

RECONSTRUCTING SALAH AL-DIN MINBAR OF AL-AQSA MOSQUE: CHALLENGES AND RESULTS

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Abstract

Salah Al-Din Minbar (pulpit) has a distinguished value in Islamic art, which is originated from its historical value of being constructed 800 years ago representing a symbol of dignified historical era; and to its political value as this Minbar had formed an emotional spur during the Crusades; and above all it is considered as one of the most beautiful and finest pieces of Islamic decoration art. After a devastating arson blaze nothing was left of the Minbar except some wooden pieces and few photographs that had been taken at previous periods of time. The need to rebuild and renovate Salah Al-Din Minbar of the Aqsa Mosque as similar to the original Minbar has arisen and met the Jordanian Royal mandate. This paper documents reconstructing the model Minbar to be exactly like the original one which was a sole job until the time, especially because of the decorations' diversity and the need to adopt the traditional craft techniques which require deliberate synthesized studies to prepare the drawings and construct the Minbar. The model Minbar was totally completed within 14 years.

Keywords: *Minbar, original Minbar, model Minbar, main traditional decorative patterns, traditional craft techniques*

Introduction

This paper documents the reconstruction of Al-Aqsa mosque Minbar in Jerusalem which is known as Salah Al-Din Minbar which was blazed in 1969.

Sultan Nour Al-Din Zinqi ordered to construct the Minbar in 1167 but he died before its completion; Salah Al-Din Al-Ayyubi who followed him had installed the Minbar at Al-Aqsa mosque on his triumphant restoring of Jerusalem from Crusaders in 1187 [1, 2].

This research describes the stages of Minbar rebuilding, starting with the preparation of Minbar drawings depending on some photographs and on the wooden pieces remainders leftover the blazed Minbar; consequently working-drawing plans were prepared to cover the whole Minbar design and details; plans were also revised by specialized committees to make sure it conforms the original Minbar. Another specialized committee had chosen the craftsmen and technicians who arrived from several Arab and Moslem countries to work as a one team in order to construct the model Minbar.

The Minbar of the mosque is a platform mounted by the Khatib who delivers the sermon on Friday prayers and the two Muslim feasts' prayers. The minbar permits the Khatib to oversee the congregation of prayers and also allows the prayers to see the Khatib during the listening to his speech; thus achieving the objective of this meeting.

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Beyond the social and religious value of the mosque's minbar, the role of the minbar is extended to political value as well. The minbar speech presented by Governor himself in his place of residency or including the prays to bless and save the Governor within Khatibs' speeches of other mosques' minbars is a religious Islamic tradition that proves governor's legitimacy and sovereignty [1-10].

The mosque minbar has also functional reasons; it is also a vital visual component leading worshipers to Kiblah direction (prayer's direction), as it is located next to the mihrab (niche) where the imam (leader of prayers) stands to lead the prayers at the middle of kiblah wall in the mosque.

The valuable meanings of mosque's minbar had motivated Moslem craftsmen and artists to decorate wooden minbars with the carved Koran verses, geometrical and floral patterns making masterpieces of Islamic art decoration that meet the desired function accompanied with high aesthetic values.

History and importance of original Minbar of Al-Aqsa Mosque

Jerusalem was occupied in 1099 AD and remained under Crusader occupation about 90 years. Sultan Nour Al-Din Zinki had prepared for the liberation enhancing the symbolism of holy and blessed Jerusalem as for regarding Muslims. His soldiers were motivated with making the Minbar ready to be placed in Al-Aqsa Mosque after liberating Jerusalem. He had chosen highly skilled craftsmen to implement this Minbar [4].

The importance of Al-Aqsa Mosque Minbar, which is named later after Sultan Salah Al-Din Minbar or the original Minbar, is because it marks out the victory and liberation of Jerusalem, in addition to the importance of artisan and aesthetic values of the original Minbar shown in figure 1.

