

THE ECHOPHONE SAGA

2 December 2012 © 2012 Gary H. Price

Echophone was a major radio receiver brand in the early 1920s. It enjoyed something of a rebirth at the end of that decade, and continued to be seen even into the 1950s. Much is known about its history (Douglas 1991; Paul 1999b; SHS n.d.) but the nature of certain developments remains somewhat obscure. In the following, I attempt to shed some further light on these developments and the events that drove them.

Prelude: The Radio Shop

Douglas (1991) notes that The Radio Shop, with offices in San Jose, California and a manufacturing plant in nearby Sunnyvale, began as a manufacturer of variometers no later than May 1920, followed by a regenerative tuner using these devices in August of that year. The business was founded by partners Arthur E. Bessey and Tom Lambert, both of whom were residents of Sunnyvale (SHS n.d.). As regards how these two came to partner, Douglas further notes that the amateur station then operated by Bessey used receiving equipment manufactured by Colin B. Kennedy, where Lambert was sales manager.

Advertisements for The Radio Shop products in 1920 (adv. 1920a; adv. 1920b; adv. 1920c) and into early 1921 (adv. 1921a) featured shortwave regenerative receivers aimed at the amateur market. Bessey was a well-known west-coast radio amateur, profiled during 1920 in articles appearing in the *Pacific Radio News* and in *QST* (SHS n.d.), and it seems natural that the target market would reflect this circumstance. By February 1921, however, the product line had expanded to include a long-wave receiver (adv. 1921b). This was followed mid-year by advertisements for the RS 1-24 (adv. 1921c), a regenerative re-

ceiver covering a wide wavelength range of 100–24000 m.

The market for receivers continued to grow as commercial broadcasting took hold, and by May 1922 The Radio Shop was announcing the construction of a new plant in Sunnyvale, to be managed by Tom Lambert (Douglas 1991). By midyear,¹ a broadcast license had also been obtained for The Radio Shop station KJJ (DoC 1922).

The regenerative circuit used in The Radio Shop receiver designs was patented by Armstrong as U.S. Patent No. 1,113,149 (Douglas 1991; SHS n.d.). Although The Radio Shop appears initially to have built their sets without having been licensed by Armstrong, by October of 1920 their

Echophone
ECHOES OF THE WORLD

Echophone Special
\$85.00

Invented by The Radio Shop of Sunnyvale
licensed under Armstrong Pat. No. 1,113,149

No single feature in Radio has attracted the marked interest that the ECHOPHONE INTER-CHANGEABLE UNIT has during the past few years. To be able to receive from a beautiful tone without the cost of a second, distinct feature combined with all the outside necessary for perfect radio reception, and slip it into a single portable cabinet for the automobile or touring today, has placed the ECHOPHONE in the front of radio attention.

ECHOPHONE, SPECIAL, the ideal set for use with any make of loud speaker, is made up of the interchangeable Unit contained in a beautifully decorated mahogany cabinet constructed to hold both battery and accessories.

ECHOPHONE, STANDARD, which sells for \$175.00, is a receiver without a cabinet, containing the same interchangeable Unit, but without sufficient capacity to hold the batteries.

The complete ECHOPHONE has constant radio receiving and tuning in power from 100 to 24,000 m.

In all ECHOPHONE sets, the same simple still has accomplished the elimination of the various and bulky tuning circuits. Special circuit arrangements make only two controls necessary, which, with the "Vernor," make operation simple and insure perfect tuning.

DEALERS: Write for the ECHOPHONE proposition TODAY
For further information, literature, literature, literature or accessories
address the nearest branch office.

THE RADIO SHOP
General office and factory, Sunnyvale, California

West Branch Berkeley, Calif.	1220 Chestnut St. St. Louis, Mo.	111-119 Market St. San Francisco, Calif.	314 Market St. San Antonio, Texas	6 North Michigan Ave. Chicago, Ill.
---------------------------------	-------------------------------------	---	--------------------------------------	--

Advertisement by The Radio Shop for the Echophone Line. From the October, 1923 issue of *Radio*.

Speaking About Combinations—



The RADIO SHOP Short Wave Regenerative Receiver combined with the latest addition to its already well established line.

