REPORT OF EUROPEAN TRIP

June 3 through June 26, 1948

C. R. Knight

This trip was made at the request of Mr. Sylvan Ginsbury, exporter of the Ken Rad line of receiving tubes. Mr. Ginsbury also handles a full line of other radio components and I was requested to act in an engineering capacity, insofar as possible, on these other lines also. Some of the other lines were:

1. Micamold capacitors.
2. Herlec ceramic capacitors.
3. Chicago Telephone Supply volume controls.
4. Grigsby-Allison switches.
5. Automatic Manufacturing i-f transformers and trimmer capacitors.
6. Measurements, Incorporated test equipment.

Reports of individual customer contacts are included on the separate report forms attached. General comments are given below.

GENERAL

The entire radio industry in Europe is quite different from that encountered in this country on many scores due to the very small size of the countries and government control of radio broadcast stations, the selection of programs in any one country is very limited. Therefore, inclusion of the international shortwave broadcast bands on radio sets is an essential. Because of the greater emphasis on shortwaves and because of the narrower channels (approximately 9 Kc) much greater emphasis is placed on selectivity. In addition, the dials are not marked in terms of kilocycles but are marked in terms of the countries from which the programs emanate. In the shortwave bands this means that, generally speaking, electrical band spread, much more accurate calibration of the dial and high local-oscillator stability are necessary. These factors have led to the almost complete elimination of mica trimmers for i-f transformers and tracking circuits and the substitution of air trimmers. I-f coils have about double the Q of domestic i-f transformers and because of the higher Q circuit gains are higher and gain stability becomes more of a problem. In addition to these differences the general line voltage available for operation of radio sets is 230 volts 50 cycles which presents quite a problem with American tubes when used in a-c/d-c sets because the excess heater voltage must be taken up by a resistor which means twice the heat dissipation in the set. This is further amplified by the fact that for some reason European customers will not accept plastic cabinets and insist upon wooden cabinets which must be run at lower temperatures. Philips has available a line of tubes having 100-milliampere heater current for this service which cuts the heat down by one-third. In addition, they have a triode-hexode converter which has very definite advantages in the shortwave bands particularly up near 21 megacycles.

In the past Philips has been supplying tubes which were of the multi-purpose type. With these type tubes a very satisfactory four-tube set could be made. A triode-hexode is supplied which can be used as the converter, the triode being used as the local oscillator, the hexode as the mixer. Another of the same tubes is used in the i-f amplifier position with the hexode acting as the i-f amplifier, and the triode section acting as the first audio amplifier. A power output pentode and detector diode is the third operating tube with a power rectifier as the fourth tube. Their new miniature "rimlock tubes" are supplied in the triode-heptode combination but five tubes are necessary as it is no longer possible in the 8-pin miniature to bring out sufficient leads so the triode can be used for separate service. Data on the new Philips rimlock tubes is attached to this report.

In Great Britain, Belgium, and France it is apparently very difficult to obtain dollars for importing American goods. In England its practically impossible if the product is being manufactured within the country. In Belgium and France importation is possible but the amount of material which can be imported is based upon past importation records. In Switzerland where dollars are plentiful there is no limitation on imports. In the countries where dollars are scarce, Philips charges about double the price of our tubes to equipment manufacturers and, in general, they can get away with it because Holland is a debtor nation; but in Switzerland, where dollars are plentiful, they are matching our prices practically to the cent on a complement. In all of the continental European countries most of the customers contacted preferred American types especially when considering miniature tubes, because of the better quality. They claim that on Philips tubes they have about five per cent rejection, while on American types they have only one or two per cent. Apparently, Philips is trying to counteract this in Switzerland and they are giving very good application engineering service there.

