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UNITED STATES TARIFF COMMISSION

**COILS AND ANTENNAS:
BEL-TRONICS CORPORATION,
ADDISON, ILLINOIS**

**Report to the President on
Firm Investigation No. TEA-F-19
Under Section 301(c)(1) of the Trade Expansion Act of 1962**



**TC Publication 385
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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that could result in the disclosure of the operations of an individual concern. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

REPORT TO THE PRESIDENT

U.S. Tariff Commission
April 13, 1971

To the President:

In accordance with section 301(f)(1) of the Trade Expansion Act of 1962 (76 Stat. 885), the U.S. Tariff Commission herein reports the results of an investigation made under section 301(c)(1) of that Act, relating to coils and antennas for radio and TV receivers.

On February 12, 1971, the Commission received a petition filed on behalf of the Bel-Tronics Corporation, Addison, Illinois, for a determination of its eligibility to apply for adjustment assistance under the Trade Expansion Act. On March 1, 1971, the Commission instituted an investigation (TEA-F-19) to determine whether, as a result in major part of concessions granted under trade agreements, articles like or directly competitive with the coils and antennas produced by the aforementioned firm, are being imported into the United States in such increased quantities as to cause, or threaten to cause, serious injury to such firm.

Public notice of the investigation was published in the Federal Register (36 F.R. 4527) on March 6, 1971. No public hearing was requested, and none was held.

In the course of the investigation, the Commission obtained information from the petitioner, other domestic producers of coils and antennas, and importers of those articles.

Finding of the Commission

On the basis of its investigation, the Commission, being equally divided, 1/ makes no finding under section 301(c)(1) of the Trade Expansion Act of 1962 with respect to whether articles like or directly competitive with the coils and antennas produced by Bel-Tronics Corporation, Addison, Illinois, are, as a result in major part of concessions granted under trade agreements, being imported into the United States in such increased quantities as to cause, or threaten to cause, serious injury to such firm.

1/ Presiding Commissioner Sutton and Commissioner Leonard found in the negative; Commissioners Clubb and Moore found in the affirmative. Commissioner Young did not participate in the decision.

Views of Commissioners Sutton and Leonard

Our determination in this investigation is in the negative because all of the conditions imposed by section 301(c)(1) of the Trade Expansion Act of 1962 have not been satisfied.

The petitioning firm--Bel-Tronics Corporation of Addison, Illinois--has been engaged in the production of a wide variety of coils of the type used in the electrical circuitry of radio and television receivers, and integral antennas used in radio receivers and high fidelity equipment. Data on U.S. imports of coils and integral antennas are not separately recorded in the U.S. import statistics. Information obtained by the Commission from the principal consumers of those products indicates that U.S. imports of integral antennas have declined steadily in recent years, and by 1970 were small. Thus we hold that integral antennas are not being imported in increased quantities within the meaning of section 301(c)(2).

The information available to the Commission indicates that U.S. imports of coils increased substantially in recent years; purchases of imported coils by the major U.S. consumers in 1970 were nearly triple in quantity and double in value those in 1966. We have concluded, however, that these increased imports were not in major part the result of trade-agreement concessions. The relationship between the trade-agreement concessions applicable to coils and the imports of those articles is similar to that of other radio and TV components

that have recently been involved in cases before the Commission. 1/ The U.S. rates of duty applicable to imports of such coils have been reduced substantially--from a rate of 35 percent ad valorem before any trade agreements were negotiated to a rate of 9 percent currently. However, the major concessions, accounting for three-fourths of the total duty reductions, occurred more than two decades ago--before such items became significant articles of commerce. The recent Kennedy Round concessions have been comparatively minor, resulting thus far in duty reductions of only 4 percentage points in the ad valorem rates. In our view, the recent increase in U.S. imports of coils could not have been caused in major part by trade-agreement concessions which had largely occurred many years before.