THE "RADIO SHOP" DETECTOR AND TWO STEP AMPLIFIER

A unit possessing features not found in other sets available on the market today. Scientifically designed for superior wave-lengths. Magnetically screened throughout for complete elimination of "deadends" howling. Transformers of expert proportions for present day tubes. Non-heating rheostats. Tube sockets which make either standard V-Ts or Navy type sockets. Hinged cabinet top for easy access to interior for removal of valves. Bias lead condenser in detuning circuit of correct capacity for regenerative circuit. Separate plate battery compartment for detector and amplifier valves. Extreme simplicity of construction. Connection strips furnished for connection to short wave sockets. Provided without valves or batteries.

PRICE.....\$11.95

THE "RADIO SHOP" SHORT WAVE REGENERATIVE RECEIVER

Now licensed under Armstrong U. S. patent No. 1,311,049. Described in detail in previous issues of "Pacific Radio News."

NEW PRICE.....\$25.95

Both sets sold with the distinct understanding that your money will be immediately refunded if you are not satisfied. We will shortly have interesting literature on the above and other "RADIO SHOP" products. A stamp will get your name on our mailing list.

THE RADIO SHOP
BANK OF ITALY BUILDING Dept. 5 SAN JOSE, CALIFORNIA

Advertisement by The Radio Shop for their regenerative detector/audio amplifier combination. From the October, 1920 issue of Pacific Radio News.

advertisement in the *Pacific Radio News* (adv. 1920b) proclaims this oversight to have been rectified. Armstrong licensed his patent non-transferably to numerous makers of sets for the amateur market for a short time prior to the patent's sale in November 1920 to Westinghouse (Douglas 1988; Raymer 2011). At a time when tubes and the batteries to power them were relatively expensive, and the gain otherwise to be had from a single tube was relatively modest (Painter 2001), the Armstrong circuit offered both superior sensitivity and superior selectivity in addition to detection. For those listeners primarily interested in program content, sensitivity was not necessarily a concern. Selectivity, however, became increasingly important as the number of broadcasting stations on the air continued to increase.

Echophone Arrives on the Scene

Circumstances surrounding the arrival at The Radio Shop of the Echophone brand remain somewhat clouded, but Douglas (1991) has it producing sets using this name as early as June, 1922. The Sunnyvale Historical Society publication *An Echo of the Future* (SHS n.d.), has The Radio Shop purchasing a license to use the brand from the Echophone Corp. of Chicago in 1921,

but that seems unlikely at this early date. That Echophone is also said in *An Echo of the Future* to have a Radio Corporation of America (RCA) license to manufacture broadcast receivers makes plausible some confusion there as a result of the later (1930) presence in the Chicago area of Echophone, which by then did have an RCA license. More will be said below concerning this chronology.

The similarities of the early Echophone model TA-16 to a set also produced by The Radio Shop as their model "S Special" is pointed out in *An Echo of the Future* (SHS n.d.). Douglas (1991, p. 63) appears to be taking note of this similarity as well in his organization of the presentation of photographs of the various models shown by him, though he does not explicitly address it in his text.

Further Growth

The success of the Echophone brand is attested to by The Radio Shop's announcing in late 1922 that the increase in business had made necessary the establishment of a branch manufacturing plant in St. Louis, Missouri (anon. 1922). Also noted in this announcement is that the Echo Radio Corp. had been organized to take over national distribution of The Radio Shop products. This growth was fueled by new investors, led by A. B. Dorman, The Radio Shop manager for the eastern part of the United States, as president of Echo Radio. Neither Bessey nor Lambert were among those named in the Echo Radio Corp. Certificate of Incorporation, issued by the State of Delaware on 1 August 1922 and filed with the State of Missouri on 10 August in Echo's application for a license to operate in that state (SoM 1922).

An Echophone advertisement in the January 1923 issue of *Electrical Merchandis-*

This advertisement, which is reproduced on the Radiomuseum website (adv. 1923a), has the sets being manufactured by The Radio Shop of St. Louis, Mo., and Sunnyvale, Cal. Sets manufactured by the St. Louis plant appear, however, to be rare (SHS n.d.). The significance, if any, of this apparent emergence of the Echophone Corp. as a distinct entity remains to be determined. A search of state records finds no record of its having been licensed in Missouri, while the address given for the company in the May 1923 *Radio Broadcast* advertisement, namely 1922–28 Chestnut St., St. Louis (adv. 1923a), is that subsequently associated, as noted below, with The Radio Shop's St. Louis plant.

