The ART/MPC is a 3 X 9 variable power rifle scope that compensates for bullet drop from 200 to 600 meters. By the use of a unique circular cam that actually raises and lowers the rear of the scope, the ART/MPC is a true Auto-Range scope that does not rely on the use of fragile internal ranging devices or the movement of the elevation and windage adjustments to range the scope. The use of only one trajectory cam that is incrementally adjustable for most modern cartridges makes the ART/MPC the most advanced of the ART (Adjustable Ranging Telescope) scopes. ART scopes are in use throughout the world and their history is an example of an all out effort to build only the best.

I. Basic Description

A. Eyepiece: The eyepiece is immediately to the rear of the scope and is looked into by the shooter. The shooter may turn the eyepiece to the right or left, thus changing the scopes focus to suit his individual eyesight. The eyepiece is secured by a knurled locking ring once it has been set.

B. Power Ring: The power ring is located immediately in front of the eyepiece and the knurled locking ring. The power ring has a series of numbers on its rear face ranging from 3X to 9X which are used to designate the power the scope is set on.

C. Range Ring: The range ring encircles the power ring and has the word meters and the numbers from 2 to 6 stamped on the rear face. The numbers are used to indicate the range from 200 to 600 meters that the scope is set on when used in the Auto-Range mode. The range ring has a slotted head knob on one side and a slotted head screw on the other. When setting the scope for the cartridge to be used, the knob and screw are loosened to allow the range ring to be pulled to the rear.

D. Calibration Ring: The calibration ring is located immediately in front of the range ring and also encircles the power ring. It has a series of numbers and figures stamped on its outer surface that serve the dual purpose of indicating the range the scope is set on when used in the Manual mode as well as being used to calibrate the scope for the cartridge the shooter desires to use.

E. Locking Thumbscrew: The locking thumbscrew is located on the calibration ring. When the locking thumbscrew is tightened down the scope is in the Auto-Range mode, when loosened a few turns it will place the scope in the Manual mode.

F. Trajectory Cam Ring: The trajectory cam ring is immediately in front of the calibration ring and also encircles the power ring. The trajectory cam ring has an arrow stamped on its outer surface which is used as a reference point when moving the trajectory cam ring's position in relation to the Cartridge Calibration Ring. The purpose of the trajectory cam ring is to raise and lower the rear of the scope and thus compensate for bullet drop.

G. Elevation and Windage Adjustments: The elevation and windage adjustments are located near the center of the scope. Each adjustment is covered by a screw-on turret cap that seals out moisture and dirt. The elevation and windage adjustments are encircled by a calibrated dial that is divided into minute of angle and $\frac{1}{4}$ minute of angle increments.

H. Mount Cradle: The mount cradle is used to securely position the scope on the rifle while at the same time allowing the rear of the scope to raise up and down. Each ART/MPC is precisely positioned in the mount cradle and should NOT BE TAMPERED WITH.

II. Setting the Scope for the Cartridge to be used

When the shooter has determined the type of cartridge that he desires to set the scope for, he should do the following:

A. Check the Cartridge Calibration Chart located at the rear of this manual and locate the cartridge, bullet weight, bullet type and trajectory cam setting that corresponds with the cartridge.

B. Loosen the slotted head knob and slotted head screw located on the range ring and pull the range ring to the rear approximately 1/8 of an inch.

C. Loosen the locking thumbscrew slightly on the calibration ring and pull it to the rear so that the teeth on the calibration ring are free of the teeth on the trajectory cam ring.

D. Rotate the trajectory cam ring in the required direction until the arrow is in line with the position on the calibration ring that corresponds with the correct number as indicated by the Cartridge Calibration Chart.

E. When the arrow is pointing at the correct position on the calibration ring, push the calibration ring forward so that the teeth are once again engaged with the teeth on the trajectory cam ring and tighten the locking thumbscrew down.

F. Push the range ring firmly against the calibration ring and tighten the slotted head screw and the slotted head knob on the range ring.

