

# JACKSON BROTHERS – A HISTORY

## A History – Part 1: Foundation, Golden Age and Doing Their Bit. *By T.S.Christian*

Mention Jackson Brothers to most older radio enthusiasts, and the inevitable response is 'Ah, I remember their products! Are they still going?' Well, they are, and we can consider ourselves lucky.

When I started to engineer the ST-1993 receiver (Ref. 1) as a construction project, I dug out an old JB catalogue, changed the London telephone number from 01- to 081-, dialled it and prayed. When Ann Beauchamp's warm 'Jackson Brothers, how can I help you?' came through I breathed a sigh of relief. After Jim Parker, their Chief Engineer, had assured me of the availability of Wavemaster capacitors (they really are condensers!), I suggested that it was about time the history of the firm was properly recorded. Jim said that he would ask John Fillmore, son of the founder and Managing Director from 1971 to 1989, if he could provide some material. The answer was 'Yes', so here we go.

### BEGINNINGS

Jackson Brothers was founded in 1923 to manufacture variable capacitors and accessories such as tuning drives and dials. One of the first in the field, they joined Wingrove and Rodgers (Polar) in the UK and Cardwell's in the USA in supplying the rapidly-growing market – mainly of home constructors – for components for conjuring the magic of wireless from the ether. John Fillmore takes up the story: 'Leonard Fillmore, my father, provided the 'platform' on which Jackson Brothers was founded. Although only 19, he had the necessary product ideas, engineering expertise and, above all, profound knowledge of the then leading edge of technology – wireless.'



The Fillmore family about 1918. At the back is Walter Fillmore (left) with elder son Louis. In front of them are Walter's wife Elizabeth and her sister Dorothy. Leonard Fillmore, then about 14, is at the front. Photo courtesy John Fillmore

'When other boys were reading comics, Leonard read everything he could get his hands on about wireless. Marconi's demonstration of the transmission of messages across the Atlantic through the air – without wires – fired young Leonard's imagination. He was determined to play an active part in the new technology.'

Leonard Fillmore joined Vauxhall Motors as a machine shop and tool-room apprentice in 1917, just after his fourteenth birthday. By the end of 1918, he had constructed a wireless receiver and transmitter in the attic of his parents' council house at Lewisham.

'The trees and shrubs in their little back garden were festooned with yards of aerial wire', related John Fillmore. 'No doubt some of the engineered bits and pieces that formed part of the "Attic Transceiver" came from work!'

### Developing the Product

Although rotating vane capacitors were already manufactured for the professional market by 1918, Fig. 1, they were heavy, instrument-grade units, Fig. 2, with a price well beyond the reach of most amateurs. Home-made arrangements like plates of variable overlap through a dielectric, and concentric tubes were often resorted to. (Concentric

tubes were used in professional equipment too, as trimmers. Since they covered a few pF – a billionth ( $10^{-12}$ ) of farad – they were known as 'billis')

'By 1921, Leonard had developed the idea of mounting a number of semicircular plates accurately spaced on a spindle that he could rotate through a corresponding number of rectangular plates fixed to a Bakelite base – *pace* Vauxhall Motors' tool room', John Fillmore told me.

The important thing about the design was that it could be made cheaply, in quantity, at an affordable price, and just in time for the boom in the home-constructor wireless market. Development had resulted in a reliable product – kits for home assembly, Fig. 3 – at the right price by 1923 and it was time to go into production.

### Founding the Firm

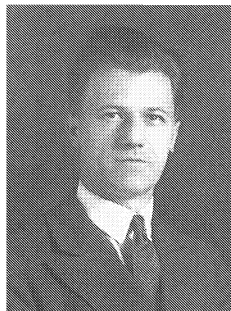
'By 1923, Leonard had persuaded his father Walter, and his recently-demobbed elder brother Louis to commit themselves to the manufacture of variable capacitors.' John Fillmore continued, 'His older sister Dorothy put some money into the project, too, but never played an active part.'

'But if all the founders were Fillmores, I had to ask, why "Jackson Brothers"?'

'One reason was the existence of a quite-unrelated Mrs Fillmore in similar trade in Lewisham. The other had to do with my grandfather, who was a true Victorian, complete with waxed moustache and a total belief in the omnipotence of an Englishman (as opposed to woman). He believed passionately in God, Queen (or King) and Country as epitomised by John Bull.'

'Since he was putting up most of the money, he demanded the right to name the partnership. Believe it or not, he wanted to call it John Bull & Company. Father and Uncle managed to persuade him that this wouldn't be wise, but compromised to the point of creating a name that gave the right initials for the logo. "Jackson" was a very English name and "Brothers" was obvious: hence, Jackson Brothers.'

