Burlington, MA)	563	2,319	Design devlp./mkt. training programs
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208. Inst. for Business & Tech. (San Jose, CA)	647	809	Priv. vocational educ.	248. Little Barn (Little Rock)	559	1,259	Furniture retailer
209. Research, Analysis & Mgmt. ¹ (Rockville, MD)	647	3,613	Naval support services	249. Astro Wire & Cable ¹ (Worcester, MA)	557	9,963	Mfr. electrical wire, cable
210. Aitridge Heating & Cooling (Tempe, AZ)	642	816	Mfr./sales, cooling systems	250. Sachs/Freeman Assoc. (Bowie, MD)	555	4,838	Eng. consultant, software devel.
211. One Pass (San Francisco)	621	3,180	Tech. creative services, film/TV	251. Spaulding & Slye (Burlington, MA)	554	51,853	Real estate devlp./brokerage
212. Amigo Sales (Bridgeport, MI)	618	9,289	Mfr. electric wheelchairs	252. Blue Dolphin Enterprises (San Diego)	552	1,780	Wholesale/mail-order/publ.
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216. Technical Aid (Newton, MA)	610	81,021	Contract personnel services	256. Systems Architects (Randolph, MA)	543	8,668	Computer technology R&D
217. Specialty Office Machines (Fond du Lac, WI)	609	1,800	Whsle./retail office mach.	257. Metaltech (Kirkwood, MO)	541	2,215	Mfr. rain-carrying goods, gutters
218. Ag Asset (Salem, NY)	608	3,251	Dairy cattle sales/leasing	258. Micro-Metal (Indianapolis)	540	2,801	Mfr. access. for HVAC equip.
219. WLC Industries (Woodstock, GA)	608	12,110	Retail/contract art, gifts	259. Reactive Metals & Alloys ¹ (West Pittsburg, PA)	540	29,306	Mfr. indus. alloys/additives
220. L&M Enterprises (Berthoud, CO)	604	1,906	Landscape contractor	260. Heritage Log Homes (Gatlinburg, TN)	539	1,851	Mfr./mkt. log home kits

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262. Raven Syst. & Research ¹ (Washington, DC)	536	8,700	Info. processing/programming	302. Duff's Enterprises (Lebanon, OH)	465	48,009	Smorgasbord restaurants
263. Remco (Mechanicsburg, PA)	532	1,577	Refrig./elec./mech. contractor	303. MBT Associates (San Francisco)	463	4,262	Architects
264. Jon Rich Displays (St. Petersburg)	529	1,075	Mfr. displays, trade shows	304. Jer-Way of Texas (Brownsville, TX)	462	4,288	Wholesale sash, door, millwork jobber
265. Electro-Test (San Ramon, CA)	524	3,745	Elec. power syst. testing, engineering	305. Saddlebrook ¹ (Cambridge, MA)	459	14,141	Minicomputer distributor, bank ind.
266. Horwath Electric Motors (Erie, PA)	524	773	Electrical equip. repair	306. Bam Publications (Oakland, CA)	458	1,407	Music magazine publisher
267. Design 1 ¹ (Los Angeles)	523	3,113	Commercial interior design	307. DuCair Bioessence (North Bergen, NJ)	455	6,036	Mfr. gift cosmetics
268. Phillips Publishing (Bethesda, MD)	521	4,912	Newsletter publisher	308. Seavex Limited (Boston)	453	1,039	Publishers' ad rep.
269. Unित्रonix (Somerville, NJ)	520	6,200	Distrib., computers syst.	309. Sportsman's Emporium (Philadelphia)	453	18,331	Distrib. hunting equip., firearms
270. Cameo Fashion Access. (Beverly Hills, CA)	518	1,243	Wholesale jewelry	310. Precision Tune (Beaumont, TX)	452	5,303	Automotive tune-up franchise
271. Design & Image Assoc. (Denver)	517	1,148	Graphic design	311. Tarpon Electric (Palm Harbor, FL)	449	1,869	Elec. construction/design
272. Amer. TV & Appliance (Madison, WI)	515	80,507	Retailer, furniture/appliances	312. Concord Carpet Mills (Dalton, GA)	449	9,589	Carpet mfr./ sales
273. Tenco Industries (Elk Grove Village, IL)	512	2,745	Mfr. metal-cutting machine tools	313. S.F.C. (Torrance, CA)	444	9,901	Computer-related furniture
274. Scientific Systems Serv. (Melbourne, FL)	512	7,945	Process-control computer software	314. JWK International (Annandale, VA)	442	7,747	Gov't. contracted R&D
275. Conдор Carrier (Lodi, OH)	511	3,067	Interstate transportation	315. Steven H. Adler (New York)	442	661	Insurance/consultants retirement plan