G. The scope has now been calibrated for the particular cartridge that the shooter desires to use. Should the shooter wish to change cartridges or bullet weights or types, he should consult the Cartridge Calibration Chart for the required position of the arrow on the trajectory cam ring and reset the scope as before for the new cartridge.

III. Mounting the Scope on the Rifle

To mount the scope on the rifle the following should be performed:

A. Tightly secure the appropriate base to the rifle.

B. Loosen the two thumbnuts and clamps on the side of the mount.

C. Place the scope on the rifle so that the crossbolts on the under side of the mount cradle are down in the corresponding grooves in the base.

D. Tighten the thumbnuts lightly and check to see that the clamps are straight on the base and gripping evenly.

E. Tighten the thumbnuts securely.

Zeroing the Scope

To zero the scope the following procedures are recommended:

A. Check the scope to see that the knob on the range ring and the locking thumbscrew on the calibration ring are in line with each other and the locking thumbscrew is tightened down.

B. Turn the range ring all the way to the right so that the number 3 X and 2 are at the top.

C. Set up a target at 200 meters and zero the scope in by using the elevation and windage adjustments.

D. When the rifle is shooting "dead-on" at the point of aim at 200 meters it is properly zeroed in and ready for use.

V. Ranging System

The ART/MPC ranging system is composed of the combination of the power ring, range ring, calibration ring and trajectory cam ring. When the locking thumbscrew on the calibration ring is lined up with the knob on the range ring and tightened down all of the rings will turn together. When all the rings turn together the scope is in the Auto-Range mode. When the locking thumbscrew on the calibration ring is loosened several turns the calibration and trajectory cam rings will turn independently of the power and range rings. When the rings function as two separate units the scope is in the Manual mode.

A. Auto-Range

In the Auto-Range mode the scope will automatically compensate for bullet drop at all ranges between 200 and 600 meters. The aiming reticle is used to "range" the scope in on the target.

B. Manual

In the Manual mode the power and range rings turn independently of the calibration and trajectory cam rings. The scope will not Auto-Range in this mode. The numbers on top of the calibration ring are used to denote range and the numbers on the power ring are still used to denote the power setting. The numbers on back of the range ring are not used when the scope is in the manual mode. The purpose of the manual mode is to allow the shooter to select combinations of power and range that better suit his needs than if the scope is in the Auto-Range mode. For example: By using the manual mode, the shooter may set the scope on 9 power and 200 meters for more magnification to shoot at small targets or perhaps select a setting of 6 power and 300 meters for a general all purpose setting that will allow him to take advantage of any fleeting target when there is not time enough to "Auto-Range" the scope.

VI. ART/MPC Reticle

The ART/MPC reticle consists of a set of tapered crosshairs with an additional finer horizontal wire below the crosshair. The ART/MPC reticle is used to measure a known target size and thus "range" the rifle in on the target. A basic target size of 18 inches in height is used to range the scope.

With the ART/MPC set in the "Auto-Range" mode the reticle is used in the following manner to range the scope:

A. Look through the scope at the 18 inch target and place the 18 inch target between the two horizontal cross wires of the reticle.

B. Increase or decrease the power of magnification until the 18 inch target is "framed" in between the two cross wires.

C. Place the upper (heavy) crosshair on the target and fire. The scope has ranged in on the target and there is no need to "hold-over" for bullet drop.

VII. Precision Zero

It is recommended that the ART/MPC be precision zeroed. Once the shooter is confident that he understands the use of the reticle of the ART/MPC to "Auto-Range" the scope, he should do the following to realize the full potential of the scope.

A. Set the scope in the Auto-Range mode.

B. Set up an 18 inch target at any range between 200 and 600 meters.

C. Range the scope in on the 18 inch target and fire at least a three shot group.

D. If corrections are required, adjust the scope with the internal elevation and windage adjustments until the rifle is shooting to the point of aim on the target.