We further observe that the question arises, as it has in other recent investigations, whether components contained in imported finished products (in this case, coils and antennas contained in radios and television receivers) are, within the terms of the statute, "like or directly competitive" with the components produced by the petitioners. Commissioner Sutton holds that they are not "like or directly competitive."2/ Commissioner Leonard holds that even assuming coils and antennas in radio and television receivers to be "like or directly competitive"

1/ See, for example, Paper Cones for Loudspeakers, Fibre Form Corporation . . . , Investigations Nos. TEA-F-16 and T A-W-55, TC Publication 362, February 1971; Electrolytic Capacitors: Ion Capacitor Corporation . . . , Investigation No. TEA-F-11, TC Publication 335, August 1970.

2/ Paper Cones for Loudspeakers: Fibre Form Corporation . . . , Investigation Nos. TEA-F-16 and TEA-W-55, TC Publication 362, February 1971, pp. 8-11.

with the coils and antennas produced by Bel-Tronics, imports of the radio and television receivers are not being entered in increased quantities as a result in major part of concessions granted under trade agreements. 1/

For the foregoing reasons, we have made a negative determination in this case.

1/ Ibid., pgs. 4-6, and Electronic Transformers: Former Workers of CP Electronics, Inc. . . ., Investigation No. TEA-W-31, TC Publication 351, January 1971, p. 13.

Views of Commissioners Clubb and Moore

This investigation was instituted upon a petition of the Bel-Tronics Corporation of Addison, Illinois. Bel-Tronics makes coils for use in radio and television (TV) receivers and antennas for use in radio receivers. * * *

Under section 301(c)(1) of the Trade Expansion Act, four requirements must be met for the Commission to make an affirmative determination:

- (1) Articles like or directly competitive with articles produced by the petitioning firm must be imported in increased quantities;
- (2) The increased imports must be a result in major part of trade-agreement concessions;
- (3) The petitioning firm must be seriously injured or threatened with serious injury;
- (4) The increased imports resulting in major part from trade-agreement concessions must be the major factor causing or threatening to cause serious injury.

In our judgment, each of the four requirements has been met, and we therefore have made an affirmative determination.

Increased imports

As noted above, Bel-Tronics has produced coils for radio and TV receivers and antennas for use in radios. These products have been

imported as separate articles in recent years, but there have been even greater imports of them as components in radio and TV receivers. As we have held in comparable circumstances in earlier investigations, 1/ we hold here that the coils and antennas imported as components in radio and TV receivers are "like or directly competitive" with the coils and antennas produced by Bel-Tronics.

Data on U.S. imports of coils and antennas entered as separate articles are not separately classified in the official U.S. import statistics. Based on information obtained by the Commission from the major consumers, U.S. imports of coils of types used in radio and TV receivers rose greatly in recent years--from about 17 million units in 1966 to 47 million units in 1970. This increase in imports occurred in a period when the apparent U.S. consumption of coils in the manufacture of radios and TVs was declining so that the imports accounted for 15 percent of consumption in 1970 compared with only 4 percent in 1966. During the same period, U.S. imports of coils as components of radio and TV receivers were much larger, and the absolute increase much greater, than imports of coils entered as separate articles; these imports are estimated to have been about 270 million in 1970, compared with 160 million in 1966.

U.S. imports of antennas entered as separate articles apparently declined in recent years. Data obtained from the major U.S. producer

1/ Electronic Transformers: . . . , CP Electronics, Inc., . . . ,
Investigation No. TEA-W-31, TC Publication 351, January 1971, at 6-9.

of radio receivers indicate that imports of antennas rose from about 500,000 units in 1966 to 1.1 million units in 1967, and then decreased to 85,000 units in 1970. During that period, however, imports of antennas entered as parts of radios increased substantially; it is estimated that they rose from 25 million in 1966 to 32 million in 1970. Considering the totality of the U.S. imports of antennas, it is clear that imports of those articles have increased within the meaning of the statute.