It was very interesting to me and somewhat surprising to find that most of the manufacturers there manufacture perhaps ten thousand sets a year and some of the larger manufacturers may build as many as 60 to 70 thousand sets per year. This is, of course, with the exception of Philips who recently got back up to the million sets per year mark. As a result, most of the manufacturers have some other interests, such as lighting, induction heating, etc. The reasons for this small manufacture are the small markets in any individual country and tariff barriers which do not allow tremendous export on a competitive basis. In addition, there is also a very great dearth of small components parts manufacturers such as exist in this country. The equipment manufacturer, at least on the continent, being obliged to buy almost all of their parts from Philips or else to manufacture their own. And in this case it is not at all surprising to find a set manufacturer who makes five thousand sets a year manufacturing his own loud speakers. As a result of all these factors about the cheapest European set sells for approximately $75.00, United States money.

In the field of television, of course, Great Britain has been involved for many years but, to date, has only one television transmitter. One or two others are now being considered. There is one television transmitter in France and one in Eindhoven at the present time but television and FM in the rest of Europe are something for the future. There is to be a television conference in Europe this Fall, at which time it is hoped that all the

countries can get together to form a television network for western Europe. If such is done, television will probably be quite practical on the continent. Otherwise, the chances are quite remote of television becoming successful in the smaller European countries such as Switzerland, Belgium, Holland, and so on. Because of this prospect, many of the engineers in these radio concerns contacted were quite interested in the American development in television and were particularly interested in the aluminized picture tubes as characterized by the 10FP4.

Type	Function	Heater Voltage	Heater Current	Anode Voltage	Screen Voltage	Grid Voltage	Plate Current	Screen Current	Gm umhos	Po
ECH41	Triode-hexode converter	6.3 V	0.225 A.	V_h = 250 R_t = 30 K	R_1 = 30 K R_2 = 47 K	-2 to -28 R_k = 200 ohms	I_h = 3 Ma I_c = 4.9	2.2 Ma	S_c = 500	
EF41	Remote cutoff pentode	6.3	0.2	250	R_{g2} = 90 K	-2.5 to -39 R_k = 325	6	1.7	2,200	
EAF41	Diode-pentode (1) RF Amp. (2) Audio Amp.	6.3	0.2	250 R_p = 100 K	R_{g2} = 90 K R_{g2} = 500 K	-2 to -40 R_k = 300 R_k = 1000	5	1.6	1,800	
ECC40	Double triode (separate cath.)	6.3	0.5	250	u = 30	-5	6		3,000	
EL41	Output pentode	6.3	0.65	250	250	R_k = 170	36	4	9,000	4.5
AZ41	Rectifier	4.0	0.625	2 x 300			70 Max.			
UCH41	Triode hexode converter	14	0.1	V_h = 200 R_t = 10 K V_h = 100 R_t = 10 K	R_1 = 22 K R_2 = 47 K R_1 = 22 K R_2 = 47 K	-2.2 to -27 R_k = 200 -1 to -14 R_k = 200	I_h = 3 I_t = 4.6 I_h = 1.1 I_t = 2.8	2.2 1.1	S_c = 500 S_c = 320	
UF41	Remote cutoff pentode	12.6	0.1	200 100	R_{g2} = 40 K R_{g2} = 40 K	-3 to -34 R_k = 325 -1.4 to -14 R_k = 325	7.2 3.3	2 1	2300 1900	
UAF41	Diode-pentode (1) RF Amp. (2) Audio Amp.	12.6	0.1	200 100 R_a = 200 K	R_{g2} = 44 K R_{g2} = 44 K R_{g2} = 750 K	-2.4 to -35 -1.1 to -17 R_k = 300 R_k = 2.7 K	6 2.8	1.9 0.9	1900 1650	
UL41	Output pentode	45	0.1	165 100	165 100	R_k = 150	54 32.5	9 5.5	9500 8500	4.2 1.35
UY41	Rectifier	31	0.1	250 Max.			90 Max.			

