



NORTH ELECTRIC TYPE F DESK SET

by Jonathan Finder and Roger Conklin



North “potbelly” with wiring diagram (restored schematic can be found on the TCI website).

Special Issue, February, 2010

This month’s issue of *Singing Wires* is very special. It is sixteen pages and two of them are printed in color. The cost of the additional pages and color printing are funded by the very generous contributions made this past year by the membership. We hope you enjoy this issue as much

as we have enjoyed planning it for you.

We would like to encourage those who have yet to renew their membership to do so prior to March 1. If you have decided not to renew, we hope you will consider membership in the future and we wish you well in your pursuit of the hobby. ☛

It’s Membership Renewal Time!

If you haven’t yet renewed by 2/15, a renewal form is included in this mailing. The electronic member renewal form can be found on page 17 in the Bonus Pages.

Pictured is an uncommon desk stand, the North Electric Type F Desk Set, often called a “potbelly” desk stand because of the shaped convex-in-profile shaft. The North Electric company was founded by two former employees of the Cleveland Telephone Company, George Drumheller and Charles North. The company was started in Cleveland and later (1912) moved to Galion, Ohio. North was a small company that supplied the Independent telephone companies. Its products are relatively scarce today, and this is a rare early example of their work.

Another reason that North phones are hard to find is that it discontinued making phones when it moved its factory from Cleveland to Galion. North sold its phone tooling to Cracraft-Leich when it made that move in order to concentrate its efforts on its new Automanual Switching System.

North did not resume making phones until it introduced the so-called Galion set in the 1930s after WE introduced the 302. It purchased its transmitters, receivers and induction coils for this phone from Western Electric—this was well after the move to Cleveland. During those interim years, North introduced and manufactured dials and was the principal source of dials for Stromberg Carlson’s phones. North did make significant quantities of Galion sets for the Bell System to help keep them going when Western Electric’s phone plant in Indianapolis went on an extended strike in the late ‘40s.

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THE PRESIDENT'S COLUMN

Irreparable?

by Jonathan Finder, M.D., TCI President

The box arrived in the mail courtesy of our friends at the Post Office. It was a Priority Mail box, standard sized, and when I picked it up it was loose sounding inside. A guy had e-mailed me and asked me if I'd rewire his 302 to work. Along the way he found another set that I guess he decided he'd include as well. It was with a growing unease, as I unpacked the box, that I realized it had not been very well packed. Packing something fragile to survive a trip across the country is something of an art, and one that I take pride in doing well. Box-in-box, lots of bubble wrap, separating the handset from base, lots of packing peanuts between the boxes... You know the drill. The two phones inside the box were rattling around with a minimal amount of bubble wrap between the two; there were no inner boxes. So it was no surprise that the fragile, early colored thermoplastic ivory Western Electric 302 arrived with 2 large chips missing from the front edge, which were found at the bottom of the box. The set was in rough shape, with a big crack in the front right corner, and now it was missing part of its front. I immediately e-mailed my customer with a photograph of the broken ivory WE 302. I let him know that it had arrived damaged, and was probably irreparable without a lot

of work. He let me know that he really wanted it to be put back together, and was willing to pay for the repair. I took the set apart and discovered that the inside of the dial mounting of the housing was badly cracked as well. This turned out to repair nicely with a silicone-based compound. The two chips fit nicely together like puzzle pieces, and I used a "crazy glue" type adhesive to put them back in place with a thin piece of cardboard inside as a support. After it dried, I sanded and polished the front. The crack I filled with several layers of glue, then sanded and polished, using Novus #3, followed by Novus #2. After replacing the cords, the set looked pretty darn good, if I do say so myself. I e-mailed the customer a final picture with some measure of pride, and he was excited to see it restored to a displayable condition—of course working nicely, too! I hate to admit how much I enjoyed taking this set, which I had initially deemed irreparable, and making it look quite nice, despite its obvious shortcomings. They aren't making more of these sets, so keeping one more alive is a good thing. Here's to restoring these old beauties and bringing them back to life. Enjoy this special color issue, which also features other restored early colored sets in the center spread. ☛

21 Years of Singing Wires

Over 21 Years of Singing Wires on CD / DVD

The Twenty-one Year History of TCI CD is now available to telephone collectors everywhere. Bev McFadden, co-editor of the Singing Wires Newsletter for 15 years, has taken every newsletter ever published by TCI between June '86 and December '07 and assembled them on this DVD or two-CD set. That's 244 newsletters, thousands of articles and items and hundreds of photos, many of them in color.

The CD is in PDF format. PDF files are all text searchable, you can quickly find a story or reference to any topic by simply entering a keyword into the Adobe Acrobat search window. Put in Western Electric and you will get hundreds of hits. Customize it to colored telephones and you're down to dozens of hits with half of those being Jon Kolger ads requesting colored phones. Put in Pekin red and there will be nine hits ... only 4 for mahogany A/E.

This CD is available for \$20 U.S. It can be paid for with PayPal ... send payment for your CD ORDER to: Singwires@aol.com.

TELEPHONE TOKENS AND THE CHICAGO EXPERIENCE

by Robert Gilbert and Bill Weber

A fairly recent craze sweeping the numismatic scene is the collecting of telephone cards. Most of you are probably familiar with these credit card-sized instruments used to pay for telephone calls at public pay phones. Technology has enabled phone companies around the world to deploy coinless phones in which pre-paid debt cards are used to pay for telephone calls. Given that the small magnetic stripe or microchip on which the card's value is encoded is limited to a small fraction of the card's size, a lot of room is available for displaying any topical design that can be thought up. This has led to literally thousands of different cards that can be collected.

In this article I'd like to discuss a numismatic area that is related to telephone cards, but has a longer history. This is the area of telephone tokens: non-currency tokens issued specifically for use with public pay telephones.

The first pay telephone was installed in a Hartford, Connecticut bank in 1889. William Gray invented the pay telephone in the 1880s after having a difficult time convincing a local factory to let him use their telephone to call a doctor for his sick wife. Few people or businesses could afford their own telephone in those days. Today (the nineties), public pay telephones are virtually everywhere and continue to evolve with increasing sophistication.

Telephone tokens have been used in many countries from the early 1900s to the present day for a variety of reasons, as will be discussed shortly. Over the years many businesses, both telephone companies and others, have issued or used telephone tokens. Although telephone cards are fast becoming the high-tech solution, tokens may still be in use in some countries today (2009) such as Italy and Brazil.

One of the earliest uses of telephone tokens was for making payments at attended pay stations. Attended pay stations were staffed offices where customers could make phone calls and then pay

for the calls placed. Since the earliest pay phones had no coin slots, payment would be made to the attendant. Although it is not completely understood why tokens were used at attended pay stations, it is assumed that tokens facilitated payment in some manner.