By performing the above procedures, the shooter will "fine-tune" his rifle over the longer ranges. It is also recommended that the shooter use these procedures to check his rifle when he is in an area that varies significantly in temperature or altitude from the one where he originally zeroed the scope.

BASIC OPERATOR INSTRUCTIONS

1. Tighten bases securely on rifle.

2. Place scope on bases and tighten thumb nuts securely.

3. There are three (3) rings on the rear of the scope. Loosen the slotted knob and side set screw on the rear ring and pull it to the rear approximately 1/8" (inch).

4. Loosen the locking thumbscrew on the middle ring and pull it to the rear approximately 1/8" (inch). The middle ring and the front ring will now turn independently of each other.

5. Look at the back pages of the manual and find the cartridge, bullet weight, and bullet type you are going to use. Note the three digit number that corresponds with your cartridge selection under the Calibration Cam Setting heading.

6. Look at the arrow on the front ring and turn the front ring until the arrow is pointing at the position on the middle ring which corresponds with the number you selected from the chart.

7. Push the middle ring forward against the front ring and seat the teeth on the middle ring into the teeth on the front ring, while making sure the arrow and the chart number are still lined up. It may be necessary to move the rings slightly to get the teeth to engage.

8. Return the rear ring against the middle ring and tighten the slotted knob and set screw.

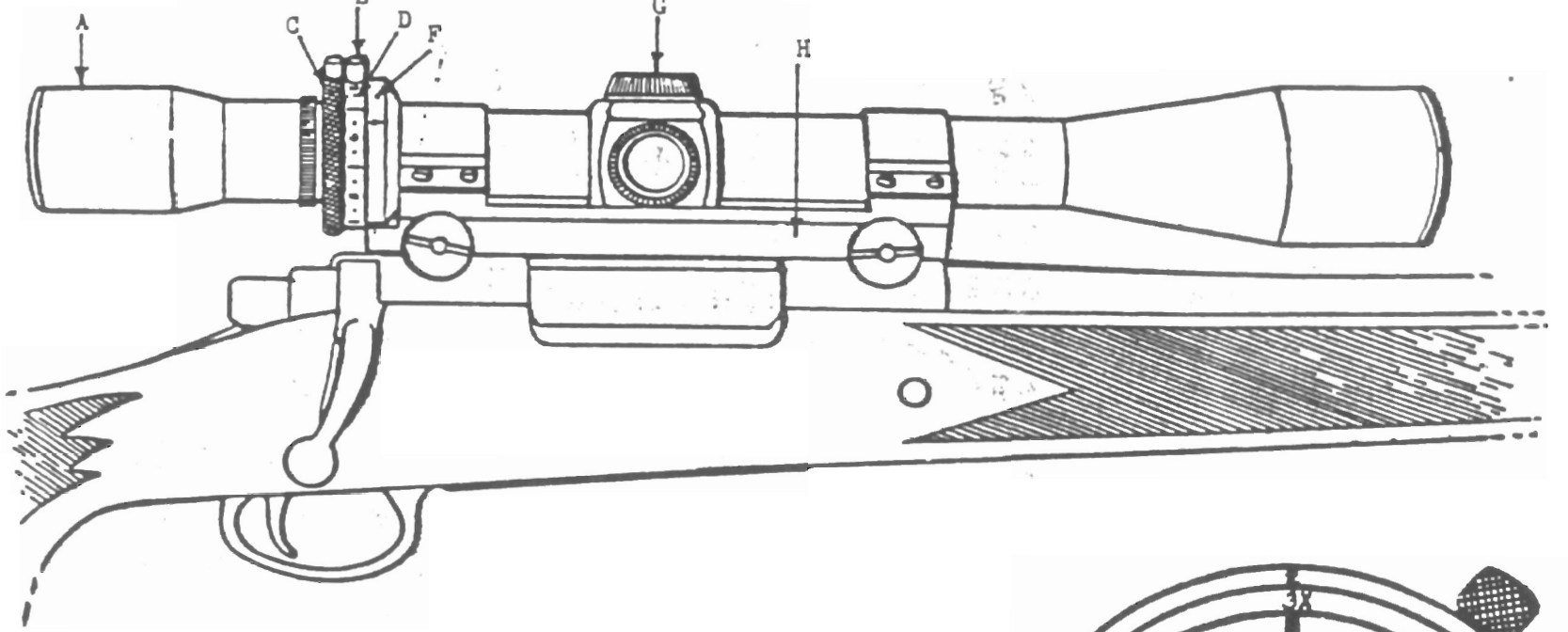
9. Turn the middle ring until the locking thumbscrew on it lines up with the knob on the rear ring and tighten the middle ring locking thumbscrew.

