

## A VERY RARE SECTION OF FABRIC FROM A GERMAN AIRCRAFT CIRCA 1914



A very rare, early section of WW1 Fabric Cross from German Aircraft, measuring 64 x 52cms.

### WW1 GERMAN AIRCRAFT CROSSES

Although there were very few aircraft in service at the start of the war; 232 front line aircraft (others in reserve/aircraft parks), it very quickly became apparent for the need to mark their aircraft as a means of identification. As such the German aviation service ordered that their aircraft were to be marked with a black Cross Patée from August 1914.

Initially there was no standard size or dimensions of the Cross Patée to be applied to aircraft. With no standardisation, crosses were painted onto aircraft by different manufacturers or in the field by mechanics in a way that suited them. Period photos from 1914 show all sorts of different variations of crosses; sometimes on the same aircraft! However into 1915, photos suggest crosses painted started to move away from thinner (like this one) and other similar types, to a bolder more visible type. The type and dimensions of the Cross Patée to be painted on aircraft was finally standardised in early/mid 1916. This standard type would be used throughout the war until replaced by the Balkan Cross in April 1918.

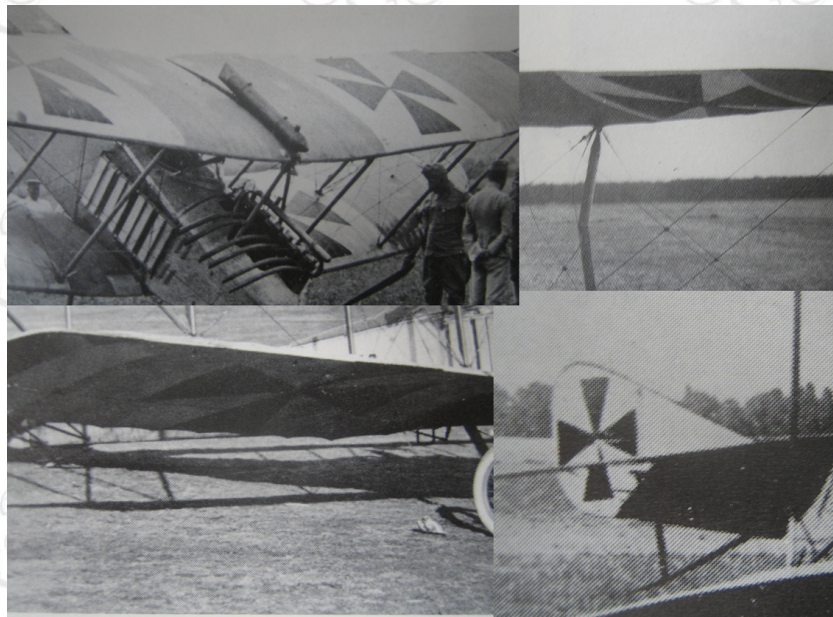
### THE CROSS FOR SALE

This exact Cross is shown on pages 10- 13 of the reference book; 'Feldzug Volume 2 1915'. Here, Michael Baldwin gives a very good description of the cross, the history of this type and need not be repeated. Copies of these pages are on this PDF writeup but will also be supplied with the cross and can be emailed to a potential buyer. However I have taken this a step

further with the graphics below in an effort to establish the probable original full size of the cross and probable position on the aircraft. I have used an LVG BI as an aircraft to base these graphics on. This is not because I'm sure its from this type but because it was one of the more common types used at the front at this time and similar styles of crosses can be found on photos of these aircraft (other types too). This aircraft is also a good 'average' sized two seater of the time as far as wing/fuselage dimensions, rib spacing etc are concerned.