Manufacture of variable capacitor kits (not complete capacitors) for home assembly started in London: in rented rooms above a shop at 8 Poland Street, Soho (off Oxford Street). Accessories such as drive spindles, dials, knobs, cord drums, pointers and escutcheons (frames for tuning scale windows) were gradually added to the range.



Leonard Fillmore pictured around 1925. Photo courtesy John Fillmore

### Completing the Range

It was soon apparent that many amateur radio enthusiasts lacked the manual skills necessary for the successful assembly of the parts, and so Jackson's started to assemble them. This, in turn, meant rationalisation and, hence, the development of standard values. Outlets included direct sales, mainly mail-order, to home-constructors; via stockists; and through suppliers of complete kits. Business was far from steady, however.

'From 1923 to about 1930, their only customers

## MECHANICS PLAYS ITS PART

We should like to see the general public a better class of work than the wireless... (Text continues with technical details about capacitor construction and materials.)



JACKSON BROS. 8 POLAND ST. OXFORD LONDON - W.1. GERRARD 7414

for the S.T. 800

THE TUNING WAS ENTRUSTED TO US . . .

### THE LINACORE

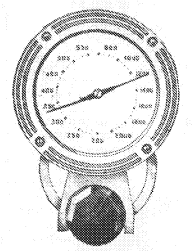
The famous tuning unit. Complete with reaction control and all switching, including provision for gramophone pickup. For use with mains or battery coils. Type B.P.U. . . . . . 65/-

J.B. NEUTRALISING CONDENSER

The most intricate variety of capacitor made with special brass plates. Each plate offers a neutralising effect to be used in combination with other capacitors in a set. Price 3/6

Jackson Brothers advertisement from 1925, giving the Poland Street address. (1925 Wireless Constructor)

## AIR-PLANE DIAL



Bold Wavelength calibration, dual lamp-holder and excite-beam fitted with glass. Three finishes - chrome, oxidised silver and bronze.

Catalogue No. 2130 . . . . . Price 5/9

Air-plane dial (from Amateur Wireless 1935 advert)

were enthusiasts building their own wireless sets,' said John Fillmore. 'There were no set makers in those very early years.'

'For the most part, building wireless sets was a very seasonal hobby. It was one thing to build your own set at home during the long winter nights, but enthusiasm waned somewhat as spring gave way to summer. In the rented rooms in Poland Street, many summer days in 1923 and '24 passed by with nothing more productive going on than a game of cards. Autumn and winter, by contrast, were very busy with regular eighteen hour days.'

In 1925, JB acquired Fred Chaston who was to become a mainstay of the firm for the next 51 years.

'Fred was a remarkable man. He joined straight from school when, I believe he was sixteen. It took me until 1976 to persuade him to retire. He was most reluctant to go! It is a pity that he is not still around to tell us both more about pre-war and immediate post-war Jackson Brothers. When my Grandfather and Uncle died. Dad made him General Manager.'

'Fred lived with his wife in Parners Green, North London. Commuting to London Bridge was no big deal, but after the Blitz he continued to commute to Waddon (Croydon).'

### Expansion and Change

'By 1932,' the demand for variable capacitors and the associated tuning mechanisms was coming from set makers as well as home constructors. Leonard, Louis and Walter converted the firm into a private limited company, Jackson Brothers (London) Ltd, and moved to a prestigious new, four-storey factory at 72 St Thomas Street, SE1, next to London Bridge Railway Station. Customers at the time included such names as Bush, Ekco, Murphy and Sobell.'

Best known of JB's products for the home constructor in the late '20s and early '30s were probably those in the 'Perfect Five' group shown on the exhibition stand of 1933/4 (right). These comprised direct-drive and slow-motion tuning capacitors in 150pF and 500pF versions, in both straight-line frequency and logarithmic versions, and a concentric-tube neutralising capacitor for triode RF amplifiers (a version of the 'billi').

### JB – ST

Being 'specified' as suppliers for prestigious home-construction projects published in the wireless magazines of the period was of vital importance in the competition between variable capacitor manufacturers of the late 1920s and early 1930s. Of the designers of these projects, John Scott-Taggart was probably one of the best known. Jacksons collaborated with 'S-T' in the design of the drive for the distinctive S.T.800 of 1936, and their capacitors were 'specified' for the S-T 'All BBC' set of 1937.

