



American Gunsmithing Institute

**PROFESSIONAL GUNSMITHING COURSE
CURRICULUM AND VIDEO INDEX
ONLINE EDITION**



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AMERICAN GUNSMITHING INSTITUTE

Professional Gunsmithing Course

Course Indexes

Following are the indexes to the American Gunsmithing Institute's Professional Gunsmithing Course curriculum.

The "Quick Reference Index" is essentially an index to the "Master Index." It gives you the page location of topics in the Master Index, which also gives you the disc number of the indexed menu listings which you can use as a reference within the Online Course.

Use of these two indexes will greatly speed your ability to find a certain topic when researching answers to work related questions and the Certification Examination's test questions. It answers all those "Now where did I see that?" questions.

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# AMERICAN GUNSMITHING INSTITUTE

## Professional Gunsmithing Course

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## Professional Gunsmithing Course

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#### INTRODUCTORY - DISC 4

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## NEXT MENU

### Common Questions & Answers continued

#### Workbench Tips

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## NEXT MENU

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| Bedding Options and Avoiding Mistakes .....   | 35:45 |
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## NEXT MENU

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| Tapered vs. Hollow-Ground Screwdrivers ..... | 1:06:19 |
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| Lubricants/Protectors/Penetrants .....       | 1:15:01 |

## NEXT MENU

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| Test Firing Guns .....  | 1:19:56 |

## HANDGUNS - DISC 1a

### PISTOLS: SINGLE-ACTION AUTOMATICS

#### LOCKED BREECH: "COLT 1911" .45 AUTO

|                                    |       |
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| Introduction with Gene Kelly ..... | 00:12 |
| Introduction with Bob Dunlap ..... | 01:18 |

#### History & Variations

|                                |       |
|--------------------------------|-------|
| History .....                  | 02:22 |
| Variations .....               | 06:20 |
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| Caliber Variations .....       | 10:59 |

## HANDGUNS

## Design & Function

|                                                  |       |
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| Safeties - Types, Operation, Problems .....      | 21:59 |
| Springs - Sear Spring, Thumb Safety .....        | 29:40 |
| Slide Stop - Operation, Problems .....           | 35:38 |
| Extractors - Design, Operation, Variations ..... | 38:56 |
| Firing Pin Blocking Safety - Variations .....    | 43:16 |
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## Lockup

|                                                                        |         |
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| Locking Lug Engagement .....                                           | 53:42   |
| Link - Increasing Lockup, Function, Testing & Modification .....       | 55:26   |
| Barrel & Slide Movement - Function, Malfunctions .....                 | 58:45   |
| Hang Test - Method .....                                               | 1:01:42 |
| Link - Determining Lockup, Dimensions & Calculations (Link Size) ..... | 1:04:13 |
| Making Link - Material, Heat Treating, Fitting .....                   | 1:08:27 |
| Long Link - Malfunctions, Troubleshooting .....                        | 1:09:46 |
| Lock & Unlocking - Design, Function & Operation .....                  | 1:11:53 |

## NEXT MENU

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Unlocking Test - Method, Correction, Modification & Testing ..... | 1:16:20 |
| Fitting Barrel to Frame - Function & Troubleshooting .....        | 1:17:33 |
| Slide Stop Test - Method .....                                    | 1:22:20 |

## Feeding

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Ramp Design (Barrel & Frame), Problems, Corrections .....                 | 1:23:22 |
| 1-1/2 to 1 Rule - Dimensions, Calculations .....                          | 1:27:24 |
| Corrections & Modifications .....                                         | 1:29:39 |
| Incorrect Ramp Modifications - Dangers, Causes .....                      | 1:31:49 |
| Ramp Gauge Design & Fabrication .....                                     | 1:33:44 |
| Headspace & Loose Breech - Definition, Dangers, Causes, Corrections ..... | 1:37:00 |
| Tolerances .....                                                          | 1:42:08 |
| Loose Breech - Correction Procedure .....                                 | 1:42:57 |
| Barrel Ramp Contour .....                                                 | 1:49:10 |