276. Security Alarms & Fire Eng. (Davie, FL)	509	610	Install. alarm/intercom/antennas	316. Resource (Tampa)	441	2,114	Dvlp./sales audio-visual training prod.
277. Summit Reprographic (Akron)	509	6,700	Distributor drafting supplies	317. Wiedemann & Johnson (Dallas)	438	9,610	Executive benefit plans
278. D & S Metals (Dallas)	509	8,309	Metals distribution	318. Career Blazers Personnel ¹ (New York)	436	10,462	Permanent/temp. employment svcs.
279. Mainpro (Irving, TX)	508	2,456	Mfr. custom lubricants	319. Action Instruments (San Diego)	434	14,193	Mfr. electronic measurement and control instru.
280. Bassil & McNichols (Boston)	507	637	Retailer, gifts/cookbooks	320. Kolin Plumbing (West Babylon, NY)	434	2,799	Plumbing syst. installation
281. Alley-Cassetty Coal (Nashville)	504	40,485	Coal brokerage	321. Data Design Associates (Sunnyvale, CA)	434	4,430	Dvlp./mkt. financial software
282. Setpoint (Houston)	504	3,959	Dev. indust. process control programs	322. Harold E. Hammond (Fort Worth)	433	752	Hand distrib. printed materials
283. Coating Specialists (San Antonio, TX)	502	2,666	Polyurethane foam roof systems	323. Eastway Delivery Service (Houston)	432	2,236	Local freight delivery
284. Aloe Charm (King of Prussia, PA)	502	6,000	Skin care, cosmetics	324. American Foundry Group (Bixby, OK)	430	9,694	Castings foundry
285. Lionex (Burlington, MA)	501	19,739	Distributor, electronic components	325. Mktg. Corp. of Amer. (Westport, CT)	429	61,414	Consumer marketing service
286. Connecticut Travel Serv. (New Britain, CT)	500	12,000	Travel agency	326. Sasquatch Publishing (Seattle)	429	1,306	Publishers, local news mag./guidebk.
287. Anadex (Chatsworth, CA)	499	25,102	Mfr. computer output printers	327. Polk Audio ¹ (Baltimore)	427	4,828	Mfr. hi-fi speaker systems
288. Analysis & Technology (North Stonington, CT)	498	19,713	Tech. support services	328. Chemco Valve & Fittings (Houston)	427	2,637	Distrib. ind. pipe/valves/fittings
289. IDM Controls (Houston)	495	5,323	Sales/serv. motor control syst.	329. Management Decision (Walham, MA)	427	16,126	Software, consulting
290. Morino Associates (Vienna, VA)	492	4,442	Dvlp./mktg. computer software	330. Macom Industries (Van Nuys, CA)	426	5,337	Import/sales, antenna syst. components
291. Numanco ¹ (Pawtucket, RI)	491	8,693	Technical support services	331. Software Module Mktg. (Sacramento)	425	2,100	Mkt. IBM mainframe software
292. Seaboard Energy Syst. (Virginia Beach, VA)	486	1,001	Mfr. computer-based management syst.	332. Phoenix Reforestation (Eddyville, OR)	424	545	Reforestation serv., tree farms
293. Ecan Investments ¹ (Mobile, AL)	486	3,273	TV, appliance rental	333. Fastenal (Winona, MN)	424	3,691	Wholesale dist. fasteners, hardware
294. Compuware (Birmingham, MI)	484	11,280	Info. syst. services; computer software	334. Scopus (Lowell, MA)	422	4,620	Computer library mgmt.
295. Bepco (Winston-Salem, NC)	481	1,700	Rebuild heavy equip. parts	335. Xylogics (Burlington, MA)	422	9,547	Dvlp./mfr./sale microprocess. controls
296. Catalyst Technology (Buckner, KY)	478	10,920	Catalyst handling service	336. Miller Oil (Norfolk, VA)	421	22,500	Petroleum products distrib.
297. Custom Recording & Sound (Greenville, SC)	474	948	Recording serv., equip.	337. Kaye Instruments (Bedford, MA)	421	13,530	Mfr. microprocessor-based computer equip.
298. Tideland Petroleum Serv. (Alta Loma, TX)	474	4,344	Offshore facilities install./fabrication	338. Nuvatec (Lombard, IL)	420	1,962	Design/mfr. electronic prod.
299. EDM Precision Products (Fort Lauderdale, FL)	471	1,394	Aerospace contract mfr.	339. Frank Scott Enterprises (Aptos, CA)	418	10,422	Financial services, venture capital
300. Western Trailer Equip. (Abilene, TX)	470	5,773	Semi-trailer sales/parts/serv.	340. Beacon Sales (Jacksonville, FL)	416	7,268	Commercial construct. subcontractor