Telephone tokens were also produced for deposit directly into the pay phones. The uses of these tokens can be classified into three main categories: to prevent the use of slugs, to substitute for local currency, and for official company use.

Security has always been a concern for any public device that requires the user to deposit money. Pay telephones are no exception. People have used anything from lower valued foreign currency to metal washers to cheat the machine. To combat those trying to cheat, security tokens have been used in telephones. The basic concept is that the pay phone had a coin slot, or some special device attached to the coin slot, which accepted only those tokens with the matching groove, punch or slot design. Thus, foreign currency, blank metal planchets, and washers would not work. Only the appropriate security tokens could be used.

Ironically, it was the US, and especially Chicago, where phone tokens got their start. Phones that would accept only tokens were legal in the US until 1944. Then they were eliminated and most of the tokens were melted down to make shell casings.

The first token that was actually deposited in a phone appeared in the 1890s. It was produced for the Sunset Telephone and Telegraph Company in California. The brass token bore the company name and the value, "Good for One Switch."

Shortly after the turn of the 20th century, Mr. Harry Goetz, a Chicago druggist, devised and patented the first Goetz-Yale Slot & Slug Telephone token and a companion security device. The security device was attached to a pay telephone's coin slot, allowing only Goetz tokens to

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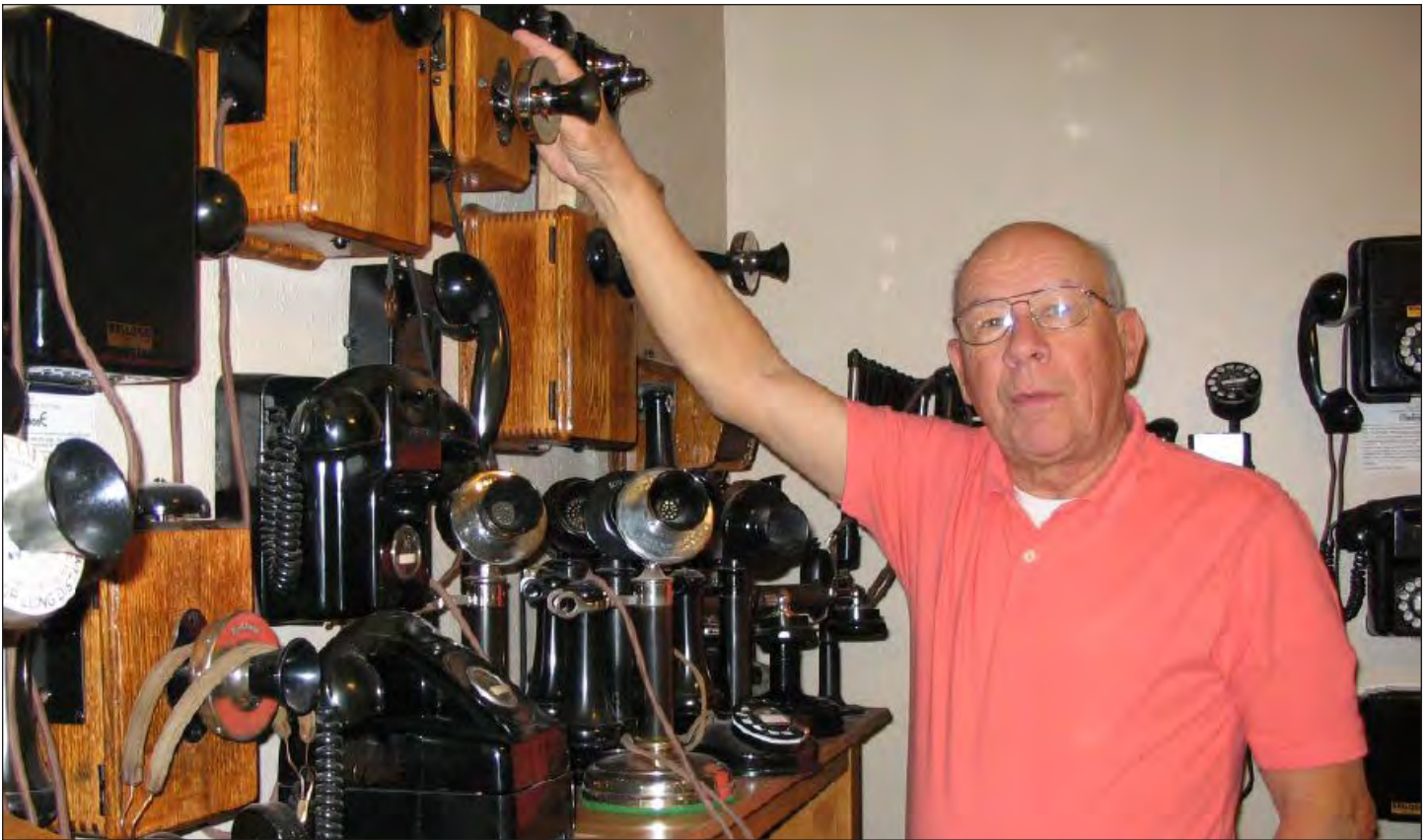
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MIKE NEALE (AKA, “KELLOGG MIKE”): TCI COLLECTOR OF THE MONTH

by Gary Goff

Editor’s Note: Periodically, TCI will feature a collector with an interesting background and a story to tell.

Mike was born before calendars were invented but he does recall that in 1956 he entered the US Navy and trained to be a photographer. After he left the service he tried to use his photography skills in the advertising business but found that he was not suited for the work. He soon joined another guy and they went into the audio and intercom business. Several years later they were burned-out (literally), losing their entire business. From that point, he did a number of things including a stint as a deputy sheriff radio dispatcher, jailer, and forensic technician. He also managed the county’s telephone system and supervised operators. When interconnect became a real business, he quit the county and went full time on his own. He ultimately sold his company

to Centel Business Systems, and then moved to California.

Though he now lives in Texas, he lived and worked for a number of years in California in telco-related work. He ultimately moved back to Texas to work for a company that later became Alcatel. He retired from full time work in 1999, just in time to avoid the Y2K fiasco. He lives in Midland, TX where his children

reside and he has his own installation and service company, installing and repairing Toshiba and Avaya systems.

Mike began collecting telephone items in 1985. His motivation for doing so is not unlike many other collectors. He received a Kellogg 2609 woodie as a gift and this magneto set was just the beginning. Of all the items in his collection, he says his favorite is a type 9917 Kellogg wall set, an art deco masterpiece pictured here.

Like many collectors, Mike has collected many items, but as his nickname implies, he has focused on Kellogg/ITT equipment. We asked Mike about his greatest find, and he identified it as a type 215 booth set with a transmitter marked, “Tri-State Tel & Tel Co.” He bought the item on eBay for \$10 believing it was an



(From top:) Mike Neale and his collection; a Clear 500 Set.

intercom station set (apartment), in very bad condition, but it turned out to be a very rare type 215, also pictured here. He says it's now hanging on the wall in mint condition. This restored central battery wood wall set was made about 1909. The set was designed for the walk-in Call Centers where long distance calls could be placed. When your call was ready, you went into a booth to receive it. It was generally used in a PBX environment. Another version was used in an apartment building door/call system, inside the apartment.