An advertisement for the Echophone Special and Standard models in the October, 1923, issue of *Radio* magazine (adv. 1923b), reproduced in *An Echo of the Future* (SHS n.d.), has the brand back under the wing of The Radio Shop in Sunnyvale, with a branch office in St. Louis at 1926 Chestnut St., the same address as that listed for the Echophone Corp. in their May 1923 advertisement (adv. 1923a), as well as at a number of other locations. The demise of the Echo Radio Corp. during 1923 is attested by a 1 January 1924 filing for administrative Forfeiture of License to operate in Missouri by reason of failure to comply with provisions of the Act governing registration of corporations in Missouri (SoM 1922).

[illegible]

in *Radio Broadcast* magazine at the end of 1924 and in early 1925 (adv. 1924; adv. 1925a; adv. 1925b) initially show the Armac Co. of 1120 N. Ashland Ave., Chicago, as Agents for Echophone, although this last detail is absent from the final advertisement of this series. In all three advertisements, The Radio Shop is listed as manufacturer with an address the same as that of Armac, but also with a presence in Long Beach, Cal., and in Sunnysvale.

39

by The Radio Shop is confirmed by an early version of the model 4 with that address on its front panel that is shown in *An Echo of the Future* (SHS n.d.).

Douglas (1991) states that Echophone's last models were advertised in October 1925, but probably never made. The *Radio Retailing* advertisement of Oct. 1925 reproduced by him is by Echophone Radio, Inc., of 1120 N. Ashland Ave., Chicago, the same address previously found associated with Armac. Also secondarily listed in the advertisement are Echophone Sales Co. of San Francisco and Echophone Radio Shop of Long Beach; this last presumably is the plant that produced the Echophone model 4 with that address that is shown in *An Echo of the Future* (SHS n.d.). The Radio Shop of Sunnyvale is, however, conspicuous by its absence from this advertisement. The Echophone Radio Shop is also found listed for a time beginning in 1924 as owner of broadcast station KFON, located in Long Beach as well (DoC 1924; White 2012).

As regards the reasons for this decline of The Radio Shop and its Echophone brand, *An Echo of the Future* (SHS n.d.) notes the rapid evolution of the radio industry at the time as well as rumors of illness in the Bessey family and of bankruptcy. The brief history of early radio development by Painter (2001) that is reprinted in *An Echo of the Future* gives some sense of this evolution, additional detail concerning which can be found in Douglas (1988).

These included tuned radio-frequency (TRF) sets³ increasingly coming into favor as their design was refined and cost of production reduced. Furthermore, RCA had introduced the superheterodyne receiver to the market in 1924, a design that—although relatively expensive to implement—addressed major deficiencies of both the regenerative detector and TRF sets. Each of these last two designs was considered to be challenging to tune by some, although for different reasons. The level of feedback in a regenerative detector needs to be varied over its tuning range for optimum performance, while the TRF sets of the day typically required the adjustment of multiple

Radio Retailing, November, 1932

77

Echophone

through its Quality gives

PUNCH



Model 100—Superheterodyne—Single Tube—Power 100 Watts—Price \$198.00—Complete.

to your

Sales Effort

and Sales Story

Echophone supplies you with wonderful sales arguments when you are standing face to face with a customer. The reason is simple. There's that Echophone Quality as well known since 1921. You can say a lot about the quality that has built Echophone sales year after year and made money for dealers. An Echophone demonstration and Echophone appearance gain plenty of rush into your store. Give Echophone a try, you will give your customer the right receiver for any prospective purchaser. Get Echophone "Sound" into your best customer — let Echophone do a big profit-making job for you.

ECHOPHONE RADIO MFG. CO., LTD.
Executive Office and Factory
WAUKEGAN, ILLINOIS
Export Office—Echophone Company Export
44 West 44th St. New York, N. Y.



Model 101—Superheterodyne—Single Tube—Power 100 Watts—Price \$153.75—Complete.

Model 102—Superheterodyne—Single Tube—Power 100 Watts—Price \$132.75—Complete.

Model 103—Superheterodyne—Single Tube—Power 100 Watts—Price \$159.00—Complete.