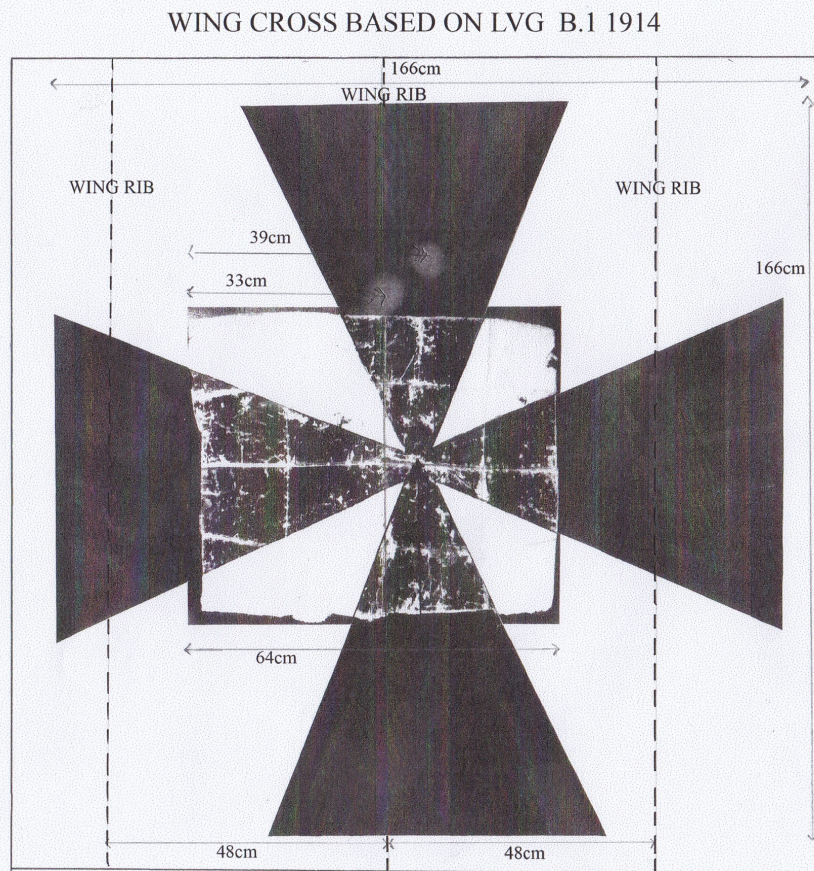


When calculating the probable size of the original cross, two main factors come in to play. Firstly, assuming the crosses arms were of equal dimension, the longest arm on this piece of fabric should be the minimum size of each arm. Secondly, the reverse clearly shows where the fabric was tacked to a wing rib if a wing cross, or spar if from the fuselage.



### WING CROSS:

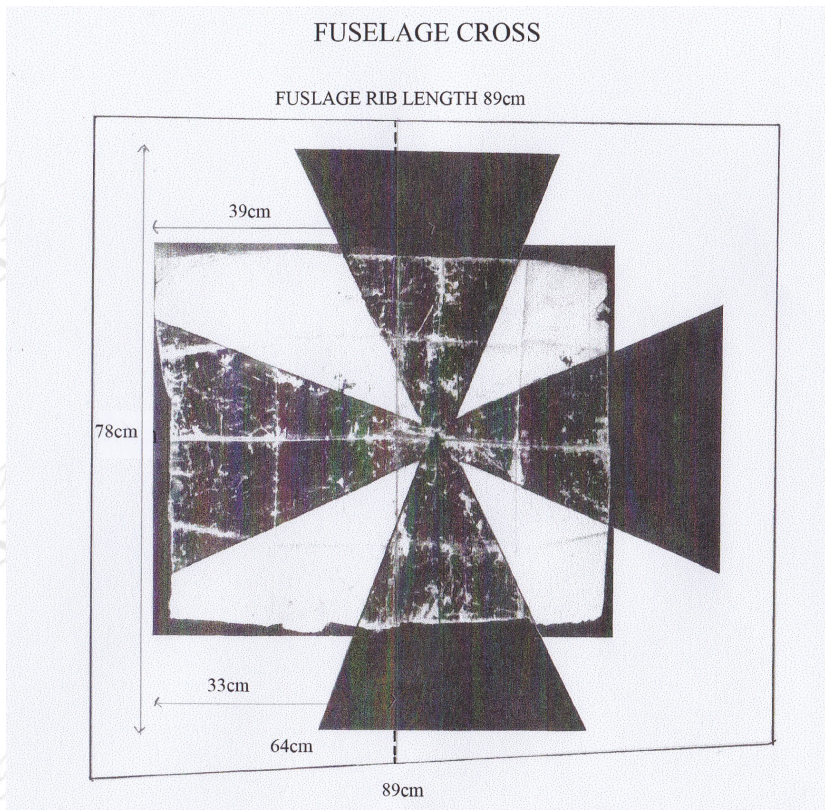
If from a wing, the minimum spacing of an aircrafts ribs cannot be less than the distance between where the rib/spar was located on this piece of fabric and the distance to the edge of the fabric at its longest point, ie 33cm. With a minimum of above 33cm, this pretty much discounts a single seater type and any two seater aircraft with a shorter distance between ribs . Based on photos and 1/48<sup>th</sup> plans, below are the rough dimensions of a cross on the upper wing of an LVG BI. The box the cross is in is the white background the cross would have been painted on:



### FUSELAGE CROSS:

If from the fuselage, the minimum spacing between rib/spar is as with above. However then the minimum size of the cross itself comes in to play. This being determined by the distance between the centre of the cross and the longest part of the arm; 39cm, making the cross of a minimum size of 78cm square. For an LVG BI, this would mean the cross would have to be located very high up the fuselage towards the rear cockpit and although possible, its still a tight fit and would be the same for many other two seaters of that period.

### FUSELAGE CROSS



Conclusion, though a fuselage cross cannot be discounted, this cross is probably from a wing. One spanner in the works is early crosses have been noted with one arm longer than the others but this is a very unusual design. Also note the LVG BI dimensions in the above plans are based on up scaled 1/48 technical drawings and may be out by a few cm, however there is room for this margin of error.



CONDITION:

The fabric itself is in excellent condition. There is some usual flaking to the paint, with a few flecks of black paint sticking to the white background where the cross has been folded. However as can be seen the appearance of the cross has hardly been affected. It is currently housed in a lightweight clip frame.

All fabric crosses from German WW1 aircraft are very scarce, with late war Balkan Crosses being the most numerous. However this particular style of cross is incredibly rare as it would only have been on an aircraft in service during the early months of WW1, the first year at most. If not unique, we would only be talking of perhaps a handful of such having survived. Cross comes complete with copies of pages from Feldzug 1915 and Graphics, printed and on CD.

An original and scarce early war German fabric aircraft cross.