Every collector has a Holy Grail, and Mike is no different in this regard. His passion is to find a Kellogg Number 1 stick with steer-horn hook and pin-in-the-perch.

We asked Mike what's the best

thing that has happened to him since he began collecting. He replied, "Well, I have made some very good friends, met a lot of nice people (and a couple of grumps), hooked up with two very interesting men (Wayne Merit and John LaRue) who have an unbelievable passion for telephone collecting, AND my

Every collector has a Holy Grail... His passion is to find a Kellogg Number 1 stick with steer-horn hook and pin-in-the-perch.

trip to some interesting places, especially the underground facility in Lyons, NE.

Mike's contributions to the hobby are many. He is a ready resource on Kellogg equipment and maintains a beautiful website for Kellogg information. <http://www.kelloggtelephone.com>. He is also the webmaster who designed and maintains it. In the past year, his friends at the JKL Museum acquired an old Select-o-Phone Switch that was taken out of service and stored outside for about 40 years. Mike basically rebuilt the switch to working condition and it now operates at the museum. The switch is basically an in-house dial intercom system with rotary switches to connect stations. A picture of the switch appears with this article. ☛



A Kellogg Select-O-Phone switch, refurbished, rebuilt, and installed by Mike Neale at the JKL Museum.

Telephone Tokens

Continued from page 3.

be used when placing a call. His invention was another example of the common man finding a solution to a distasteful situation. Examples and patent drawings accompany this article.

There are four patent diagrams, A through D. Note in Patent A, Fig. 4, that there are three narrow slots in the top of the shroud or device that fits over the coin gauge. The slots have bumps or protrusions that require that the token used have grooves so that the token will slide into the slot. Once in the slot, the caller then pushes the coin from the front into the normal coin slot. Note in Patent B, Fig. 2, that the token is pushed in from the front and must have notches all around the token to fit into the 5-cent opening. In Patent D, Fig. 1 clearly shows the metal rod device that protrudes from the coin hole and the type of token that must be used. Patent C shows another design. It's very strange that to date, no collector admits to owning an example of one of these devices.

Goetz was probably a keen businessman, well aware that one way to improve his store's profitability was found in the old adage "little leaks sink big ships." It's reasonable to assume he had pay telephones in his drug store and was reminded each time they were collected how much (occasionally fifty percent) of his telephone revenue was lost to Chicago's nickel bandits. Merchants were bound by contract with the Chicago Telephone Company to pay five cents for each originating call from their pay station. Should anything—slugs, washers—other than legal tender appear in his pay phone's collection box, the merchant had to make up the difference.

Although a nickel is an insignificant amount by today's standard, in 1907 it bought a draft beer and sandwich, a good cigar, or a loaf of bread. Considering what today's price is for these items, you can better appreciate a store owner's frustration at redeeming twenty or more

slugs each month. And, the practice of using worthless substitutes in pay telephones was becoming more widespread.

During this period (prior to 1907) Mr. Goetz and other Chicago merchants provided some 3,000 pay telephones in their establishments as a service and convenience to their customers, and also as a source of revenue for themselves. Semi-public pay telephones were in-

performed with a legitimate token or a slug. The merchant kept the balance for himself. This practice was instituted in 1901 after the Chicago Telephone company was cheated out of \$110,000 worth of phone calls by slugs.

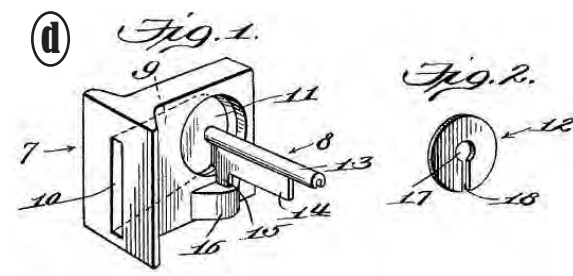
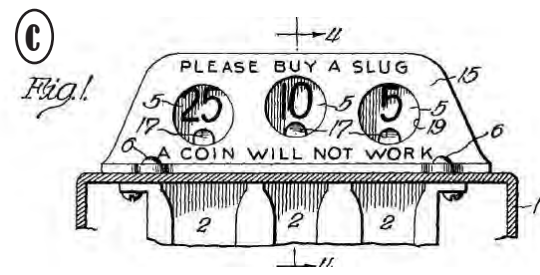
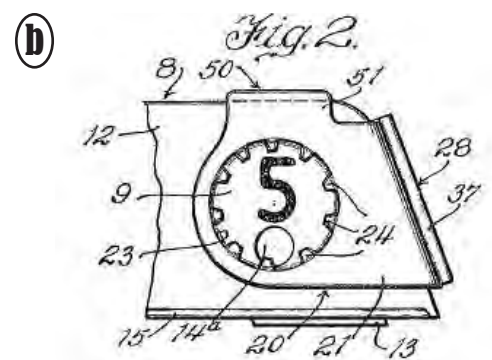
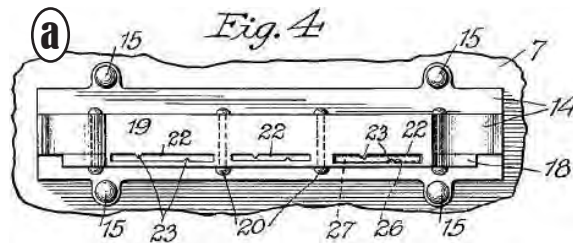
Reduce someone's income and you can be assured the offended party will plan some sort of remedial action immediately. Enter our hero, Harry Goetz, with his solution. He developed a special attachment that was secured directly to a pay telephone's coin slot. It was designed to exclude anything other than one of his specially designed tokens. U.S. nickels or slugs would not pass his security attachment. To place a call you first bought one of Goetz's patented tokens from the establishment, and then placed your call. Although it was a minor inconvenience, it improved the merchant's income, his attitude, and the odious chore of redeeming worthless trash each month.

Goetz token collectors are often intrigued by the wonderful array of slot patterns, groove arrangements, and edge treatments Goetz devised over the years to thwart Chicago's pay telephone free loaders. It's unlikely they'll ever win an award for exquisite die work, but his product was utility personified; it was easy to manufacture and easy to use.

Goetz-Y.S.& S. telephone tokens were struck in three sizes: nickel (21 mm), dime (18 mm), and quarter (24 mm). This article's focus will be on the 21-mm nickel-sized tokens. Dime and quarter size tokens were deliberately excluded, as each size is rare, especially the dime, and very seldom offered for sale today to collectors.

