

INSTRUCTION MANUAL

# CZ 452/453



ČESKÁ ZBROJOVKA  
SINCE 1936

**Before handling the firearm read this manual carefully and observe the following safety instructions.**

Improper and careless handling of the firearm could result in unintentional discharge and could cause injury, death or damage to property. The same consequences can be caused by any unauthorized modifications or adjustments, corrosion, or use of non-standard or damaged ammunition. In these cases the manufacturer shall not be responsible in any manner whatsoever for the resultant consequences.

Before leaving the factory this firearm was tested, carefully inspected, and packed. CZ cannot accept responsibility for product handling while in transit, or upon leaving the factory. Therefore, please examine this firearm carefully at the time of purchase to ensure that it is unloaded and undamaged.

This instruction manual should always accompany the firearm and that even in the case of its loan or sale.

**CONTENTS**

SAFETY INSTRUCTIONS	18	Rifle Scope	26
THE SMALLBORE RIFLE DESCRIPTION AND TERMINOLOGY	20	MAINTENANCE INSTRUCTIONS	26
OPERATING INSTRUCTIONS	23	Stripping for Cleaning - Disassembly	26
Ammunition	23	Disassembly of the Bolt	26
Removal of the Magazine	23	Cleaning of the Rifle	27
Magazine Loading	23	Cleaning the Barrel Bore and the Cartridge Chamber	27
Loading of the Rifle	23	Cleaning of Other Rifle Parts	28
The Safety and its Operation	24	Preserving	28
Unloading of the Rifle	24	Waste Management	28
Cocking Indicator Function	24	LIST OF PARTS	29
Set-trigger Operation	25	TROUBLESHOOTING, CAUSES AND REMEDIES	30
Trigger Adjustment	25	TECHNICAL SPECIFICATIONS	31
Sight Adjustment	25	LIST OF ILLUSTRATIONS	32

## SAFETY INSTRUCTIONS

Always follow the safety instructions for your safety and the safety of others.

1. Always handle your firearm as if it were loaded.
2. Never point your firearm at anything you do not intend to shoot.
3. Never take anyone's word that a gun is unloaded.
4. Always make sure that your firearm is not loaded before laying it down, or handing it to another person.
5. Always store your rifle unloaded with the striking mechanism released.
6. Never abuse your firearm by using it for any purpose other than shooting.
7. Never leave a loaded firearm unattended.
8. Prior to loading the firearm make sure that barrel bore, chamber, and action are clean and clear of obstructions. Clean a dirtied firearm immediately so that it will function properly and safely.
9. Always use only clean, dry, original high quality commercially manufactured ammunition, which is appropriate to the caliber of your firearm.
10. Never drink alcoholic beverages or take drugs before or during shooting.
11. Always wear safety glasses and ear protection during shooting whenever possible.
12. Always keep the safety on when the rifle is loaded with a cartridge in the chamber, until you are ready to fire. Keep firearm pointed in a safe direction when disengaging the safety.
13. A rifle with an activated set-trigger should be handed with maximum care, as even jolts during handling operations could cause an unintended discharge.
14. Always keep clear and keep others clear of the ejection port.

15. Never squeeze the trigger or put your finger in the trigger guard until you are aiming at a target and ready to shoot.
16. Always be absolutely sure of your target, and the area behind it, before you squeeze the trigger. A bullet could travel through or past your target up to several hundreds of meters.
17. Never shoot at a hard surface such as rock, or a liquid surface such as water.
18. Never fire your firearm near an animal unless it is trained to accept the noise.
19. Never indulge in "horseplay" while holding your firearm.
20. Failure to fire: In case of failure to fire hold the firearm keeping it pointed towards the target, or a safe open area and wait 30 seconds. If a hangfire (slow ignition) has occurred, the cartridge will fire within 30 seconds. If the cartridge does not fire, eject the cartridge and examine it. If the firing pin indent on the cartridge is light, or non-existent, have the firearm examined by a competent gunsmith.
21. Always make sure your firearm is not loaded before cleaning, storing or travelling.
22. Always keep and store your firearm and ammunition in separate locked receptacles out of reach and sight of children and untrained people.
23. Never alter any parts of your rifle as the safety and proper function of your rifle could be seriously compromised.
24. Always be aware that corrosion, use of damaged ammunition, dropping the rifle on hard surfaces or other "coarse treatment" could cause a damage you may not see. If something like this happens let the firearm to be examined and tested by a competent gunsmith.