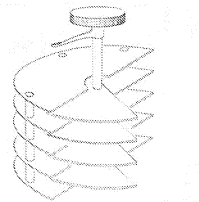


Fig. 1 - This drawing of a rotating-vane variable capacitor appears in the Wireless Telegraphy Manual for HM Fleet, 1912

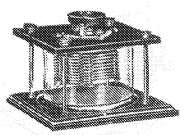


Fig. 2 - A typical 'professional grade' variable capacitor at WMM's vintage computer with nice case!

No. 1474

**CONDENSER MOVING SPINDLES.** Clean Cut Threads. These when mounted hold the Plates quite immovable, and are fitted with Two Nuts, Spring and Washers.

For .0005 Condenser.	Price 3d.	Post 1d.
For .0001 "	3d.	1d.
For .0002 "	4d.	1d.
For .0003 "	4d.	1d.
For .0005 "	5d.	1d.
For .00075 "	6d.	1d.
For .001 "	7d.	1d.

No. 1475

**CONDENSER FIXED SUPPORTS.** These are of Stout Brass Rod, Three in Set, and are gauged for use with the above Spindles. Complete with Four Nuts on each Rod.

For .0005 Condenser.	Price per Set 8d.	Post 1d.
For .0001 "	7d.	1d.
For .0002 "	8d.	1d.
For .0003 "	8d.	1d.
For .0005 "	9d.	1d.
For .00075 "	1/-	1d.
For .001 "	1/2	1d.

No. 1476

**CONDENSER VANES.** Aluminium. These are very carefully made and cleanly stamped.

Moving	8d. doz.
Fixed	1d. doz.

Special Prices for Quantities.

No. 1478

**CONDENSER SPACERS.** Clean Cut. Guaranteed true to .001 in., and are not burred in any way. For Moving Vanes.

6 doz.	1/10.	Post 1d.
--------	-------	----------

FOR FIXED VANES. No. 1479. 3d. doz. Post 1d. 6 doz. 1/4. Post 1d.

Fig. 3 - 'Condenser' parts of the type marketed by Jackson Brothers in the early 1920s.

# JACKSON BROTHERS – A HISTORY



## At 'The Show'

Reviewing their Radio Show exhibits during the 1930s reveals continuous development of Jacksons' product range for both home constructors and set makers. In 1933, apart from the 'Perfect Five', they showed their new full-vision straight-line tuning drive assembly (the dial-lamp moved with the cursor); a special short-wave slow-motion dial giving 8:1 and 150:1 ratios; three and four-band superhet capacitors with matching, calibrated scales; their 'Dilecon' range of solid-dielectric capacitors that are still available today; and the 'Nugang Type A.I.' screened capacitor.



Walter, left, and Louis Fillmore with a Jackson's exhibition stand in either 1933 or 1934. Photo courtesy John Fillmore.

For the 1935 Show, Jacksons produced a new version of the 'JB Baby Gang' capacitor with a ball-bearing rotor. Baby Gangs were available for superhet tracking for 465 and 473kc/s. New for the Show was an American style 'Airplane' dial. Reduction ratios were 8:1 and 100:1. Also on the stand was a range of straight-line scales with two-colour tuning scales!

In the 1936 show, Jacksons showed midget tuning capacitors for TV receivers for the new Alexandra Palace transmissions. Both single and twin gang versions were available (at 3s. 9d. and 5s. each – slow motion, 1s. extra).

The 1937 Show introduced an all-wave version of the 'Linacore' tuning unit. *Popular Wireless* magazine commented: '...this Stand has one of the finest displays of well-made but competitive priced components in the whole Show.'

An all-wave receiver kit for home constructors was added for the 1938 Show.

## DOING THEIR BIT

September, 1939, heralded major changes in the fortunes of the UK electronics industry whose effects are still evident today. Prior to WW II, military electronics was a comparatively small market for what, even by standards of the day, was fairly primitive equipment. That was to change, rapidly and decisively to a point where the military market dominated sectors of the UK industry not only for the duration but, for some companies, long afterwards.

## Working Together

For Jackson Bros it marked an abrupt change from a market of many customers – setmakers and enthusiasts – to just one: the Government in its various guises. For much of the war, JB and Wingrove and Rodgers made many items in common, working closely with Government research establishments on the design of components suitable for the rigours of military application. John Fillmore, again:

'Virtually all aircraft, warships and military vehicles manufactured in Britain during WWII were fitted with radio tuned by the products of Jackson Brothers and Wingrove and Rodgers.'

How well Jacksons' products performed is evident from the many examples that survive even today in WWII equipment restored by collectors. Fifty-year old JB products, as good as new, are still to be found in the surplus and second-hand markets. War brought more than a change in market, however.