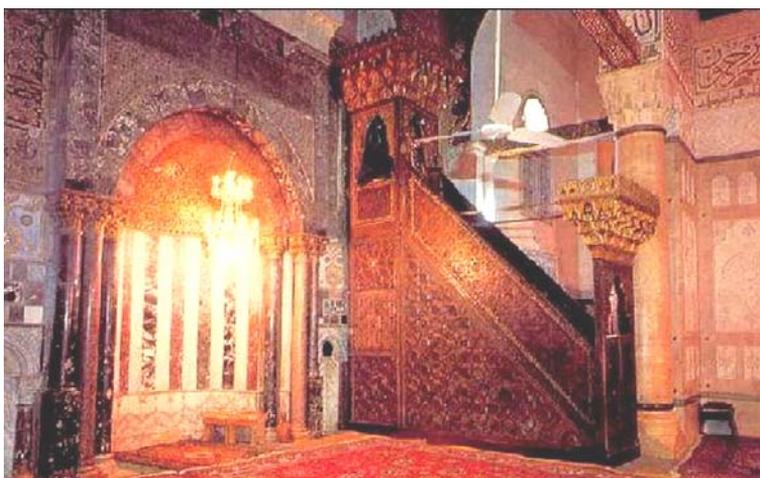


Fig. 1. Al-Asa Mosque Minbar: Salah Al-Din Minbar or the original Minbar.

The artistic value of Salah al-Din Original Minbar

The Ayyubid period had an excellent flourishing decorative art. Many craftsmen, who migrated from Mousel in Iraq to Egypt and Syria, had transferred their crafts' methods with them. The Ayyubid decoration was affected by Seljuk decoration types especially the wooden carved decorations of Syria [5]. The wooden decoration had shapes of polygonal fills and star plates which were decorated with geometrical network based on square, hexagon, octagon and decagon accompanied with spiral floral designs; the decorations were also inlaid with ivory and ebony.

Al-Aqsa Mosque Minbar is considered as an exceptional fine Islamic decorative wooden work of art.

Decorations of Al Aqsa Mosque Minbar included geometrical decorations, plant motifs and Arabic calligraphy. The Minbar had formed a beautiful and accurate piece of art which consist of the following main traditional decorative patterns:

- *Woodcarving*: Wooden panels including its frames and fillings were carved with minute floral and geometrical integrated patterns, forming three dimensional decorations with equal depth. Also Koran inscriptions were carved either overlapping with floral patterns or without overlapping.
- *Turnery*: The process of turning small wooden pieces and then assembling the pieces together as artistic panels which form parts of the Minbar body.
- *Inlaying*: The carved panels were inlaid with thin pieces of ivory and ebony which had been cut according to the designed patterns to be settled into the carved wooden surfaces forming precise integrated geometrical shapes of decoration.
- *Muqarnas* (overlaid squinches): Stacking the identical sculptured wooden pieces of intergraded decorated arches in layers on top of each other to form the crowns above the minbar's door and Khatib's platform. Muqarnas is the most difficult decorative pattern to implement due to the need of designers' and craftsmen's great imagination.
- *Arabic calligraphy*: a number of Arabic Koran verses stripping on the handrail of stairs and on the frames of Minbar panels.
- *Interlocking*: Interlocking is used for the assembly of about 6500 of wooden pieces making the Minbar, where as varying sizes and shapes of wooden pieces were gathered to make strong and tight fine details of several geometrical decorative shapes without the use of adhesives, nails, screws or any other fixing material [6].

Methodology of constructing the model minbar

Constructing the model Minbar to be exactly similar to the original Minbar, which was almost entirely blazed, did not follow any known systematic methodology. The implemented methodology was required due to the unique privacy of the project. Methodology and constructing stages are summarized as follows:

Studying Islamic decorations

Studies which took place were concerned with the decoration patterns of that period in which original Minbar was built, and with tracking similar decorative works and minbars which were created at that period.