In major part

The second requirement of the statute is that the increased imports must have resulted in major part from trade-agreement concessions. We have consistently ruled that this requirement is satisfied if, but for the concessions, imports would not be at substantially their present level.

The rates of duty applicable to imports of coils and antennas, and to imports of those articles when entered as components in radio and TV receivers, have been greatly reduced to carry out trade-agreement concessions. The rates of duty applicable to coils and antennas have been progressively reduced from 35 percent ad valorem (for both coils and antennas) to 9 percent ad valorem for coils and 7 percent ad valorem for antennas. The rate of duty applicable to radio and TV receivers was 35 percent ad valorem in 1930; it was progressively reduced in response to trade-agreement concessions, to

10.4 percent for solid state radio receivers, 7 percent for radio receivers other than solid-state, and 5 percent for TV receivers.

In other recent cases, 1/ we have concluded that the recently increased imports of radio and TV receivers have resulted in major part from trade-agreement concessions; we reiterate that conclusion here. Similarly, we hold that the imports of coils entered as separate articles could not have reached substantially their present level had it not been for the concessions; hence, those increased imports, for purposes of the statute, have resulted in major part from the concessions.

Threat of serious injury

The third requirement of the statute is that the firm must be suffering serious injury or be threatened with serious injury. We have interpreted serious injury to mean--

"an important, crippling, or mortal injury; one having permanent or lasting consequences. Such injuries are distinguished from the less important and temporary injuries which domestic concerns are expected to absorb without governmental assistance." 2/

Bel-Tronics has operated with mixed success in recent years. * * *

1/ See, for example, Television Receivers: . . . RCA Plant . . . , Investigation No. TEA-W-70, TC Publication 376, March 1971, at 4 and 5; and Television Receivers, Radios, and Phonographs: . . . Emerson . . . , Investigation No. TEA-W-77, TC Publication 380, April 1971, at 4 and 5.

2/ Pianos and Parts Thereof: Report to the President on Investigation No. TEA-I-14 . . . , TC Publication 309, December 1969.

Bel-Tronics is threatened with serious injury, and that injury is imminent should its financial condition continue to deteriorate.

Major factor

The final requirement of the statute is that the concession-generated increased imports must be the major factor in threatening to cause serious injury to the petitioning firm. The "but for" test is applicable here. Hence, if Bel-Tronics would not be threatened with serious injury but for the increased imports, then such increased imports have, for purposes of the statute, been the major factor causing the threat of injury.

It is readily apparent that Bel-Tronics would not be threatened with serious injury but for the increased imports. Bel-Tronics' sales have been adversely affected in two ways. First, the U.S. markets for Bel-Tronics coils and antennas have substantially contracted as concession-generated imports of radio and TV receivers have supplied larger shares of the market, resulting in reduced U.S. production of those articles. Second, the concession-generated increased imports of coils (though not antennas) have taken over a markedly larger share of the contracted market. Had it not been for such increased imports, Bel-Tronics would not be threatened with serious injury.

Conclusion

We find that the petitioner has met the requirements of the Act, and therefore have made an affirmative determination.

INFORMATION OBTAINED IN THE INVESTIGATION

Description of products

The Bel-Tronics Corp. manufactures a wide variety of coils of the type used in the electrical circuitry of radio and TV receivers and makes integral antennas, which are used in radio receivers and in high-fidelity equipment which contains a radio receiver. On the average, a radio receiver contains about five coils, whereas TV receivers usually contain from 20 coils (monochrome receiver) to 35 coils (color receiver); virtually all radio receivers except those for use in autos contain an integral antenna.

Coils, also commonly known as inductors, consist of wires (or conductors) wound on insulating cores or coil forms in a spiral manner. The Bel-Tronics Corp. does not make certain coils, such as deflection and focus coils, used in TV receivers.

Coils may be generally divided into two main classes: air-core coils, in which there is no core or the core is nonfunctional and does not influence the inductance of the coil, and iron-core coils, in which the core is functional and profoundly magnifies the inductance of the coil.

