

## ON APPARATUS, 1929-1930

### [SLIDE 1 – TITLE]

1929 and 1930 were years of concentrated change within the British film exhibition industry. Sound cinema had quickly established itself as the essential attraction of the time, and cinemas throughout the country swiftly mobilised to equip for sound, lest they fall behind the tide. During these years, numerous companies – both domestic and international – vied for control of the nation's sound apparatus market, with the large resources behind companies such as Western Electric and Radio Corporation of America (R.C.A.) competing with smaller British concerns, as well as established domestic manufacturers such as British Thomson-Houston. Taking the apparatus choices of Birmingham cinemas as an example, this paper looks at the various methods by which different manufacturers attempted to distinguish themselves on the sound equipment market, including pricing and advertising strategies. This paper will also discuss the potential effects of national and local pride in the choices made by both exhibitors and apparatus vendors. Through these lenses, this paper hopes to shed some light on how and why exhibitors installed the apparatus they did, and some oft-overlooked the idiosyncrasies of the British transition to sound.

### [SLIDE 2]

This table shows the eighty-six cinemas in Birmingham for which information about their installed apparatus during the first four years of sound exists. It shows the dominance of a small number of apparatus manufacturers, particularly Western Electric and British Thomson Houston. [CLICK] Thirty-five cinemas – over two-fifths – installed Western Electric sound, either on their initial conversion to sound or within

one or two years of conversion. [CLICK] Another twenty-two would install British Thomson-Houston. Of the remainder, thirteen installed equipment from R.C.A Photophone (including the Plaza Playhouse, who would replace it with B.T.H. equipment by the end of 1931); five cinemas installed apparatus from British Talking Pictures (with the Warwick replacing its Film Industries equipment by the end of 1932); four cinemas installed Gaumont's British Acoustic (including the Gaumont Palace); and several other manufacturers are represented in very small numbers, including Klangfilm, Mihaly, Classitone, Synchronophone and Edibell.

[SLIDE 3]

That Western Electric should so dominate the cinemas of Birmingham is unsurprising. By the end of October 1929, when only fifteen Birmingham cinemas had converted to sound, Western Electric apparatus had been installed in 338 cinemas across the British Isles; of the first fifteen to convert in Birmingham, eight had chosen W.E.<sup>1</sup> By the middle of January 1930, the company had installed 476 systems in British cinemas; this rose to 826 by the end of May, and 1,000 by the beginning of September.<sup>2</sup> Around 10,000 cinemas worldwide had been wired for sound by mid-September 1930, and Western Electric had wired over 60 per cent of them.<sup>3</sup>

[SLIDE 4]

It is important to recognise the centrality of maintenance and after-market service; Western Electric, to a greater extent than most of its competitors, endeavoured to create a strong infrastructure for its exhibitors. Service stations were established

---

<sup>1</sup> 'W.E. Installations Total 338', *The Bioscope*, 30 October 1929.

<sup>2</sup> 'New W.E. Installations', *The Bioscope*, 15 January 1930; 'Western Electric Progress', *The Bioscope*, 28 May 1930; 'Western Electric's 1,000th', *The Bioscope*, 3 September 1930.

<sup>3</sup> 'Where Sound Is Thickest', *The Bioscope*, 10 September 1930.

around the country, close to key markets, allowing for comprehensive maintenance. The upshot of all this being that, as a *Bioscope* article of January 1930 notes, “In the last six months of programme running [nationwide], only 3.2 hours have been lost by breakdown.”<sup>4</sup> By July 1930, the company would claim to have replaced apparatus in over a thousand cinemas around the world, citing poor or non-existent service for the failure of the previous equipment.<sup>5</sup> The extent of service was also a key factor in Western Electric’s advertising. An example from the beginning of 1930 reads, “Always at your elbow is the whole great Western Electric service organisation – whose watchword is ‘the show must go on!’”<sup>6</sup>

**[SLIDE 5]**

The lengths to which Western Electric aspired to create a community for its exhibitors around the country were also extensive. In December 1929, the company began circulating the fortnightly periodical *Western Electric Exhibitor*, which contained technical advice for cinema operators, and publicity matter extolling the company’s achievements. A letter from the company’s managing director E. S. Gregg specifies the purpose of the publication as “to acquire that ‘get together’ spirit that marks a good family.”<sup>7</sup> The periodical was short-lived, ending after ten issues in April 1930, and failed to create much of a social network. The fifth edition of the *Exhibitor* contained a note from editor Hilton Schleman where he laments that queries from operators has not been forthcoming, although he calls it “a credit to [the company] and to our Service.”<sup>8</sup>

**[SLIDE 6]**

---

<sup>4</sup> “What ‘Service Means’”, *The Bioscope*, 29 January 1930.