It wasn't until April of 1944 that the use of these tokens became illegal and all of the security devices were removed. Counting the different legends found on these tokens, there are well over 200 different varieties of Goetz tokens for one to collect. And more are being uncovered as collectors make detailed studies of these tokens.

Another reason for the use of telephone tokens was the limited supply of

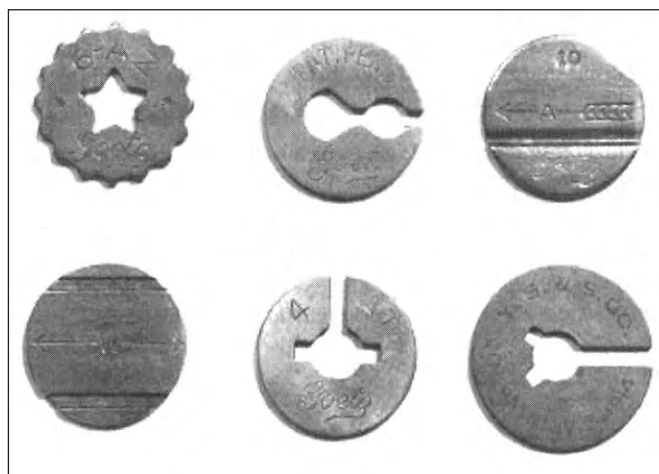
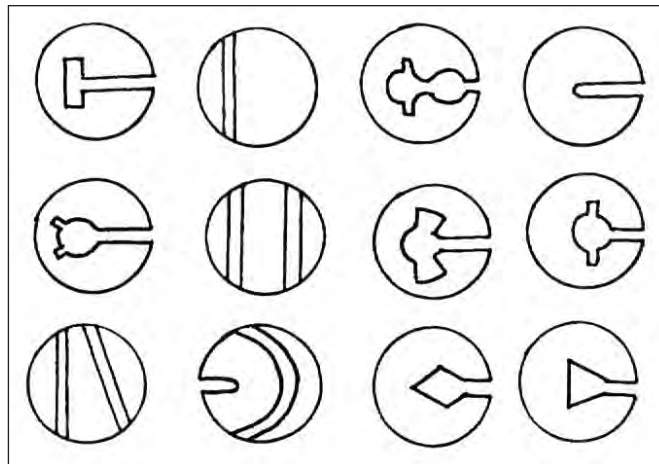


tended to provide proprietors this modest income if enough local calls were placed through them.

At the end of each week, the phone company would send someone around to empty out each phone's token box. The merchant would have to reimburse the company for the 77.5 percent of the activations that occurred, whether they were

local currency or the continual devaluation of a currency due to inflation. Let's say the price of a phone call goes up 50% in one year due to inflation. Instead of having to retool all of the pay telephones to accept a different-sized coin, you can design a pay telephone to accept a special token and simply increase the price of the token as required by inflation. Or perhaps the particular denomination of coin required for a phone call is in short supply due to political or economic situations. Special tokens can be manufactured for use only in pay telephones. This was the case in Italy, which led to the use of the Gettones Telefonico in the 1960s.

A third classification of telephone tokens are those used by special segments of the population: both those in the telecommunications industry and those in other industries. For example, telephone employees would be issued tokens to use in the field when they had to test a public pay telephone. Or a token could be issued to an employee of some other utility company, fire or police, or some private company to use when they had to make a phone call back to the home office. Rather than currency, which could be spent in any manner, the employee would be given a token which could only be used to make a phone call. Many tokens of this type bear the company's name and wording such as "test" or "employee slug."



Goetz Token Designs and Goetz Token Photos.

The Telephone Tokens of Canada

To date, only two telephone tokens of Canadian origin are known to exist. A third token, although not of Canadian origin, is believed to have been used in the Yukon Territory.

The first is the Victoria & Esquimalt Telephone Co. Ltd. token. According to a B.C. Telephone Company internal document entitled "Historical Record" by Tony Fan, around 1902 the Victoria & Esquimalt Telephone Co. wanted to start installing pay telephones in their offices and other public places around Victoria.

This would make it more convenient for their customers to make calls without having to ask the use of a private phone.

Up to that time, attended pay stations were the only means of making a phone call outside one's home or office. Pay telephones would eliminate the need to deal with an attendant and allow public phones to be placed in various local establishments.

for use in the pay phones. They were sold by the merchants in whose establishments the pay phones were installed. As most numismatists are aware, it wasn't until 1922 when the Canadian 5-cent piece was redesigned to its current diameter of 21.2 mm.

A situation similar to that which led to the Victoria & Esquimalt token is believed to have existed in the city of

Dawson, YT around 1900. As Ralph R. Burry describes in his article in *The Canadian Token* (Volume 16, Number 1, January 1987) of the Canadian Association of Token Collectors, the Yukon Telephone Syndicate, Ltd. obtained their telephone equipment from the United States. Again, there was a need for a coin or token the size of the US 5-cent piece for use in these US phones. Instead of creating special tokens for use in Dawson, stock 21-mm brass tokens from the L.H. Moise Company of San Francisco, California seem to have been used.

L. H. Moise was a manufacturer of many tokens including those for use in telephones. A few of these tokens have been found in the money boxes of old Yukon Telephone Syndicate Company phones, leading to the belief that they were obtained specifically for use in Dawson pay phones. These tokens are uniface and appear in the design of store cards, providing the manufacturer's name and address.

Very little is known about the other Canadian telephone token. In fact, there is no real proof that it is a telephone token. It is believed to be from Prince Rupert, BC. However, there are other possibilities for its origin: for example the token may be from Powell River, BC.

The full Goetz Patent can be found in this month's Bonus Pages. ♣

(Editor's Note: Robert Gilbert wrote the basis for this article in 1995. Information from a 1994 article by Bill Weber (deceased) was also used. TCI was granted permission to use these materials in whole or in part.)

To create pay phones, the telephone company had to attach coin boxes to their telephones. However, the coin boxes obtained by the telephone company at that time were designed to accept coins the size of the US nickel (21.2 mm). The Western Electric type 7A coin box, in which coins were deposited, could not be altered to accept the smaller Canadian 5-cent piece (15.5 mm). Hence, a metal token (Copper-Nickel) was locally manufactured in the same dimensions as the US nickel for use in the pay phones.

These tokens were sold to the public

SPECIAL COLOR SECTION



AE Monophone 1A Desksets

See page 15 for more information.



Mike Neale: TCI Collector of the Month

(From left:) A Kellogg #215 Booth Set;
Mike Neale and some of his collection.
(Opposite page:) A Kellogg #2609 Wall
Set. See page 4 for more information.



Western Electric Desk Sets

At the 2009 Lancaster Show, Russ Cowell displayed desk sets in fourteen colors manufactured by W.E. Black, Mahogany Brown, Oxford Gray, Dark Rose Beige, and Mediterranean Blue are shown here.