DK91	Heptode converter	1.4	0.05	90	67.5	0 to -14	1.6	3.2	S_c = 250	
DF91	HF pentode	1.4	0.05	90	67.5	0 to -16	3.5	1.4	900	
DAF91	Diode pentode	1.4	0.05	90 R_a = 250 K	R_{g2} = 1.5 M	R_{g1} = 10 M	2.7	0.5	720	
DL92	Output pentode	1.4	0.1	90	67.5	-7	6.1		1425	0.236
DK40	Octode converter	1.4	0.05	V_a = 67.5 $V_{g2}(V_{at})$ = 67.5	V_{g5} = 67.5	V_{g4} = 0 to -6.5	I_a = 0.9	0.2	S_c = 475	
DL40	Output pentode	+1.4 (pin 1) -1.4 (pin 7) Common (pin 8)	0.1	67.5	67.5	-3.5	6	1	2200	0.180

Customer: Radio and Electric Supplies (Distributor) Date of Contact: 6/17/48

Location: Brussels, Belgium Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:

Mr. J. J. Claes

Comments:

This is a new account for Mr. Ginsbury and they have just taken on the Ken Rad line of vacuum tubes. The concern imported about 50,000 tubes last year. They will probably be interested in getting GE 8-inch and 10-inch loudspeakers and would like samples near the center of the magnet-weight range. Orders for 4,300 Ken Rad tubes have already been placed. They requested they be sent the Ken Rad Receiving Tube Manual which has been arranged.

Customer: Radio Bourse Date of Contact: 6/15/48

Location: Brussels, Belgium Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:

Mr. Strickaert

Comments:

This operation is one of both distribution and manufacturing. The manufactured product goes under the trade name of Secora. I was particularly impressed with the vitality and enthusiasm of the manager-owner of this concern. Apparently he has done very well. Approximately 50,000 tubes per year are used in their manufacturing and wholesaling business. They have been manufacturing some sets with Sylvania lock-in tubes, but plan to take all the lock-in tubes out of new models. Copies were requested of our Engineering Bulletins on the 12AT7 and 6T8 (ET-B19) and also our Television Tubes Bulletin (ET-B24). This is being arranged. Apparently they plan to manufacture an FM converter and are also very interested in supplying a complete kit of parts for television similar to that supplied by Transvision in this country.

Customer: R-R Radio — Date of Contact: 6/11/48

Location: Brussels, Belgium — Date of Report: 7/6/48

Report by: C. R. Knight

Persons contacted:

Mr. Vanhecke
Mr. Revol

Comments:

This company has apparently been using Philips tubes for quite some time, but apparently Mr. Ginsbury has been able to get them to swing over to the American miniatures and in this regard they are very interested in the 12BE6, 12BA6, 12AV6, 50B5, and 35W4. They would like coil information for the 12BE6 for the following wave bands: 16 - 50 meters, 190 - 550 meters, 1000 - 2000 meters to tune with a 50 micromicrofarad to 500 micromicrofarad tuning capacitance. A request was made for an a-c/d-c complement of our miniature tubes plus an a-c complement involving the following types: 6BE6, 6BA6, 6AV6, 6C4, two 6AQ5's, and 5Y3-GT. Mr. Ginsbury has already arranged for these samples to be sent.

They are also planning a wire recorder and should be quite interested in our development of the Z-1383. It seems that wire and tape recorders are extremely popular in Europe, much more than in this country.

Customer: Radio Television Amplificateurs — Date of Contact: 6/11/48

Location: Iepre-Saint-Gervais, France — Date of Report: 7/6/48

Persons contacted:

Mr. J. Drapier

Comments:

This concern seems to be a company with a wide field of interests, with home radio as a rather small part of the total. Their home radio manufacture amounts to approximately 30,000 sets per year. In addition to home radio, they manufacture public address systems, Army equipment for the French Army, and a good many other specialties. They are manufacturing a few television sets, but the market is quite limited. There is only one station in Paris. This transmitter operates at 42 megacycles with a 455 line 50-cycle interlaced scan. Peak power is at black level, as is customary here in America. They were very interested in our television components and have requested Mr. Ginsbury to quote them price and to send them samples and data. In addition, they have requested a proformer invoice or samples of the 10BP4 and 10FP4. I gave them samples of our type 12AT7, 6AU6, and 6T8 in which they were very interested. They also asked for a copy of GE tube catalog and I understand Mr. Ginsbury is making arrangements for this. In addition, samples of the following types were requested: 1R5, 1U4, 1S5, 3V4, and a selenium rectifer.