## Feeding - 3-Point Bind

|                                                 |         |
|-------------------------------------------------|---------|
| Three Point Bind .....                          | 1:49:10 |
| Breech Face & Slide Modification .....          | 1:50:38 |
| Firing Pin Hole - Modification & Function ..... | 1:51:37 |

|                                                     |         |
|-----------------------------------------------------|---------|
| Additional Problems, Troubleshooting & Repair ..... | 1:56:13 |
|-----------------------------------------------------|---------|

## Extractor

|                                       |         |
|---------------------------------------|---------|
| Design & Function .....               | 1:57:55 |
| Fit - "Spring out" .....              | 2:01:04 |
| Spring Tension .....                  | 2:04:10 |
| Hook Shape - Chamfers & Angles .....  | 2:05:29 |
| Cam Out (Engagement Adjustment) ..... | 2:13:54 |
| Spring Tension & Adjustment .....     | 2:15:05 |
| Extractor Action & Malfunction .....  | 2:17:05 |
| Causes & Corrections (Angles) .....   | 2:18:55 |
| Test - Extractor Fit .....            | 2:25:38 |
| Checklist on Fit .....                | 2:27:01 |

## NEXT MENU

## Ejector

|                                                               |         |
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| Ejection Port - Malfunctions & Lowering Port, Procedure ..... | 2:34:37 |
| Comments .....                                                | 2:36:45 |

|                                                                                    |         |
|------------------------------------------------------------------------------------|---------|
| Trigger Job: Trigger Mechanism                                                     |         |
| Trigger Mechanism Layout, Design, Function .....                                   | 2:38:03 |
| Overcoming Trigger Weight.....                                                     | 2:45:39 |
| Elements of Trigger Job .....                                                      | 2:47:46 |
| Sear - Positive Angle, Determining Angles, Principals of Engagement .....          | 2:49:00 |
| Demo - Positive vs. Negative Trigger Jobs .....                                    | 2:57:42 |
| Creep - How to Reduce.....                                                         | 2:59:08 |
| Colt System & Modified System.....                                                 | 3:00:29 |
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| Trigger Job - Method & Techniques (Creep) .....                                    | 3:05:24 |
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| Method & Technique (Weight).....                                                   | 3:07:54 |
| Surge & Hammer Follow-Down                                                         |         |
| Surge & Hammer Follow-Down - Causes .....                                          | 3:09:06 |
| Sear Tail - Modification .....                                                     | 3:12:04 |
| Triggers - Weight & Modification .....                                             | 3:13:35 |
| Trigger Problems                                                                   |         |
| Premature Disconnect, Cause, Troubleshooting & Correction .....                    | 3:17:13 |
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| Magazines                                                                          |         |
| Magazines - Types, Design, Function, Troubleshooting.....                          | 3:27:21 |
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| Magazine Catch (Release) - Design, Function .....                                  | 3:37:09 |
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| Safeties                                                                           |         |
| Safeties: Types, Designs, Functions, Changes .....                                 | 3:43:56 |
| Half Cock (Interrupter) Design, Function .....                                     | 3:47:44 |
| Grip Safety - Design, Function, Troubleshooting, Adjusting .....                   | 3:48:28 |
| Grip Safety - Amount of Engagement & Angle.....                                    | 3:49:25 |
| Grip Safety - Trigger Block Timing.....                                            | 3:52:06 |
| Grip Safety - Trigger Block Timing Tests (3) .....                                 | 3:53:20 |
| Grip Safety - Trigger Block Problems, Causes & Corrections.....                    | 3:55:30 |
| Thumb Safety - Design, Function .....                                              | 4:00:09 |
| Thumb Safety - Fitting & Adjusting.....                                            | 4:04:37 |
| NEXT MENU                                                                          |         |
| Thumb Safety Detent - Design, Function.....                                        | 4:05:00 |
| Thumb Safety Detent - Plunger Positions.....                                       | 4:06:19 |
| Thumb Safety Detent - Safety Travel (Won't Go On), Troubleshooting & Repair) ..... | 4:08:56 |

