

MACHINE GUN FIRE CONTROL

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Machine Gun Fire Control by Glenn P. Wilhelm

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GLENN P. WILHELM

**MACHINE GUN
FIRE CONTROL**

MACHINE GUN FIRE CONTROL

By CAPTAIN GLENN P. WILHELM
Fourth U. S. Infantry

Price \$2.50—includes *Sliding Rule*

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Machine Gun Fire Control

ERRATA SHEET

Page Eleven, Figure One

Substitute the letter "T" for "H" in "GHH", making it "GTH".

Page Fifteen

In the middle of the page following sentence containing "beaten zone varies inversely as the range" insert quotation "Small Arms Firing MANUAL".

Page Seventeen, Line Five

Change "It is always an angle of elevation" to "It is usually an angle of elevation but may sometimes be an angle of depression."

Page Twenty-three, Line Six

Change "17.7 mils" to "17.5 mils."

Page Twenty-five, Middle of Page

Change "cross cuts on the pencil every twenty inches" to "cross cuts on the pencil every inch."

Page Thirty-two, Line Fourth from Bottom of Page

Omit the word "and," substituting therefore, "as viewed from".

Pages Thirty-three to Thirty-five

Under Parallax 1, 2, 3, 4 insert the word "to" preceding the word "find" as follows: "At the Gun 'G' to find the angle TGP", etc.

Page Thirty-four

Omit the word "not" in the title beneath Fig. 24, making it read: "Observer on flank on line with gun."

Page Thirty-five

Insert the word "not" in the title beneath Fig. 25, making it read: "Observer not on flank on line with gun."

Page Thirty-eight, Line Twenty-one

Actual value of one mil equals 3.6 inches per 100 yards of range. Actual value of one point windage equals 4.31 inches per 100 yards of range. (See page 73 of Description and Rules for United States Rifle Cal. .30, model of 1903, revised to 1917.) One point of windage therefore equals 1.2 mils approximately or $1\frac{1}{2}$ mils. The value of $1\frac{1}{2}$ mils for one point of windage was determined experimentally. It is probable, however, that machine gun sights may be graduated to read mils instead of points and thus render any conversion unnecessary.

Page Thirty-nine, Figure Twenty-six

Change horizontal dotted line "HOH" to "AOA."

Page Forty-four, Figure Twenty-eight

Change contour elevation of "890" and "891" to "990" and "991."

Page Fifty, Line Six

Change " $17\frac{3}{4}$ mils" to " $17\frac{1}{2}$ mils."

Page Sixty-six, Eleventh Line from Bottom

Change "1000" yards to "100" yards, making line read: "For each 100 yards of range beyond 2000 yards."

Page Seventy

Insert lines 16-17 from top of page: "In the effective zone or a total of 4. If three sight settings are".

Page Seventy-two, Second Line from Bottom

Change "index in." to "index M".

Page Seventy-five, Map Reading

Change "Map visivility" to "Map visibility."

Table Nine

Correct initial velocities as follows:

Browning Heavy.....	2680
Browning Light.....	2682
Lewis Machine Gun.....	2693
Marlin Aero.....	2706
Vickers Machine Gun.....	2690

On the Milometer the $1^{\circ}=17.7$ mils should be 17.5 mils. This figure 17.7 was given in text as approximate which is perfectly true. All calculations were based on the exact value of mil however.

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MACHINE GUN FIRE CONTROL

PREFACE

MACHINE gun firing is a science requiring considerable mechanical ability and a thorough knowledge of ballistics. It is not the province of this text to take up the mechanical problems of the machine gunner, as that is a subject complete in itself. The study of the ballistics of the machine gun with a working knowledge of the control of machine gun fire are essential to success on the battlefield.

In order that the machine gun commander may utilize his machine guns to the best of advantage he should be capable of scientifically directing their fire on any objective or sector within the extreme limits of the trajectory.

This text was written and the fire control rule designed in order to try and teach the difficult subject of the exterior ballistics of the machine gun and to simplify to a minimum the mathematical operations in the control of fire.

The rule is not a chance design, but is the final result of numerous previous attempts to devise a rule that would render any reference to tables or penciled notes unnecessary in the field for the computation of firing data.

There is nothing official in this text and it is hoped that the methods as outlined will not be blindly followed as a drill regulation.

Machine gunners must be adaptable, as the conditions at the front are continually changing and old methods are soon rendered obsolete and scrapped.

However, a careful study of the text and a thorough knowledge of the operation of the slide rule will enable one to meet all manner of conditions and to understandingly control and direct machine gun fire under circumstances and in conformity with whatever technical methods are being used at that particular phase of the war

Knowledge and ability to make use of knowledge should be the goal of the gunner. Then, whatever may happen he can confidently follow the progress continually being made in the technique of machine gun fire and if need be, can take the initiative and work out practical methods of his own. Knowledge combined with experience will make the master machine gunner and machine gun commander.

GLENN P. WILHELM
Capt. 4th U. S. Inf.

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329027

Rec'd 2-2-41 7-11-41 M J 2

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