Collection of photos, drawings and documents

Collecting data and photos of the original Minbar and checking their consistency and corresponding with the geometrical bases of the Minbar. The collection included the following:

- Available photos, documents and films were collected from the Jordanian Committee of reconstruction; also Arabic, Islamic and international organizations and institutions were addressed about the need of original Minbar's photos which succeeded with getting some photos from Ashmolean Museum in Oxford and the Congress library.
- The remnants of the burned Minbar which were collected, cleaned and documented with photos as shown in figure 2 were also used in subsequent phases.
- The Minbar drawings which was laid by Jamal Badran as requested by Reconstruction Committee after the fire.

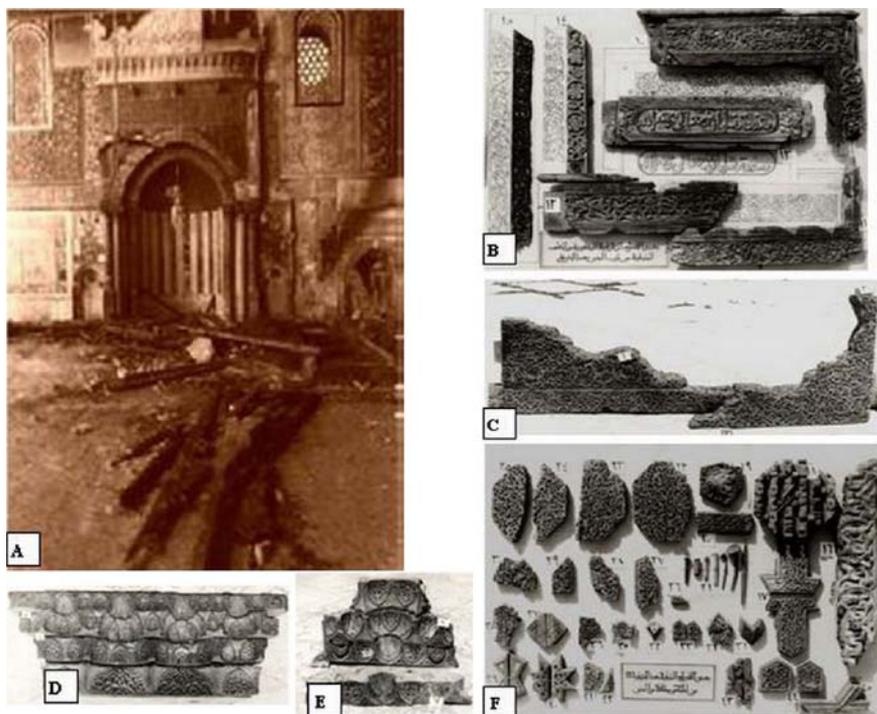


Fig. 2. Original Minbar after the fire (A); Remains of decorative frames carved with the name of manufacturer (B); Remains of the frame of Minbar door (C); Remains of muqarnas above the Minbar door (D); Remains of crown muqarnas above the Khatib platform (E); Remains of decorated pieces of burned Minbar (F), source: Museum of Al-Aqsa Mosque.

Minbar drawings of Jamal Badran

The Reconstruction Committee had commissioned the draftsman artist Jamal Badran the Maqdisi (of Jerusalem), who had excellent and extensive experience in the field of Islamic decoration. He drew 33 plates of the Minbar decorations at a scale of 1/1, making use of the remnants wooden pieces of the burned Minbar and the available Minbar images from museums as shown in figure 3.

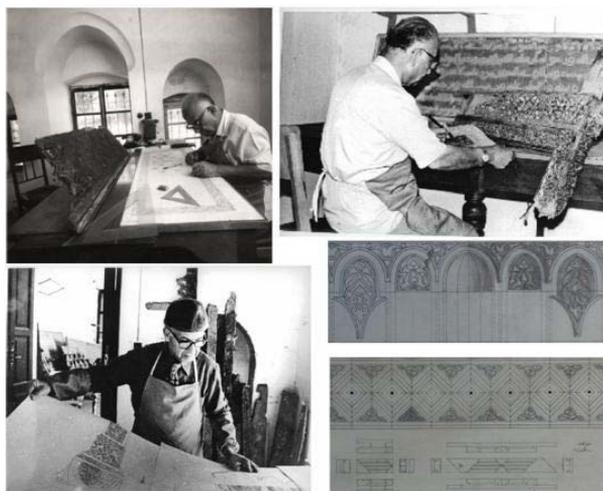


Fig.3. Jamal Badran plans of the Minbar.