Air-core coils are usually wound on a nonmagnetic, nonconductive form or, if the wire is sufficiently large in diameter to be self-supporting, they may be wound without a form. Iron-core coils are wound on a core of either soft iron or some modification thereof, or on a ferrite material. A ferrite material is magnetic, yet nonconductive;

it consists of magnetic iron oxides dispersed in a solid organic binder.

There are innumerable kinds of coils in each class, and the coils vary in size from a fraction of an inch in any dimension for an air-core spring-wound coil to about 2 feet in diameter for a degausser coil for use in a color TV receiver. They also vary greatly in shape and complexity; one may consist of one or more windings of a few turns while another may have thousands of turns of wire. Hence, owing to the differences in size, material used, and complexity, the prices of coils range from a few cents to over a dollar each.

An antenna is a conductor or an array of conductors which intercept electromagnetic waves. The integral antenna, which is the only type of antenna the petitioner produces, is housed entirely within the receiving equipment. Hence all references to antennas in this report are directed entirely to integral antennas.

The antennas manufactured by the Bel-Tronics Corp. consist of wires wound on a ferrite core; the core enhances the efficiency of the device in intercepting radio waves. These antennas usually consist of a round or flat ferrite rod from 2 to 7 inches long, with either one or two windings of wire. * * *

U.S. tariff treatment

Coils when imported separately are provided for as inductors under item 682.60 of the Tariff Schedules of the United States (TSUS).

Antennas for all radio receivers, including antennas for solid-state (tubeless) radio receivers, when imported separately are classified under TSUS item 682.25; antennas for TV receivers when imported separately are classified under TSUS item 685.20.

Radio receivers other than solid-state are classified under TSUS item 685.25; solid-state radio receivers are classified under TSUS item 685.23. TV receivers are classified under TSUS item 685.20.

All of the aforementioned articles would have been dutiable under paragraph 353 of the Tariff Act of 1930 at 35 percent ad valorem. The changes in rates of duty as a result of trade-agreement concessions are shown in the following table.

Coils and antennas, radio and TV receivers:
U.S. rates of duty, 1930-72

Authority	(Percent ad valorem)			
	Coils	Rate of duty for--		
		Antennas for all :TV anten-:Solid-		
		radios and radio :nas and : state		
		receivers other : TV : radio		
		than solid-state :receivers:receivers		
Tariff Act of 1930-----	35	35	35	35
Bilateral agreement with the United King- dom, 1939-----	25	25	25	25
GATT, 1948-----	15	15	15	15
GATT, 1951-----	<u>1/</u>	12.5	12.5	12.5
GATT, 1956-----	<u>1/</u>	<u>1/</u>	11.5	<u>1/</u>
GATT, 1957-----	<u>1/</u>	<u>1/</u>	11	<u>1/</u>
GATT, 1958-----	<u>1/</u>	<u>1/</u>	10.5	<u>1/</u>
GATT, 1962-----	<u>1/</u>	<u>1/</u>	10	<u>1/</u>
Tariff Classification Act of 1962-----	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>
GATT, 1968-----	13.0	11	9	12
GATT, 1969-----	12.0	10	8	11.5
GATT, 1970-----	10.0	8.5	7	11
GATT, 1971-----	9.0	7	6	10.4
GATT, 1972-----	7.5	6	5	<u>1/</u>

1/ No change.

U.S. consumption.

Data on total U.S. consumption of these products are not available. However, consumption of coils by U.S. companies accounting for 85 percent of the domestic output of radio and TV receivers in the production of such articles declined from 409.6 million units in 1966 to 314.8 million units in 1970. Similarly, consumption of antennas by these companies declined from 8.8 million units in 1966 to 2.1 million units in 1970 (table 1). The most important market for these products is as coils for use in color TV receivers. In 1966, imports of such coils furnished 0.7 percent of the total domestic market, whereas in 1970, imports of these coils supplied 14.4 percent of consumption.

