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RESTORATION REPORT

1786 Jacob & Abraham Kirckman Double-manual harpsichord ex John Barnes

This report should be read in conjunction with the pre-purchase report by Cesar Hernandez and comments by Ben Marks, and the extensive picture files.

Inscriptions

The nameboard batten is inscribed:

Jacobus et Abraham Kirckman Londini Fecerunt 1786

and the soundboard contains the second variety of rose (Mould's Type B1) used by Kirckman, a gilt metal trophy of King David playing the harp, reading from the keyboard and incorporating the initials *I.K.*

An ink inscription appears on the wrestplank in front of the 8' nut:

Restored – 1915 by Charles Hersant – 49 Lennox Road, Finsbury Park, London. N.

A pencil signature appears on the bottom of the lower manual FF# key:

W Archer 7/9/[18?]65

An ink inscription now appears on the reverse of the keyslip batten:

CAREY BEEBE / SYDNEY / 2026

Condition on initial inspection, noting previous interventions

The harpsichord on arrival in Sydney showed signs of longterm neglect and was considered barely playable. The pitch was measured to be A384.

There is a design anomaly on this instrument I have not noted on any other Kirckman, as the distal wrestplank which supports the 4' nut is a few mm lower than the soundboard and main wrestplank. It is not known why Kirckman would have done this.

It was evident that the instrument has been much altered in the past. The extreme treble of the bentside hitchpinrail has been replaced. The tail hitchpinrail likewise has been replaced, although its moulding does not quite match and the workmanship is not so neat. Both rails, however, are firmly attached and show no signs of failure. The hitchpins in these replaced rails are iron rather than brass, and in a different alignment to that expected. The cap veneer at the tail increases in taper to >6mm at the tail/spine joint, probably in an effort to visually correct previous case distortion of a twisted tail. The original pairs of wooden gap spacers have been replaced with metal box girders. The case remains quite flat. The nameboard is not so firmly attached to the wrestplank, and has risen 2mm at the spine.

There is a removable section of the bottom under the rose which enabled a limited inspection of the interior. There is reinforcement of the bracing in various areas, with glued and screwed additions. The cheek/bentside case corner block was dislodged.

None of the alterations and additions mentioned above are shown on the Richard Ireland 1975 drawing, made when the instrument was in the possession of John Barnes.

The 8' nut has been removed and reinstated at an increased height of 5mm, as witnessed by the unusual jump in the pale thick wrestplank veneer in the lower tenor. It's not entirely clear why this modification was necessary. This work, most likely carried out in 1915 by the Mr Hersant who signed on the wrestplank, has several negative implications:

- There is reduced downbearing on the bridge in the treble to the point where the strings cross the bridge almost level;
- All the unison jacks had to be extended in height at that time to suit the higher stringband; and
- The 4' downbearing at the nut was inadvertently reduced as those strings from the tenor up have to run through the holes pierced in the 8' nut to reach their tuning pins.

A small window and associated screw holes in the spine remain as evidence of a probably early C20th addition to work the harp stop by the machine. This addition had been removed on some subsequent occasion.

The instrument retains its original fallboard with later lock, although age-related shrinkage of the fallboard has been accommodated by an additional mahogany strip glued along its bottom edge, and also flat mahogany packing pieces at its two bottom internal corners. There is a poor inset repair around the missing brass escutcheon and no key accompanied the instrument. The mahogany lid stick is modern.

The lid had been rehinged with rough cut wooden plates under the spine hinges. The Nag's head swell had modern cloth strips tacked to the full perimeter length of the lid underside. The original gilt iron screws for the hinges and lid hooks have been replaced with brass.

The instrument interior was filthy, with mould and stains on the soundboard and wrestplank. The top surface of the lid was badly stained. Areas of veneer were loose, and some parts of the chevron stringing inlay missing. A chunk of wood was missing around the treble flap hinge. Sections of the bottom moulding had been replaced. There were poorly executed veneer repairs at the tail.

