table 1 for identification of the job classifications that equate to each GS grade for use in the Federal pay setting process.²) In 1982–83, increases in average salaries varied little among these groups—7.2 to 7.4 percent. Since 1973, cumulative percentage increases have been the highest for the grades 11-15 category and lowest for the middle grades. (See table 2.)

A MORE DETAILED ANALYSIS of white-collar salaries and complete results of this year's survey are contained in the *National Survey of Professional, Administrative, Technical and Clerical Pay, March 1983*, BLS Bulletin 2181. It includes salary distributions for 101 occupational work levels, and relative employment and salary levels by industry division for the two dozen occupations covered.

-----FOOTNOTES-----

¹The PATC survey is conducted by the Bureau of Labor Statistics, but survey occupations and coverage such as establishment size and the private sector industries to be included are determined by the President's Pay Agent—the Secretary of Labor and the Directors of the Office of Management and Budget and the Office of Personnel Management. The Agent has designated the industrial coverage and minimum size establishment as follows: manufacturing, 100 or 250 employees; transportation, communications, electric, gas, and sanitary services, 100 or 250 employees; mining and construction, 250 employees; wholesale trade, 100 employees; retail trade, 250 employees; finance, insurance, and real estate, 100 employees; and selected services, 50 or 100 employees. The pay-setting role of the PATC survey is described in George L. Stelluto's, "Federal pay comparability: facts to temper the debate," *Monthly Labor Review*, June 1979, pp. 18–28.

 2 In 1983, a total of 101 work levels produced publishable data out of 107 levels within scope of the survey. Widely varying duties and responsibilities may be embodied in work levels within each of the broad categories of table 2; for example, Group B includes clerical and technical positions, such as accounting clerk IV and engineering technician IV, as well as the entry and developmental levels of professional occupations.

Wages of appliance repair technicians vary widely among metropolitan areas

HARRY B. WILLIAMS

Pay levels for technicians repairing major consumer electrical products in 19 metropolitan areas averaged from \$7.93 an hour in Buffalo to \$10.43 in San Francisco-Oakland, according to a November 1981 Bureau of Labor Statistics survey.¹ These technicians worked in appliance repair facilities operated by electrical repair shops, department stores, retail television and radio stores, appliance retailers, and appliance wholesalers.

About two-thirds of the technicians specialized in repairing either television sets, radios, and tape players (brown goods) or larger household appliances such as refrigerators, freezers, and washers (white goods); their average earnings in individual areas typically were between \$7 and \$9 an hour. A group of approximately 4,350 technicians—called service technicians—routinely worked on both brown and white goods during the survey period and could not be classified as either television-radio or electrical appliance technicians. Because of their dual skills, service technicians usually averaged more per hour than television-radio or electrical appliance technicians; however, separate data for service technicians met Bureau publication criteria only in Newark, where 208 full-time service technicians employed in combination (inside and outside) work averaged \$10.31 an hour.

Among the 19 areas surveyed, pay levels were highest for full-time technicians in the San Francisco-Oakland area, where $\tau\nu$ -radio repairers averaged \$9.87 and electrical appliance repairers, \$9.72. The lowest averages were found in Memphis at \$6.65 for $\tau\nu$ -radio repairers and \$6.12 for electrical appliance repairers. (See table 1.) Average wages for part-time workers in the same occupations most frequently were between \$5.75 and \$8.75 an hour.

Full-time apprentice technicians often earned 30 to 50 percent less, on average, than the qualified technicians. Averages for electrical appliance apprentices, in 9 areas, ranged from \$4.58 an hour in Boston to \$7.95 an hour in Chicago. Hourly earnings of TV-radio apprentices, in 12 areas, averaged from \$4.01 in Memphis to \$8.10 in San Francisco-Oakland. TV-radio apprentices averaged more than their electrical appliance counterparts in 4 of 6 areas for which data permit comparison.

Electrical appliance technicians, however, usually averaged more than their TV-radio counterparts. Their pay advantages, typically between 2 and 10 percent, were largely explained by three factors: industry, union status, and size of repair facility. To illustrate, nearly one-third of the electrical appliance technicians worked in department stores or for appliance wholesalers-the two highest-paying industry branches. Such establishments employed slightly more than one-tenth of the television-radio technicians. Also, union contracts covered slightly more than one-third of the survey's white-goods technicians and apprentices compared with one-fourth of those servicing brown goods. The study showed that technicians in shops with union contracts nearly always averaged more per hour than their nonunion counterparts. Additionally, four-fifths of the white-goods technicians, compared with slightly over two-fifths of their browngoods counterparts, were in establishments with at least 10 repairers. Technicians in shops with at least 10 repairers usually averaged more than those in smaller shops. But, when comparisons were limited to establishments employing both types of technicians (about 13 percent of the establishments studied), brown-goods technicians commonly received as much as, or more than, white-goods technicians.