Preparation of the computerized Minbar plans

A local engineering consultant office (Al-Mihrab for Islamic architecture) was selected to re-produce draw the plans for Jamal Badran and complete the missing drawings to achieve a complete scheme of decoration plans and detailed working drawings. Al-Mihrab office was supplied with photos and documents which were available from the Reconstruction Committee, and also via making use of the burned Minbar remains. The reconstruction committee had granted a specialized technical committee to follow-up the engineering office in order to approve the entrusted office team with preparing the Minbar plans and to give agreement of various stages of work.

Decoration Analysis

The study of geometrical bases of Islamic decoration art and tracking other decorative works, had led to the discovery of Al-Halawiah school niche in Aleppo which is carved with the same manufacturer's name had been found on the remnants of the burned Minbar. The motifs and decorations of this niche had given the advantage to understand the decoration types and the interlocking pattern which was used at the same period in the original Minbar of Salah Al-Din.

Mihrab office had analyzed geometrical and floral decorations in order to conclude the basic units of the motifs and the proportions which were applied within original Minbar. An example of the decoration analysis is presented here for the Minbar's door decoration as seen in figure 4:

- The creation of hexagon in the decoration of Minbar door is based on the unity circle and the six surrounding circles with their centers on the perimeter of the unity circle, while the circles themselves intersect at the center of unity circle (Fig. 4A);

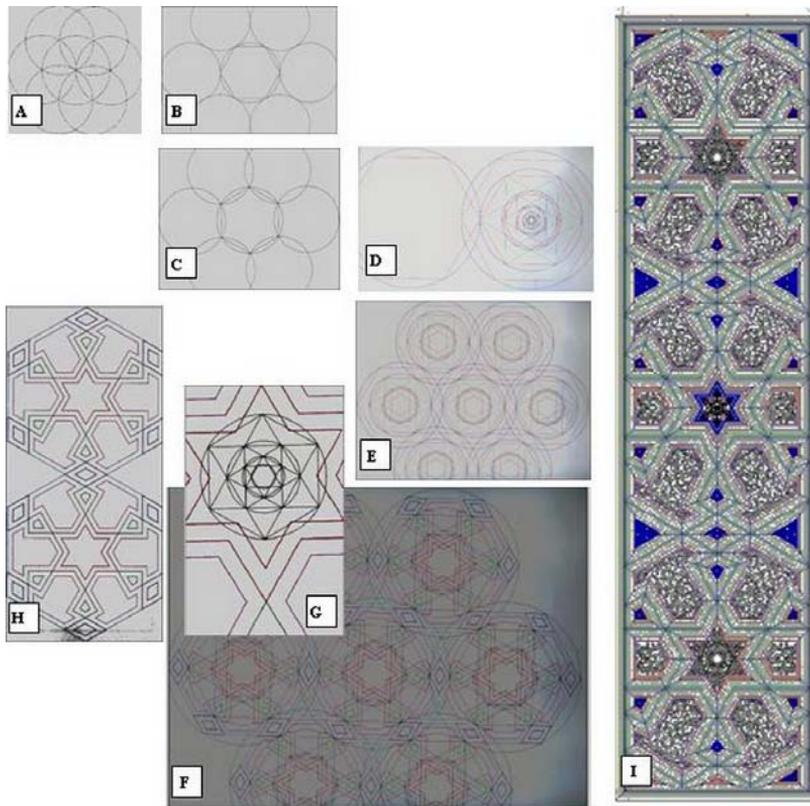


Fig. 4. Decoration analysis of the door of original Minbar [6].