The ivories of the keyboards do not appear to be replacements and have the expected slight rounding of the sides of the heads, although unusually lacking the expected score mark. There is minor pitting of the ivories, likely resulting from radical bleaching to a uniform very white appearance. The mortises have been neatly tightened by inserted shims. The front pins of both keyboards have been replaced with oval pins which were found to reduce the available keydip to unusable, especially on the upper keyboard accidentals. Attempted past rectification by banging the pins lower has split and pushed out the underside of the oak upper keyplank for a section in the bass. There is a hardwood insert in the upper balancerail to hold its bottom four balance pins. The two holes in the lower frontrail for keyboard holddown screws have been relocated towards the rear. Thin softwood flats have been glued to the lower keyframe to raise both front and back.

The sheepskin and cloth keyend layers have been relatively recently replaced in correct manner. All the keyboard cloths are modern, laden with dirt and showing signs of insect damage and droppings. The original castellated layout of the balance rail cloth as evidenced by the usual chisel marks on the balance rail, were replaced by modern thick grey cloth punchings. Assorted paper punchings, some quite old, and others recently handcut in square shape and left on top of the cloth punchings, had been used to level the keys.

The jacks are all typically Kirckman and almost all original to this instrument. They have the usual stamped numbering to identify note and register. The jacks of the front (lute) register are identified by 0; the dogleg 1; back 8' 2; and 4' 3. There are a few replacement jacks from other instruments apparently also by Kirckman, one or two renumbered by pencil. All the jacks have been extensively reworked, not only with the height additions already mentioned, but with numerous repairs or replacement inset pieces to broken damper arms, and glued accretions to reduce what must have been perceived slop in the register fit, particularly on the thin doglegs themselves. A number of tongues had growths of white fungus, probably resulting from the type oil used for the quills. Rather than being blind, the axle pins of all choirs somewhat unusually virtually penetrate the jack bodies.

The back 8' jacks have holly tongues throughout, rather than the consistent Kirckman practice of both unison choirs (not lute) using holly in the bass, changing over to boxwood at tenor f#. Are these holly tongues original? If so, together with the neatly wooden plugged square mortises of this choir, it could indicate this register originally had leather plectra. That register was relatively recently quilled in Delrin, whereas the other choirs were varieties of real quill, most apparently crow, with a few odd Delrin replacements.

The harpsichord was neatly but rather heavily strung in modern yellow brass (largest diameter 0.80mm) with some odd bass strings of higher copper content, crossing over to steel ranging in diameter from 0.40mm to 0.23mm in the extreme treble. The tuning pins are mostly original and undrilled. Some, however, were discovered upon removal to be much longer replacements.

Removal of strings and action

The action was removed and the jacks stored in order on trays. The existing string diameters and materials were measured and noted prior to removal. Although these strings were not original, the hitchpin loop ends were retained in order to allow any future study. The tuning pins for each choir were stored in order in a dense foam block. The soundboard was given a preliminary clean and the instrument was handed over to my cabinetmaker Eddy Valk for his specialized work undertaken in his own premises.

Cabinetwork

The sole soundboard crack in the extreme treble was shimmed. The soundboard, wrestplank, bridges and case rim veneers were cleaned and the finish revived. Cracks in the bottom were shimmed and the missing stand locating blocks fitted. The dislodged internal case corner block for cheek/bentside was reattached. The loose nameboard was reglued to the wrestplank, and trunailed from the spine for reinforcement. The replaced section of the bentside bottom moulding was colored to better match the case. The later screwed-on batten at the top of the machine box was removed and the screw holes in the spine filled. A repair was made to the fallboard, a brass escutcheon fitted and a key cut for the lock.

The lid exterior was stripped for stain removal, and damaged or missing areas of the chevron stringing inlay were replaced. The lid was then repolished to match the case. The brass hinges were cleaned and revived, and the lid refitted to the case. Replacement brass screws were installed for the those missing in the hinges for the flap and Nag's head swell. The non-original cloth which was tacked to the bentside perimeter of the lid for the Nag's head swell was removed, and the tack holes filled. A piece of old mahogany was used to repair the damaged distal treble edge of the jackrail. All work was carried out with hot glue. All metal mechanical parts including the machine stop were cleaned and lubricated, and the instrument returned to my workshop.