## THE SMALLBORE RIFLE DESCRIPTION AND TERMINOLOGY

The names of basic smallbore rifle parts used in this Instruction Manual are presented in Fig. 1 on the inner side of the cover. Nomenclatures of all smallbore parts are presented in the section *List of Parts*.

The smallbore rifles CZ 452 ZKM and CZ 453 are classic repeating arms of sturdy design. They are manufactured in several versions. Characteristic features of all versions are:

- The CZ 452 ZKM is well-balanced and consequently quick and easy to aim
- The tangent rear sights are adjustable to a wide range of shooting distances
- Easy mounting of rifle scope
- Controlling elements which are simple in operation, and easy to reach, manufactured also in left-handed version
- Adjustable trigger pull
- Cocking indicator indicates cocking of the striking mechanism
- Easy disassembly for cleaning and routine maintenance, which can be carried out without any tools
- A high degree of accuracy when firing
- A long service life
- High functional reliability in all environments, even with ammunitions made by various manufacturers, and with different types of bullets
- Threaded muzzle as option for Still or Parker Hale sound moderator attachment (available on special request only, territories with appropriate legislation only)
- The CZ 453 is equipped with a completely adjustable trigger mechanism including a set-trigger

CZ 452	Caliber				Surface finish		Threaded for sound moderator	Trigger with set-trigger	Description
	.22 LR	.22 WMR	.17 HMR	.17 HM2	Blued	Nickel			
Standard	✓	✓	✗	✗	✓	✗	✓	✗	Beech wood stock
Lux	✓	✓	✗	✗	✓	✓	✓	✗	Walnut stock, grip parts provided with checkerings
Style	✓	✗	✓	✗	✗	✓	✓	✗	Plastic stock, metal parts nicked and blued
Silhouette	✓	✗	✓	✗	✓	✗	✓	✗	Plastic stock, design of this rimfire rifle meets the requirements of the IMSSA shooting regulations
FS	✓	✓	✓	✗	✓	✗	✗	✗	Walnut full stock, grip parts provided with checkerings
Scout	✓	✗	✗	✗	✓	✗	✗	✗	Version intended for use by juvenile persons
American	✓	✓	✓	✓	✓	✓	✓	✗	Design has been adapted to the requirements governing the USA and Australian markets - without fixed sights
Varmint	✓	✗	✓	✓	✓	✗	✓	✗	Heavy barrel, stock is provided with a mass-reduced rubber buttplate - without fixed sights

CZ 453	Caliber			Surface finish		Threaded for sound moderator	Trigger with set-trigger	Description
	.22 LR	.17 HMR	.17 HM2	Blued	Nickeled			
American	✓	✓	✓	✓	✗	✗	✓	Design has been adapted to the requirements governing the USA and Australian markets - without fixed sights
Varmint	✓	✓	✓	✓	✗	✗	✓	Heavy barrel, stock is provided with a mass-reduced rubber buttplate - without fixed sights

## **OPERATING INSTRUCTIONS**

### **Ammunition**

Use only factory-manufactured ammunition of appropriate caliber, which are in compliance with CIP regulations (International Proof Commission for Firearms) or SAAMI (Sporting Arms and Ammunition Manufacturers' Institute Inc. of the United States). The use of other cartridges could damage the firearm or cause injury to the shooter.

### **Removal of the Magazine**

Press the magazine catch located at the front of the magazine in a rearward direction (Fig. 2), and remove the magazine (single-shot adapter) from the firearm.