Identifying specific JB wartime products is not easy. Commonality with other manufacturers was virtually complete. Assiduous students of inspection stamps might identify 'JB' amongst the usual smudges.

## Fortunes of War

'Jackson Brothers suffered two harsh blows during the War.' John Fillmore recalls. 'As I have already mentioned, our factory was right alongside London Bridge Station which was itself a natural target for Herr Goering's Luftwaffe. Sure enough, at the height of the Blitz, March 1941, the factory was totally destroyed, mainly by fire caused by incendiary bombs.'

'The Ministry of Defence was very quick to help relocate production at a factory in Waddon, Croydon. Since this was right alongside the airport at Croydon, there might have been an element of "out of the frying pan, into the fire" about such a relocation! Full production was resumed after a very few months.'

After the Blitz, Fred Chaston continued to commute from his North London home to Waddon.

'In order to avoid the traffic, he left home at 5:30 a.m. so as to be at the factory by 7.' related John Fillmore, 'He would leave at 6:30 or 7 in the evening, calling on out-workers on the way home, where he would arrive around 10 p.m. – just in time for a night-cap before turning in in good time to be up by 5:30 the next morning. Apart from the out-workers, he kept the routine up until the day he retired!'

This period also saw personal loss for the Filmore family. 'Grandfather Walter died at the end of 1941, but not before seeing the new production unit at Waddon. Uncle Louis died of cancer early in 1942, which left Leonard very much on his own. From this point on, he relied increasingly on the support of Fred Chaston.'

The Germans had not yet finished with Jackson Bros, however.

'In 1944, a V1 "doodlebug" bomb hit the factory adjacent to Jackson's, rendering it impossible to continue manufacture there. With the War almost won, the MoD were not quite so quick to help. At one stage, they offered a factory in Newcastle, with something of a "take it or leave it" shrug.'

'Fred Chaston took issue strongly and, finding an empty factory at Cherry Orchard Road, East Croydon, convinced the MoD that a journey to Newcastle was unnecessary.'

This damage to the Waddon factory might have been a side-effect of the deception plan for the V1. R.V. Jones, Ref. 2, describes how the Double-Cross system was used to report the points of impact of V1 impacts north of London with the times of impacts south of London. This evidently persuaded the Germans to reduce progressively the range setting on the V1, saving an estimated 50 per cent of casualties – but not JB. The Waddon factory was rebuilt, however, Jacksons moved back into it in 1945. In 1993, it is still their headquarters.

## References

1. Christian, T.S. 1993. 'The 1-V-1 rides again'. *RB* 21 to 23.
2. Jones, R.V. 1978. *Most Secret War*. Hamish Hamilton, London. (Coronet Edition, 1979, pp 531 to 536)

## Part 2: Aftermath of War, Indian Summer and Going strong. By T.S.Christian



Jacksons' headquarters, 'Kingsway One' about 1950. Apart from the bike shed and the waste bin (right), the building has changed little over the past forty years.

## Aftermath of War

As the Ministry of Supply quickly cut back on orders, the end of the war saw some hard years for Jacksons. Austerity, helped by draconian Government measures to promote exports, like 66<sup>2</sup>/<sub>3</sub>% Purchase Tax on domestic radios, greatly (perhaps fatally) slowed the pace of the UK consumer electronics industry.

Jacksons resumed advertising and exhibiting at trade shows. Although vigorous enough, home construction provided less new sales post-war as constructors took advantage of the war-surplus Aladdin's Caves. Many excellent wartime Jacksons' products were recycled by enthusiastic amateurs, whose ranks were swelled by radio-trained servicemen. Again, Government interference with market forces, control of the rate of release of surplus items, probably prolonged the agony rather than eased it.

'Cooperation with Wingrove and Rodgers came to an abrupt end as both Companies sought to restore their own fortunes.' John Fillmore, son of the founder and Managing Director from 1971 to 1989, told me. 'It was probably 1949 or even 1950 before setmakers were once again established. Once this happened, business became brisk once again.'

'Overseas sales agents were appointed, notably in Holland, Denmark, India (variable capacitors were known as JB's in India for many years!), South Africa and Australia.'

Although reduction in size of variable capacitors had started immediately before WWII, the trend was already accelerated by 1946. New B7G battery valves made much smaller portable radios possible. Reinstatement and expansion of television, coupled with the introduction of FM broadcasting brought VHF techniques into the consumer sector. With their experience of military applications during WWII Jacksons' were well-placed to meet the new demands.