They would like six sets of each. Mr. Ginsbury is making arrangements for these as well.

Samples of the GE variable reluctance pickup have been tried and they like it very much. They have already written Mr. Ginsbury in regard to it to see what arrangements might be made.

Customer: S. A. Gramaphone — Date of Contact: 6/14/48

Location: Brussels, Belgium — Date of Report: 7/6/48

Report by: C. R. Knight

Persons contacted:

Mr. L. Minot
Mr. A. Dubois

Comments:

This company is the affiliate of the Gramaphone Company in England, or the Electrical and Musical Industries of England, and are currently manufacturing sets using the following tube types: 12SA7, 12SK7, 12SQ7, 50L6-GT, and 35Z5-GT. In addition, an a-c set using the 6SA7, 6SK7, 6SQ7, 6V6-GT, and 5Y3-GT. They are very interested in changing over to the miniature tube complement and have requested samples which have been arranged for. Currently they are using only Ken Rad tubes in their entire manufacture. They have gotten some engineering bulletins from Mr. Ginsbury but are interested in receiving back copies of our engineering bulletins, which I will arrange to have sent to them. In this regard, they commented that the 50B5 should be rated for a plate voltage of 230 volts. This is certainly true and would make the tube much more usable in Europe. They obtain all their other radio requirements, such as wire recorders, communications equipment, etc., everything outside of home radio, from EMI in London.

Customer: Les Laboratoires Idioelectriques — Date of Contact: 6/12/48

Location: Paris, France — Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted: — Title:

Georges H. Bezy — Chief Engineer

Comments:

This company is apparently doing mostly industrial electronic work and would very much like to obtain data and prices on the GE industrial tubes type FG-105, GL-414, GL-5545, and GL-7C29. They would also like information on 10-centimeter and 3-centimeter TR and ATR tubes and prices.

Customer: Erea — Date of Contact: 6/12/48

Location: Antwerp, Belgium — Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:

Mr. Cardon Frerea

Comments:

Mr. Frerea was very interested in the 8516-GT (Z-1459) and would like technical information. He has a possible application of 2,000 to 4,000 sockets initially in a "wired wireless" type of amplifier. The company has already bought 10,000 amplifiers using 5016-GT's for installation in Ghent and an equal number for Antwerp.

Customer: Novak Radio Corporation — Date of Contact: 6/15/48

Location: Brussels, Belgium — Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted; — Title:

Mr. George Bonar and others — Manager

Comments:

Novak Radio is another rather large manufacturer in Belgium manufacturing 40,000 sets per year. They buy most of their tubes from Philips because of past practice and can't change very well right now because of the import situation. They are quite interested in obtaining fluorescent lamps for resale in Belgium, perhaps under their own name. They can manufacture their own ballasts and would prefer to do so. Here is another case where SEM might very well have the business, but Novak seems to be very little interested in dealing with them on a matter of this type.

They were very interested in our television components and would like samples and data. Also they are placing an order for two 10FP4's through Mr. Ginsbury. They are also interested in the wire recorder and probably will be interested in and would like to be kept advised of our development of the Z-1383.

Customer: Bell Telephone Mfg. Co. Date of Contact: 6/16/48

Location: Antwerp, Belgium (contacted in Brussels) Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:	Title:
Mr. P. A. Visschers	Chief Engineer
Mr. L. Cabes	
Mr. L. Lhonneux	Purchasing Agent

Comments:

The Bell Telephone Manufacturing Company of Belgium is, strangely enough, associated with IT&T and most of their work is in the carrier current business, although they are also in the home radio field. Mr. Ginsbury seemed to have excellent contacts with this organization.

They are very interested in our Engineering Bulletins on FM and television and asked for three copies of each. Also they would like the same information on our set of television sweep components. In addition, they asked to receive our Receiving Tube Catalog. Samples of our miniature tubes for a-c and a-c/d-c sets were requested and have been arranged for. They are doing some work on aircraft radio equipment and would like to be kept informed on our line of tubes for this service.