¹/ Ranked among the INC. Private 100 companies in 1981. * / Net income as % of sales: A. 16% or more; B. 6%-15%; C. 1%-5%; D. loss.

500 Most of the 500 companies will keep growing in the year ahead, but you can also bet that several will go public, a couple will sell out, and at least one will end up bankrupt.

Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description	Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description
341. Rehler Vaughn Beaty & Koone (San Antonio)	415	1,600	Bldgs./landscape architect; interior des.	381. Romano Temp. Personnel (San Francisco)	354	2,114	Temp. personnel
342. National Emergency Serv. (Tiburon, CA)	415	16,400	Staffing/ mgmt., hosp. emergency dept.	382. McMorris & Associates (Atlanta)	353	1,821	Health-food restaurants
343. Doty's, T.J., Image-Makers (Santa Barbara, CA)	413	514	Photo finish., audio visual commun.	383. Colorado Boxed Beef (Auburndale, FL)	350	40,203	Wholesale meat distributor
344. Corpene Industries (Louisville)	409	1,346	Mfr. ind. cleaning/finishing syst.	384. California Cash Register (Downey, CA)	349	1,902	Distrib. terminals, coin dispensers
345. Rawcliffe (Providence)	405	2,163	Mfr. pewter giftware	385. MGR Equipment (Inwood, NY)	349	1,395	Mfr. ice/refrig./AC equip.
346. Overhead Control Syst. (Bellevue, WA)	405	1,003	Sales/serv. beverage dispensing sys.	386. Progressive Driver Serv. (Jacksonville, FL)	347	15,806	Contract driver leasing
347. American Intl. Security (Shreveport, LA)	404	2,172	Security/alarm; guard svcs.	387. Headquarters Cos. (San Francisco)	347	5,573	Nat'l. executive office ctrs.
348. Vintage Selections ¹ (Scottsdale, AZ)	403	3,123	Wine importer/ distributor	388. Optronics Specialty (Chatsville, CA)	347	1,498	Mfr. electronic photog. tools
349. D.R.I. Industries (Bloomington, MN)	403	38,876	Mail-order handyman prod.	389. Bay State Carbide Prod. (Barrington, NH)	346	1,478	Mfr. cutting tools
350. Aaron's Office Furniture (Lincolnwood, IL)	400	10,000	Office furniture retailer	390. Temporaries (Washington, DC)	346	34,128	Temp. personnel
351. Chemsiz (Travelers Rest, SC)	400	5,500	Mfr. chemicals; steel galvanizer	391. Superior Indus. of Neb. (Omaha)	345	23,526	Design/bld./insulate cold storage fac.
352. TLA (Santa Monica, CA)	400	6,000	Travel agency	392. Stratabolt (Pelham, AL)	342	2,433	Mfr. mine support/ventilation prod.
353. Acme Canvas (Malden, MA)	399	10,750	Mfr. ind./ recreational textile prod.	393. Electronic Engineering (Brecksville, OH)	342	23,092	Phone/word process syst. sales, service
354. Aquatic Pool Builders (Houston)	399	3,138	Residential swimming pool construction	394. Central Coated Products (Alliance, OH)	342	3,379	Mfr. waxed/oiled pkg. papers
355. Tele-Pages (Parsippany, NJ)	397	1,636	Local ad directories	395. Pixley Richards West (Tempe, AZ)	342	10,600	Precision molding/assembly of plastic prod.
356. General Physics (Columbia, MD)	393	23,685	Training, eng. serv. for nuclear util.	396. N. American Brokerage (Bala-Cynwyd, PA)	341	3,750	Financial brokerage prod.
357. Specialty Surfacing (Honolulu)	392	825	Recreational surface construction/finishing	397. Dowdell (Sacramento)	340	1,889	Equipment financing; mortgage banking
358. Vocational Training Ctr. (St. Louis)	392	1,039	Trade school	398. Advanced Marine Enterp. (Arlington, VA)	336	5,333	Naval architecture, marine eng.
359. Siegel Ruggiero Design Graphics (New York)	386	670	Photo studio; ad agency	399. General Aero Products (Copiague, NY)	335	8,090	Mfr. aircraft control syst./instruments
360. Titan Protection Services (Sunnyvale, CA)	384	4,200	Private patrol	400. Southwestern Directory (Oklahoma City)	334	2,703	Publish telephone direct.
361. Bio-Tek Instruments (Burlington, VT)	381	2,230	Mfr./design medical instrumentation	401. American Shifty (N. Little Rock, AR)	333	993	Wholesale/retail truck transmissions
362. Forum Corp. of N. Amer. (Boston)	380	10,470	Dvlp. perform.-improve. programs	402. Superior Supply (Marion, IN)	331	919	Distributor bldg., maintenance supplies
363. Dombrowski & Holmes (Chicago)	380	1,320	Transport./cleanup hazardous waste	403. Planning Systems (McLean, VA)	330	5,026	Research/anal. of naval warfare syst.
364. SLM Instruments (Urbana, IL)	379	2,215	Mfr. electro-optic instrumen.	404. Professional Book Dist. (Columbus, OH)	329	4,434	Book-order fulfillment
365. Crazy Joe's (Kannapolis, NC)	379	2,738	Auto parts, access. retailer	405. Midwest Office Systems (Marshalltown, IA)	327	4,700	Market office products, serv.
366. Wild & Woolly Needle-crafts (Falls Church, VA)	377	2,008	Needlecrafts retailer	406. Arus Andritz (Arlington, TX)	326	15,880	Assembly, sales separation equip.
367. Numeridex ¹ (Wheeling, IL)	376	8,005	Mfr. machine tool programming syst.	407. Ultimate Nut & Candy (Studio City, CA)	323	1,137	Retail confectionary
368. Teleram Communications (White Plains, NY)	369	4,016	Mfr. portable computers, terminals	408. Ad Factors Mktg. Rsrch. (Glen Ellyn, IL)	321	2,802	Consumer/indus. survey rsrch.
369. Mediterranean Importing (Lake Success, NY)	367	5,600	Importer, Italian wines and specialties	409. Sage Systems (Bethesda, MD)	319	2,878	Mfr., sales computer software, service
370. Thayer Dental Laboratory (Mechanicsburg, PA)	366	515	Dental supplies laboratory	410. Mogas Industries (Houston)	316	4,191	Mfr. specialty ball valves
371. Sharpoint (Mohnton, PA)	365	7,356	Mfr. surgical products	411. Power Eng. & Mfg. (Waterloo, IA)	316	1,567	Mfr. gear boxes
372. Northern Air Freight (Seattle)	365	21,278	Air freight forwarding	412. Industrial Sciences (Gainesville, FL)	312	2,917	Mfr. audiovisual process equip.
373. Account-A-Call (Burbank, CA)	360	2,182	Phone account software/ service bureau	413. Basic Concept (Paterson, NJ)	311	3,700	Mfr. portable lamps
374. Pallet City (Chicago, IL)	360	3,538	Mfr./repair wooden pallets	414. Austin Nelson ¹ (Austin, TX)	310	13,492	Gen'l. contractor, commercial const.
375. Cathedralite Domes (Capitola, CA)	358	2,828	Mfr. energy-efficient prod., geodesic domes	415. Media Recovery (Graham, TX)	309	4,175	Computer accessories sales/service
376. American Business Lists (Omaha)	356	3,860	Publisher of business lists	416. Seneca Balance (Depew, NY)	308	1,000	Test balance HVAC syst.
377. VIP Enterprises (Miami, FL)	355	3,380	Waterproofing sealants/ coatings	417. Knight Equipment ¹ (Costa Mesa, CA)	307	4,302	Mfr. electronic pumps
378. Ray's Mobile Home (Bakersfield, CA)	355	1,940	Manufactured-home sales	418. Universal Fire Equipment (Dallas)	305	3,248	Sale/service commercial fire equip.
379. Daniel Co. of Springfield (Springfield, MO)	354	3,908	Common/contract motor carrier	419. Cyberex (Mentor, OH)	305	11,489	Mfr. elect. power conditioning equip.
380. Information Bureau (Dallas)	354	2,200	Financial newsletters	420. Hekimian Laboratories (Gaithersburg, MD)	305	11,935	Mfr. telecom. systems/ instrument.