- The six circles are transmitted to be tangent to the parameter of unity circle so that every three circles became contacting each other (Fig. 4B);
- The intersection of circles around the unity circle form twelve equal sections within the unity circle making up the hexagon which is the base of door decoration (Fig. 4C);
- The intersection of two circles surrounding unity circle and the two hexagons resulting of their intersection, where a circle is drawn from the center of first circle to contact the perimeter of second circle (Fig. 4D); The intersections of circles surrounding the unity circle and resulting hexagons (Fig. 4E);
- Hexagon is drawn inside the circle and keeps growing smaller getting a star which is derived from the same proportions of original shape representing the filling form (Fig. 4G). As repeating the previous steps within all circles, the geometrical decoration is completed (Fig. 4F).
- The chords are drawn within one circle and then repeated in all other circles; Decoration and chords crossings are illustrated as the extra lines are removed (Fig. 4H).

Preparing model Minbar plans

The Office has prepared Minbar plans according to the analysis of geometrical and floral motifs which has led to the used geometrical proportions for establishing the original Minbar, and also to understand how wooden pieces were connected in the original Minbar with interlocking.

Plans had been drawn to all parts of the Minbar. Detailed Plans also show dimensions, shapes and numbers of wooden pieces which form the frames and fillings of all decorative panels; drawings also show the ways of interlocking for the different shapes of wooden pieces. The main elevations and some examples of detail drawings are shown in figure 5.

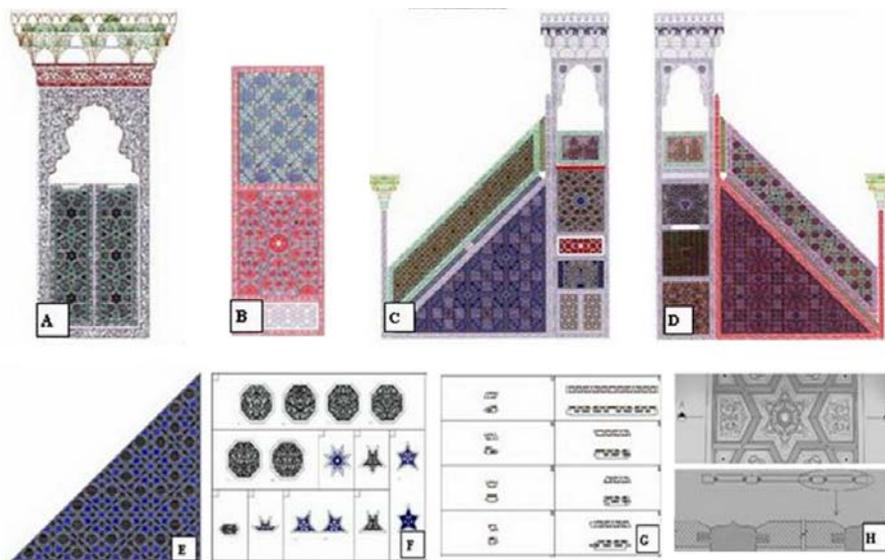


Fig. 5. The Minbar main elevations (A, B, C, D); Details and shapes of decorative fillings of the triangular panel in western elevation (E, F); Detailed section for interlocking of fillings and chords (G); Interlocking details of wooden pieces (H).

Implementing the model Minbar

Identifying parties for implementing and supervising model Minbar

The Reconstruction Committee signed up an agreement with a local university, Al-Balqa Applied University (BAU), to implement the reconstruction of model Minbar at the workshops of the faculty of Islamic tradition arts at (BAU). An appropriate workshop was chosen and

provided with the needed tools and equipments. The workshop where the work took place became later the nucleus of the Traditional Islamic Art Institution which provides its students and craftsmen with the technical professional experiences.

The Mihrab office who had prepared the model Minbar plans was also asked to supervise the manufacturing process which would be watched over by a specialized technical committee.