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Colored 5302 Sets

Colored 5302 telephones along with a black 2-line version. Pink 5302, Courtesy of the JKL Museum. See page 13 for more information.



Southeast Winter Regional Telephone & Insulator Show

Jim Aita and his display. See this month's Bonus Pages for more images.



Leich "Convertible" Deskset

This very colorful red deskset is quite rare, according to the experts on the Leich sets. It can be mounted on the wall (note the current position of the dial) or used as a deskset as pictured. It was also produced in white, beige, black, and perhaps other colors. The black version, and perhaps the colored as well, appeared as early as the fifties.

TCI YOUTH MEMBER, KYLE ROBERTS

by Steve Dunne and Gary Goff



Kyle Roberts, a high school freshman in the San Jose area, visited the San Jose telephone collector show with no idea what a day it would be. He met long-time collector, Steve Dunne, who took an immediate interest in helping Kyle to find a lot of donated telephone equipment. Thanks to Steve Cichorsky and many others, there were lots of items on the silent auction tables, many of which did not sell, and rather than take them home, the owners gave them to Kyle. Steve Dunne, who lives in the San Jose area, promised to provide some assistance to Kyle when he was ready to begin his project. Steve wrote the following paragraphs about his experience working with Kyle.

"We all welcome our new member, Kyle Roberts, a freshman in high school, who started his interest in rotary dial phones in grammar school. Thanks to the work Gary Goff performed in organizing the recent San Jose show, Kyle

found lots of new friends to support him. Jeremy Walters, Jim Dexter, Jeff Johnson, and Rob Honeycutt all provided important contributions to get Kyle up and running with his newly acquired mix of a Panasonic 1232, Western Electric KSU from Massachusetts, and a ComKey 416, plus a host of the rotary dial phones that Kyle already had acquired. Steve Dunne went to Kyle's home for a Saturday workday and, in 12 hours, helped Kyle to get all of the components up and working successfully. It was a bit of a rush job, so there is still some cleaning up to do to meet BSP standards! Anyway, it was lots of fun and it is good to see the lifelong hobby of collecting phones expand to a new generation. His family was a great support with pizza at lunch and great homemade sugar cookies to keep them working! Congratulations, Kyle, and a job well done!

"Here's our finished project! I know

that some would not approve of our loose adherence to BSPs but not too bad for 12 hours work, right! There was nothing there before we started. Kyle learned all about punch downs, cross connects, and the fun of pulling cable all around the house! I think we have a new lifelong convert, and his parents are happy to see him enjoying this hobby so much! Kyle, consider yourself initiated! Still some tidying up to do, but at least we brought a WECO KSU, a ComKey 416 and a Panasonic 1232 back to life with lots of extension sets! I think it is 15 around the house, right, Kyle? Thanks, again, for all the various parts and pieces. I really was not missing anything when it was time to pull it together. And see, Gary, if had not been for the SJ show, this would have never started!"

Pictured are Kyle and Steve Dunne, and a clear view of the heart of the project after just 12 hours of work. ☛

CONSENT DECREES

How They Changed Your Local Phone Service

by Gary Goff

In 1908, Theodore Vail, having been installed as president of AT&T after the “panic of 1907,” proposed that telephone service in the US be provided based on the philosophy of “one system, one policy, universal service.” This concept involved monopoly provision of service, coupled with pervasive government oversight and regulation. It was promoted in advertisements from 1908 and formalized in the so-called Kingsbury Commitment of 1913, when AT&T was allowed to operate without governmental interference, but agreed to stop acquiring telephone companies and to interconnect with others.

1913 Kingsbury Commitment

AT&T commits to the Attorney General to dispose of its telegraph stock, provide long-distance connection to Independent telephone systems and not to purchase any more Independent telephone companies except as approved by the Interstate Commerce Commission. The results were to dispose of Western Union, get Interstate commerce commission approval for further phone company acquisitions, allow independent phone company interconnection to AT&T networks, and provide a basis for universal access and service.

For many years, the Bell System followed this plan, fully integrating its systems and procedures to provide end-to-end service. In order to ensure a reliable supply of standardized equipment, it also designed and manufactured its own equipment. Bell Laboratories, created from a merger of the design department of the manufacturer, Western Electric, and the engineering department of the operator, AT&T, also embarked on an extensive and successful effort to perform the research necessary to promote technological progress in telecommunications. During this period, independent telephone companies and manufacturers convinced the US Department of Justice that the Bell System was in major

violation of anti-trust provisions related primarily to manufacturing and research unrelated to the provision of basic telephone service. In 1956, a final Consent Decree was issued.

1956 Final Judgment

The negotiated settlement between AT&T and the US Department of Justice that allowed AT&T to retain ownership of Western Electric if it manufactured

“The long practiced philosophy of the Bell System... ‘one system, one policy, universal service.’ ”

only equipment of a type to be used for the provision of telephone service and only for Bell companies. The decree also prevented the Bell system from offering data processing services and other services not related to functions of a common carrier and required that Bell System patents be licensed to others on the basis of reasonable fees. As a result, AT&T was forced to license its transistor technology to any company for \$25,000. This final judgment (the Consent Decree of 1956) brought to a close the Justice Department’s seven-year-old antitrust suit against AT&T and Western Electric which sought separation of the Bell System’s manufacturing from its operating and research functions.

1982 Modified Final Judgment (MFJ): Sherman Act Violations

The FCC approves cellular startups with two licensees per market. AT&T and the DOJ sign a consent decree settling the DOJ’s anti-trust case by divesting AT&T of its local telephone companies. Judge Green issues the Modified

Final Judgment (MFJ), effective January 1, 1984.

In this case the complainant alleged that the defendants had monopolized and conspired to restrain trade in the manufacture, distribution, sale, and installation of telephones, telephone apparatus, equipment, materials, and supplies, in violation of the Sherman Act; the action thus focused on the practices of defendants with respect to the telecommunications equipment industry. The relief sought included the divestiture by AT&T of its stock ownership in Western Electric; termination of exclusive relationship between AT&T and Western Electric; divestiture by Western Electric of its fifty-percent interest in Bell Telephone Laboratories, AT&T’s telecommunications research and development facility, a jointly owned subsidiary in which AT&T and Western Electric each own 50% of the stock; separation of telephone manufacturing from provision of telephone service; and the compulsory licensing of patents owned by AT&T on a non-discriminatory basis. The results were: AT&T would divest the local parts of the Bell operating telephone companies; 22 Bell Operating Companies (BOC) became 7 Regional Bell Operating companies (RBOC); AT&T kept its manufacturing facilities and its long distance network; BOC’s would not be allowed to manufacture nor would they be allowed to get in the long-distance business within their territories; and AT&T would not be allowed to get in the local exchange business nor to acquire the stock or assets of any RBOC.