1/ Ranked among the INC. Private 100 companies in 1981. * / Net income as % of sales: A. 16% or more; B. 6%-15%; C. 1%-5%; D. loss.

500

Led by a Seattle furniture wholesaler, 65 of last year's Private 100 companies remain on this year's roster of 500. Only 25 of them, however, are still among the top 100.

Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description	Company (by rank)	Percent Increase	'81 Sales (\$000)	Business description
421. Federated Group (City of Commerce, CA)	305	60,710	Retail home entertainment centers	461. Alarmingly Safe & Sound (Holliswood, NY)	267	1,529	Security systems svcs.
422. McDonald Equipment (Willoughby, OH)	302	9,455	Distrib. engines/engine-generator sets	462. Process Efficiency Prod. (Los Angeles)	266	1,170	Mfr. water filters
423. Mid City Web (Chicago)	300	4,000	Web offset lithography	463. Sprott Oil (Manning, SC)	263	12,250	Petroleum distribution
424. Drafting Graphics (Elk Grove Village, IL)	300	1,859	Printers, eng./drafting media	464. H. Loney Construction (Brattleboro, VT)	262	4,272	General contractor
425. Command Plastic (Akron)	298	2,329	Mfr. heat-sealed vinyl packaging	465. Creative Mgmt. Syst. (Vienna, VA)	262	493	Telecommun. software
426. Intl. Computer Programs (Indianapolis)	298	3,962	Computer software info. publisher	466. CTEC (McLean, VA)	262	6,702	Computer systems and operations analysis
427. Tele-Terminals (Minneapolis)	298	6,942	Computers/data term./maint. sys./software	467. Controlled Syst. of Wisc. (Nashotah, WI)	260	607	HVAC contractor
428. Conco Engineering (San Luis Obispo, CA)	295	2,312	Genl. eng. construction	468. Merco (Milwaukee)	260	11,014	Distrib. appliances garden equip.
429. Daw (Salt Lake City)	294	10,000	Interior construction/design	469. Construction Mgmt. (Knoxville, TN)	260	23,285	General contractor
430. Calhoun's Collectors Soc. (Edina, MN)	294	28,257	Direct mail mktg., collectible items	470. Acctex (San Francisco)	258	7,332	Temp./perm. placement, office personnel
431. TaxLogic (Richardson, TX)	294	938	Computerized income tax process, services	471. Southeastern Medequip (Jacksonville Beach, FL)	257	454	Med. equip. rent./sales/serv.
432. Video Tape Assoc. (Hollywood, FL)	294	5,081	TV/indust. training programs	472. Rundel Products (Portland, OR)	257	5,036	Mfr. vinyl binders, tabs
433. Energy & Envrmtl. Rsrch. (Irvine, CA)	289	6,972	High-tech. combustion eng.	473. Telspan (Long Island City, NY)	256	2,519	Sales/install./maint./phone systems
434. Creative Professional (Woburn, MA)	289	1,217	Direct mail advertising serv.	474. Diversified Graphics (Little Rock)	255	2,349	Typesetting, graphic arts
435. Baylock Manufacturing (Leonard, MI)	288	8,567	Mfr. component parts for auto. mfrs.	475. Pacific-Sierra Research (Los Angeles)	252	7,265	Technical services, electronic sys.
436. Shannon (Kent, WA)	286	2,610	Electronic distrib./retailer	476. Martin Instrument (Livonia, MI)	251	16,480	Distrib. architect., art supplies/furn.
437. Chiswick Trading (Sudbury, MA)	286	5,909	Indust. distrib., flexible packaging	477. Homecraft Marketing (Englewood, NJ)	250	1,400	Mfr. wire prod. for home/garden
438. Cloverdale Equipment (Oak Park, MI)	286	6,905	Sales/services/rentals construct. equip.	478. Windomatic Systems ¹ (Fort Wayne, IN)	250	1,756	Mfr. winding mach. for electric motor ind.
439. ComTrac (Columbus, OH)	286	5,148	Transportation mgmt. info.	479. Galaxy Business Prod. (Honolulu)	249	1,276	Office products
440. Morning Star (Eden Prairie, MN)	285	2,650	Publisher, posters/calendars/stationery	480. C.B. Thomas Construc. (Spofford, NH)	249	2,942	Drilling/blasting specialists
441. Brenlin Group (Akron)	285	82,987	Mfr./distrib. truck parts	481. Olympic Controls (Elgin, IL)	248	2,672	Mfr. relays/switching devices
442. Ad-Market Attractions (Brooklyn, NY)	284	732	Mfr./distrib. display lettering	482. Rolling Hills Interiors (Torrance, CA)	248	1,169	Interior design
443. K&L Microwave (Salisbury, MD)	284	6,527	Mfr. RF/microwave filters	483. Russ Berrie & Co. (Oakland, NJ)	248	63,950	Mfr. gifts, toys
444. Multiple Technologies (Southfield, MI)	283	11,131	Productivity prod., payroll systems	484. Lewan & Associates (Denver)	247	14,467	Office prod. sales/rental/service
445. Associated-General (Anchorage, AK)	280	1,466	General contractor	485. Meeco Timing Screw (Newtown, PA)	246	627	Design/mfr. pkg. equip.
446. Idea Man (Los Angeles)	277	6,652	Ad. specialties, gifts, and incentive prog.	486. DAQ Electronics (Middlesex, NJ)	246	2,040	Design/mfr. remote telemetry equip.
447. Texas Corp. Supplies (So. Houston, TX)	275	532	Legal supplies	487. Financial Data Planning (Miami, FL)	245	8,272	Fin./actuarial software dvlp./sales
448. Quintron (Quincy, IL)	275	5,387	Mfr. mobile radio/paging base stations	488. Coleman Cable Systems (North Chicago, IL)	244	26,690	Mfr. wire, cable
449. Futures Personnel Serv. (Baltimore)	274	376	Exec. recruitment/placement	489. Ventura Associates (New York)	244	8,600	Sales promotion agency
450. Kastle Systems (Arlington, VA)	274	3,378	Central station secur./energy mgmt. sys.	490. Erie Creative Coatings (North East, PA)	244	865	Custom powder coatings
451. F.H. Chase (Avon, MA)	274	3,819	Install interior syst.	491. TV Cable Supply (Hersey, PA)	243	4,396	Full line supplier, CATV industry
452. D.C. Taylor (Cedar Rapids, IA)	273	12,849	Exterior construction, roofing	492. Leisure Environments (Wheat Ridge, CO)	243	1,302	Sales, saunas, hot tubs
453. A.J. Walters (Bridgeport, CT)	273	2,691	Design/mfr. material handl./scaling sys.	493. Tri-Valley Supply (Westlake Village, CA)	242	719	Retail/whsle. maintenance products
454. Lynn-Edwards (Sacramento)	272	23,074	Whsrl., office products	494. Ctr. for Profess. Advance. (E. Brunswick, NJ)	241	7,216	Technical/scientific continuing educ.
455. American Int'l Ins. (St. Louis)	270	3,700	General insurance agency	495. National Computer Print (Birmingham, AL)	240	2,454	Mfr. coupon books for banks
456. Robertson's Auto Salvage (Wareham, MA)	269	4,105	Late-model auto salvage	496. Pinson Valley Heat Treating (Birmingham, AL)	239	1,067	Metals heat treating service
457. Comsonics (Harrisonburg, VA)	269	2,637	CATV services/products	497. Mahoney & Wright Ins. (Boston)	238	17,600	Insurance agents, advisers
458. Calif. Plant Protection (Van Nuys, CA)	269	84,785	Security guard service	498. Cartwright Commun. (Cincinnati)	238	2,662	Electronics distributor
459. Cojac Portable Buildings (Oklahoma City)	268	1,586	Mfr./sales, portable buildings	499. David Langer & Co. (Los Angeles)	236	1,151	Whsle. distrib., games, toys
460. Entropy Environmentalists (Rsrch Triangle Park, NC)	268	3,074	Air-pollution testing	500. Termiflex (Nashua, NH)	235	1,596	Mfr. control/display units