ACTION IS THE THING!

This is high speed action. Echophone is sure to attract the complete attention of your customer. It is the only radio set that can be demonstrated in your store. Watch the action! Let your own salesmen

Advertisement by Echophone Radio after the move to Waukegan, IL. From the November, 1931 issue of Radio Retailing.

independently-tuned circuits. Additionally, the regenerative circuit was itself prone to radiation if maladjusted, thereby causing interference to other nearby receivers.

Retooling and Rebirth

Following the 1925 departure from the scene of The Radio Shop in Sunnyvale, little appears to have been heard of Echophone for the next year or two, although the *Radio Collector's Guide* (McMahon 1981) does show a number of models being produced during this period. Paul (1999b) additionally notes some transactions involving the purchase and sale of broadcast stations, including the Echophone Radio Shop station KFON in Long Beach. He further finds that by mid 1927 advertisements were appearing for Echophone models manufactured by the Echophone Radio Mfg. Co. of 968 Formosa, Los Angeles (Hollywood).

By 1929, the increasing business at Echophone Mfg. had brought them to the attention of the Gilfillan Bros. (Paul 1999d). Gil-

fillan by this time had an arrangement with RCA to manage the licensing of manufacturers in the western states that were making sets which infringed upon the latter's patents. By the end of that year, Gilfillan was able to inform RCA that Echophone too had been brought under license. Subsequently, Echophone sets were at least on occasion advertised as being manufactured under RCA license (adv. 1930).

By May 1930, the Echophone plant in Hollywood was in the process of being expanded according to one A. U. Magnan, president of the company (Paul 1999b). As to how Echophone had managed to rise from the ashes in Magnan's hands, his experience in radio manufacture is noted in the article to extend back to his having begun to make Echophones some six or seven years earlier when helping to finance KFON. Given this circumstance, it seems likely that Magnan had played a part in the earlier manufacture of Echophones by the Echophone Radio Shop of Long Beach. As noted above, this company was at least for a time affiliated with The Radio Shop of Sunnyvale under the banner of Chicago-based Armac.

With The Radio Shop not in the mix, Echophone Mfg. had no access to the former's non-transferable Armstrong regenerative-circuit license. It appears from characterizations of the models being produced by them (Radiomuseum 2012) that in any event Echophone was transitioning to the production of TRF and superheterodyne sets, for which it ultimately would be forced to license the patents held by RCA.

Moving On

According to Don Dresden, an employee at the time, Echophone Mfg. was having difficulty in 1930 ramping up to fill large orders for their sets from the *Los Angeles Times* and the *Examiner* (Paul 1999a). A solution was found in moving its manufacturing facilities to Waukegan, IL. In his chronicling of the various models introduced by Echophone after its rebirth in Los Angeles, Paul (1999b) suggests production started in Waukegan at the beginning of

1931 with models S-3, S-4, S-5, and F. Of these and the other models mentioned by him, only the model F has a model designation in common with those Echophones produced in the mid-1920s by The Radio Shop. Two model F Echophones, with dates of manufacture indicating early production of one by The Radio Shop and later production of the other by Echophone Mfg., are included in the Radiomuseum collection (Radiomuseum 2012). These appear nominally to be the same set from the illustrations included in the Radiomuseum descriptions of each. That the earlier one is, however, stated there to be a TRF design with regeneration, and the later one to be a TRF design without regeneration leaves this conclusion somewhat in doubt.

After having made the move to Waukegan, where it appears to have continued to thrive for a time (Link 2007; anon. 1931; anon. 1932), Echophone Mfg. had the good fortune to come to the attention of one Clem Wade. Wade⁴ was looking for a manufacturer of receivers for his Chicago-based Western Television company, an early presence in television (Parker 1984; Yanczer 2008). Apparently in order to secure their services for Western Television, Wade bought Echophone (Hawes 2011). This development resulted in Echophone's production for Western Television of the latter's model 41 television receiver, released to market in 1932, as well as opening a market for receivers of the accompanying sound broadcast.