The long-practiced philosophy of the Bell System no doubt contributed to the establishment of one of the finest communication systems in the world, but when it grew to the point where the end user had little or no control over equipment choices and many other details related to local telephone service, the government and the courts took notice and determined that violations of the Sherman Act and other anti-trust provisions of the law had been violated for years in the name of “one system, one policy, universal service.” ☛

(Basic facts obtained from Technology for All, Houston, TX)

SHOW ANNOUNCEMENTS

So. Cal. Telephone Collector Show

Saturday, March 6, 2010 • 8 A.M. to 1 P.M. (those with tables may enter at 7:30 A.M.) • Placentia Presbyterian Church, 849 N. Bradford, Placentia, CA • (Located about ½ mile east of I-57, south of Yorba Linda Bl. Take the Yorba Linda off-ramp, east to Bradford, right ½ mile south to church, just beyond Madison.)

Admission is \$2 per person; the table charge is \$10 per table, paid in advance. Mail table fee to: G. Goff, 3805 Spurr Cr, Brea, CA 92823.

There will be a silent auction at 11:30 A.M.; bring those items you would like to donate to the clubs or sell for yourself.

New Feature: In keeping with our charter to educate collectors, please consider bringing one or more of your very favorite telephone items to display on special tables set aside for that purpose. We will have large

cards for you to use in identifying your display item.

Contact: *Gary Goff* • E-mail: gdgoff@gmail.com • Phone: (714) 528-3561 or (714) 928-6352



7th Annual Michigan Telephone Show

Mason, Michigan • Saturday, April 3rd, 2010 • 8:00 A.M. to 2:00 P.M.; Set-up is at 8:00 A.M. on Saturday morning.

• Cobblestone Events Center (in the Mason Antique District, with 7 different Antique shops) • 205 Mason Street, Mason, Michigan 48854

Social reception Friday, April 2nd, 6 P.M. - 10 P.M. Complimentary refreshments & YUMMY deep-dish pizza

Complimentary fresh-brewed coffee, orange juice, & freshly baked pastries from The Quality Dairy Company of Lansing, MI, on Saturday morning.

Registration / Admission: \$10; Tables: \$15 (We had 48 tables last year.) • If you want to register early, just mark how many tables you would like and send a check for the total to: Ray Kotke, P.O. Box 37, Bath, MI 48808.

Please note: All net proceeds this year will be donated equally to ATCA & TCI.

You can also register using PayPal at: paypalmurp@gmail.com. • Please put in the "note box" how many tables that you would like and if you *are* planning on attending the Friday night get-together at the show hall.

Accommodations: Red Roof Inn - (517) 332-2575. Book early so the horse show doesn't get your room!

There are many other hotels in the Lansing area, too.

For FANTASTIC hamburgers, pizza, & Smelt dinners,

go to LEO'S LODGE just down the street from the Red Roof Inn. Leo's Lodge is located on Jolly Rd. (Jolly Rd exit on I-127 North, then right ½ mile on the right; it looks like a Log Cabin!)

Contact: *Ray Kotke* • E-mail: kleenax@gmail.com • Phone: (517) 230-6730 (EST)



Lyons Antique Telephone Show

Lyons, Nebraska • Saturday, May 1, 2010

One last hurrah! This will be the last show at Lyons - Mark your calendar! The show is located in the former AT&T hardened coax site at Lyons, Nebraska. Presented by the JKL Museum in cooperation with Telephone Collectors International. • Additional information about this show will be posted when it becomes available.

E-mail: telephonedcollector@gmail.com



The National Vintage Communications Fair

Sunday, May 9th, 2010 • Warwickshire Exhibition Centre, Warwickshire, UK • 10:30 A.M. to 4 P.M. - Admission £5 (under-14 FREE)

Probably the biggest show I've ever seen. Sellers' tables loaded with all kinds of telephony and books on same. I definitely recommend the show to all telephone and radio collectors. . . not to be missed. — *A US Telephone Collector*

Interested?

Find out more at www.nvcf.org.uk



TCI Spring Show

Lancaster, PA • June 11-12, 2010 • Lancaster Farm and Home Center, 1383 Arcadia Road, Lancaster, PA 17601 • Additional information will be posted when it becomes available.



16th Annual TCI Cincinnati Show

Cincinnati, OH • September, 3-4, 2010 • Additional information will be posted when it becomes available.



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COLORED 5302 SETS: RARER THAN COLORED 302 SETS!

by Jonathan Finder



These sets (photographed above) may look like ordinary 500 telephone sets, but they are actually quite rare. The success of the Henry Dreyfuss-designed 500 telephone coupled with the improved economy of post-WWII America led to an unprecedented demand for telephone service. The Bell System could not meet demand, at least not with newly manufactured telephones. In addition, the Bell System was looking to extend the useful life of the WE302 sets, of which they had millions in service. To scrap this model would have been to lose a great deal of investment – and the Bell System was nothing if not frugal. These 5302 sets were not produced until 1957. 1957 was the year WECO replaced the dark shades of blue and beige in the original colored 500s with the lighter, pastel shades and also introduced the pink and white colors. Accordingly, they probably were in production for a very few number of years as production of model 500 sets in color caught up with demand. In an attempt to meet the popular demand for the new 500 telephone, the engineers of the Bell System created a retro-fit kit to recycle old

302 model telephones (with admittedly older networks and transmitters, with a less favorable acoustic quality) into what looked like 500 telephones. This model, the 5302, also adapted the ringer to allow for a modicum of adjustability, which was another popular feature of the 500. Close inspection will reveal that the 5302 uses a #6 or #5 dial with a special dial porcelain in matching color to that of the shell. There is a special dial bezel that surrounds the 3" dial, which gives one the outward appearance of the later #7 dial. While 5302 in black is not a rare telephone and is an easy phone to find at shows and on auction sites, the colored versions are extraordinarily rare. Shown here are some of the rare colored versions. The Bell System made colored

kits to retrofit 302s in the 1960s to meet the increasing demand for colored telephones. The colored 5302s were made in just 4 colors: beige, light blue, white, and pink. I have also shown a 5314 model, which is the 2-line version of this set (it is a WE411 conversion). These colored sets were in rough shape when I acquired them, but with a great deal of sanding and polishing I was able to bring them back to life. The 5314 has new plastics and was apparently never put into service. So despite the intense popularity of the colored 302 series, it turns out that the colored 5302 series is far more rare. Keep an eye open at shows for these sets – they look like 500s but are perceptibly shorter in length and have distinctive cut-outs in the cradle. ☛

5302 sets from the JKL Museum.