10. All rings will now turn together as one unit. Turn the rings all the way to the right (clockwise) and leave.

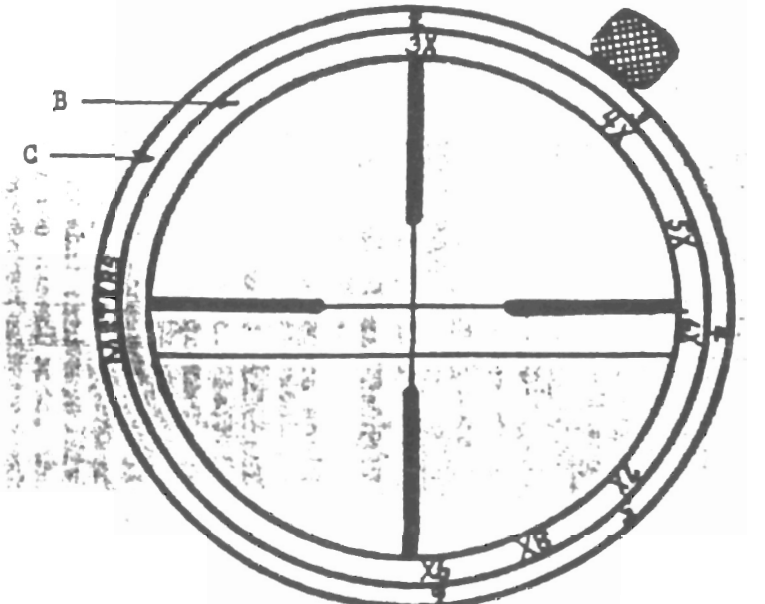
11. Zero scope in at 200 meters range.

12. Frame 18" (inch) target between framing wires in scope by turning ring to left (counter-clockwise) and scope will automatically adjust for bullet drop.

"IF ALL ELSE FAILS -- READ MANUAL"



A. Eyepiece
B. Power Ring
C. Range Ring
D. Calibration Ring
E. Locking Thumbscrew
F. Trajectory Cam Ring
G. Elevation and Windage Adjustments
H. Mount Cradle