This company is apparently manufacturing only about 20,000 home radio sets per year at the present time, but they hire about 8,000 people in Antwerp and, of course, most of their effort is on carrier equipment.

Customer: VanDerHeem Date of Contact: 6/16/48

Location: Hague, Netherlands Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:	Title:
Mr. P. G. Zaayer	Chief Engineer, Radio Division
Mr. W. A. Wan Waasdyk	Director of Engineering

Comments:

This company, in addition to manufacturing about 60 to 70,000 radio sets a year, also manufactures vacuum cleaners and other electrical appliances. In Holland it is practically impossible for any one to buy anything other than Philips tubes so that's what they do. They advised that there is now one television transmitter operating in Eindhoven and two more television transmitters are planned for Holland later. They would like to receive copies of our Engineering Bulletins on television and technical data and prices on our television sweep components.

Customer: Universal Radio

Date of Contact: 6/15/48

Location: Marseilles, France (contacted in Brussels)

Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:

Mr. Rebaudi

Comments:

Universal Radio is a distributor in Southern France and Mr. Rebaudi is apparently the owner and manager. He was very well acquainted with Mr. Ginsbury and is handling the Ken Rad line of tubes. He has the receiving tube catalog but would like to obtain the GE transmitting and industrial tube catalogs. This is being taken care of. He was also interested in complete sets of parts for television sets similar to the kit sold by Transvision.

Customer: Pye Radio Corporation Ltmd.

Date of Contact: 6/5/48 and 6/7/48

Location: Cambridge, England

Date of Report: 7/6/48

Report by: C. R. Knight

Persons contacted:	Title:
Mr. James Dalgiesch	Chief Engineer
Mr. Hughes	Telecommunications Engineer
Mr. Cope	Television Engineer
Mr. Jones	Audio Engineer

Promises Made:

Keep informed on progress of airline tubes (send data). Send samples of the variable reluctance pickup.

Comments:

Pye Radio is doing work for the British Airlines and as a result are very interested in our developments along these lines and would appreciate being kept informed.

They are manufacturing emergency communications systems for police and also taxicab communications systems and as a result are very interested in the quick-heating tubes of types similar to the 2E30 and the RCA 5618. For their ground station transmitters they are currently using AM but were somewhat interested in the phasitron for FM application. I left them a copy of the 5593 Engineering Bulletin. They would very much like the low drain 160-megacycle tube for walkie-talkie equipment for portable railroad work, etc. Our Z-1482 would probably have been suitable for such use with a few minor modifications.

I spent quite some time with Mr. Cope of their Television Section and

was quite amazed at the extent of the work which they are doing. They are manufacturing television transmitter equipment and remote pickup equipment. They are even manufacturing their own iconoscopes, and to the best of my knowledge, are the only manufacturers of iconoscopes in England. All this in addition to manufacturing home receivers. In the line of home receivers they have a set which is not a superheterodyne, inasmuch as they only have one station to receive. This set has a 9-inch magnetic picture tube which sells somewhere in the neighborhood of $125.00. The picture quality is excellent. They had some rather interesting features which should definitely result in cost reduction: (1) They have found that by moving a permanent magnet used for focusing backwards and forwards about 1/2 to 3/4 inch along the neck of the cathode ray tube, they are able to provide all the focusing adjustment necessary. This, of course, eliminates the 40 milliamperes required with our own focus coil. They have already tried cathode ray tubes with a 1-inch neck but have obtained no real improvement in sweep efficiency because of the lower yoke Q associated with the smaller coil. They felt that the 1-inch neck was a definite disadvantage from the mechanical standpoint and so they have gone back to the standard neck diameter. They claim that the European sweep tube is more efficient than our 6BG6-G and apparently it sells for about the same price ($1.48). This tube type is known as the PL-38 and has a transconductance of 11,000 micromhos and a plate disaipation rating of 25 watts. There is another version available having a 30-volt heater at .3 amp. They have already gone to the series heater strings. They have been obtaining from Mallard in England a very small high voltage rectifier tube which is selling there for $0.95. The rating on this tube is Eh = 6.3 volts, Ih = 80 milliamperes, E_{out} = 9 KV at 100 microamperes. This tube is known as the type EY-51. This price is even more astounding when one compares it to the price of the more conventional tubes in England which average at about $0.80 each. A sample has been delivered to Messrs. Jenks and Millis.