## Meeting New Requirements

Although taken very much for granted, variable capacitors critically affect the stability, efficiency, ease of tuning and resettability of radio equipment. Other critical properties are leakage, self-inductance, dielectric losses and rotor contact resistance. Variable capacitors of open construction must resist the effects of dirt and atmosphere. At least one of the banks of vanes (usually the fixed bank, or stator) must be isolated, as well as accurately supported mechanically.

Operation at higher frequencies, requires stator and rotor connections to be of the lowest possible resistance and inductance (large area, short length). Dielectric and supporting insulating material must be of the lowest possible loss. Surfaces (where RF currents flow) must be of as low resistance as possible. These features are typified by the construction of Jacksons' C804 trimmers, Fig. 1: still among the best in their class.

New plastics materials have had limited impact on variable capacitor design. Many low-loss plastics have thermal or mechanical limitations that preclude their use. Ceramics, although expensive to form, remain the best all-round insulators.

Miniaturisation introduces further problems. Capacitance is proportional to plate area and inversely proportional to plate separation. Reducing the volume of a capacitor to one eighth (all dimensions halved – typical of developments between the 1930s and the 1950s) reduces plate area to about one quarter. But air gap is only reduced by one half: not enough to maintain the capacitance value. A further reduction of one half – is needed to make up for the reduction in plate area. Susceptibility to dirt increases and working voltage is reduced. Plates cannot be too thin, or the unit will be microphonic and fragile. One solution to both plate and air gap problem, a solid-dielectric, while suitable for pre-set trimmers, does not result in the mechanical performance of air-dielectric types.

Although lower voltages are associated with solid-state circuitry, high working-voltages are still needed for power applications like transmitters and aerial matching units.

Thus, the capacitor designers' job is truly not a happy one. Two of the design routes taken by Jacksons' over the last thirty years or so are exemplified by their Dilem miniature solid dielectric capacitor (built on the experience of their Dilecon design, Fig. 2) for medium and long-wave transistor radios, Fig. 3, and their C16 trimmers, Fig. 4.

Fortunately, miniaturisation results in lower circuit strays. As a result, the capacitance swing required to tune a valved receiver across the medium waveband fell initially from 500pF to 365pF. This was the basis for the O.G. Gang, Fig. 5, whose air gap was reduced from about 0.012in to 0.0075in.



M.G.R.N. 1, 2 or 3 GANG CONDENSER  
This is made in various capacities up to 300pF. It is of rigid construction, with constant slow motion drive and with tapered ends. The spindle is tapered to fit for ease of insertion. The spindle can be driven by card from the drum disk. Built in strength for the toughest of conditions.  
**JACKSON**  
BROS (LONDON) LIMITED  
PHYSICAL ELECTRONICS GROUP  
140, KINGSWAY ONE, CROYDON, SURREY, GU9 1JH  
TELEPHONE: 01889 47545

Jacksons' started advertising their traditional setmakers' products immediately after WWII. Note the logo (WW 10/55 ad)

### Dependable and Tested components for lasting efficiency!




**STAND-OFF INSULATORS** Working voltage 1,000V, 2,000V. Very high resistance. Ceramic construction. Fully tested to meet requirements. Tag us with our name. We have a full range to cover your needs.

**S.L.S. SPIN WHEEL DRIVE** A precision slide with drive magnet side 8 band glass scale. The spin wheel gives perfect control throughout the 28.1. Fitted with standard velocity coupling. Outstanding quality and performance. We have a full range to cover your needs.

**M.E. GANG CONDENSER** Available as 1, 2 or 3 gangs. 400 pF nominal capacity, standard and standardised to meet needs. Capable of giving 1000V. Minimum 1000V. Low loss dielectric. Length adjustable. 1 gang—1.5in. to 3.5in. 2 gangs—1.5in. to 3.5in. 3 gangs—1.5in. to 3.5in. Price 1 gang, 9.5s. 2 gangs, 14.5s. 3 gangs, 18.5s.

Write for full details of the complete range of precision-built components: the Action and Television industries.

**JACKSON BROS.**  
(LONDON LTD)

KINGSWAY · WADDON · SURREY Telephone: 01889 47545  
140 KINGSWAY · WALFILD · SOUTHPHON · LONDON

Setmakers components from Jacksons in 1955. (WW 10/55 ad)

# JACKSON BROTHERS – A HISTORY



Fig. 1 – A rotating vane, variable capacitor as exemplified by Jacksons' ubiquitous C804 trimmer.

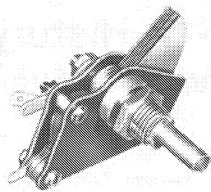


Fig. 2 – The Dilecon solid-dielectric variable capacitor dates from the 1930s, and is still in production.