### **Magazine Loading**

With the open end uppermost, grasp the magazine in one hand. Place a cartridge on the magazine follower with the base just forward of the retaining lips. Press the cartridge down and back until it touches the rear flat edge of the magazine. Place the next cartridge on top of the previous cartridge and slide in as already described.

### **Loading of the Rifle**

**ALWAYS MAKE SURE THE RIFLE IS POINTED IN A SAFE DIRECTION WHEN LOADING!**

Insert a loaded magazine into the rifle until it is securely caught by the magazine catch.

Grip the rifle with the left hand by its fore-end, place the buttplate against your body and grip the bolt handle with the other hand. Open the bolt by raising the bolt handle and pulling it to the rear to its stop. Then push the bolt continuously to its forward position again and by rotating the bolt handle in a downward direction close the bolt action. This procedure inserts the cartridge into the cartridge chamber and cocks the striker mechanism. The rifle is now ready to fire. If you do not intend to fire immediately ensure the firearm safety as described further in the section *Safety and its Operation*.



When using a single-shot adapter, keep it inserted in the rifle, open the bolt and place the cartridge on the follower. Further proceed in the same manner as when employing the magazine. The single-shot adapter is intended for the highest accuracy levels of shooting as it protects the bullets against damage during the feeding of cartridges.

### **The Safety and its Operation**

Shift the safety forward to its "Safety-On" position (Fig. 3) until the red dot is fully covered. This procedure locks the trigger mechanism and the bolt, it is not possible to discharge a cartridge or manipulate the bolt.

### **Unloading of the Rifle**

**ALWAYS MAKE SURE THE RIFLE IS POINTED IN A SAFE DIRECTION!**

- Remove the magazine in the manner as already described
- Move the safety to its "Safety-Off" position in order that the bolt can be opened
- Open the bolt and check to ensure that the cartridge has been extracted from the chamber and ejected
- Close the bolt
- Depress the trigger (dry fire)

### **Cocking Indicator Function**

Cocking of the striking mechanism is indicated by the striker. When the striker is cocked (activated), its rear part protrudes. This protrusion can be checked both by sight and by touch.

### Set-trigger Operation

The set-trigger is activated by pushing it in the forward (Fig. 4). For the reason of safety, activate the set-trigger only after the rifle is loaded and shortly before shooting. Do not carry your rifle with an activated set-trigger! If you have activated the set-trigger and you do not follow through with firing, keep your firearm pointed in a safe direction while carefully engaging the safety and then squeeze the trigger. Subsequently unload the rifle in the manner described above.

### Trigger Adjustment

The trigger pull adjustment for the CZ 452 ZKM is carried out after removal of the stock using the adjusting nut (Fig. 5).

CZ 453 enables adjusting the trigger pull and the trigger travel length before and after discharge (Fig. 6). The adjustment can be performed after removing the stock using the set screws A (trigger pull), B (trigger travel before) and C (trigger travel after discharge).

If the rifle is equipped with a set-trigger, the adjustment of the set-trigger is carried out using the screw located in front of the trigger (Fig. 7). For safety reasons do not adjust the set-trigger travel too short, as the rifle with an activated set-trigger is very sensitive to shock, and during handling the rifle could unintentionally discharge. The safety of the set-trigger adjustment can be checked with the rifle unloaded by repeated opening and closing of the bolt combined with moving of the safety to its "ON" and "OFF" positions. The spontaneous release of the trigger must not occur.

**Note:** The set-trigger can be removed from the rifle without impairing the function or adjustment of the conventional trigger.

### Sight Adjustment

The CZ 452-2E ZKM small bore rifle sights were sighted-in at the manufacturing plant at a 50 m distance. The tangent rear sight is provided with lines for 25 - 200 m aimed shooting in diversion steps of 25 m.