The decline in the consumption of coils and antennas is in large measure attributable to the increased imports of consumer electronic products, particularly radio and TV receivers, in which the coils and antennas are used. In 1966 and 1969 (the latest year for which full data are available), U.S. imports of radio receivers amounted to 25.1 million units and 36.5 million units, respectively; the ratio of imports to consumption rose from 52.6 to 70.9 percent (table 2). Although U.S. consumption of TV receivers (monochrome and color) declined from 13.0 million units in 1966 to 12.2 million units in 1970, the portion of consumption supplied by imports accounted for an increasing share of consumption, rising from 11.7 to 37.3 percent during 1966-70 (table 3). During that period, the proportion of imports to U.S. consumption rose from an estimated 16.9 percent to 52.7 percent for monochrome receivers, and from 2.6 to 17.1 percent for color receivers.

U.S. producers and production

The domestic producers of coils and antennas consist essentially of two classes of manufacturers: the integrated producers, which make these products exclusively for their own use and the independent producers, which make these materials solely for sale to others.

The integrated producers consist of at least seven firms and may include some others. These firms are large domestic radio and TV manufacturers. They make a substantial portion of their own requirements of coils and the bulk of their requirements of antennas; the remainder of their requirements are secured from other domestic sources and from imports. The integrated producers are mostly located in Illinois, Indiana, and New York. Most of them operate one or more plants that produce parts for their radio- and TV-receiver assembly plants.

The independent producers, about 17 firms, are smaller and less diversified than the integrated producers. They supply, in part, the supplemental needs of the integrated producers and the needs of other producers of radio and TV receivers. The independent producers operate the following plants: seven in Illinois, three in Indiana, two each in Michigan and Ohio, and one each in California, New Jersey, New York, and Wisconsin.

Data on production of coils and antennas, which are not separately reported in official statistics, were obtained from nine domestic firms

which manufacture about 85 percent of the TV and radio receivers produced domestically. Based on these data, U.S. production of coils declined substantially (with declines recorded in all uses), from 392 million units, valued at \$60 million, in 1966 to 268 million units, valued at \$45 million, in 1970 (table 4). Domestic output of antennas also decreased, from 8 million units, valued at \$1.7 million, in 1966 to 2 million units, valued at \$0.5 million, in 1970. Most of the domestic production during 1966-70 was accounted for by the integrated producers, which use the coils and antennas exclusively in their own products.

U.S. imports

Official statistics do not specially provide for imports of coils and antennas. The data in the report, partly estimated, were obtained from nine major consumers of these products.

U.S. imports of coils increased from 17.3 million units, valued at \$3.2 million, in 1966 to 46.8 million units, valued at \$6.2 million, in 1970, an overall increase of 170.5 percent (table 5). Most of the increase in imports consisted of coils for use in color TV receivers. U.S. imports of antennas rose from 480,000 units, valued at \$114,000, in 1966 to 1,153,000 units, valued at \$92,000, in 1967, and then declined over the next 3 years to 85,000 units, valued at \$33,000, in 1970. The overall decline in the imports is attributable in part to the increase in imports of radio receivers containing an antenna as an integral component, which by 1970 supplied the great bulk of domestic consumption of such articles.

* * * * *

U.S. imports of radio and TV (monochrome and color) receivers also increased substantially during 1966-70, as shown in the following table.

Radio and TV receivers: U.S. imports for consumption, 1966-70

(In thousands of units)

Year	Radio receivers		TV receivers	
	Total	Excluding use in autos	Monochrome	Color
1966-----	25,129	<u>1/</u> 24,773	<u>1/</u> 1,400	<u>1/</u> 100
1967-----	24,200	23,579	1,293	321
1968-----	30,161	29,293	2,043	668
1969-----	36,468	35,589	3,121	913
1970-----	33,383	32,122	3,596	916

1/ Estimated.