Keyboards

The five-octave keyboards have sixty-one notes FF-f'''. The lime upper keylevers are each numbered by hand in ink in front of the balance mortise, the lower likewise but perhaps in pencil, generally very faded, some to the point of illegibility. The detached treble end of the lower balancerail was reglued to the stile. The keys of both manuals are guided by modern oval frontpins which were found to restrict the keydip by the underside of the keycovers, banging when making contact, especially on the accidentals. The front pins were removed and the length of their tangs reduced, whereupon they could be reinserted in the keyframes and seated to appropriate height without penetrating and damaging the underside. All keyboard pins were polished clean and frictionless with very fine steel wool. Remnants of glued card to the front of the upper keyboard plank, probably to reduce keydip in the past, were removed. Reproduction cloth was fitted by blued tacks to frontrails and backrails, and the single layer for both balance rails cut in the expected castellated form. The keylevers and covers were cleaned and the relatively recent leather keyend coverings revived. The balance mortise of lower key #1 required a wooden block inset for repair. The ivories were buffed and the keys leveled and spaced, some requiring ironing to correct alignment.

Stringing

The 8' nut retains its original string gauge stampings, while there are no markings on the 4' nut. The speaking lengths of the 4' and long 8' choirs were measured and a stringing schedule devised. The total tension was calculated at 888kg at A415. The tuning pins which had been retained in order when the instrument was destringed were lightly buffed on a stitched cloth wheel with tripoli to remove their surface rust. The harpsichord was then restrung using Birkett brass and P-wire iron with traditional friction wrapping. Careful attention was paid to consistent downbearing, and the strings chipped to A415 pitch in preparation for installation of the keyboards and action. Some wrestplank holes had to be deepened to accommodate the length of particularly long tuning pins, mostly in the area of the lower tenor where the wrestplank veneer stepped down to usual height. Only one or two holes required simple loose shimming with a thin parchment strip to ensure good tuning pin fit. A metal tuning hammer was prepared and its slot modified for best average fit on the pins to allow for comfortable and accurate tuning.

Disposition & Action

There are four registers, from front to back:

Lute 8' ←, Front 8' ←, Back 8' → & 4' ←

The Lute register plays from the upper keyboard, and the Front 8' jacks are dogleg, so when that register is engaged, it plays from both keyboards. There is no coupler. There is a harp stop on the back 8'. In Mould's alphanumeric coding system, this instrument is represented as 2284HLMS.

There are five handstops terminated by brass knobs in the keywell. From the left, these are as follows:

Harp ← Lute ← 4' ←

At the treble:

Front 8' dogleg → & Back 8' ←

The existing plectra and dampers were removed, and the jacks cleaned. The jacks were in poor condition and required much repair. Some jacks required their tongues to be removed to effect reliable repair to broken damper slots, including redoing previous repairs. These new repairs were all done with hot glue. Many tongue mortises were found to be substantially enlarged, and had to be swelled tighter with warm water and/or diluted glue to sufficiently hold the new quills. A few tongues were found so badly damaged that they had to be replaced, along with their axle pins and/or staples:

The repaired jacks are as follows (replacement tongues are **bold**):

Lute (register 0): #22

Dogleg 8' (register 1): #9, #11, #15, #16, #17, #18, #20, #30, #35, #44, #51, #57, #60

Back 8' (register 2): #4, #8, #12, #14, #15, #24, #31, #35, #40

4' (register 3): #7, #8, #10, #13, #21, #39, #51, #53, #58

Most of the boar bristle springs proved to be more than adequate, so only those which were noticeably weak required replacement. Some plastic and odd other springs were also replaced with white bristle. Soft leather had been glued at some stage to the spine plug and cheek, probably to reduce noise of the register ends otherwise hitting wood. Card shims which were glued to that soft leather were removed. The stop lever fulcrum holes in the wrestplank were packed with glued oak strips as necessary to ensure sufficient fulcrum screw friction. The register positions were adjusted with any necessary card shims glued to the register ends themselves, before the harpsichord was freshly quilled throughout in crow, and the quills lightly oiled.