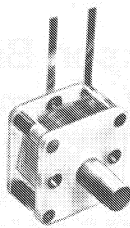


Fig. 3 – The Dilemin miniature variable capacitor for solid-state domestic radios has supports thin vanes with Teflon dielectric films.

tion was having a decisive effect on the UK radio industry. Perdio failed, and many other UK and Continental manufacturers went out of radio production altogether. The demand for variable capacitors for domestic receivers declined dramatically.

'At Jackson Brothers, we combated this by (a) shrinking our operation and (b) designing more specialist capacitors.' John Fillmore told me. 'The demand was still very much there for capacitors in transmitting equipment and for specialist trimmer capacitors. Remember that we always had a very important range of reduction drives. Originally, these were designed for fine tuning of variable capacitors, and as such were invaluable to the Citizen's Band radios that were so immensely popular in the USA in the seventies.'

'As tuning went over to ohms rather than pFs, [Varicaps ®] so these drives could convert the performance of a cheap, carbon pot, to that of an expensive, multi-turn job.'

## Wavemaster

A stroke of luck for home constructors occurred in 1967 when, almost by accident the Wavemaster range was added to Jackson's catalogue.

'Wavemaster capacitors were made as a sideline by a general light engineering company. When the owner retired, he sold the company but the buyer told him to "get rid of all the Wavemaster junk".' Recalls John Fillmore. 'I got to hear about it, phoned him up, went round and did a deal there and then!'

Wavemaster capacitors, Fig. 7, are still in production.

## Loss of the Founder

Founder and Chief Executive from 1923 to 1971, Leonard Fillmore, died suddenly in January, 1971, while still in office.

'He never did retire, but died quite suddenly of a cerebral haemorrhage.' Recalled John Fillmore. 'I had myself been with the firm since 1956, so naturally took over as Chief Executive when Dad died.'

## Chinks in the Armour

Cheap, high quality, Japanese components posed enormous problems for the UK electronic components industry, besides eliminating many of their customers. An inevitable consequence of the quest for low cost by the Japanese has been less flexibility in the design and delivery scheduling. (The attendant Quality Management philosophies can equally well be applied to achieving quality with flexibility, at higher cost, if that is what the customer wants.) Jacksons also had the advantage of being close to their customers, and speaking the same language.

'At Jacksons, we offered an individual design service and total flexibility as regards delivery schedules.' Said John Fillmore. 'As a result of giving such personal service to our customers' design engineers, we enjoyed a degree of customer loyalty, at least until the present recessionary period struck us all – and remember that started in 1979!'

'It may be that we think of this recession as starting post 1987 but, if you think back, you may agree with me that the diminution of our manufacturing base got under way in 1979. I know I had to endure the personal misery of making a number of my employees redundant that year. Since then, redundancy has become a way of life, but at that time it was horribly new.'

## Taking Over

Although contraction of the UK domestic radio industry from the late 1960s onwards saw many fine names disappear, Jacksons survived well enough to absorb their long-time rivals.

'I personally negotiated the deal with Wingrove and Rodgers whereby we took over production of the "Polar" range. This contract was signed in February, 1980. This Polar range included the variable capacitors used in "Clansman" – they had been more successful than me in negotiating with the M.o.D. earlier!'

\* The British Army communications system, subject of a forthcoming article in Radio Bygones. – Ed

## The Changing Face

Jacksons' publicity material of the period 1950 to 1980, Fig. 8, shows that, in common with many other companies, Jacksons spent much time and effort seeking a replacement logo. In retrospect, it is difficult to justify the expenditure and time that this sort of exercise demands. At best it might help old customers forget past problems, at worst it hazards brand loyalty. When did Sony, for example, last change its image?

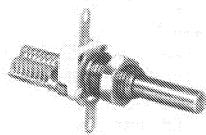


Fig. 4 – A C16 series miniature trimmer

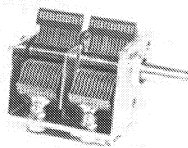


Fig. 5 – A Jacksons' O2 capacitor, the two gang developed for post-war miniature-valve sets. Both gangs are 365pF swing.

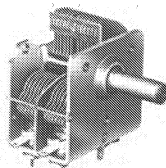


Fig. 6 – Jacksons' OO gang capacitor developed for Perdio transistor radios. Nominal capacity was 10 – 208pF for the signal section and 8.5 – 176pF for the oscillator section.

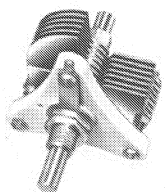


Fig. 7 – Wavemaster tuning capacitors are one of very few precision small-signal tuning capacitors still in production.