## **HANDGUNS - DISC 1b**

### **PISTOLS: SINGLE-ACTION AUTOMATICS**

#### ***“COLT 1911” .45 AUTO CONTINUED”***

|                                                           |       |
|-----------------------------------------------------------|-------|
| Stock Screw Bushings: Repair & Replacement.....           | 00:10 |
| Plunger Tube Housing: Repairs, Installation & Tools ..... | 01:10 |
| Firing Pin Protrusion                                     |       |
| Firing Pin Protrusion: Types & Designs .....              | 03:25 |
| Absolute Protrusion - Design & Function.....              | 03:45 |
| Positive Protrusion - Design & Function .....             | 03:56 |
| Comments & Rules .....                                    | 05:05 |
| Tip Shapes.....                                           | 06:39 |
| Correcting Positive Protrusion - Method .....             | 07:46 |



## Accuracy

|                                                                  |       |
|------------------------------------------------------------------|-------|
| Accuracy: Understanding .....                                    | 09:28 |
| Frame – Tightening Procedure .....                               | 11:07 |
| Slide – Tightening Procedure .....                               | 13:21 |
| Barrel – Link & Positioning .....                                | 14:09 |
| Bushing – Function, Methods of Tightening (3-Point System) ..... | 14:43 |
| Link – Over Center Position, Method & Diagram .....              | 21:01 |
| Problems & Solutions - Troubleshooting Information .....         | 25:18 |
| A Message from Gene Kelly .....                                  | 42:11 |

## Disassembly

|                                                      |         |
|------------------------------------------------------|---------|
| Magazine .....                                       | 42:43   |
| Slide Removal .....                                  | 46:52   |
| Slide – Recoil Spring, Bushing, Barrel .....         | 47:34   |
| Slide (Cont.) – Firing Pin, Extractor, Safety .....  | 49:36   |
| Frame – Thumb Safety, Mainspring, Hammer, Sear ..... | 51:25   |
| Frame (Cont.) – Trigger, Magazine Catch, Grips ..... | 54:15   |
| Mainspring Housing .....                             | 1:03:37 |

## Reassembly

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| Magazine .....                                                        | 1:05:38 |
| Mainspring Housing .....                                              | 1:06:17 |
| Subassemblies – Firing Pin, Barrel Link, Hammer, Magazine Catch ..... | 1:07:58 |
| Slide– Firing Pin, Extractor, Safety .....                            | 1:10:52 |
| Slide (Cont.) – Barrel, Recoil Spring, Barrel Bushing .....           | 1:14:22 |
| Frame – Trigger, Magazine Catch .....                                 | 1:15:26 |
| Frame (Cont.) Sear, Disconnecter .....                                | 1:18:07 |
| Hammer – Problems, Correction .....                                   | 1:21:45 |
| Frame (Cont.) – Sear Spring, Thumb Safety, Mainspring, Grips .....    | 1:28:38 |
| Loose Breech .....                                                    | 1:35:03 |

## NEXT MENU

|                                        |         |
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| Measuring Lock-Up .....                | 1:54:11 |
| Barrel to Frame Fit .....              | 1:59:46 |
| Making a Ramp Gauge .....              | 2:11:22 |
| Link Rotation in Locked Position ..... | 2:27:35 |
| Fitting the Barrel Hood .....          | 2:30:48 |
| Review of the “Tests” .....            |         |
| Slide-Stop Test .....                  | 2:41:01 |
| The Pencil Test .....                  | 2:42:26 |
| The Hang Test .....                    | 2:44:08 |
| Review of Making A Link .....          | 2:46:09 |
| Review of Extractors .....             | 2:50:23 |