Pye is very actively interested in wire and tape recorders and in this regard should be interested in our type Z-1383.

In addition, they have heard of our variable reluctance pickup and are very interested in obtaining samples of it.

Customer: Ultra-Radio — Date of Contact: 6/8/48

Location: London, England — Date of Report: 7/7/48

Persons contacted: — Title:

Mr. Ted Rosen — Manager
Mr. Harry Sturgen — Chief Engineer

Comments:

This company is building home receivers and is also quite actively engaged in construction of communication equipment for the British Airlines and as such should be very interested in our line of tubes for that purpose. While there I was told of the new development along the lines of the Schmidt lens system for projection television, which is available in England now for about $15.00. This particular lens system has been developed by the Imperial Chemical Industries of Great Britain and a representative is apparently coming

to the states in the very near future, if he has not arrived already. This same concern has a new screen which is thought to be very good for projection television and which sells for about $2.00 per square foot.

Customer: Electrical & Musical Industries Ltmd. (EMI) (somstimes known as the Gramaphone Company) Date of Contact: 6/8/48

Location: London, England Date of Report: 7/6/48

Persons contacted:	Title:
Mr. Carrick Smith	Manager, Export Division
Mr. Metcalf	Chief Mechanical Engineer
Mr. Cooper	Chief of Research Division

Comments:

Time was quite limited at this account and consequently the discussions were very brief, but Mr. Cooper was very interested in the aluminized cathode ray tubes for television and also very interested in the 16-inch tube. They may obtain samples through Mr. Ginsbury. This company manufactures their own receiving tubes so all discussions were purely academic. Apparently, however, this is one of the largest radio manufacturers in Great Britain. They do some of their manufacturing in Belgium and the contact with the Belgian part of the company is given as a separate report.

Company: Societie Belge Radio-Electrique (SBR) Date of Contact: 6/9/48

Location: Brussels, Belgium Date of Report: 7/6/48

Persons contacted:	Title:
Mr. Leopold Goutglik	Chief Engineer

Comments:

I discussed our proposed Z-1459-A with them and they were very interested. However, they would be more interested if the heater current were 100 milliamperes rather than 150. They are very interested in wire and tape recorders so should also be interested in our Z-1383 eventually. In addition to the above items, they are interested in our television components and would like literature which I will send through Mr. Ginsbury, and also would like data and price information on our 8-inch and 10-inch speakers.

In addition to the radio field, they are very active in the induction heating field and are currently looking for a source of induction heating generators. They would very much like to buy these from the General Electric Company with or without the GE monogram. While they realize that SEM is the GE agent in Belgium, they are not interested in dealing with SEM because they claim they show a very definite lack of interest in anything electronic and have a

complete lack of appreciation for the electronic field. They would like power outputs in the range of 2 to 15 kilowatts at approximately 400 to 500 kilocycles. They would like as much information on the line as possible. In this field I believe that we could do a fairly good business because it is relatively simple for them to get import licenses for industrial electronic equipment.

This company is apparently the largest radio manufacturer in Belgium, exclusive of Philips, and Mr. Ginsbury seems to be extremely well entrenched there even though at the present time they are the RCA agents.

Customer: Thorens, SA — Date of Contact: 6/16/48

Location: St. Croix, Switzerland (contacted in Brussels, Belgium) — Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted: — Title:

Mr. Nicole — Chief Engineer

Comments:

The Thorens Company is planning to get into the radio business for the first time and are planning to start on one set which will have the following tube complement: 6BE6, 6BA6, 6AL5, 6SH7, 6V6-GT, and the type 80. All of these tubes will be purchased through Mr. Ginsbury. I discussed the Z-1459 (85L6-GT) briefly with Mr. Nicole and he was very interested and would like to be kept informed. Two thousand sets will be made on the first release.