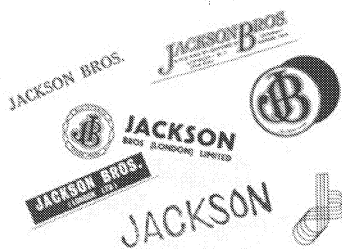


Fig. 8 – The changing face of Jacksons through the years.

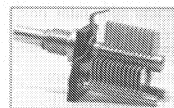


Fig. 9 – One of the new C824 budget trimmers for the home constructor market.

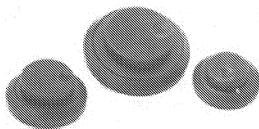


Fig. 10 – A face-lift for Jacksons traditional ball-drive panel furniture.

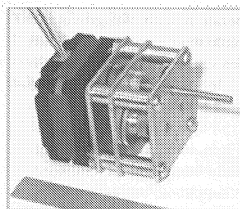


Fig. 11 – Interfacing Jacksons' traditional products with the modern world of computer control is provided by this precision stepper-motor and gearbox combination.

NOTE – The illustrations of the various components above are not to scale

## The Indian Summer

John Fillmore joined his father in the firm in 1956, a year after the first Sony transistor radio was produced in Japan. He was to see radical changes: the coming of the transistor; the growing emphasis on low-cost and miniaturisation; and the catastrophic decline of UK domestic radio production.

Jacksons' 1950s product ranges covered domestic, amateur and professional markets. As a result of the War, they had been able to add an (albeit diminished) military market sector to their prewar range. New components, especially high-voltage transmitting capacitors, and professional-style tagboards and trimmers, were developed.

## Transistors

Transistor receiver manufacture was very much pioneered in the UK by Perdio Ltd, whose products first appeared at the 1957 National Radio Show and for whom Jacksons' developed their OO Twin tuning capacitor, Fig. 6. These first Perdio sets were very popular, and both companies prospered from the co-operation.

Many thousands of C16 trimmers were used in Pye radiotelephone equipment in the early '60s, which also stimulated development of the 'Tefter' multi-turn trimmer.

## Wind from the East

By the beginning of the 1960s, Japanese competi-



Jacksons' machine shop at Croydon about 1951. Note the belts driving machines from shafting in the roof.

### Facing the Future— Brass to Silicon

It is not only the need for precision that has caused variable-capacitor tuning to be replaced by solid-state synthesis. For large-scale production, the i.c.s. and digital displays required are becoming cheaper than the mechanical components that they replace. This trend will probably see the demise of the variable capacitor in domestic radio equipment.

However, the limitations of wideband, solid-state radio front ends will ensure the retention of the variable capacitor for aerial and preselector tuning for the most demanding applications (and discerning users!). Moreover, home-constructors (a growing market) still need the straightforward flexibility that only the mechanically-variable capacitor can provide.

#### End of an Era

John Fillmore sold Jacksons to its present owners, headed by current Managing Director, David Ryland, in 1989. This ended nearly seventy years of family control which saw the evolution of wireless technology from a civil and military

communications monopoly through the home construction and mass media boom of the '30s to the complexities of turn-of-the-century solid-state electronics.

### Jacksons – the Next Generation

Under David Ryland's determined leadership, Jacksons' are well placed to meet the challenge of the future.

'The Company has very considerable skills in manufacturing small electromechanical products, and developments are afoot that will expand us into new product and market areas,' he told me. 'Product areas being considered include transformers, gear drives and universal couplings. We are also seeking to exploit market connections, by introducing complementary products. These may come from associated companies, such as Sulfex Capacitors Limited, whose products are sold in a very similar market.'

'We have set out to design and produce more sophisticated trimmers for high-power applications where high voltages still dictate a conventional component. Considerable effort has gone into reducing the cost of products for the amateur market to allow us to compete with the very considerable supply of second-hand equipment.'

### New Products

At Jacksons, development of new products to meet changing demands has always been a continuous activity.

For the amateur and home-constructor, still important customers, Jacksons' have developed the C824 series trimmers, Fig. 9. This is a budget version of the C8 using readily-machinable composite material for the mounting plate in place of ceramics. Their slow-motion drive accessories have also been given a face lift, Fig. 10 to suit modern styling. An interface to the modern world of digital control, a precision gearbox with stepper motor, is shown in Fig. 11.

### Towards 2000

Too often, historical articles in *Radio Bygone* have been obituaries for members of the once-dominant UK radio industry. By contrast, Jackson Brothers are still with us, planning for the future with confidence in their tradition of supplying the high-quality, high-performance products for which they are famous. Although the longest recession on record hardly provides an encouraging backdrop for the future of any business, if skill, determination and pride in workmanship mean anything, they should mean that Jacksons' products, old and new, will be with us for a long time to come.