It is estimated that during 1966-70 these imports contained the enumerated quantities of coils and antennas as integral components of the radio and TV receivers listed in the table below.

Coils and antennas: Estimated quantities imported into the United States as integral components of radio and TV receivers, 1966-70

(In thousands of units)

Year	Coils	Antennas
1966-----	157,145	24,773
1967-----	158,095	23,579
1968-----	215,045	29,293
1969-----	276,715	35,589
1970-----	270,895	32,122

In 1970 the estimated quantity of coils (270,895,000) which entered into the United States as integral components of radio and TV receivers was equivalent to about 85 percent of the amount consumed domestically as separate units (314,795,000); the quantity of antennas (32,122,000), on the other hand, which arrived in the United States as component parts of receivers, amounted to 15 times the total consumed domestically as separate units (2,104,000).

The Bel-Tronics Corp.

History of the corporation

The Bel-Tronics Corp. was incorporated in 1953 under the laws of the State of Illinois to manufacture electronic windings for use in the assembly of radios and TV's. * * *

Plants and facilities

The company operates two manufacturing plants. The original plant is situated at Addison, Ill., about 10 miles west of Chicago; the other plant is situated at Flora, Ill., which is 200 miles south of Chicago and 90 miles east of St. Louis. * * *

* * * * *

STATISTICAL APPENDIX

Table 1.--Coils and antennas: U.S. production, 1/ imports for consumption, and apparent consumption, 2/ by uses, 1966-70

(In thousands of units)

Item	1966	1967	1968	1969	1970
Coils for use in receivers:					
Radio:					
Production-----	110,327	107,502	94,561	89,906	68,866
Imports-----	9,414	9,382	16,162	12,074	11,180
Apparent consumption---	<u>119,741</u>	<u>116,884</u>	<u>110,723</u>	<u>101,980</u>	<u>80,046</u>
Monochrome television:					
Production-----	80,219	60,847	68,138	61,359	47,049
Imports-----	6,441	4,073	9,633	10,481	10,113
Apparent consumption---	<u>86,660</u>	<u>64,920</u>	<u>77,771</u>	<u>71,840</u>	<u>57,162</u>
Color television:					
Production-----	201,728	212,905	222,297	202,480	152,087
Imports-----	1,476	7,744	18,252	23,511	25,500
Apparent consumption---	<u>203,204</u>	<u>220,649</u>	<u>240,549</u>	<u>225,991</u>	<u>177,587</u>
Total apparent consumption-----	409,605	402,453	429,043	399,811	314,795
Antennas for use in radio receivers:					
Production-----	8,290	5,924	4,135	3,378	2,019
Imports-----	480	1,153	898	189	85
Apparent consumption---	<u>8,774</u>	<u>7,077</u>	<u>5,033</u>	<u>3,567</u>	<u>2,104</u>

1/ Partly estimated.

2/ Apparent consumption equals production plus imports, since exports have been virtually nil.

Source: Compiled from data supplied the U.S. Tariff Commission by the principal consumers.

Table 2.--Radio receivers: U.S. factory shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1966-70

Year	Shipments	Imports	Exports <u>1/</u>	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>Percent</u>
1966-----	22,956	25,129	342	47,743	52.6
1967-----	17,527	24,200	437	41,290	58.6
1968-----	17,510	30,161	644	47,027	64.1
1969-----	15,760	36,468	770	51,458	70.9
1970-----	<u>2/</u>	33,383	678	<u>2/</u>	<u>2/</u>

1/ Data may not be fully comparable with data on shipments and imports.