**Address Change?
Membership Questions?
Delivery Problem?**

Please contact our Membership
Chairman, Gary Goff, at [membership@
telephonecollectors.org](mailto:membership@telephonecollectors.org) or (714) 528-3561

ROGER'S REMINISCENCES

The Life History of Western Electric's First Commercial Machine Switching Central Office

by Roger Conklin (roger.conklin@usa.net)

Western Electric's very first commercial fully automatic system, the Type 7 Rotary, was cut into service for the General Post Office in Darlington, England on December 10, 1914. Manufactured by Bell Telephone Manufacturing Company, the Belgian subsidiary of International Western Electric in Antwerp, the cutover date was 4 months after the German Army crossed the border into neutral Belgium on its way to France. The equipment had been manufactured and shipped from Antwerp some months before the outbreak of WWI. This 2800 line exchange was part of the GPO's evaluation of early automatic systems, which also included Automatic Electric's Strowger Step-by-Step and the Canadian Lorimer system.

Although the Darlington Rotary system performed well, the GPO decision was to standardize on the locally manufactured Strowger System for its future automatic exchanges. The Darlington Rotary system, however, remained in service until 1944 when it was replaced by a new Strowger exchange. This replacement was made because the Rotary equipment had been expanded over the years to its maximum capacity, beyond which it could not grow to meet the need for more lines in that city.

But that was not the end for the Darlington Rotary equipment. Ron Kay, who edits the New Zealand Historic Telecommunications Collectors' Club newsletter has researched the history of the last years of the Darlington Rotary equipment. When it was removed from service, it was carefully packed and shipped to New Zealand where it was re-installed in the New Zealand Post Office exchange in Ravensbourne, near Dunedin. It remained in service until it was retired on December 1, 1978. That was some 64 years after it was first placed in service in Darlington. Not a bad record for any "issue 1" switching system.

The November 2009 edition of the

NZ Historic Telecommunications Collector's Club newsletter reproduces a clipping from the April 1985 issue of *NZPO News* titled "Last Rotary Finishes its Work." It states "Rotary Exchanges were developed before WWI and used extensively in New Zealand for over 60 years." Manufacture of Rotary began in Belgium in 1911 with semi-automatic exchanges which were installed in Sweden, Switzerland, and France prior to the

*The Rotary exchanges
in New Zealand were
unique in that
the telephones...
were supplied with "reverse
numbered" dials.*

installation of the first fully-automatic exchange in Darlington in 1914. Western Electric, through its sales office in Australia, won the NZPO tender for new automatic exchanges for Wellington, Auckland, Blenheim, Hamilton, Masterton and Oamaru before the outbreak of WWI, but due to the war and the shutdown of the Antwerp factory, the first exchange in New Zealand did not go into service until 1919 in Masterton. Western Electric hastily transferred its work-in-progress, drawings and assembly tooling from Antwerp to its London factory immediately after the German army troops crossed over into Belgium, but before they reached Antwerp. Because of British military priorities the London factory was unable to resume Rotary manufacture and the materials and equipment received from Antwerp were reshipped to the Hawthorn plant in Chicago where Rotary equipment to fulfill contract commitments was manufactured and exported to various countries until the Antwerp

factory was rehabilitated after the war.

Ron Kay has researched the NZPO records and it is not possible to determine exactly from where the first Rotary equipment for that country was shipped. Some of it manufactured but not yet shipped from Antwerp, likely was reshipped from London after everything that was not bolted to the floor in Antwerp arrived there. And it is probable that some of the early NZ equipment was manufactured in and shipped from the Hawthorn plant in Chicago. The Rotary exchanges in New Zealand were unique in that the telephones used with them were supplied with "reverse numbered" dials. The dials were numbered clockwise 0-1-2...9 rather than the conventional 0-9-8...1 used in most of the world. This reverse dial remained the standard in New Zealand until dials were replaced with DTMF (touch tone) service. Reverse numbered dials were also used in Oslo, Norway.

In 1925 AT&T sold its International Western Electric subsidiary to ITT. This sale included all of its manufacturing and sales offices outside of the U.S., except its minority interest in Northern Electric in Canada. Even though ITT replaced Western Electric as the manufacturer and supplier of Rotary equipment to New Zealand in 1925, in that country this system continued to be referred to as the Western Electric Rotary System.

The last Rotary exchange in New Zealand, in Miramar, was retired from service on February 22, 1985 when it was replaced by a new stored program computer (SPC) electronic exchange supplied by Nippon Electric Co. Ltd. (NEC). Rotary equipment had been supplied to numerous telephone companies and government administrations. It was used in Holland, France, Spain, Rumania, Bulgaria, Hungary, China, Brazil, Peru, Mexico, Egypt, Syria, Turkey, Denmark, Italy, South Africa and other countries. Rotary continued in service well into the '90s in Brazil and Rumania. ☞

Restoration of AE Monophone 1A Desksets

by Gary Goff

References have been made in other articles in this issue of *Singing Wires* to the restoration of colored desksets and the amount of time and effort required to do this work. The two sets referred to in this article are the Orchid and Chinese Red Monophones that I acquired many years ago. Though the metal on both was in excellent condition, the surfaces of the colored plastic no longer looked like the original colors, which could be viewed on the inside of the handset caps or inside the handset mounting. A quote from Automatic Electric advertising material stated that, "These Monophones are molded from the new and popular colored plastic materials which in ordinary use is practically indestructible. The color and finish are brilliant and permanent."

What was not known at that time in the short existence of this new material was what effect age and the atmosphere would have on the plastic. Assuming these sets were made in the early thirties, they were over sixty years old in the nineties when I acquired them. The Red set was a beautiful rust color over every inch of its surface with no signs of red



except on the inside of the caps and housing. The Orchid set could be described as Robin Egg Blue and I have seen other Orchid sets over the years in the same color. I know a collector who obtained an AE40 in RE blue, knowing full well that it was Orchid under it all. He got the phone for a song!

I began the process of surface plastic removal using a fairly coarse (300 grit) wet/dry paper with a very fine pumice to soften the surface scratching. It took many, many hours to "clean" every inch of the surface of both, but the Red set was much easier. In fact, many years later, the Red set has not shown signs of returning to its "rusty" color, but the Orchid set has gradually taken on the RE hue over the Orchid. The final finishing was done with 600-800 grit and Novus.

I have other color Monophones in this style: Nile Green, Ivory, and Walnut. All of these appear to be of their original color and hue. I also have a Kotke Green, Blue, and Clear, and they are identical in color to the originals. I believe the manual Red set with the Chrome metal finish, is my favorite of them all. ☞

Type F Desk Set

Continued from page 1.