After depressing the rear sight-locking piece it is possible to shift the slide for the desired range. Windage adjustment is achieved after loosening the screw (Fig. 8) on the side you want to shift the point of impact and then tighten the screw on the opposite side. A full turn of the screw shifts the point of impact 5 cm (2 in.) at 50 m. Elevation correction is carried out by drifting the front sight in a dovetail. The front sight is secured in its place by a screw. The front side base is provided with auxiliary lines. Drifting the front sight by one line shifts the point of impact by 1.5 cm (.6 in.) at 50 m.

On the CZ 452 ZKM Scout version, windage correction is carried out by shifting the front sight in the transverse groove, and securing it in the desired position with an indentation punch. Elevation adjustment is carried out by shifting of the rear sight leaf slide (Fig. 9). Shifting the slide by one increment changes the point of impact by 1.25 cm (.5 in.) at 50 m.

CZ 453 is manufactured in a version without sights.

### Rifle Scope

Mounting of the riflescope and sighting-in of the rifle should be entrusted to a qualified gunsmith's workshop.

## MAINTENANCE INSTRUCTIONS

### Stripping for Cleaning - Disassembly

1. Remove the magazine.
2. Shift the safety to its "Off" position, in order that the bolt can be manipulated.
3. Open the bolt, and after depressing the trigger to its extreme rear remove the bolt by moving it rearward.

### Disassembly of the Bolt

1. Remove the bolt from the receiver as previously described.
2. Keeping the firm grip of the bolt body rotate the bolt handle to the right (in the same manner as if closing the bolt in the firearm). The main spring is thus released.
3. Place the striker spring support against a suitable solid object (Fig. 10) and push it a little way into the bolt body. At the same time pulling the safety up and out.
4. After detaching the safety, carefully release the bolt while holding the striker spring support. Be very careful when doing this disassembly procedure as the spring support is under main spring tension and its ejection could result in the loss of this part, or could cause an injury.

**CAUTION:**

Do not strip your firearm any further. If you assume that your firearm requires adjustment or repair, entrust this work to a competent gunsmith in a specialized workshop!

**Cleaning of the Rifle**

Clean the rifle

- Each time you use it
- If you get your rifle wet
- As soon as possible after shooting
- At least once a year in a temperate climate
- As often as once a month in a tropical climate, or other demanding environment

**Cleaning the Barrel Bore and the Cartridge Chamber**

If the firearm has not been fired or if only a few cartridges have been fired, clean the barrel bore and cartridge chamber with a clean patch attached to a cleaning rod. Repeat, changing patches, until the last patch comes out clean.

When the barrel bore is very dirty, apply a gun cleaning solution using a cleaning brush. Let the solvent act for about 10 minutes (this time may vary depending on the solvent agent being used). Then thoroughly scrub out the barrel bore. Subsequently, dry the barrel bore and cartridge chamber with a clean patch and check that all powder residues or fouling have been removed. If necessary repeat this procedure.

The cleaning rod and the brush must be inserted into the barrel bore from the chamber, to prevent wear or damage to the muzzle. Pass the brush all the way through the barrel bore before reversing the movement. If you try to change directions with the brush in the barrel, the brush could stick.

### **Cleaning of Other Rifle Parts**

Other parts of the rifle can be cleaned with a dry cloth, old toothbrush, copper bristle brush or a wooden scraper. Preserving oil or paraffin oil can be used for proper cleaning. Never use an agent designed for barrel bore cleaning. These solutions could remain in the joints, and after some time could cause corrosion. Check that cloth particles or brush bristles have not become lodged in any part of the rifle.

The maintenance of the stock can be carried out with a dry cloth or by some furniture-polishing product.

### **Preserving**

When the barrel bore, cartridge chamber, and all accessible parts are clean and dry, wipe these parts with a cloth soaked in gun oil or apply the oil in a spray. Remove all excess oil.

Before shooting always wipe the barrel bore dry. At very low temperatures remove the oil from all accessible parts or apply a lubricant prepared especially for these conditions.

Use thick preserving agents such as preserving grease only for long-term storage in demanding climate environments, and before any use of the rifle it must be thoroughly removed from all parts of the firearm.