¹/ Ranked among the INC. Private 100 companies in 1981. * / Net income as % of sales: A. 16% or more; B. 6%-15%; C. 1%-5%; D. loss.

CLASS OF '81: OFF THE PACE BUT IN THE PACK

Led by A-America, a Seattle furniture wholesaler, 65 of the 1981 INC. Private 100 companies earned rankings among this year's expanded Private 500 roster (see Footnote 1, main tables, page 39). Of the 65, however, only 25 remain among the 100 front-runners.

What about the 35 1981 INC. Private 100 companies that didn't make the 1982 list? Thirteen of them closed 1981 with sales decreases, thus failing to qualify. The declines ranged from a mere 1% logged by Trend Group, a Pennsylvania-based equipment lessor (#41 in '81), to precipitous drops of more than 50% registered by at least four other companies.

Three other 1981 Private 100 companies grew in the 1977-81 base period but missed the +235% cutoff point of this year's top 500. They include Progressive Graphics (+214%), Wren Associates (+194%), and American Awning & Patio (+192%).

Four businesses were disqualified for reasons other than sales performance. As predicted in the December 1981 issue, two have sold out (Charles Schwab and Associated Druggists), one has gone public (Godfather's Pizza), and one has plunged into bankruptcy (Wayne H. Coloney).

The performances of the remaining 15 companies could not be charted. Exercising the unique right of closely held companies, principals in each case declined to disclose information for reasons ranging from changes in management to changes of heart.

HOW THE PRIVATE 500 WERE SELECTED

The 1982 INC. Private 500 is a charter roster of 500 of the fastest-growing privately held smaller businesses in the United States. To be included on the list, each company had to meet the following qualifications:

1. The company is an independent, privately held corporation, proprietorship, or partnership.
2. The company shows a sales history of at least five years, increase in sales from 1977 to 1981. Companies founded after 1977 were excluded.
3. Sales in 1977 were at least \$100,000 but less than \$25 million.
4. The company's 1981 sales exceeded its 1980 sales. Companies showing growth in the five-year period, but a sales decline in 1981, were excluded.

While the criteria were relatively simple, the task of identifying the 500 finalists was complex, both because of the numbers of companies involved and because the project depended on data generally regarded as confidential. INC. estimates that the total universe of potential Private 500 candidates exceeded 470,000 companies. The research relied on two primary sources: INC. readers and in-house records. In addition, business groups, trade associations, and professional service firms were alerted to the search for high-growth companies by letter, advertisements, and personal contact.

Business reply cards inviting readers to nominate candidates for the Private 500 were inserted in INC.'s April, May, and June 1982 issues. Drawing on the publication's national circulation of more than 400,000, the cards generated more than 5,000 entries from April 1 to July 31. In-house database was screened to produce an additional 2,500 candidates, and another 2,000 names were added from directories and editorial files.

On August 20, data forms were sent to 9,500 company executives. More than 1,900 responses were received by the deadline of September 24. From those responses, more than 500 smaller privately owned companies whose sales had at least tripled in the past five years were identified and ranked by percentage gain in sales. Information on the top 500 was then verified through signed statements from company officers, support material from outside professionals, and telephone interviews with executives of each company.