Preparing and selecting the working team

Technical workers were selected according to their specialties, testing their technical qualifications and evaluating sample models of their works; so the chosen team would cover the needed crafts including woodcarving, interlocking, inlaying, turnery and other technical carpentry crafts. About 30 carpenters and craftsmen had shared the completion of the model Minbar from many Arab and Islamic countries (Turkey, Egypt, Morocco, Syria, Indonesia and Jordan).

Preparing needed materials for constructing the Minbar

Walnut wood type of original Minbar was identified through practical and laboratory tests of the Minbar remains after the fire. Walnut was brought from Turkey for the purpose of building the Minbar and required quantities of ebony & ivory were imported from Sudan for inlaying decorations, so the used materials were similar to those of the original Minbar.

Implementing the model Minbar at workshop

The work was sequenced and distributed in relation to crafts' specialties to manufacture the decorative units of Minbar according to the following technical groups:

- **Woodcarving:** Carving all kinds of decoration including geometrical, floral and written strips. The piece of wood is being processed as the required form, and then the design to be conducted is pasted and marked with a pointed edge on the wooden piece at scale 1:1. This is followed by starting to engrave the background of decoration producing two levels, an outward surface and inward surface. Then showing the third dimension and embody required forms through grading the carved levels while showing wrapped movements and crossed decorations (Fig. 6).



Fig. 6. The implemented traditional craft techniques: Wood carving, Inlaying, Turnery, Interlocking (A – Cotters, B – Click & tongue, C – cotters connecting side door with the minbar body, D, E – interlocking of wooden pieces of chords), source: Applied Balqa University.

- *Inlaying*: The ivory and ebony pieces would be glued and inlaid within the prepared carved wooden decorations according to the desired design and thickness of the small flat pieces which would be later refined in its final shape.
- *Turnery*: Cutting small wooden pieces and assembling them to form parts of the Minbar body. Precise and beautiful shapes of turnery had been carried out at different locations of the Minbar. Turnery was used for the risers and railings of stairs and it was also used for the background of two panels containing the name of Allah on both sides of the Khatib's platform and used for the background of the lower decorative panel behind the Khatib's platform.
- *Interlocking*: It is an Islamic Innovation used for installing and fixing decoration units without the use of any fixing materials, but using the method of click-and-tongue and wooden cotters shown in figure 6. Interlocking permits the presence of voids which allow extensions and distractions of small pieces of wood in response to changes of air temperature; and therefore avoid bending and cracking decorative wooden panels.

The model Minbar assembly

The processed pieces of Minbar were collected, temporarily built and compared with the plans in order to correct errors and make adjustments to enable the completion of work with the required optimum accuracy. The temporary constructed Minbar of all manufactured decorative panels and units were compared with the scheme plans in order to deal with the observations or remarks to conduct final adjustments and add any needed necessary artistic touches.

Then the model Minbar was dismantled, packed in specified wooden boxes, shipped and installed in Al-Aqsa Mosque by the specialist technical team.

Matching the model minbar with original minbar

The conducted methodology for documenting and implementing the model Minbar was special and unprecedented. This methodology enabled the conformity of the reconstructed model Minbar with the original Minbar that was almost completely burned and highly damaged.



Fig. 7. Original Minbar at the Aqsa mosque (left). Model Minbar at the Aqsa mosque (Right). Source: Reconstruction committee.

A certain decorative panel through the different stages starting from its location in the original Minbar (Fig. 7), then within the drawings of Jamal Badran, and later in the plans done by Mihrab office, followed by the manufactured panel at workshop up to its location in the temporary constructed model Minbar. The correspondence of the constructed model Minbar at Al-Aqsa mosque to original Minbar is shown in figure 8.