<sup>5</sup> “Dire Purchase!”, *The Bioscope*, 23 July 1930.

<sup>6</sup> “‘The Show Must Go On!’”, *The Bioscope*, 1 January 1930.

<sup>7</sup> “To Western Electric Exhibitors”, *Western Electric Exhibitor*, 1 December 1929.

<sup>8</sup> “Editor’s Note”, *Western Electric Exhibitor*, 1 February 1930.

British competitors, vying for their own share of the talkie apparatus market, primarily focused on pricing and aspects of nationalist sentiment, emphasising their “Britishness” in their competition with Western Electric and R.C.A.<sup>9</sup> As of June 1930, Western Electric’s cheapest model was priced at £1,550, for sound-on-disc and on-film combined, suitable for houses with capacities of up to 1,000; their 1,750 capacity model cost £2,150; their 3,000 capacity model cost £2,800; and their largest model cost £3,600. R.C.A’s prices started at £1,100 for cinemas with up to 1,000 seats and rising to cost £3,350 for their largest model. These companies were targeting larger super cinemas, undoubtedly aiming for the greater profit margins such contracts could attain. Western Electric had seen much more success than R.C.A in this effort. By June 18, 1930, R.C.A had installed 198 talking sets in cinemas nationwide; Western Electric had installed over four times more, with 841.<sup>10</sup>

[SLIDE 7]

British Talking Pictures (B.T.P) had released an apparatus model of their own, and had achieved 200 installations by this time, a British success only beaten by British Thomson-Houston. B.T.P. had for the past year held a series of demonstrations of their apparatus, and had been favourably compared to Western Electric for its sound quality. In June 1929, B.T.P. had brought legal action against the owners of the Elite Picture Theatre in Kingston-Upon-Thames, for removing their B.T.P. apparatus to replace it with Western Electric equipment, allegedly breaching B.T.P.’s contract. The Elite stipulated that B.T.P.’s equipment was not substandard; their decision had been due to

---

<sup>9</sup> This was a tactic that The Bioscope detected as early as February 1929, when an opinion writer declared, ‘[Exhibitors know] that both picture and sound projection must be as good as his competitor’s [...] and he would quickly scrap a sound system, no matter how costly or how “British” if he discovered that it was damaging his business.’ ‘Interchangeability’.

<sup>10</sup> The installation numbers cited in this section rely heavily on *ibid*. However, installation numbers are rarely reported and are often inconsistent; See Martin H. Kennedy, ‘High Taxes and Shortage of Silents to Sound Deathknell of French Exhibitors’, *Motion Picture News*, 14 June 1930.

the shortage of films that could be shown on the apparatus.<sup>11</sup> Aside from the issue of interchangeability, where films recorded with W.E. sound were prohibited from being shown on competing apparatus, this was also likely due to the fact that B.T.P.'s equipment was only sound-on-film at this stage. B.T.P. had begun life as the De Forest Phonofilm Company, which exploited the sound-on-film technology innovated by Lee de Forest in the early 1920s and which formed some of the basis of the Fox Movietone process.<sup>12</sup> However, sound-on-disc processes like Vitaphone were widespread within production and exhibition, and apparatus manufacturers were soon to realise the unfeasibility of making equipment that couldn't handle both systems of reproduction. At the end of June 1929, B.T.P. announced a new attachment for their apparatus that enabled the exhibition of sound-on-disc.<sup>13</sup> Their combined system was priced at £1,100, well below Western Electric's cheapest price point, and suitable for halls larger than that specified for RCA's smallest unit, similarly priced. Advertising for B.T.P. claimed, "Exhibitors unanimously vote it the finest value for money on the market – and it is British."<sup>14</sup> This combination of national pride and competitive pricing drove a great deal of advertising and publicity for British sound companies.

**[SLIDE 8]**

British Thomson-Houston (B.T.H.) was, at the time, undoubtedly the most successful British competitor in the domestic sound apparatus market. In March 1930, C. F. Trippe, manager of the B.T.H. Sound Reproducing Department, described their

---

<sup>11</sup> 'Sequel to W.E. Monopoly: B.T.P. Action Against Cinema Owners'.

<sup>12</sup> Gomery, *The Coming of Sound: A History*, 47–50.

<sup>13</sup> 'B.T.P. Disc System: New Attachment Evolved', *The Bioscope*, 26 June 1929.

<sup>14</sup> 'Advert for British Talking Pictures New Model', *The Bioscope*, 18 June 1930.