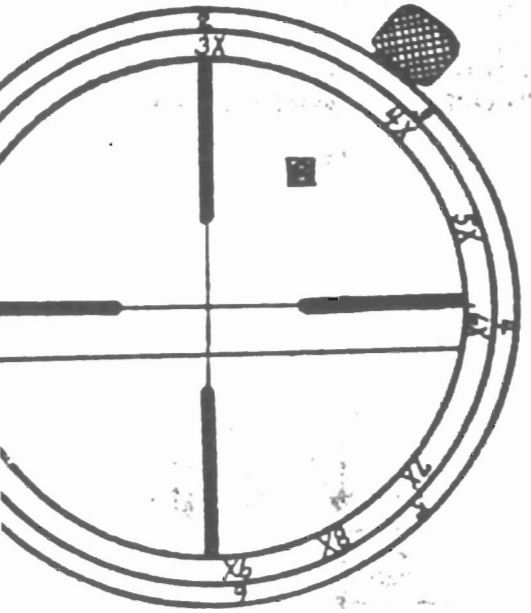


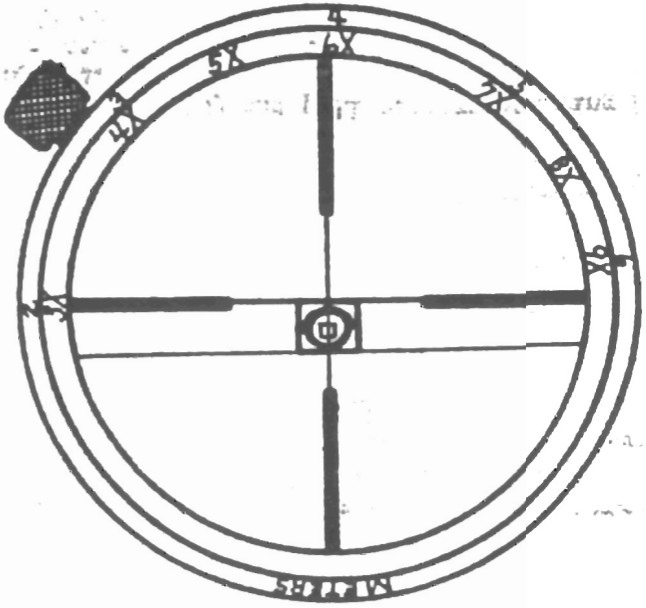
RANGING THE ART/MPC

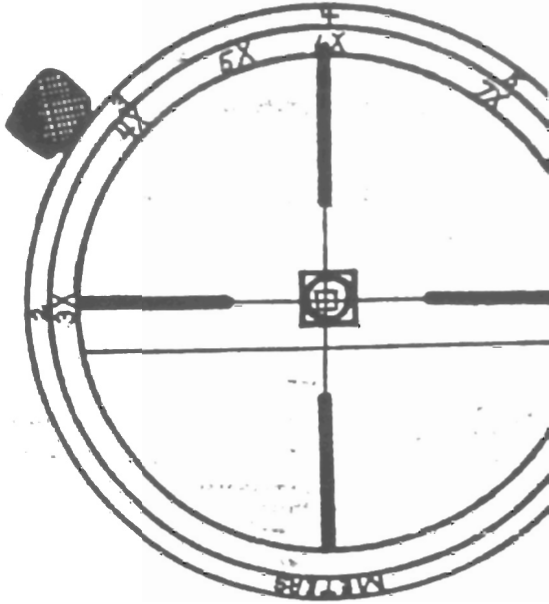
1. Observe target in scope

2. Increase magnification until 18" target is "Framed" in by the two horizontal crosswires

3. Place upper crosshair on target and fire. "No Hold-over"







NOTE: A target 18" (inches) in height must be used to "Range" the scop

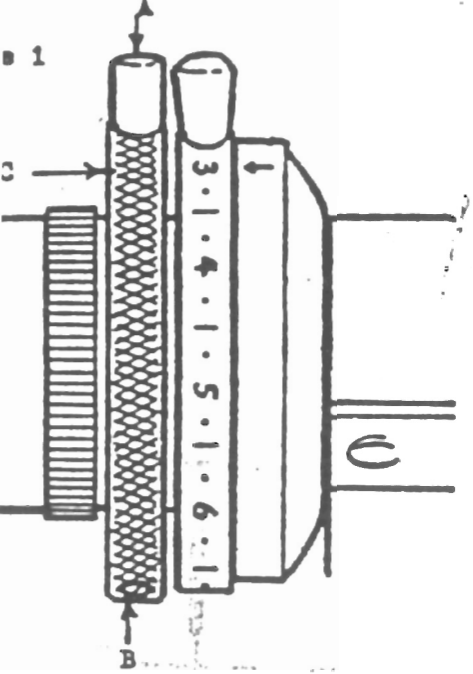


Figure 2

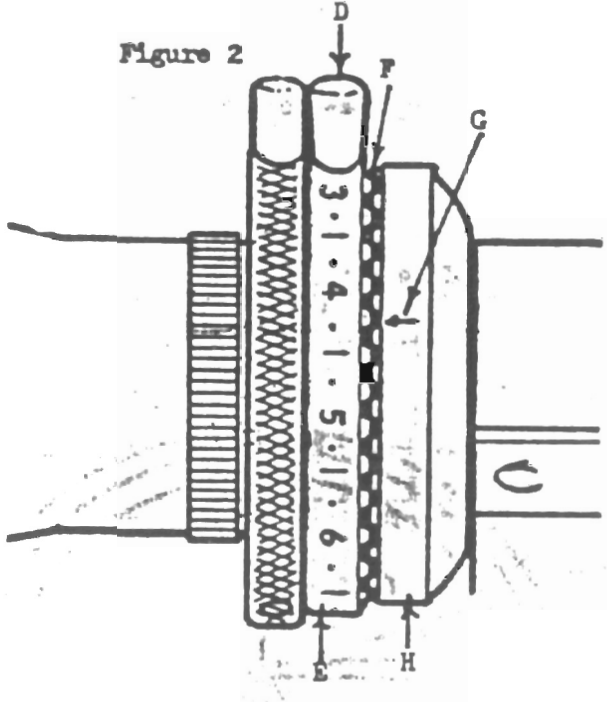
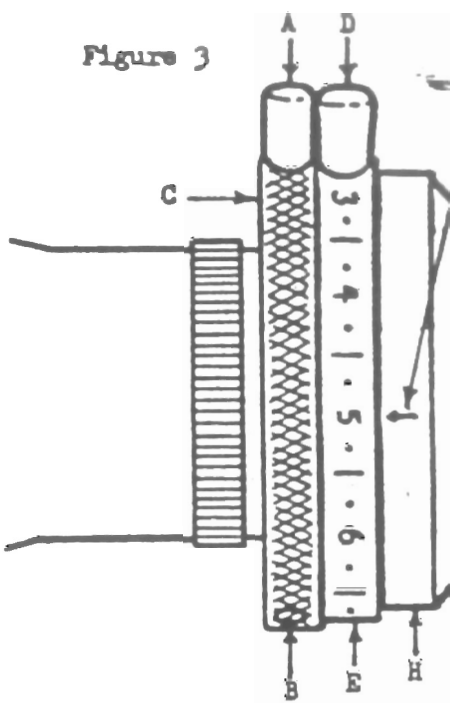


Figure 3



II. Setting the Scope for the Cartridge to be used

Figure 1 - Loosen the slotted head knob (A) and slotted head screw(B) and pull range ring (C) to the rear.

Figure 2 - Loosen the locking thumbscrew (D) and pull calibration ring (E) to the rear so that the teeth (F) are disengaged.
Rotate the trajectory cam ring (H) in the required direction until the indicating arrow (G) is in the proper position.

Figure 3 - When the arrow (G) is pointing at the correct position, push the calibration ring (E) against the trajectory cam ring (H) re-engage the teeth and tighten the locking thumbscrew (D).
Push the range ring (C) against the calibration ring (E) and tighten the slotted head knob (A and slotted head set screw (B).

Place indicating arrow on trajectory cam across from proper proper position on calibration ring as indicated by chart.