Customer: ACEC — Date of Contact: 6/17/48

Location: Brussels, Belgium — Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted:

Mr. Frederick Duchateau

Comments:

ACEC is the Westinghouse and Western Electric representative in Belgium and are apparently attempting to get into the electronic business in a big way, although there is some indication that they do not have a very complete under-standing of some of the problems involved. They are quite interested in wire recorders and in this regard should be interested in the Z-1383 and have requested samples when available. They are currently using quite a number of Ken Rad tubes in their equipment.

Customer: Megex Company (Importer) Date of Contact: 6/17/48

Location: Paris, France (contacted in Brussels, Belgium) Date of Report: 7/7/48

Report by: C. R. Knight

Persons contacted: Title:

Mr. D'Estribaud Manager

Comments:

Apparently this importation concern is coordinating tube and equipment importations from America for the French Ministries of War, Navy, Post Office, etc. The quantities they buy are rather small and scattered, but they are very interested in being kept informed on a good number of fields including our airline development, VHF and UHF tubes, and television circuits and television picture tubes. We agreed to send a copy of our latest Engineering Bulletin ET-B24 on miniature tubes for television and data on the television sweep components. Mr. D'Estribaud is also interested in obtaining two each samples of the 10BP4 and the 10FP4. An order will be placed for these tubes. He also requested copies of our Transmitting Tube and Industrial Tube Catalogs.

Mr. D'Estribaud also advised that the following French tube companies will be manufacturing American type miniature tubes by the end of this year:

(1) Radio Technique.
(2) Company DeLamp.
(3) Visseaux.
(4) Grammont (Fotos).

Customer: Paillard Date of Contact: 6/21/48

Location: Yverdon and St. Croix, Switzerland Date of Report: 7/22/48

Report by: C. R. Knight

Persons contacted:

Dr. Lindecker
Mr. Droz
Mr. Ascoli
Mr. Chappni
Mr. Mernod
Mr. Maire

Promises Made:

Keep informed on availability of Z-1383. Samples and prices of GE variable reluctance pickup. Data and prices on GE television sweep components.

Comments:

Dr. Lindecker, who is in charge of all their research, took charge of my entire visit. Paillard, in addition to being in the radio business,

manufactures a good amount of movie equipment and typewriters. They are the manufacturer of the Bolex movie camera and the Hermes typewriter.

They have been getting our Engineering Bulletins through Mr. Ginsbury and seem to appreciate them very much. I left samples of the types 6BA6, 6AU6, 12AU7, and 12AT7 with them. They have done a great deal of work on magnetic tape recorders and will, I am quite sure, be interested in our Z-1383 low-noise low-microphonic double-triode. They are interested in the GE variable reluctance pickup and would like samples and prices, probably for inclusion in their higher-priced sets. As with most other manufacturers in Europe, they have no real market for television as yet, but in view of the forthcoming November Conference on television, a great many of the concerns are doing some advanced development work. For this reason they will be interested in obtaining prices and data on the GE line of television sweep components. Paillard is making about 6,000 home radios a year which range in price from $75.00 to $600.00. Their $600.00 set is beautiful and it appears to me that in this class they could compete quite successfully in the States with companies like Scott, Capehart, and Stromberg-Carlson. The cabinet was especially well designed and beautifully finished.

Customer: Sondyna A.G. Date of Contact: 6/22/48

Location: Zurich, Switzerland Date of Report: 7/22/48

Report by: C. R. Knight

Persons contacted:

Mr. W. Strohschneider
Their Purchasing Agent whose name I did not get.