2/ Not available.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--TV receivers, monochrome and color: 1/ U.S. factory shipments, imports for consumption, exports of domestic merchandise, and apparent consumption, 1966-70

Type of receiver and year	Shipments	Imports	Exports	Apparent consumption	Ratio of imports to consumption
	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>1,000</u> <u>units</u>	<u>Percent</u>
Monochrome:					
1966-----	6,913	<u>2/</u> 1,400	<u>2/</u> 84	<u>2/</u> 8,229	<u>2/</u> 16.9
1967-----	4,738	1,293	<u>2/</u> 93	<u>2/</u> 5,938	<u>2/</u> 21.7
1968-----	5,212	2,043	<u>2/</u> 96	<u>2/</u> 7,159	<u>2/</u> 28.5
1969-----	4,516	3,121	99	7,538	41.4
1970-----	<u>2/</u> 3,300	3,596	75	<u>2/</u> 6,821	<u>2/</u> 52.7
Color:					
1966-----	4,760	<u>2/</u> 124	<u>2/</u> 84	<u>2/</u> 4,800	<u>2/</u> 2.6
1967-----	4,963	321	<u>2/</u> 46	<u>2/</u> 5,238	<u>2/</u> 6.1
1968-----	5,134	668	<u>2/</u> 48	<u>2/</u> 5,754	<u>2/</u> 11.6
1969-----	4,398	913	58	5,253	17.4
1970-----	<u>2/</u> 4,500	916	51	5,365	<u>2/</u> 17.1
Total:					
1966-----	11,673	1,524	168	13,024	11.7
1967-----	9,701	1,614	139	11,170	14.4
1968-----	10,346	2,711	144	12,913	21.0
1969-----	8,914	4,034	157	12,791	31.5
1970-----	<u>2/</u> 7,800	4,513	126	<u>2/</u> 12,187	<u>2/</u> 37.3

1/ Includes combinations with radio receivers and record players.
2/ Estimated.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note.--Because of rounding, the data by types may not add to the totals shown.

Table 4.--Coils and antennas: U.S. production, 1/ by uses, 1966-70

Item	1966	1967	1968	1969	1970
Coils for use in receivers:					
Quantity:					
Radio-----1,000 units--:	110,327	107,502	94,561	89,906	68,866
Monochrome TV-----do-----:	80,219	60,847	68,138	61,359	47,049
Color TV-----do-----:	201,728	212,905	222,297	202,480	152,087
Total-----do-----:	392,274	381,254	384,996	353,745	268,002
Value:					
Radio-----1,000 dollars--:	19,127	16,928	17,063	16,929	12,603
Monochrome TV-----do-----:	10,449	6,272	6,979	6,461	4,568
Color TV-----do-----:	29,962	29,770	30,629	33,379	27,960
Total-----do-----:	59,538	52,970	54,671	56,769	45,131
Antennas for use in radio receivers:					
Quantity-----1,000 units--:	8,290	5,924	4,135	3,378	2,019
Value-----1,000 dollars--:	1,725	1,288	961	821	455

1/ Partly estimated.

Source: Compiled from data supplied the U.S. Tariff Commission by the principal consumers.

Note.--Value of production is equal to the value of shipped merchandise plus the constructed value of merchandise produced by firms for their own use.

Table 5.--Coils and antennas: U.S. imports, 1/ by uses, 1966-70

Item	1966	1967	1968	1969	1970
Coils for use in receivers:					
Quantity:					
Radio-----1,000 units--:	9,414	9,382	16,162	12,074	11,180
Monochrome TV-----do-----:	6,441	4,073	9,633	10,481	10,113
Color TV-----do-----:	1,476	7,744	18,252	23,511	25,500
Total-----do-----:	17,331	21,199	44,047	46,066	46,793
Value:					
Radio-----1,000 dollars--:	1,335	1,285	2,228	1,412	1,662
Monochrome TV-----do-----:	1,484	436	653	678	750
Color TV-----do-----:	397	597	979	2,765	3,766
Total-----do-----:	3,216	2,318	3,860	4,855	6,178
Antennas for use in radio receivers:					
Quantity-----1,000 units--:	480	1,153	898	189	85
Value-----1,000 dollars--:	114	92	75	60	33

1/ Partly estimated.

Source: Compiled from data supplied the U.S. Tariff Commission by the principal consumers.