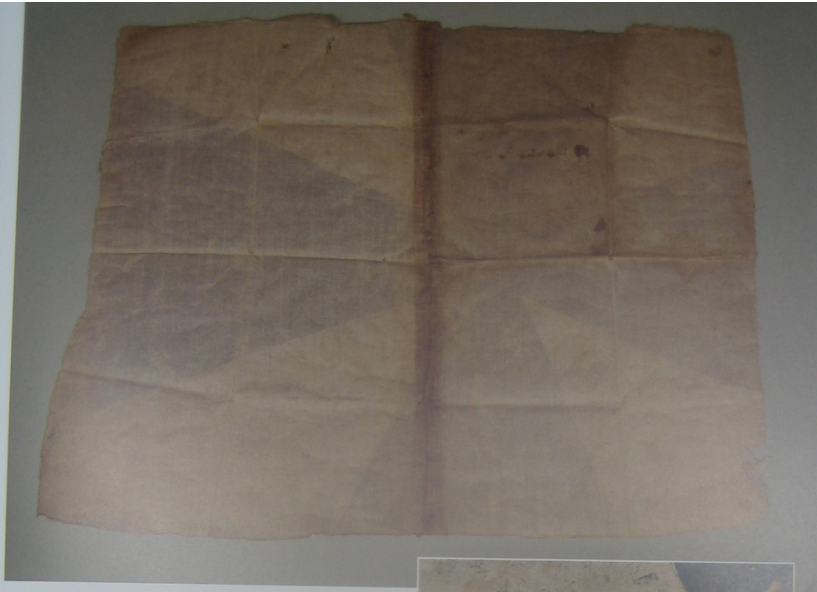
FELDZUG 1915 - VOLUME 2

The German Army Air Service was very small during peacetime, before the war, but rapidly expanded as its role became more apparent. The peacetime national markings consisted of a black stripe, from the leading edge, to the rear edge of the wing. The black Maltese Cross became the new wartime recognition insignia used from August 1914, initially there were no specific dimensions for the cross, or a hard and fast style, different aircraft manufactures chose to apply their own interpretations of this type of marking. Aircraft would sometimes have three different styles of Maltese Cross on the same plane, depending on the various sizes of stencils that they had, or the various ones that different painters had chosen to use.

One style used quite frequently in the early months of the war, by some aircraft manufacturers, was the straight-sided Maltese Cross as seen here. Linen, used for covering the

airframe, was relatively fine in texture compared with linen used later in the war. Initially the black cross was painted directly onto the neutral coloured plain-doped fabric, this was found to be not conspicuous enough. It was then and probably still is, a fine line drawn between being able to be recognised by your own troops, for fear of accidents occurring, when at the same time trying to conceal yourself from an enemy. This fabric wing cross has had a white square, brush painted around it after the black cross had already been factory applied, which was most likely done by ground crew at an airfield to comply with the new regulations of September / October 1914.

Fabric was attached to wings in various manners by different manufactures and for different types of model, sometimes by the same manufacturer. When the fabric was stretched over the wing frame and sewn on by hand, it was also affixed to



the ribs, sometimes by sewing through the fabric onto an underlying rib tape that ran around the rib surface. The other main method used was to tack the top covering fabric to the ribs with small steel tacks, which was the way that was used for this cross. Whatever way it was done, a surface rib tape was doped on over the top, to cover and conceal the stitches or tack heads, making it less likely for the fabric to become loose in flight. The approximately one inch wide top rib tape can be seen in the photograph, as can the tack head marks that have worn through it, evenly spaced along its length. The uneven dimensions of the cross, are because it was originally much larger when in place on the aircraft, possibly cut off as the shape it is now, in its present size, it would have been easier to fold and keep in a service dress pocket. It may have been cut out and initially souvenired larger, at its full dimensions, with portions later cut off for others and sold or given away as souvenirs. The edge of the black cross has also been widened or re-touched, possibly due to flaking at some point during its service life.

When trying to determine what type of aircraft a cross was from, a number of considerations have to be taken into account, such as the type of materials used, not only for the fabric itself, but also for the airframe, which is the bit you do not have! But there are usually tell tale signs on the fabric, such as rust or stain marks left by wood or glue, this however does not mean you can always identify items such as this, but it helps you eliminate aircraft types that it is definitely not from, making your search much smaller.



On the back of the fabric, the long brown rib stain mark can be seen and as there is only one, it reveals that the ribs were spaced at a minimum distance apart, from the centre of the rib stain to the longest parallel edge of the cut fabric. In this case approximately 13 1/2", or 345mm, which means when using anthropology as a rough analogy, the bigger the gap between the ribs, the bigger the rib cage, i.e.; the bigger the animal or aircraft. Rib spacing of this size, leads me to assume that the aircraft that this cross was taken from was most likely a "B" type, an unarmed two seated reconnaissance bi-plane, the relatively low horse power of an early aircraft would mean that the wings would have had to have been sufficiently wide to carry the weight of two crew members. The view of the back also shows how the fabric was folded when souvenired, the two darker squares are dirtier, being the exposed outer sides of the folded cross. At this moment in time, I have not managed to determine exactly what design or make it is from, but have some possibilities that may, in the future, with more photographic evidence, prove to be fruitful in accomplishing this task.