Found in the Bonus Pages for this issue is the Patent application from Charles North, dated May 17, 1900 (approved December 10, 1910) in which Mr. North describes improvements to the telephone system, which include the design of the Type F:

The object of my invention is to simplify and cheapen telephone exchange systems and at the same time render them more efficient in service. I obviate the necessity of using condensers or repeating coils in the subscribers' lines, placing a repeating-coil simply in each operator's cord-circuit, which are about one-tenth as numerous as subscribers' lines. My invention provides in a complete installation subscribers' sets with complete metallic circuits—i.e. having metallic individual or common return—and at the exchange subscribers' line-signals, supervisory

signals, a ringing generator, an operator's talking set, and suitable connections for a busy test, all arranged in a simple and satisfactory form, as hereinafter more fully set out.

The extended base of the Type F set includes some of this technology described by Mr. North above.

I was lucky enough to find this lovingly restored example at the 2009 Lancaster Show. It was probably manufactured around 1900. It features an extended base and has a Bakelite sleeve at the top of the shaft. I have seen this set with a "steerhorn" hook switch, but this set has a later design with the circular hook design more common to the first decade of the 20th century. There is a wiring diagram on the bottom of this set (shown on page 1) attesting that it passed the inspection of H. N. Quass. ☞



An Overview of the Introduction and Development of the Automatic Electric AE 1

by Jack Ryan, aka Jack O'Brien, Australia

In the January issue of *Singing Wires*, we published a nine-page document created by Jack Ryan, with the same title as this short article. It was published in the Bonus Pages only, and therefore was not printed. It is a worthwhile read.

Jack is very knowledgeable about early Automatic Electric telephones and researched this particular deskset using several Automatic Electric catalogs and other sources. Jack provided the following when asked for his reasons for doing the research.

"I originally wrote the AE 1 timeline to summarize some of the findings I had made but I decided to share it because: There is a fair bit of confusion about regarding this model and its release date. The AE 1 (called by some a Highboy) was released first in 1925 and the AE 1-A superseded it in 1928.

The AE 1 sells for a reasonable sum on eBay. Some look like reproductions to me - there are no brass cradles and there are no inset bases to accept Type 24 dials (except perhaps some refurbished telephones that combine an AE 1 cradle with an AE 1-A base.)

Please be aware that the picture of the AE 1 on the bottom of page 2 is not quite accurate, as I do not have the correct picture. It is meant to depict an AE 1 fitted with a Type 23 Dial.

This document is a work in progress and I shall update it as new information becomes available. I welcome comments."

We apologize to Jack for publishing his work without including this explanation. ☞

BUY / SELL / TRADE

BUY / SELL / TRADE Ads are free to TCI members. Please send an e-mail to: editor@telephonecollectors.org. (Large display ad space is available for a modest fee. Visit www.telephonecollectors.org and click on "Singing Wires" for rates.)

FOR SALE

Over 1000 wood ringer boxes. Some complete with magnetos and cranks, ringers and bells, some missing the magneto and crank. • 500 plastic candlesticks from the 70s. Red ones \$43 each in groups of 10 and White ones \$40 each in groups of 10 polished and working. We continue to work on inventory for sale.

480 page Payphone History. The book is divided into 3 sections: 1. The Payphone (321 pgs), 2. Booths (63 pgs), 3. Signs - 810 signs (74 pgs), \$25 + \$5 shipping.

Ron and Mary Knappen • phonecoinc@aol.com • (608) 582-4124 • www.phonecoinc.com

All makes of Rotary Dials repaired, still six dollars each (a little more if a lot of parts are defective). Your dial will run smoother because I'll lubricate the bearing points. Your dial will send accurate pulses because I'll burnish the points and set the calibration accurately.

Do you need World War II Field Phone parts? I have plenty of support parts to keep your military phone in repair. Go on-line to <http://phonesurplus.com> or just call.

Steve Hilsz • PO Box 429, Salome, AZ 85348 • (928) 859-3595 • jydsk@tds.net

WE-made wood back board to mount 354 and 554s to mount on lath and plaster walls. They also made them for other wall mountings, such as the space saver. • The code numbers are 172 "A" for the 354, 172 "B" for the

554 and 172 "C" are the plastic ones for the 554. The "C" were also used for 1554 and 2554s. The later ones had a large hole to fit over the mod mounting plate. • They were made in colors. I am looking for an 172B in Ivory, Yellow, Dk. Gray and Dk. Blue. Also a 172C in Lt. Blue. • Also I could use a few of the "B" to re-paint. • I do have some to trade.

Vern Potter • 2940 S. 500 E.S.L.C, UT 84106 • (801) 486-6794 • VERN@WEBTV.NET

For Sale: Just printed, an 8 x 11" pamphlet entitled, *The Western Electric Trimline Cord—Its History, Types, and Production*. Twenty pages of information and pictures at your finger tips. Modular cord history is included. Collectors who have a copy raved about it. Only \$8.50 post paid.

Richard Gerber • weh5aa@yahoo.com • (405) 483-5177



WANTED

5 switchboard cords for a Conn. Tel. and Elec. Co. Telephone. The cords have a 9/32 on the large end and on the small end of the same cord is a 11/64.

Gary McKay • (905) 898-3999 • buy-anyphone2003@yahoo.ca

Looking for a blue Crosley CR59 "Princess like" phone in mint condition. Thanks.

Gerhard Fuchs • Austria (Europe) • (011) 43-2252-63625 • phonefox@utanet.at

WANTED

- Original terminal strip for WE #10
- Painted E-1 seamless handsets in original Gray, Old Brass, Oxidized Silver, or Statuary Bronze
- WE NOTCHED (#4 style) 132E dial face

- Original WE wood/metal base cover for #22 or early #20B stick
- Bottom cap for Swedish Amer brass bottom receiver
- 1902 American Electric manual stick having ring on shaft below hook (stick only)
- Keystone receiver or ANYTHING KEYSTONE

David Kuns • 14 King St. Wallace, ID. 83873 • (208) 512-3991 • koonzee@yahoo.com • www.phonemandave.com

WANTED: Looking for unusual acoustic "string" telephones, particularly those with magneto-signaling and/or speaking/listening tubes.

Also seeking primitive, home-made acoustic telephones, the stranger the better. Wanted to buy acoustic telephone literature such as catalogs, flyers, instructions, etc... What do you have? Thanks!

Jon Kolger • 6906 Meade Drive, Colleyville, TX 76034 • (817)-329-5262 • jkolger@gte.net

Wanted: • Keystone Receiver • North Receiver, Transmitter and backup for wood wall phone. 10L payphone locks with or without keys, Leich nondial candlestick Receiver, Bottom cover for Stromberg dial stick.

Gene Doom • springdoom@aol.com • (616) 842-8327

WANTED: Hi all, I'm looking for these W.E. items: AUTOVON Card Dialer cards • RED 4A Speakerphone transmitter • GREY 760A Loudspeaker • TURQUOISE hardwired G6 Handset and 4-6 wire spade Line Cord • 259B KTU • Transparent (clear) 565HK Keyset • plastic housing parts for old Data Phones. Thanks!

David Friedman • mommabirdie@netzero.net