£1,250 equipment as, “sufficient to fill halls up to 2,000 seating capacity with ample reserve.”<sup>15</sup> This placed it within the market for larger cinemas, competing with Western Electric’s and R.C.A.’s similar models, priced at £2,800 and £3,300 respectively.<sup>16</sup> B.T.H., like R.C.A., fell under the broad multinational umbrella of the American conglomerate General Electric, but there is no evidence that they collaborated in the creation of their respective equipment, beyond adherence to General Electric specifications – to which any apparatus claiming to be compatible with all films would have to be. B.T.P., for instance, advertised their apparatus as such, highlighting their adherence to these specifications.<sup>17</sup>

**[SLIDE 9]**

Several other British companies created apparatus to compete with these more established manufacturers, including Gaumont’s British Acoustic system, which Laraine will talk about a lot more. Several of these appeared in Birmingham, including Mihaly, Classitone, Edibell and Synchronophone. Of these, Edibell had managed by the middle of 1930 to find some success nationwide, with 160 installations made by June 18<sup>th</sup>.<sup>18</sup> The British subsidiary of the American Edison Bell Corporation, Edibell had during the years leading up to the coming of sound cultivated a reputation for high quality recording fidelity, primarily through the ingenuity of its sound expert Paul Voigt. Voigt’s horn and loudspeaker, on first demonstration in the mid-1920s, claimed to be the first to be able to accurately convey all the bass tones audible to human ears. A record of the apparatus’s debut recalls, “On this occasion, for the first time in history,

---

<sup>15</sup> C. F. Trippe, ‘The B.T.-H. Reproducer’, *The Bioscope*, 19 March 1930.

<sup>16</sup> ‘Sound Systems in Brief’, *The Bioscope*, 19 February 1930.

<sup>17</sup> ‘Advert for British Talking Pictures New Model’.

<sup>18</sup> ‘Talking Systems Summarised’.

the bass drums of a jazz band [were] distinctly heard coming over the ether.”<sup>19</sup> Voigt’s speaker innovations served as the foundation upon which the Edibell talkie apparatus was designed, incorporating its features into a stronger, lighter apparatus.

**[SLIDE 10]**

The beginning of 1930 saw some key successes for the company, including several installations on the European continent and an endorsement by the School of Projectionists.<sup>20</sup> The model available as of February was sound-on-disc only, which presented a distinct limitation compared to other options, despite its much-lauded audio quality and low price of £300. Its competitive pricing may have also been due to its limited capability; the C.E.A.’s Technical Report on the equipment notes that the Edibell was only suitable for halls up to 600 capacity, and whilst the company claimed that it could be used in larger halls, “The sets we have heard indicated very clearly that to attempt to do so calls upon the apparatus for efforts greater than the capacity, [...] manifested by an unevenness of tone in the higher ranges and emphasises deficiencies of lower notes.”<sup>21</sup> The addition of sound-on-film and other technical and commercial concerns saw the apparatus, now known as the Edibell Super Equipment, rise to £895 for alternating current; £965 for direct current by September 1930.<sup>22</sup> The loss of their price advantage, at a time when many smaller exhibitors were finally converting to sound, may have contributed to their inability to propagate as far as Western Electric or B.T.H.

**[SLIDE 11]**

---

<sup>19</sup> ‘A Hole in the Wall: How the Edibell Speaker Was Evolved’, *The Bioscope*, 4 December 1929.

<sup>20</sup> ‘Edibell’s Continental Successes’, *The Bioscope*, 8 January 1930; ‘Projectionist School and Edibell’, *The Bioscope*, 8 January 1930.

<sup>21</sup> ‘General Council Receives “Talkie” Equipment Report’.

<sup>22</sup> ‘Advert for Edibell Super Equipment’, *The Bioscope*, 3 September 1930.

Mihaly Universal Tone-film was established in June 1930 to commercially exploit the technical innovations of Denes Mihaly, a Hungarian-born technician who had developed new methods for sound-on-film reproduction, and who had dedicated much of his life to early advances in television. An account of an early demonstration of the Mihaly Tone Sound System in August 1930 describes the system as having projected the sound track itself, along with the picture, into the auditorium, at which point the filtered light would fall upon a photo-electric cell and be electrically converted to sound.<sup>23</sup> The rationale behind this arrangement was the elimination of electrical and mechanical interference from the rest of the projection apparatus in the operating box, and removing the need for as much wiring from the photo-electric cell to the speakers on the stage, near the screen. By the end of 1930 the apparatus was described as working in the same general way but projecting the sound track onto a wall in the operating box, rather than into the auditorium proper.<sup>24</sup> The Mihaly was cheap, at £350 for the addition of sound to a silent house and £250 for an attachment for existing sound-on-disc set ups, explicitly designed as an option for smaller houses, who could not afford more established larger equipment, nor the alterations required to send wiring from the operating box to the stage. The owner of the Copenhagen Cinema, Islington, wrote in a 1931 letter to London County Council asking for permission to proceed with sound installation that, “I am desirous of putting in a Mihaly Talkie set, because it is the most economical I can afford.”<sup>25</sup>

**[SLIDE 12]**

---

<sup>23</sup> ‘Pick-Up at the Screen: The New Mihaly System’, *The Bioscope*, 6 August 1930.