Separate earnings data were developed for three cate-

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Table 1. Number of full-time workers in selected occupations and average straight-time hourly earnings in appliance repair facilities, November 1981

Area	Electrical appliance technicians		Electrical appliance apprentices		TV-radio technicians		TV-radio apprentices	
	Workers	Earnings ¹	Workers	Earnings ¹	Workers	Earnings ¹	Workers	Earnings ¹
Northeast								
Boston Buffalo Nassau-Suffolk Newark New York Philadelphia	106 35 108 71 319 219	\$8.01 7.21 8.18 7.63 7.35 8.88	22 10 57 29	\$4.58 5.75 4.71 6.95	97 105 155 93 611 349	\$8.69 6.67 7.58 6.85 7.56 8.41	14 7 68	\$4.88
South								
Atlanta Dallas-Fort Worth Memphis Miami Washington	90 150 29 108 158	9.01 8.51 6.12 8.42 8.86	14 44 —	5.67 5.12	154 257 44 154 323	8.96 8.51 6.65 8.23 8.20	8 27 17	 4.01 5.73 5.35
North Central								
Chicago Cleveland Kansas City Minneapolis-St. Paul St. Louis	383 66 102 126 105	9.21 8.86 8.08 8.75 8.98	9 	7.95 	594 169 123 157 209	9.02 7.93 8.20 8.65 8.45	48 7 <u>–</u> 12	6.19 4.97 4.97
West								
Denver-Boulder Los Angeles-Long Beach San Francisco-Oakland	112 193 152	8.72 9.38 9.72	14 28	6.56 7.36	218 630 276	8.54 8.78 9.87	34 46 33	5.42 6.29 8.10

for the sale of maintenance contracts, parts, or appliances. Premiums paid for licenses held by employees, if any, are included. Incentive payments, such as those based on flatrate hours, flat-percentages, or other piecework or production bonus systems, and costNOTE: Dash indicates no data reported or data do not meet publication criteria

gories of technician jobs—inside (bench), outside (home service calls), and a combination of the two. Full-time TVradio technicians making outside calls typically averaged less than their counterparts on either inside or combination work. (There were too few comparisons possible among electrical appliance technicians to observe an earnings pattern.)

About three-fifths of the workers covered by the survey were in facilities with formal provisions for paying commissions on the sale of maintenance contracts, parts, or appliances. Commissions for the sale of maintenance contracts were the most frequent; those for the sale of appliances were least common. Surveywide, 14 percent of the electrical appliance technicians, 7 percent of the TV-radio technicians, and 3 percent of the apprentice technicians received commissions during the payroll period. Technicians and apprentices who received commissions averaged less than 5 percent above straight-salary personnel in virtually all areas. (Earnings data presented in table 1 exclude commissions, but include earnings under other incentive systems, such as flat-rate hours or piece rates.)

Paid holidays, most frequently 6. 10, or 11 days annually, were provided by establishments employing more than seveneighths of the full-time technicians and apprentices in each of the areas studied.

Virtually all full-time appliance repair technicians and apprentices covered by the survey were in facilities providing paid vacations after qualifying periods of service. Typical vacation plans called for at least 2 weeks of vacation pay after 1 year of service, 3 weeks after 10 years, and 4 weeks after 15 years. About one-half of the workers could receive 5 weeks after 25 years or more.

Various health and insurance plans, at least partly paid for by the employer, also were available to large proportions of workers, although the incidence of the plans varied widely by location. Retirement pension plans applied to between one-half and four-fifths of the full-time technicians and apprentices in each of the areas surveyed. Employers typically paid the entire cost of these pension plans.

Summary reports issued shortly after each of the 19 areas was surveyed are available from the Bureau or any of its regional offices. A comprehensive report, Industry Wage Survey: Electrical Appliance Repair, November 1981 (BLS Bulletin 2177), is for sale by the Superintendent of Documents, Washington, D.C. 20402, and by Bureau regional offices.

¹The survey covered repair facilities employing 16,635 nonsupervisory service workers. About three-fourths of these workers were technicians and apprentices. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts, as well as commissions paid on sales of maintenance contracts, parts, or appliances. Premiums paid for licenses held by employees, if any, are included.

For an account of an earlier study, see "Occupational earnings in appliance repair facilities," Monthly Labor Review, January 1981, pp. 57-58.