No.	Cartridge	Bullet Weight	Cartridge Manufacturer and Bullet Type				Cam Setting
			CIL	Fed.	Rem.-Pet.	Win -Wes	
1	17 Rem.	25			HPPL		375
2a	222 Rem.	50			HPPL		275
b	222 Rem.	50	PSP	SP	PSP/MC	PSP	275
c	222 Rem.	55				FMC	350
3a	222 Rem. Mag.	55			HPPL		325
b	222 Rem. Mag.	55			PSP		350
4a	223 Rem. (5.56 mm)	55				FMC	425
b	223 Rem. (5.56 mm)	55			HPPL		350
c	223 Rem. (5.56 mm)	55		SP	PSP	PSP	325
5	225 Win.	55				PSP	400
6a	22-250 Rem.	55			HPPL		425
b	22-250 Rem.	55	PSP	SP	PSP	PSP	425
7a	243 Win.	75	PSP				400
b	243 Win.	80		SP	PSP/HPPL	PSP	425
c	243 Win.	100	PSP	HSSP	PSPLC	PP(SP)	360
8a	6 MM Rem.	80			PSP,HPPL	PSP	425
b	6 MM Rem.	90			PSPCL		415
c	6 MM Rem.	100			PSPCL	PP(SP)	400
9a	25-06 Rem.	86				PSP	425
b	25-06 Rem.	86			HPPL		375
c	25-06 Rem.	90		HP		PEP	425
d	25-06 Rem.	100			PSPCL		400
e	25-06 Rem.	117		HSSP			375
f	25-06 Rem.	120	PSP		PSPCL	PEP	375
10a	250 Savage	87				PSP	350
b	250 Savage	100			PSP		300
c	250 Savage	100	PSP				275
11	256 Win. Mag.	60				OPE(HP)	325
12a	257 Roberts	87				PSP	360
b	257 Roberts	100				ST	300
c	257 Roberts	117			SPCL	PP(SP)	255
13	6.5 Rem. Mag.	120			PSPCL		410
14a	264 Win. Mag.	100			PSPCL	PSP	450
b	264 Win. Mag.	140			PSPCL	PP(SP)	425

No.	Cartridge	Bullet Weight	Cartridge Manufacturer and Bullet Type				Cam Setting
			CIL	Fed.	Rem.-Pet.	Win.-Wes.	
15a	270 Win.	100			PSP	PSP	425
b	270 Win.	130		HSSP	BP	PP(SP)	400
c	270 Win.	130	PSP,ST		PSPCL	ST	375
d	270 Win.	150				PP(SP)	360
e	270 Win.	150		HSSP	SPCL		325
f	270 Win.	160	KKSP				300
16a	7X57 Mauser	140	PSP				275
b	7X57 Mauser	140		HSSP			300
c	7X57 Mauser	160	KKSP				255
d	7X57 Mauser	175	KK	HSSP	SP	SP	250
17a	280 Rem.	150			PSPCL		360
b	280 Rem.	165			SPCL		325
18a	284 Win.	125				PP(SP)	375
b	284 Win.	150				PP(SP)	350
19a	7 MM Rem. Mag.	125			PSPCL		425
b	7 MM Rem. Mag.	150	ST	HSSP	PSPCL	PP(SP)	375
c	7 MM Rem. Mag.	175		HSSP	PSPCL	PP(SP)	325
d	7 MM Rem. Mag.	175	SP				360
20a	30-30 Win.	55			SP ACCEL		425
b	30-30 Win.	150	SP, st pnd	HSSP		OPE,PP,ST	225
c	30-30 Win.	170	KKSP,ST	HSSP	HPCL,SPCL	PP(SP),ST	200
21a	300 H&H Mag.	150				ST	375
b	300 H&H Mag.	180			PSPCL	ST	360
c	300 H&H Mag.	220				ST	275
22a	300 Win. Mag.	150		HSSP	PSPCL	PP(SP)	425
b	300 Win. Mag.	180	ST	HSSP	PSPCL	PP(SP)	380
c	300 Win. Mag.	220				ST	325
d	300 Win. Mag.	220				PPSP	275
23a	30-06 Springfield	55			PSPACCEL		450
b	30-06 Springfield	110				PSP	340
c	30-06 Springfield	125		SP	PSP	PSP	360
d	30-06 Springfield	150			BP		360
e	30-06 Springfield	150			MC		340
f	30-06 Springfield	150	PSP,ST	HSSP	PSPCL	ST	360
g	30-06 Springfield	150				PP(SP)	350
h	30-06 Springfield	165		BTSP			360
i	30-06 Springfield	180				FMCBT	350
j	30-06 Springfield	180				PP(SP)	340
k	30-06 Springfield	180	CPF		BP		325
l	30-06 Springfield	180	ST	HSSP	PSPCL	ST	325
m	30-06 Springfield	180	KKSP		SPCL	PP(SP)	260
n	30-06 Springfield	200		BTSP			325
o	30-06 Springfield	220				ST	260
p	30-06 Springfield	220	KKSP		SPCL	PP(SP)	255