<sup>24</sup> *Kinematograph Year Book, 1931*, 214; It is likely that the location of the photoelectric pick-up was largely at the discretion of the exhibitor. See ‘Film Technical Progress in 1931’, *The Motion Picture Projectionist*, August 1931, 37–38.

<sup>25</sup> Elias Cohen, quoted in Sam Nightingale, ‘Copenhagen Cinema’, *Islington’s Lost Cinemas*, accessed 24 September 2016, <http://www.islingtonslostcinemas.com/portfolio/copenhagen-cinema/>.



Classitone and Synchronophone were two sound systems manufactured by Birmingham locals.<sup>26</sup> The Synchronophone device, developed by the Moon brothers of Holloway Head, launched at the end of 1929, with its only local installation being the Waldorf in Sparkbrook, who would replace it with Western Electric equipment by 1931.<sup>27</sup> Little information exists for the apparatus, although Synchronophone seems to have been, paradoxically, a non-synchronous gramophone device for playing records as accompaniment to films.<sup>28</sup> Several manufacturers of proper talkie apparatus made non-sync attachments available, which were typically used for intermissions and interludes.

**[SLIDE 13]**

Classitone saw yet greater success. Marketed and sold by W. A. Webb of Birmingham, sole agent in the Midlands for Ross Projectors, the Classitone was a true talkie apparatus, despite having begun in 1929 as a non-sync device. Their first installation was in Birmingham itself, at the Tudor in King's Heath in March 1930, soon followed by the Triangle in Highgate and a handful of cinemas in other cities.<sup>29</sup> It was priced at £350 as a solely sound-on-disc apparatus; sound-on-film capability was added in the months that followed, bringing the price up to £450. The equipment's success was primarily limited to the Midlands; managing to secure all installations in Kidderminster by the time it went all-talkie in August 1930.<sup>30</sup>

**[SLIDE 14]**

---

<sup>26</sup> Another device called Synchronophone is described in *Kinematograph Year Book, 1931*, 217 as being equipped for sound-on-film and sound-on-disc exhibition. This is likely the work of the Synchronophone, Ltd. described in 'New Companies Registered (Synchronophone, Ltd.)', *The Bioscope*, 8 October 1930 which was incorporated in London in October 1930, and whose makeup did not include any involvement from the Moon brothers.

<sup>27</sup> Ford-Jones, 'Synchronophone'.

<sup>28</sup> Its somewhat incongruous name likely refers to the fact that such devices were advertised as providing "synchronisation" to films, in that they would be played in synchrony with the films themselves. It is not necessarily a reference to any reproduction of the sound tracks of sound films.

<sup>29</sup> 'Classitone Sound Apparatus: Success of W. A. Webb's Invention'.

<sup>30</sup> O. Ford-Jones, 'Birmingham and Midlands', *The Bioscope*, 27 August 1930.

Several local manufacturers and inventors attempted to break into the market for sound apparatus throughout the Midlands. In Nottingham, Marshall Sound System, Ltd. was registered early in February 1930 to manufacture and market sound cinema equipment.<sup>31</sup> Their pre-release advertising focused on its quality and features, boasting a fully mains-powered system throughout, and its design as being “for cinemas and not an erected wireless job”, undoubtedly in contrast to other machines that, like the Classitone and Synchronophone, comprised of equipment partially retrofitted to function as cinema apparatus.<sup>32</sup> The pre-release also made note that it was a wholly British set – but not its asking price of £1,500.<sup>33</sup> Despite the numerous features the equipment had, this high price placed it squarely in the prestige category of apparatus options, where major companies like Western Electric and B.T.H. had already staked vast claims. Indeed, by the time of the launch of Marshall’s equipment, the larger companies had begun trying to court in earnest smaller halls with more modest, and more modestly priced, wares. Incidentally, Marshall did produce a Junior model of their equipment for small halls, priced at £800 as of June 18<sup>th</sup> 1930, yet even this price was higher than options such as Edibell (£700), British Cinephone (£700), Filmophone (£650 – even their Senior set was just £750) and budget options like Classitone.<sup>34</sup> By this time, Marshall had only made three installations, all within the Notts and Derby area.<sup>35</sup> By year’s end, Marshall had lowered its costs across the board - £1,250 for the Senior set (not seen on advert from July), £695 for the Junior, £525 for the Junior without sound-on-disc support – but it is unclear as to whether the apparatus gained traction in cinemas nationwide.