The INC. 500 project was conducted by senior editor Bradford Ketchum Jr.; research editor Elyse Friedman; researchers Maura McEnaney, and Leslie Schultz; and interviewers Paul Lombino and John Persinos.

THE PRIVATE 500 PROFILE

The composite statistics of the INC. Private 500 offer a new measure of fast growth among smaller businesses. The group's sales jumped from \$642 million in 1977 to \$4.3 billion in 1981, at a compound annual rate of 61%. At the same time, employment soared by more than 53,000 jobs. Four out of 5 have grown internally, and all but 13 are profitable.

No. of companies by industry	
Manufacturing	133
Wholesale	83
Retail	
Food	7
Nonfood	35
Other services	210
Construction	29
Mining	3
Total sales in 1981 (\$ bil.)	4.3
Percent change (1977-81)	+57.1%
Avg. sales in 1981 (\$ mil.)	8.6
Avg. sales in 1977 (\$ mil.)	1.3
Avg. sales per employee in 1981	\$61,167
Avg. sales per employee in 1977	\$37,873
Compound average annual sales growth (1977-81)	
Total	60.9%
Range	35%-246%
Median	58.6%
No. operating at a profit	
Net income as % of sales	487
(No. of companies)	
16% or more	54
6%-15.9%	253
0.1%-5.9%	180
No. acquiring other companies (1977-81)	110
No. founded since 1972	346
Avg. age (years)	10.2
Total no. of employees	
1981	70,359
1977	16,950
Percent change (1977-81)	+315%

TOP 20 PERFORMERS IN SALES PER EMPLOYEE*

Rank	Company (No. of employees)	Sales per employee
1.	Colorado Boxed Beef (15)	\$2,680,206
2.	International Games (22)	1,472,313
3.	R.W.P. Johnson Associates (7)	981,130
4.	Concord Carpet Mills (10)	958,900
5.	LaMarca Group (21)	746,710
6.	Sprott Oil (21)	583,347
7.	Electronic Seating Sys. (140)	578,226
8.	TV Cable Supply (8)	549,526
9.	W-B Pump & Supply (51)	533,139
10.	Brady Marketing (12)	500,000
11.	Technology Transfer Inst. (5)	472,213
12.	Beacon Sales (16)	454,275
13.	Sportsman's Emporium (42)	436,456
14.	Memphis Glove (21)	419,324
15.	Superior Industries of Nebraska (60)	392,103
16.	Marketing Corp. of America (178)	345,022
17.	Contract Furnishings & Sys. (40)	324,200
18.	Metaltech (7)	316,470
19.	Aquatic Pool Builders (10)	313,849
20.	Unitronix (20)	310,000

* 1981 data. List excludes capital-intensive energy developers, brokers, and real estate and financial service firms.

THE PRIVATE 500 INDEX (company and rank)