### **Waste Management**

When used properly, the materials used in the product and packaging have no adverse effects on human health or the environment. When disposing of the product or its packaging, metal parts (steel and non-ferrous metals), plastics, wood, paper and cardboard should be stored separately in collecting containers intended specifically for that purpose.

**LIST OF PARTS**

1 Barrel	26 Trigger	54 Trigger Guard	85 Trigger Spring
2 Front Sight	27 Trigger Rivet	55 Trigger Guard Plate	86 Trigger Pin
3 Front Sight Screw	28 Trigger Pin	56 Trigger Guard Screw (2x)	87 Retaining Ring (2x)
4 Front Sight Cover	29 Trigger Rod Pin	57 Rear Stock Screw	88 Set-trigger Lever Spring
5 Front Sight Base	30 Trigger Rod	58 Magazine Shell	89 Set-trigger Lever
6 Rear Sight Leaf	31 Trigger Rod Nut	59 Magazine Follower	90 Trigger Set Screw (B)
7 Rear Sight Leaf Spring	32 Trigger Spring Washer	60 Magazine Follower Spring	91 Nylon fishing-line (2x)
8 Rear Sight Blade	33 Trigger Pull Spring	61 Magazine Base	92 Pin
9 Rear Sight Windage Screw (2x)	34 Bolt Guide	62 Magazine Plunger	93 Trigger Pull Spring
10 Rear Sight Slide	35 Bolt	63 Magazine Plunger Spring	94 Trigger Support
11 Rear Sight Locking Piece	36 Extractor	64 Magazine Shell	95 Adjusting Screw, Trigger Pull (A)
12 Locking Piece Spring	37 Holder	65 Magazine Follower	96 Locking Nut
13 Rear Sight Base	38 Extractor Spring	66 Magazine Follower Spring	97 Locking Nut
14 Rear Sight Base Pin	39 Safety	67 Adapter Body	98 Adjusting Screw, Trigger Overtravel (C)
15 Receiver	40 Bolt Handle	72 Barrel	99 Trigger Lever
16 Magazine Housing	41 Striker	73 Front Sight	100 Adjusting Screw, Set- Trigger
17 Magazine Housing Front Screw	42 Striker Spring	74 Front Sight Cover	101 Fore End Band
18 Magazine Housing Rear Screw	43 Striker Spring Support	75 Rear Sight Leaf	102 Fore End Band Screw
19 Magazine Catch	44 Stock	76 Rear Sight Base	103 Fore End Band Nut
20 Magazine Catch Spring	45 Butt Plate	77 Rivet	104 Cylindrical Nut
21 Magazine Catch Pin	46 Butt Plate Screw (2x)	78 Slide	105 Magazine Shell
22 Sear	47 Front Stock Screw	79 Trigger Mechanism Support	106 Magazine Plunger
23 Sear Steel Ball	48 Front Escutcheon	80 Firing Pin Catch	107 Magazine Base
24 Sear Spring	49 Sling Swivel Assembly	81 Firing Pin Catch Stop	108 Magazine Follower Spring
25 Sear Pin	50 Sling Swivel Wood Screw	82 Stop Spring	109 Magazine Follower
	51 Sling Swivel	83 Support Front Screw	
	52 Sling Swivel Screw	84 Support Rest Screw	
	53 Elastic Spacer		

## TROUBLESHOOTING, CAUSES AND REMEDIES

If your firearm is properly used and maintained, malfunctions will rarely occur. However, if such a situation does occur please observe the following instructions.

**CAUTION** - if a malfunction occurs, the possibility of an unintentional discharge is substantially increased. For this reason, when clearing malfunctions, observe previously mentioned Safety Instructions. Keep the rifle pointed in a safe direction, do not turn the rifle against your body or anyone else's. Do not place your hands in front of the barrel!