Finale

Clem Wade later sold Echophone, which was by then in financial difficulty, to Bill Halligan and Ray Durst (de Hensler 1991). At the time, Halligan was pursuing an RCA license for his fledgling Hallicrafters Corp., and Durst was credit manager for Echophone. After purchasing Echophone, Halligan perpetuated the Echophone brand at Hallicrafters, a company focused on communications receivers for the amateur market. He eventually merged the two companies in 1936 (Wiccanpiper 2002), but receivers continued to be manufactured under

the Echophone name as late as the 1950s (LA5KI 2012).

Recapitulation and Loose Ends

Echophone began at The Radio Shop as an extension of their line of receivers, initially aimed at the amateur experimenter, to focus on the radio broadcast listener. It later became a maker of receivers for early television broadcasts, and ended producing a line of receivers intended for the shortwave listener and amateur radio enthusiast. In this, it could be said to have come full circle. Its evolution over the years appears largely to have been driven, as one might expect, by the availability of investors, by shifting markets and by the challenges presented by licensing issues.

I have attempted here only to trace what appears to me to be the main thread of this history. There are also a number of interesting loose ends that I've not addressed. These include the Ufonic brand, manufactured briefly in Echophone Mfg.'s Hollywood plant (Paul 1999c), that seems to have given rise to Echophone's curious model C. Another byway unexplored here is the presence of Echophone in Canada (Swackhammer 2002; Murray 2005). And although almost undoubtedly a red herring, there is the Echophone phonograph, invented in the late 1800s by one Edward Amet of Waukegan (Bilton 2012; Rondeau 2012)! 

NOTES

1. June 30, the date of issue of the annual government listing of such stations.
2. The TA-16 sans audio amplifier stages.
3. An alternative available to those unfortunate enough not to have become licensed by Armstrong during the brief period that such licensing was offered, although not without its own licensing issues.
4. Perhaps better known for his involvement with Eskimo Pie (Hawes 2011).

REFERENCES

adv. (1920a, Aug). *Pacific Radio News*. Vol. 2, No. 1, p. 12.

adv. (1920b, Oct). *Pacific Radio News*. Vol. 2, No. 3, p. 56.

adv. (1920c, Nov). *QST*. Reproduced in Douglas (1991).

adv. (1921a, Jan). *Pacific Radio News*. Vol. 2, No. 6, p. 196.

adv. (1921b, Feb). *Pacific Radio News*. Vol. 2, No. 7, p. 201.

adv. (1921c, Jun). *Pacific Radio News*. Vol. 2, No. 11, p. 379.

adv. (1923a). *Echophone 1-tube Regenerative Receiver T-16*. Radiomuseum web posting. Available as of 4 November 2012 at http://www.radiomuseum.org/r/echophone_echophone_1_tube_regener.html.

adv. (1923b, Oct). *Radio*. Vol. 5, No. 10, back cover.

adv. (1924, Dec). *Radio Broadcast*. Vol. 6, p. 339.

adv. (1925a, Jan). *Radio Broadcast*. Vol. 6, p. 562.

adv. (1925b, Feb). *Radio Broadcast*. Vol. 6, p. 806.

adv. (1930, June 13). *Appleton Review*. Vol. 1, No. 22, p. 6.

anon. (1922, Nov. 25). Radio Shop of Sunnyvale, Cal., establishes St. Louis factory. In *Electrical World*, pp. 1191. New York: McGraw-Hill Co. Vol. 80, No. 22.

anon. (1931, May). Exhibits at the Stevens Hotel radio show. *Presto-Times* (2258), 6.

anon. (1932, Sep-Oct). *Radio. Presto-Times* (2267), 17.

Bilton, L. (2012). Amet Echophone (Edison Echophone). Web posting. Available at <http://www.intertique.com/AmetEchophoneID.html> as of 11 November 2012.

de Henseler, M. (1991). Meet Hallicrafters' founder: Bill Halligan. In *The Hallicrafters Story* (CD ROM ed.), Chapter I, pp. 15–32. Bloomfield, NY: Antique Wireless Association. Year of publication per de Henseler website: [http://hb4fr.ch/max_de_henseler_\(e\).htm](http://hb4fr.ch/max_de_henseler_(e).htm).

DoC (1922, June 30). Commercial and government radio stations of the United States. Government Printing Office, Washington. Dept. Commerce, Bureau of Nav. publication.