ACGIS (56)	Casiano, Manuel A. (261)	Dombrowski & Holmes (363)	L&M Enterprises (220)	Penta Systems Intl. (240)	Specialty Surfacing (357)
A-America (3)	Catalyst Technology (296)	Dorman Bogdonoff (91)	LaMarca Group (111)	Perfusion Services (123)	Sportsman's Emporium (309)
Aaron's Office Furniture (350)	Cathedralite Domes (375)	Doty's, T. J., ImageMakers (343)	Lanco Knitwear (180)	Pertron Controls (125)	Spott Oil (463)
Account-A-Call (373)	Centec (146)	Douglass, Robert, Assoc. (224)	Langer, David, & Co. (499)	Phillips Publishing (268)	State Machine Products (94)
Acctex (470)	Center for Professional Advancement (494)	Dowdell (397)	Lawson Associates (38)	Phoenix Reforestation (332)	Stoops Express (182)
Acme Canvas (353)	Central Coated Products (394)	Dr. Cully's Cartage (185)	Leichtung (233)	Phone Directories (228)	Stratoball (392)
Action Instruments (319)	Century Data Systems (237)	Drafting Graphics (424)	Leisure Environments (492)	Piedmont Mechanical of Spartanburg (80)	Style Auto (154)
Ad Factors Marketing Research (408)	Charles River Data Systems (36)	DuCairst Bioessence (307)	Levy, B.W., Security Consultants (76)	Pillsbury Chemical & Oil (88)	Summit Reprographic Service (2)
Adler, Steven H. (315)	Chase, F. H. (451)	Duff's Enterprises (302)	Lewin & Associates (484)	Pinson Valley Heat Treating (496)	Sun Hill Industries (29)
Ad-Market Attractions (442)	Chemco Oil Recovery (173)	EDM Precision Products (299)	Lionex (285)	Pixley Richards West (395)	Sun Valley Waterbeds (139)
Ad-Tek Engineering Services (71)	Chemco Valve & Fittings (328)	Early Winters—Omnipotent (96)	Little Barn (248)	Planning Systems (403)	Sunmaster (114)
Advanced Image (254)	Chemsize (351)	East Coast Machine & Iron Works (243)	Loney, H., Construction (464)	Polaris Vac-Sweep (24)	Superior Industries of Nebr. (39)
Advanced Mfg. & Development (120)	Cherokee of California (201)	Eastway Delivery Service (323)	Los Alamos Technical Assoc. (110)	Polk Audio (327)	Superior Supply (402)
Advanced Marine Enterprises (398)	Chiswick Trading (437)	Elcan Investments (293)	Lynn-Edwards (454)	Polymer Development Laboratories (215)	Systems Architects (256)
Advanced Technology (34)	Cloverdale Equipment (438)	Electro-Test (265)	Macom Industries (330)	Polymer Plastics (148)	Systems Engineering Assoc. (13)
Ag Asset (218)	Coastal Compression Service (197)	Electronic Engineering (393)	Maahoney & Wright Insurance Agencies (497)	Power Engineering & Mfg. (411)	Systems Strategies (102)
AgriGenetics (63)	Coating Specialists (283)	Electronic Sealing Systems (255)	Mainpro (279)	Precision Tune (310)	TLA (352)
Alamo Consulting Group (133)	Cojaco Portable Buildings (459)	Energy & Environmental Research (433)	Management Decision Systems (329)	Pretty Neal Industries (199)	TV Cable Supply (491)
Alarmingly Safe & Sound (461)	Coleman Cable Systems (488)	Energy Supply (27)	Management Improvement (12)	Pritsker & Assoc. (231)	Tarpon Electric (311)
Allegro Services (195)	Colorado Boxed Beef (383)	Entropy Environmentalists (460)	Marketing Corp. of America (325)	Private Ledger Financial Services (112)	Tarrant Service Agency (117)
Alley-Cassidy Coal (281)	Columbia Data Products (35)	Erie Creative Coatings (490)	Marliss Industries (18)	Process Efficiency Products (462)	Taylor, D. C. (452)
Aloe Charm (284)	Comark (48)	Fastenal (333)	Martin, Doug (190)	Professional Book Distributors (404)	Texexport (44)
Altos Computer Systems (1)	Command Plastic (425)	Federated Group (421)	Martin Instrument (476)	Progressive Driver Services (386)	Technical Aid (216)
American Business Lists (376)	Commercial & Industrial Admin. (16)	Finals Racing Swimsuits (55)	Mascolo, C.M. (239)	Queen Oxygen (213)	Technology for Energy (13)
American Color (238)	Commercial Glass & Glazing (132)	Financial Data Planning (487)	McCormack & Dodge (72)	Quintron (448)	Technology Transfer Institute (13)
American Foundry Group (324)	Commercial Pipe Services (100)	Florida Food Industries (4)	McDonald Equipment (422)	Raven Systems & Research (262)	Tele-Corn Products (32)
American Intl. Insurance Agency (455)	Commercial Property Services (109)	Florida Corp. of N. America (362)	McMorris & Assoc. (382)	Rawcliffe (345)	Tele-Pages (355)
American International Security (347)	CompuShop (6)	Fresh-Pak Shrimp & Seafood (144)	Medata (119)	Ray's Mobile Home Sales & Service (378)	Tele-Terminals (427)
American Passage Marketing (95)	Computech (86)	Furniture Consultants (9)	Media Recovery (415)	Reactive Metals & Alloys (259)	Telecommunications Specialists (1)
American Pump & Supply (47)	Computer Science Press (196)	Futures Personnel Services (449)	Mediterranean Importing (369)	Red Callopie & Associates (57)	Teleram Communications (368)
American Shifty (401)	Computer Systems Research (98)	Galaxy Business Products (479)	Meeco Timing Screw (485)	Reef Petroleum (188)	Telspan (473)
American Technical Services (130)	Comsearch (160)	Gator Transportation (202)	Merco (468)	Rehler Vaughn Beaty & Koone (341)	Temporaries (390)
American TV & Appliance (272)	Comsonics (457)	General Aero Products (399)	Metatech (257)	Remco (263)	Tenco Industries (273)
Amigo Sales (212)	Conco Engineering (428)	General Physics (356)	Melior Management Systems (17)	Research, Analysis & Mgmt. (209)	Termiflex (500)
Amperil (115)	Concord Carpet Mills (312)	Ghent Mtg. (28)	Metro Information Systems (105)	Research Plastics (207)	Terminals Unlimited (2)
Anadex (287)	Condor Carrier (275)	Golden Corral (103)	Microcomputer Systems (164)	Resource (316)	Texas Corp. Supplies (447)
Analysis & Technology (288)	Conference Management (49)	Graham Brake & Diesel (62)	Micro-Metal (258)	Rich, Jon, Displays (264)	Texas Tumbleweed (14)
Apoca Industries (97)	Connecticut Travel Services (286)	Granite Financial (126)	Microtech Manufacturing (40)	Robertson's Auto Salvage (456)	Thayer Dental Laboratory (370)
Applied Process Technology (65)	Construction Management (469)	Graphic Technology (150)	Mid City Web (423)	Rolling Hills Interiors (482)	Theriall's (191)