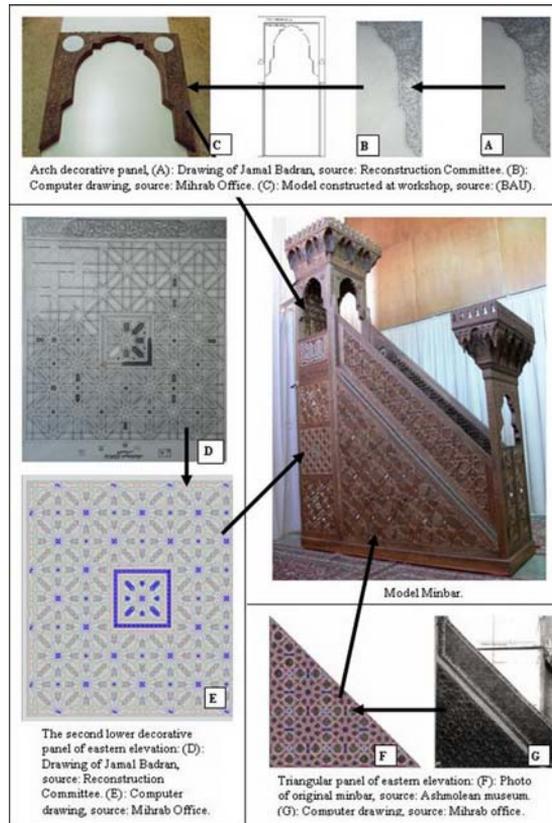


Fig. 8. Matching a particular decorative panel through available photos of original Minbar, Jamal Badran drawings, computer drawings of Mihrab office and finally within the model Minbar.

Conclusions

Al-Aqsa Mosque Minbar is considered one of the most important Islamic decorative works; which has an outstanding value related to its religious, historical and moral meanings. These values had raised a great issue to reconstruct the Minbar indication after its combustion. The actions that had been taken to shape the new Minbar exactly like the original Minbar, and which might be useful for similar projects concerned with heritage could be summarized in the following points:

- Studying Islamic decoration and the way of deriving it from the basic geometrical units' crossings.
- Theoretical study of these decorations and a field study of similar models were constructed during the same historical period.
- Referring to the photographs of the burned Minbar and making use of the remnants of old Minbar to redraw the elevations of the model Minbar.
- The Selection of specialized engineering office in the Islamic decoration, and follow-up stages of design and implementation by specialists.
- Selection of the Traditional Islamic Arts College at Al-Balqa University as a specialist in Islamic arts for the task of reconstructing the Minbar at a selected workshop in the university campus.
- Adopting the artistic craft patterns and techniques that were used in the original Minbar; so woodcarving, inlaying, turnery, muqarnas and interlocking were implemented manually without the use of machinery.

- The materials were selected and prepared for manufacturing the model Minbar to be similar and identical to materials of original Minbar.
- Technicians and craftsmen were commissioned from several Arabic and Islamic countries as specialists of artisan wooden crafts required for the task of manufacturing the model Minbar.
- The Committee of Reconstruction of Al-Aqsa Mosque had assigned a specialized committee as a general supervisor (consultants) for the job of reconstructing the new Minbar with the participation of other specialized parties to follow-up the work. The Minbar is built with interlocking which is the same artistic technique was done in the original Minbar; whereas the model Minbar was completely manufactured, it was transported to Al-Aqsa Mosque where it had been assembled and built in the place of the burned Minbar on the 24th of January 2007.

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Appendix

Jamal Badran was born in Haifa in 1909. He graduated from the College of Applied Arts in Egypt in 1928, and when back to Jerusalem he worked in the restoration of mosaic decorations at the Al-Aqsa Mosque. He was sent by the Mandate government to do his major in arts and industrial arts in the School of Arts and Industries in central London in 1934. He was appointed as an Educational art expert at UNESCO in Libya (1952 - 1962), and then he returned to Jerusalem and worked with preparing various types of decorative arts. The preparation of Salah Al-Din Minbar plans was the most famous of his work. He died in 2001.

Mihrab Office of Islamic architecture is a Jordanian engineering firm which has architectural and civil qualifications, and is owned by Dr. Minwer Al-Meheid. The firm had completed several projects, notably preparing Salah Al-Din Minbar plans and supervising its implementation. The School of Prince of Wales in London asked Dr. Minwer to present the Minbar plans which had won the competition as a basis to afford him a Doctorate degree.

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