Malfunction	Possible Cause	Remedy
A cartridge has not been fed into the chamber.	Magazine is not fully inserted or is damaged. The rifle or cartridges are fouled (dirty).	Insert magazine properly or change magazine. Clean the rifle and cartridges and wipe them dry or as the case may be slightly lubricate.
Misfire.	Defective cartridge. Firing Pin hole fouled (dirty) or improper lubrication agent used during low temperature conditions.	Follow the Safety Instructions according to point 20. Disassemble and clean the firing pin or use low temperature lubricant.
A shot sounds "weak".	The primer has been activated but no powder load was inside the cartridge case.	Unload the rifle and check that the bullet is not lodged in the barrel. Any subsequent shot could cause damage to the barrel!
The spent case has not been ejected.	Cartridge chamber, extractor or ammunition dirty or unsuitable lubricant in low temperature environment.	Clean and wipe the rifle dry or eventually lubricate lightly with a suitable agent. Use clean and new ammunition.

If you cannot clear away any malfunction in the manner described above, entrust the rifle to a competent gunsmith for inspection and repair.

**TECHNICAL SPECIFICATIONS**

Model	Standard, Lux	Style, Silhouette	FS	Scout	American	Varmint
	Caliber	.22 LR .22 WMR	.22 LR .17 HMR	.22 LR .22 WMR .17 HMR	.22 LR	.22 LR .22 WMR .17 HMR .17HM2
Overall Length [mm]	1083	1035	995	830	1020	998
Barrel Length [mm]	630	572	527	412	572	532
Sight Radius (Open Sights) [mm]	508	-	410	320	-	-
Weight (Empty Magazine) [kg]	3	2,7	2,9	1,8	2,8	3,2
Magazine Capacity [cartridges]	<b>.22 LR: 5/10/1 - .22 WMR: 5 - .17 HMR: 5 - .17 HM2: 5</b>					
Trigger Pull, Adjustment Range [N]	14 - 18					
Trigger Pull with cocked Set-Trigger [N]	4 - 7					

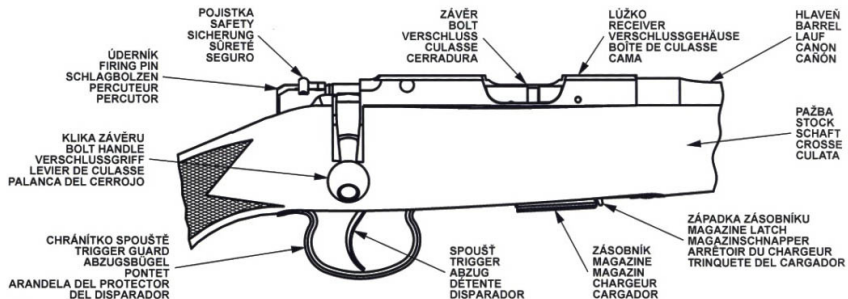


**LIST OF ILLUSTRATIONS**

1. Terminology of basic parts
2. Magazine removal
3. Safety in released position (the arrow shows direction to put the safety into place)
4. Set-trigger activation
5. Trigger pull adjustment of CZ 452 ZKM
6. Trigger adjustment of CZ 453 (A - trigger pull, B - travel before discharge, C - travel after discharge)
7. Set-trigger adjusting screw
8. Rear sight leaf with slide, rear blade and rear sight side-adjusting screws
9. Close-up of rear sight - Scout version
10. Disassembly of the bolt

The Company, reserves the right to make any changes it thinks necessary to improve its models or to meet any requirements of manufacturing or commercial nature.

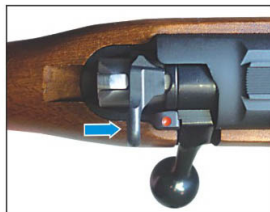




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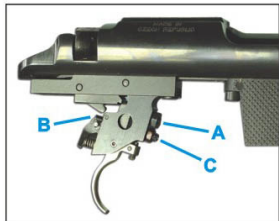
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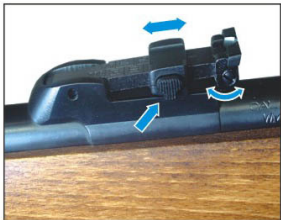
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