Aquatic Pool Builders of Houston (354)	Contract Furnishings & Sys. (186)	Griffith, David M., & Assoc. (171)	Midwest Office Systems (405)	Romano Temporary Personnel (381)	Thermal Engineering of Ariz. (1)
Aquidneck Data (39)	Controlled Systems of Wis. (467)	HTC (84)	Miller Oil (336)	Roscom (167)	Thermal, Carl B., Construction (1)
Arus Andritz (406)	Controlronics (157)	Hackney Investigations & Security (143)	Mini-Pak (23)	Rundel Products (472)	Three Rivers Computer (89)
Ashcraft Trucking (79)	Convox (66)	Hammond, Harold E. (322)	Mogas Industries (410)	Russco, L. J., Insurance Services (153)	Tideland Petroleum Services (2)
Associated General (445)	Cook Machine (118)	Harmony Foods (92)	Morgan Mtg. (193)	Rustman Bus (50)	Titan Protection Services (30)
Astre (162)	Cormed (187)	Headquarters Cos. (387)	Morning Star (440)	SAS Institute (46)	Transalaska Data Systems (15)
Astro Wire and Cable (249)	Cornwell, J. A. (7)	Hekimian Laboratories (420)	Multiple Technologies (444)	S.F.C. (Systems Furniture) (313)	Tri-Valley Supply (493)
Atlantic Fire Systems (221)	Corpene Industries (344)	Heritage Log Homes (260)	Munsen's Discovery Enterprises (245)	SLM Instruments (364)	Ultimate Nut & Candy (407)
Attridge Heating & Cooling (210)	Corporate Funding (170)	Houston Copy (129)	NEOPIC (176)	SUSPA (177)	Unitronix (269)
Austin Nelson (414)	Corvette America (87)	Hill International (19)	Nageldinger, J., & Son (93)	Sachs/Freeman Assoc. (250)	Universal Energy Systems (13)
Auto-Line Mfg. (59)	Crafco (156)	Homecraft Marketing (477)	National Business Communications (68)	Saddlebrook (305)	Universal Fire Equipment (48)
Automation Electronics (155)	Crazy Joe's (365)	Homestead Products (10)	National Computer Print (495)	Sage Systems (409)	University Business Machines (1)
Ava Care (140)	Creative Management Systems (465)	Horwath Electric Motors (266)	National Emergency Services (342)	Sasquatch Publishing (326)	Univox-California (90)
Bam Publications (306)	Creative Professional Services (434)	Hsu, Ronald, Construction (20)	Nav-Corn (234)	Sattler Companies (116)	Urban Mgmt. Consultants (22)
Bank Earnings International (69)	Crum Electric Supply (247)	Hughes Drilling (205)	Neuro (74)	Sciame, F. J., Construction (58)	VIP Enterprises (377)
Basic Concept (413)	Custom Decor (178)	IDM Controls (289)	North American Brokerage Agency (396)	Scientific Systems Services (274)	Vanguard Plastics (163)
Bassil & McNichols (280)	Custom Recording & Sound (297)	Idea Man (446)	North Star Computers (179)	Scopus (334)	Vector Group (121)
Bay State Carbide Products (389)	Cyberex (419)	Inacom (44)	Northern Air Freight (372)	Scott, Frank, Enterprises (339)	Vectran (236)
Baylock Manufacturing (435)	D&D Services (134)	Industrial Sciences (412)	Northwest (301)	Seaboard Electronics (30)	Ventura Associates (489)
Beacon Communications (108)	D&S Metals (278)	Industrial Training (67)	Nucleus (226)	Seaboard Energy Systems (292)	Vermont Castings (37)
Beacon Sales (340)	DAQ Electronics (486)	Information Bureau (380)	Numanco (291)	Seavex (308)	Video Tape Assoc. of Florida (4)
Benatty (194)	D.R.I. Industries (349)	Input (235)	Numeridex (367)	Security Alarms & Fire Eng. (276)	Vintage Selections (348)
Bepco (295)	Dallas-Fort Worth Distributing (223)	Institute for Business & Tech. (208)	Nutech (184)	Seko Air Freight (99)	Virginia Textiles (83)
Bernie, Russ, & Co. (483)	Daniel Co. of Springfield (379)	Intl. Computer Programs (426)	Nuvatec (338)	Selective Personnel (113)	Vital Signs (54)
Billings & Gage Mfg. (244)	Danyl (183)	International Games (11)	O'Donnell Organization (137)	Seneca Balance (416)	Vocational Training Center (52)
Bio-Tek Instruments (361)	Data Design Associates (321)	International Postal Marketing (5)	Olympic Controls (481)	Service Industries of America (174)	W-B Pump & Supply (31)
Bloom Electric Services (198)	Data Electronics (81)	Interwest Communications (138)	One Pass (211)	Setpoint (282)	WLC Industries (219)
Blue Dolphin Enterprises (252)	Data Systems Design (142)	JWK International (314)	Optronics Specialty (388)	Shallow Waterbeds (73)	Walters, A. J. (453)
Boland, David (107)	Data Translation (141)	Jer-Way of Texas (304)	Organizational Dynamics (246)	Shannon (436)	Web Printing Control (204)
Bolliger (214)	Datamax USA (85)	Jewel Building Systems (175)	Overhead Control Systems (346)	Sharper Image (15)	Webb, Murray & Associates (1)
Bomark Group (165)	Dav-EI Livery Services (158)	Johnson, R. W. P., Assoc. (26)	Oxford Software (203)	Sharpshoot (371)	Western Trailer Equip. & Mfg. (1)
Brady Marketing (104)	Daw (429)	K&L Microwave (443)	P E Systems (227)	Siegel Ruggiero Design Graphics (359)	Wiedemann & Johnson (317)
Branson Aircraft (181)	Decor (149)	KMW Systems (101)	PBM Office Products (61)	Simtran (206)	Wild & Woolly Needlecrafts (3)
Brenlin Group (441)	Delphi Glass (78)	Kassoul Parking (25)	PBS Computing (136)	Software Module Mktg. (331)	Willis Cos. (51)
Brock International Security (242)	Delta Business Systems (21)	Kastle Systems (450)	PSI Process Systems (147)	Sonic Air Courier (122)	Windmatic Systems (478)
Business Telephone Systems (189)	Delta Education (232)	Katek (75)	Pacific Envelope (229)	Southern-Gulf (33)	Windham (230)
CTEC (466)	Denver Spectrum (241)	Kaye Instruments (337)	Pacific-Sierra Research (475)	Southernwestern Directory (400)	Wolfberg/Alvarez/Taraco & Assoc. (42)
Calhoun's Collectors Society (430)	Design 1 (267)	Kebo Contractors (127)	Pallet City (374)	Spaulding & Slye (251)	World Wide Chemicals (41)
California Cash Register (384)	Design & Image Assoc. (271)	Kent Electronics (166)	Parker Construction (45)	Specialty Office Machines (217)	Wornick (124)
California Plant Protection (458)	Diamond Enterprises (151)	Kirke-Van Orsdal (53)	Paychex (8)		Xentek (168)
Cameo Fashion Accessories (270)	Digitize (159)	Kolin Plumbing (320)			Xylogics (335)
Can-Am Communications (43)	Dinneen Excavating (145)				Yankee Group (70)
Career Blazers Personnel (318)	Diversified Graphics (474)				
Cartwright Communications (498)					