- DoC (1924, June 30). Commercial and government radio stations of the United States. Government Printing Office, Washington. Dept. Commerce, Bureau of Nav. publication.
- Douglas, A. (1988). Introduction. In *Radio Manufacturers of the 1920s*, Volume 1. Chandler, AZ: Sonoran Publishing, LLC. Fourth printing, 2006.
- Douglas, A. (1991). The Radio Shop. In *Radio Manufacturers of the 1920s*, Volume 3, pp. 60–67. Chandler, AZ: Sonoran Publishing, LLC. Second printing, 1999.
- Hawes, J. T. (2011). Early Chicago television. Web posting. Available as of 9 November 2012 at http://www.hawestv.com/mtv_chicago/mtv_cgo.htm.
- LA5KI (2012). Hallicrafters Echophone radios. Web posting. <http://www.qsl.net/la5ki/echo.htm>.
- Link, E. (2007, June). Radio. In *Newsletter of the Waukegan Historical Society*, p. 6. Waukegan, Ill.: Waukegan Historical Soc.
- McMahon, M. E. (1981). Echophone. In *Radio Collector's Guide* (Revised ed.), p. 60. Palos Verdes Peninsula, CA 90274: Vintage Radio.
- Murray, R. P. (2005). Before and after the Mercury Super Ten. In R. P. Murray (Ed.), *The Early Development of Radio in Canada*, pp. 116–119. Chandler, AZ: Sonoran Publishing, LLC. Reference to Echophone on p. 118.
- Painter, R. (2001). A brief history of radio. *The Radio Attic* website. Available at http://www.radioatticarchives.com/features/painter_history.htm as of 3 Nov 2012.
- Parker, W. N. (1984, Oct. 28). Early Chicago television history. Web posting. Available as of 11 November 2012 at: <http://www.televisionexperimenters.com/EarlyChicago.html>.
- Paul, F. A. (1999a). Don Dresden relives the early years at Herbert Horn et al. In *Los Angeles Radio Manufacturing The First Twenty Years*, pp. 66–69. Glendale, CA: Floyd A. Paul.
- Paul, F. A. (1999b). Echophone Radio Co. In *Los Angeles Radio Manufacturing The First Twenty Years*, pp. 12–13. Glendale, CA: Floyd A. Paul.
- Paul, F. A. (1999c). Echophone (Ufonic). In *Los Angeles Radio Manufacturing The First Twenty Years*, p. 8. Glendale, CA: Floyd A. Paul. Supp. 1.
- Paul, F. A. (1999d). A history of Gilfillan Bros. Inc., Part 2. In *Los Angeles Radio Manufacturing The First Twenty Years*, Volume Supp. 2, pp. 17–23. Glendale, CA: Floyd A. Paul.
- Radiomuseum (2012). USA: Radio Catalog for the radio manufacturer Echophone Radio, Inc. - see also (The) Radio Shop. Web posting. http://www.radiomuseum.org/m/echophone_usa_en_1.html.
- Raymer, S. N. (2011). The Armstrong regenerative patent. Available at <http://www.museumofbroadcasting.org/Armstrong/1113149.html> as of 2 Nov. 2012.
- Rondeau, R. (2012, Oct. 19). Amet Echophone (1896). Web posting. Available at <http://www.edisontinfoil.com/echo.htm> as of 11 November 2012.
- SHS (n.d.). An Echo of the Future. Designed by StoriesToShare.com for the Sunnyvale Historical Society and Museum Association, Sunnyvale, CA. Content based on notes and other material on history of The Radio Shop assembled by Jack Rowe.
- SoM (1922). Echo Radio Corp. papers filed with State of Missouri.
- Swackhammer, L. (2002). Echophone Radio Company of Canada. In *Radios of Canada*, pp. 40–41. Alma, Ontario, Canada: Lloyd Swackhammer.
- White, T. H. (2012, May 12). Early radio station lists issued by the U.S. Government. Web posting. Available as of 8 Nov. 2012 at <http://earlyradiohistory.us/statlist.htm>.
- Wiccanpiper (2002, Dec). Hallicrafters. Web posting. Available as of 9 November 2012 at: <http://everything2.com/title/Hallicrafters>.
- Yanczer, P. F. (2008, Sep. 12). Ulises Armand Sanabria. Web posting. Available at: <http://www.televisionexperimenters.com/sanabria.html> as of 11 November 2012.