---

<sup>31</sup> ‘New Companies Registered (Marshall Sound System, Ltd.)’, *The Bioscope*, 26 February 1930.

<sup>32</sup> ‘Preliminary Announcement for Marshall Sound System’, *The Bioscope*, 12 March 1930.

<sup>33</sup> ‘Advert for Marshall Sound System’, *The Bioscope*, 14 May 1930.

<sup>34</sup> ‘Talking Systems Summarised’.

<sup>35</sup> *Ibid.*; ‘The Marshall Sound System’, *The Bioscope*, 12 March 1930.

**[SLIDE 15]**

Around the same time as the launch of the Marshall system, a talkie set emerged from the Leicester-based electrical firm A. E. Morrison and Sons. Morrison was a well-established producer of electrical supplies and vehicles, and their venture into cinema largely came about through their existing experience manufacturing non-sync sound amplifiers and electrical rectifiers, already used in cinemas around the country. Unlike most vendors of sound equipment, their initial offering consisted of synchronising equipment licensed from an American company, operating in combination with Morrison's amplification equipment, and sold as a complete unit.<sup>36</sup> The Morrison set was initially sound-on-disc only, but it constituted one of the most economically priced options for small exhibitors; on announcement in March 1930, Morrison equipment was priced at £160 for halls up to 500 capacity, £180 for 600-800 capacity, and £200 for capacities to 1,000. Advertising matter indicates a rise in cost as 1930 passed, reaching £500 for a complete film and disc system, including wiring, in October.<sup>37</sup> By the end of the year, Morrison also had available a model suitable for cinemas of up to 2,000 seats, priced at £750.<sup>38</sup> Their pricing was a key aspect of their advertising, which stated, "Although your Opposition may use a £2,000 apparatus you need not fear if you are 'Morrison' equipped."<sup>39</sup>

**[SLIDE 16]**

Morrison would see most of its success from 1931 onwards, as the company developed a full system in-house and exploited its holistic approach to installation for

---

<sup>36</sup> 'New Disc Set', *The Bioscope*, 12 March 1930.

<sup>37</sup> 'Advert for Morrison Sound', *The Bioscope*, 15 October 1930.

<sup>38</sup> *Kinematograph Year Book, 1931*, 216.

<sup>39</sup> 'Advert for Morrison Sound'.

small and rural exhibitors, allowing for facilities such as standalone electric plants to be installed as part of the conversion. Over 120 British cinemas installed Morrison apparatus at some time, and the company had some success overseas, both in Europe and North America.<sup>40</sup>

**[SLIDE 17]**

The successes and failures of British apparatus manufacturers were dependent on numerous factors that the evidence cannot entirely account for. The character of the exhibition market, as it related to vendors of sound equipment, was characterised by a stratified hierarchy, where larger and smaller cinemas were catered for with different products. It is likely that the failure of companies like Classitone, Edibell, Mihaly or even the much-lauded Morrison to truly impact the success of the dominant sellers – especially Western Electric – is partly due to the W.E.’s early recognition of the smaller exhibitor’s needs and budgets. The proliferation of deferred payment plans allowed exhibitors with little capital to join the ranks of the country’s most illustrious halls as Western Electric houses, a sense of status that the company sought to nurture. Through an extensive, sustained marketing campaign and backed with the credibility afforded to it by its connection with the production efforts of Vitaphone and Movietone, Western Electric was a de facto gold standard. This is perhaps best illustrated by a letter sent to A. E. Morrison & Sons by the proprietor of the Aberystwyth Imperial Cinema who, intending his statement to be the highest of compliments, wrote, “I must say that I consider your sound almost, if not quite, as good as the W. E.”<sup>41</sup>

---

<sup>40</sup> ‘Cinemas with “Morrison” Equipment’, n.d., DE5269/14, Leicestershire, Leicester and Rutland Record Office; ‘English Talkie Set for \$1,300’, *The Film Daily*, 27 September 1931.

<sup>41</sup> Patrick D. Gordon, ‘Letter to A. E. Morrison & Sons, Ltd.’, 26 September 1932, DE5269/14, Leicestershire, Leicester and Rutland Record Office.