No.	Cartridge	Bullet Weight	Cartridge Manufacturer and Bullet Type				Cam Setting
			CIL	Fed.	Rem.-Pet.	Win.-Wes.	
24a	30-40 KRAG	180			PSPCL	ST	260
b	30-40 KRAG	180			SPCL	PP(SP)	250
c	30-40 KRAG	220				ST	225
25a	300 Savage	150	PSP,ST	HSSP	PSPCL	ST	275
b	300 Savage	150				PP(SP)	260
c	300 Savage	150			SPCL		255
d	300 Savage	180	ST	HSSP	PSPCL	ST	255
e	300 Savage	180	KKSP		SPCL	PP(SP)	225
26a	303 British	150	PSP,ST				275
b	303 British	180	CPE				275
c	303 British	180	ST	HSSP		PP(SP)	265
d	303 British	180			SPCL.		250
e	303 British	180	KKSP				250
27a	308 Win. (7.62 NATO)	110				PSP	325
b	308 Win. (7.62 NATO)	125				PSP	360
c	308 Win. (7.62 NATO)	150			MC		340
d	308 Win. (7.62 NATO)	150	PSP,ST	HSSP	PSPCL	ST	325
e	308 Win. (7.62 NATO)	150				PP(SP)	300
f	308 Win. (7.62 NATO)	180	ST	HSSP	PSPCL	ST	300
g	308 Win. (7.62 NATO)	180			SPCL	PP(SP)	255
h	308 Win. (7.62 NATO)	180	KKSP				255
i	308 Win. (7.62 NATO)	200	KKSP			ST	260
28a	8MM Rem. Mag.	185			PSPCL		375
b	8MM Rem. Mag.	220			PSPCL		350
29a	338 Win. Mag.	200				PP(SP)	360
b	338 Win. Mag.	250				ST,PP(SP)	300
c	338 Win. Mag.	300				PP(SP)	255
30	348 Win.	200				ST	255
31	350 Rem. Mag.	200			PSPCL		275
32a	358 Win.	200				ST	250
b	358 Win.	250				ST	225
33a	375 H&H Mag.	270			SP	PP(SP)	280
b	375 H&H Mag.	300				ST	275
c	375 H&H Mag.	300			MC	FMC	250

Bullet Type Abbreviations

CIL:

PSP--Pointed Soft Point
PSP,ST--Pointed Soft Point, Silver Tip
KKSP--Kling Kor Soft Point
KK--Kling Kor
SP--Soft Point
PNEU--Pneumatic
CPE--Copper Point Expanding

FED:

SP--Soft Point
HSSP--Hi-Shok Soft Point
HP--Hollow Point
BTSP--Boat Tail Soft Point

REM-PET:

HPPL--Hollow Point Power Lokt
PSP/MC--Pointes Soft Point/Metal Case
PSP--Pointed Soft Point
PSP/HPPL--Pointed Soft Point/Hollow Point Power Lokt
PSPCL--Pointed Soft Point Core Lokt
SPCL--Soft Point Core Lokt
BP--Bronze Point
SP--Soft Point
SP ACCEL--Soft Point Accelerator
PSP ACCEL--Pointed Soft Point Accelerator
MC--Metal Case

WIN-WEST:

PSP--Pointed Soft Point
FMC--Full Metal Case
PP(SP)--Power Point (Soft Point)
PEP--Positive Expanding Point
OPE(HP)--Open Point Expanding (Hollow Point)
ST--Silver Tip
PPSP--Power Point Soft Point
FMCBT--Full Metal Case Boat Tail
PP--Power Point