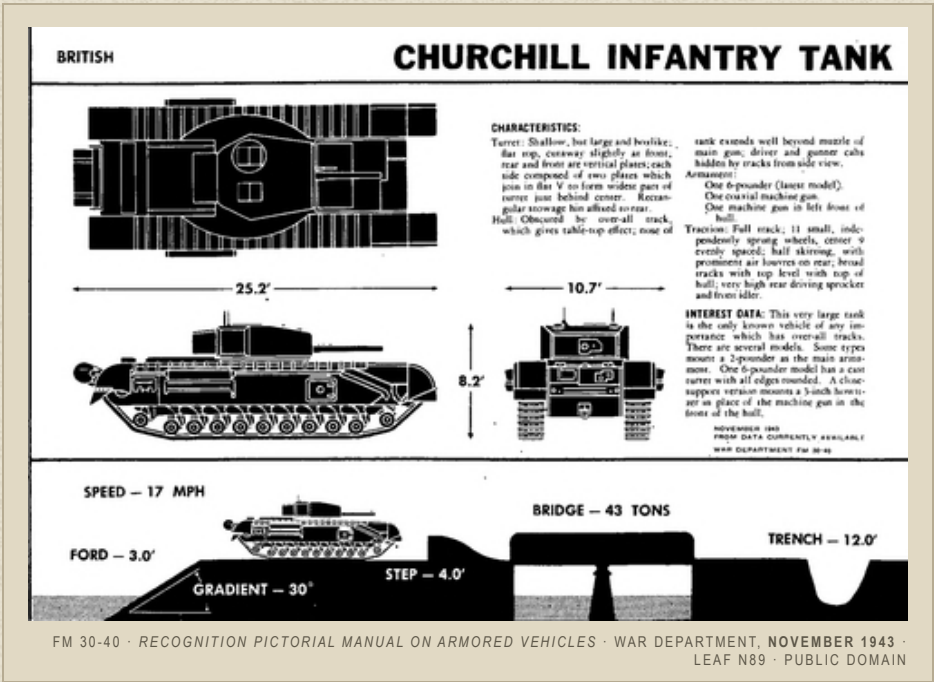


A SAMPLE CHAPTER FROM THE NEXT BOOK

CHURCHILL

Infantry tank, Mk IV — A22

The next book is thirty entries like this one. Here is one of them, complete and unabridged — every figure carrying the file and the leaf it was read from.



CREW	5	WEIGHT	38.5 long tons
LENGTH / WIDTH / HEIGHT	25.2' / 10.7' / 8.2'	ARMAMENT	1 6-pdr; 1 coaxial MG; 1 7.92-mm Besa in hull front [§]
ARMOUR, BASIS	3.54 in	SPEED	17 MPH
FORD / GRADIENT / STEP	3.0' / 30° / 4.0'	TRENCH	12.0'

[§] The characteristics table names the Besa and stops. Four pages earlier the same manual weighs it: “The 7.92-mm Besa medium (heavy) machine gun weighs 42 pounds and has an actual rate of fire of 650 rounds per minute, or 800 rounds with an accelerator.” — TM 30-410, paragraph 110c, printed p165.

Dimensions, armour and terrain data: FM 30-40, leaf n89, November 1943, read at 4×. Weight and armament: TM 30-410, Figure 87, printed pp166–167, 30 September 1942. Every figure above was read off a photograph of the printed page.

WHAT IT DID

In 1942 the War Department knew what this tank weighed, how thick its armour was and every one of the five weapons it carried. It would not print a speed. Figure 87 of the *Handbook on the British Army* carries a dashed rule across the Churchill's speed columns — cross-country and road, both ruled and both empty.

Fourteen months later a different American manual printed **17 MPH** without hesitation. Nothing about the tank had changed. What had changed was that by November 1943 the Americans had seen it work.

WHAT AN INFANTRY TANK WAS FOR, IN THE MANUAL'S OWN WORDS

The American manual that describes the Churchill defines its whole class before it lists any of them: *“Infantry tanks, which are slower and more heavily armoured, are designed to support infantry attacks on field fortifications, preceding the infantry and attempting to overrun the enemy defences.”*

Then it adds the sentence that explains why the class existed at all, and it is written from the outside: *“The role of British infantry tanks is one which is not normally envisaged by U. S. armored tactics.”* **An armour doctrine another army had no equivalent for** — paragraph 110a, printed p164.