Comments:

Mr. Strohschneider would very much like to use American tubes but he is having some difficulty with their Purchasing Agent. Philips is apparently matching American tube prices in Switzerland on a kit basis and are sending engineers up there very frequently. Strohschneider believes that if we can give them technical information and engineering assistance that he may be able to win the Purchasing Agent over. I would suggest that we make arrangements to send them a fairly complete series of the GE Engineering Bulletins. I discussed the development type Z-1383 with them and promised to inform them on development progress and the availability of samples. A copy of the GE Engineering Bulletin ET-B19 and samples of the 12AT7 tube were promised as they are very interested in manufacturing an FM converter.

Sondyna manufactures about 6,000 home radios per year and also does quite a bit of work for the Swiss government on radio-telephone receivers (diversity), police transmitters, receivers, etc.

They have our Receiving Tube Manual.

Customer: Sport A.G. Date of Contact: 6/22/48

Location: Bienne Date of Report: 7/22/48

Report by: C. R. Knight

Persons contacted:

Mr. J. Gefter
Mr. Pierre de Claparede

Comments:

This company is using Ken Rad tubes almost exclusively and are very well satisfied. Apparently they have had some troubles with Tung-Sol tubes in the past. I described the Z-1383 to them and promised that we would keep them informed on availability of samples. I also agreed to send them a copy of the GE internal report on hum considerations. Also a copy of our Engineering Bulletin ET-B15 on converters.

This company is very small, but the situation is rather generally this way in Europe. They are manufacturing their own loudspeakers in smaller sizes, but would like a good source of very high-quality 10" and 12" speakers having extended frequency response. Arrangements are being made to send samples of these loudspeakers.

Customer: A. Dewald & Son Date of Contact: 6/23/48

Location: Zurich, Switzerland Date of Report: 7/22/48

Report by: C. R. Knight

Persons contacted:

Mr. Barbier
Mr. P. Dewald
Mr. Mayor

Comments:

Philips tubes in Switzerland are almost identically the same prices as American tubes there and Mr. Barbier seemed quite sold on Philips tubes. He was especially sold on the triode-hexode type mixer. He had tried some of our American miniatures, the 6BA6, and similar types, and had had some difficulty due to oscillation. His results were, I am quite sure, based on misuse as he had used them in high gain amplifier without a grounded shield between pins on the socket. I called this to his attention and he indicated that he would try them again using the grounded shield. I left samples of tubes type 6AU6, 6BA6, 12AU7, and 6T8. I believe that our i-f amplifiers, such as the 6BA6, have considerable advantage over the Philips tube in that the transconductance is almost twice as high. One of the big difficulties with most European manufacturers that have been using Philips tubes lies in the converter problem. Most of them have been using the triode-hexode converter which is very easy to use and very simple to adjust. The pentagrid mixers of the type used in this

country are a little trickier and require manufacturing experience which they have not had, and which they are rather hesitant in obtaining.

Customer: Brown, Boveri — Date of Contact: 6/23/48

Location: Baden, Switzerland — Date of Report: 7/22/48

Report by: C. R. Knight

Persons contacted:

Mr. Guanella
Mr. Bachmann
Dr. de Quervain
Mr. Meyer
Mr. Guyer
Mr. Fehlmann
Dr. V. Baeyer

Comments:

Brown, Boveri manufactures their own larger tubes for industrial purposes and inasmuch as they are not in the home receiver business, the tube discussion was somewhat limited. They are, however, doing some work for the Swiss government on radar equipment and are also doing quite a bit of work on induction heating. In view of this, they were quite interested in available information on American magnetron types. They are developing some magnetrons themselves.

Brown, Boveri has copies of all three of our tube catalogs and might conceivably develop into a fair customer on some odd types of transmitting and industrial types which they do not manufacture. They may also be a potential customer on small quantities of receiving types.

I discussed briefly with them the possibility of electric blankets in Switzerland but their interest was only slight. The work being done in this country on electronic computers was also discussed with about the same response.

Brown, Boveri, of course, is a large heavy electrical industry in competition with the GE Apparatus lines there.

GW Bain
WH Clarke
A. Coumont
CE Crannell
DW Jenks
WC Kirk
WT Millis
OW Pike