### Acknowledgments

Everyone involved has co-operated to the full to make this trip down Jacksons' memory lane a real pleasure. Especial thanks are due to John Fillmore for his major contribution to these articles, particularly his patience with my endless questions; Jim Parker for technical help, arranging contacts, providing photos, and supplying details of current products; David Ryland for his vision of the future, and for permission to use JB promotional material; and the many friends who have hunted through heaps of dusty magazines and catalogues to find material.

### References

1. *Learmouth, B. and Nash, J. 1977. The First Crotdon Airport, 1915-1928. (Ed. D. Cluett). Sutton Libraries and Arts Services, Sutton, Surrey, UK.*

### RB

## Part 3: Approaching a New Millennium

It is difficult to know where to begin the continuing saga of fortune and misfortune of Jackson Brothers but we will try.

Mainline Electronics was contacted in November 1998 by several sources, including the official receiver; who advised us that Jackson Brothers had gone bust and as a distributor of Jackson Brothers would we be interested in buying the stock that was left over.

This started a course of events that leads us to producing the catalogue that you are reading now, it will also give the readers some idea why Mainline has been so quiet for sometime.

### What went wrong?

It is hard to work out how a well financed company with a pedigree of over 75 years within a few years went bust. But from the fragments of information available to us, we have pieced together the story which reads like this.

The Fillmore family sold the company to two entrepreneurs, who promised big things for the future.

In fact this was not the case rather than many new

products being introduced, the firm was gradually stripped of its assets; buildings were sold and the profits were re-invested in "other areas" whether by luck or chance Jackson Brothers stayed afloat. Money disappeared into many other ventures none of which proved profitable the directors of the company describing Jackson Brothers as a "cash cow".

Sooner or later something had to go. One day all the workers were told to stop what they were doing and move to another company within the group. All of the work that they had been painstakingly assembling was thrown into a corner.

Jackson Brothers later that month was put into official receivership; anyone still employed was made redundant.

### What we found!

It is very hard to find out the exact course of events that led to the state of the company that we found in late November – but piecing together the facts the following appears to be what happened.

The bailiffs entered the company and took all of the mechanical equipment (machines used for producing capacitor vanes etc.)

The workshop had already been sold off for 'strategic reasons'; most of the computers had been removed as well, strangely enough all of the equipment that was worth any money had been sold off some weeks before to another company within the group where also by coincidence the old Jackson staff had also been moved too.

The bailiffs had carefully sealed the building with new locks before leaving and went on their way.

That night their new locks were broken off and all of the brass and aluminium was stolen by an unknown second party, also the landlord entered the premises and removed all the furniture, just emptying desk draws and filing cabinets on the floor in piles.

Many Jackson products were stored in large rows of dexion racking which had all been pulled over on their sides. The spindles, vanes and rotors were spread everywhere from a thousand storage 3 bins.

### Why we purchased Jacksons

We visited the premises and found the biggest mess we had ever seen in all our years of the factory clearance. Everywhere there were photographs on the floor of old employees and products, clearly something had gone terribly wrong here, and, for one reason or another twenty staff lost their jobs, many of whom had worked at Jacksons for 30 – 40 and even up to 50 years.

Mainline Electronics is committed to the sale and supply of radio parts. Jackson Brothers was the last of its kind in the UK, and, through no fault of its own had ceased trading. To us this was a sin, so instead of just buying a few bits of stock we brought the entire company.

The move was a nightmare; three artic lorries; many huge council skips and deadline of 5 days by the landlord all caused a few headaches to say the least.

In the five days by hand we managed to salvage all of the drawings and parts that were left, plus 27 tonnes of tools and raw materials (no one knows how much was stolen but it was likely to be many tonnes of brass and aluminium). All of the material had to be removed back to Leicester and stored within the deadline.

### The Present

We have re-hired some of the original Jackson staff, including Jim Parker the senior engineer on site, plus some assembly staff.

New premises in the south of London have been rented and production started again in January.

We have produced new catalogues and price lists and many new products are planned – six months after being written off Jackson Brothers is again in profit.

Who knows what the future will bring, but we will keep you informed.

Please bear with us for the first few months as we are restarting the company and in many cases things have to be relearned.

*From me and the staff at Mainline and all of the staff from Jacksons' who are with us now or have left or retired, including the Fillmores.*

Thanks and Best Regards,

**JACKSON BROTHERS**