That is the Churchill's answer to the obvious objection. Seventeen miles an hour is slow for a tank and fast for a man walking, and the Churchill was built to move at the speed of the infantry it was covering, over ground no cruiser tank could cross. At Vimy in 1917 that idea killed a generation for a few hundred yards. In 1944 it took Normandy hedgerows and, later, the flooded ground in front of the Rhine.

WHAT IT COST

Eleven thousand one hundred and fifty pounds, for the first order placed in 1940.

That figure comes from a table in an official history published in 1964, and it is worth saying exactly what it is and is not. It is the price of the *first order* — not an average, not a unit cost across the run, and not what the tank cost by 1944.

The same table's own footnote says the quoted prices are “*to a considerable extent ... ‘estimated’ not real costs*”, because original prices were scaled down where production ran for years — and it names the Churchill's stablemates as the cases: Matilda, Valentine, Crusader, Covenantanter.

What survives that caveat is the comparison, because every figure in the table was compiled the same way by the same authors. A Churchill at £11,150 against a Cromwell at £10,000 tells you the heavier tank cost about a tenth more — and that is a fact about British procurement, not about either vehicle.

BRITISH TANK PRICES, FIRST ORDERS

Matilda · 1938	£18,000
Valentine · 1939	£14,900
Churchill · 1940	£11,150
Cromwell · 1942	£10,000

Postan, Hay & Scott, *Design and Development of Weapons*, HMSO 1964, folio 361, read at 4.5× and re-read digit by digit. Sterling is never converted in that book or in this one.

The direction is the story. Britain's tanks got *cheaper* as they got bigger, across four years in which almost nothing else did.

THE HOURS, AND WHY THERE ARE NONE

The same 1964 volume prints man-hours for four British artillery equipments — the 2-pounder at 2,682, the 6-pounder at 1,293, the 17-pounder at 2,726 and the 25-pounder at 3,085, all per gun and carriage.

There is no equivalent figure for the Churchill, or for any tank, and the authors say why in the paragraph that introduces both of their tables:

"THE USE OF MAN-HOURS AS A GUIDE CAN MISLEAD SINCE IT OBSCURES THE RELATIVE EFFICIENCY OF VARIOUS FIRMS, DOES NOT INDICATE RAW MATERIAL SHORTAGES OR LIMITATIONS DUE TO PLANT ... MOREOVER IT CANNOT BE APPLIED TO TANKS."

So this entry has a money leg and no labour leg, and the absence is the source's own decision rather than a gap in the record. Where the book can show what something cost in hours, it does. Where the authority it is reading declines, it says so and stops.

THE VERDICT

A tank that two American manuals could not agree how to describe — one knowing its weight, its armour and all five of its weapons and refusing to guess at its speed, the other printing a speed and a doctrine its own army had no use for.

It was slow, it was expensive to look at and cheap by comparison, and it went where nothing faster could. The measure of an infantry tank was never how it compared with a cruiser. It was whether the infantry got across.

THE ALLIED ARSENAL

THIRTY ENTRIES LIKE THAT ONE

Armour, anti-tank, artillery, submachine guns and machine guns — thirty Allied weapons of the Second World War, each with a technical plate and a production-cost spine.

You have just read one of them. Every figure in it named the document and the leaf it came from, because every figure in it was read off a photograph of a printed page. Where a cost could be established it is printed with its source; where it could not, the book says so and stops — there are four entries in it with no cost figure at all, and each says why.

That is the difference between the two books, and it is why the tables in this one carry the line they do. The figures here are compiled from standard references and are good. They are not the same kind of thing.

WHAT COMES WITH IT

Reference edition	8.5 × 11 in
Reading edition	6 × 9 in
Plate archive	every drawing, full resolution
Updates	free, for good

Corrections are published. This book has already corrected itself on a section number, a footnote page, a barrel length and a spelling — every one of them found by opening the file again.

thealliedarsenal.com/arsenal

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