The jacks were adjusted for height to bring the quills a consistent distance below the strings. Most required slight shortening by sanding the earlier bottom extension blocks down. Those jacks which were found to be too short were lengthened in the traditional manner by hot sealing wax. (A few jacks showed fragments of remaining red wax from early times.) The quills of all choirs were ghosted for consistent length relative to their strings. The lute and dogleg registers were staggered with zero separation because it is entirely possible

for both those registers to be engaged at once and when played from the upper keyboard, must pluck the same string at the same instant producing a trumpet-like tone.

New dampers were fitted to all choirs and side-cut. Fine adjustments were then made to the voicing and regulation including optimising the keydip for the most comfortable touch.

The lute jackrail retained its single probably original green woollen cloth layer. A substantial wooden strip was required to be glued to the main jackrail for the 4' choir in the bass, essential to prevent those jacks bouncing because of the increased height of the 8' stringband following the 1915 intervention. Reproduction woollen cloth in various layers was installed on the main jackrail. Additional layers of thinner woollen cloth were required in the treble of the unison choirs for precise adjustment.

A small discrete oak block was glued to the spine and wrestplank to limit the travel of the harp stop lever. The leather buff pads are old, and the several that had to be removed and slightly relocated particularly in the bass to provide proper buffing revealed the likely pin marks in the batten of the original pads.

Machine stop & Nag's head swell

When the Machine is engaged by pushing the brass knob on the spine keywell towards the tail, the stoplevers for the 4', lute, and dogleg registers are overridden, and in effect then solely controlled by the left pedal. The original Machine stop mechanism was adjusted to improve its intended timing in retracting the 4' register slightly before swapping the dogleg for the lute register. The back 8' remains ON if its hand stop is in that position. The scallop in the lower manual C# key required shaving to allow greater clearance for the iron transmission rod which penetrates the bottom and screws to the bar running horizontally under the wrestplank to the spine exterior.

The Nag's head swell is controlled by the right pedal. The lid contact roller was lubricated, and round leather pads were glued to the underside of the lid where the swell panel bears on the case top rim.

Displaced parts & spares for future care

A large flat box was prepared to hold all displaced parts including cloths and the modern strings, labeled and bagged for keeping with the instrument. A small stock of expendable spares was assembled for future maintenance needs, including tuning hammer, a spare prepared string of each gauge and material along with stringing schedule, three dozen crow feathers, a small dropper bottle of oil, and several white boar bristles. The instrument was measured for a custom-made padded cover which was delivered to Perth after the instrument was dispatched.

Return of the instrument

The completed harpsichord was carefully repacked in the UK crate for express roadfreight to Perth by Transcoast Express, and a brief site visit made two weeks after arrival for final adjustments to the action.

Acknowledgements

I am very grateful as always for the advice of my colleagues with extensive experience in English harpsichords, in this restoration particularly Huw Saunders and John Watson. I must also acknowledge the special skills of my cabinetmaker Eddy Valk, along with the wonderful assistance of my trainee technician from Perth Oliver Beeson, who will be the man onsite to tend the harpsichord at WAAPA.

Carey A. Beebe

Carey Beebe
19 March 2026

Photo folders

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| 1. | Cesar Hernandez UK inspection | 61 pictures + 6 videos |
| 2. | UK packing | 3 pictures |
| 3. | Arrival in Sydney & initial inspection | 38 pictures + 1 video |
| 4. | Casework | 10 pictures |
| 5. | Interior | 20 pictures |
| 6. | Keywell | 15 pictures |
| 7. | Cabinet repairs | 76 pictures + 2 videos |
| 8. | Soundboard, bridges & wrestplank | 53 pictures |
| 9. | Keyboards | 104 pictures |
| 10. | Stringing | 38 pictures + 2 movies |
| 11. | Action | 141 pictures + 1 movie |
| 12. | Machine stop | 24 pictures |
| 13. | Nag's head swell | 5 pictures |
| 14. | Completed instrument in workshop | 18 pictures |
| 15. | Displaced parts & spares | 1 picture |
| 16. | Packing for departure to Perth | 3 pictures |

Other documentation

1. 1975 Technical drawing by Richard Ireland
2. Cesar Hernandez report
3. Ben Marks report
4. CITES permit
5. AWB
6. Stringing data