## NEXT MENU

|                                              |         |
|----------------------------------------------|---------|
| Review of Ejectors .....                     | 3:01:34 |
| Troubleshooting Tips .....                   | 3:10:36 |
| Review of Trigger Theory .....               | 3:15:34 |
| Review of the 1911 Trigger Adjustments ..... | 3:31:08 |

## HANDGUNS - DISC 2

### PISTOLS: SINGLE-ACTION AUTOMATICS

#### *“COLT 1911” .45 AUTO CONTINUED”*

|                                                      |         |
|------------------------------------------------------|---------|
| Review of the 1911 Trigger Adjustments (Cont.) ..... | 00:11   |
| Review of Magazines .....                            | 26:35   |
| Review of Safeties .....                             | 59:20   |
| Review of the Slide-Stop .....                       | 1:36:30 |
| Review of the Plunger Tube .....                     | 1:46:46 |
| Review of the Stock Screw Bushings .....             | 1:51:53 |

|                                          |         |
|------------------------------------------|---------|
| Correcting Unsprung Trigger Travel ..... | 1:54:29 |
| Review of Firing Pins.....               | 1:58:09 |
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|                                      |         |
|--------------------------------------|---------|
| Review of Accuracy .....             | 2:15:50 |
| If You Get Into Trouble .....        | 2:22:57 |
| Final Thoughts with Gene Kelly ..... | 2:24:04 |

### ***“BROWNING HIGH POWER”***

|                                        |         |
|----------------------------------------|---------|
| Design & Function.....                 | 2:24:22 |
| Cam Lock Design (BBL)                  |         |
| Cam Lock Design (BBL) .....            | 2:24:47 |
| Problems: Unlocking .....              | 2:26:47 |
| Loose Breech .....                     | 2:28:48 |
| Trigger Mechanism                      |         |
| Design & Function .....                | 2:29:51 |
| Trigger Job – Design Elements.....     | 2:31:27 |
| Barrel Ramp – Design Modification..... | 2:32:03 |
| Magazine – Design .....                | 2:33:27 |
| NEXT MENU                              |         |

|                                                    |         |
|----------------------------------------------------|---------|
| Locking System .....                               | 2:34:34 |
| Frame Assembly – Disassembly, Reassembly.....      | 2:35:00 |
| Safety Design .....                                | 2:40:46 |
| Extractor – Design & Fit.....                      | 2:41:50 |
| Slide – Reassembly & Comments.....                 | 2:42:35 |
| Slide Stop – Troubleshooting & Modifications ..... | 2:43:44 |
| Review of Loose Breech .....                       | 2:44:59 |
| Review of Lock-Up.....                             | 2:46:39 |
| NEXT MENU                                          |         |

|                                   |         |
|-----------------------------------|---------|
| Review of the Feed Ramp .....     | 2:52:59 |
| Review of the Extractor .....     | 2:58:27 |
| Delaying the Slide Unlocking..... | 3:12:23 |
| Magazine & Trigger Problems ..... | 3:14:06 |

### ***“BERETTA BRIGADIER”***

|                                              |         |
|----------------------------------------------|---------|
| Design & Function.....                       | 3:21:25 |
| Extractor – Fit.....                         | 3:22:45 |
| Locking System - Design & Loose Breech ..... | 3:24:00 |
| Feed Ramp .....                              | 3:25:32 |
| NEXT MENU                                    |         |

|                                              |         |
|----------------------------------------------|---------|
| Fire Control System – Design & Function..... | 3:26:36 |
| History .....                                | 3:29:23 |
| Fitting the Safety.....                      | 3:30:47 |
| Premature Disconnect.....                    | 3:34:35 |
| Review of the Barrel Ramp.....               | 3:40:32 |
| Review of the Extractor .....                | 3:43:57 |
| Other Recommendations.....                   | 3:46:42 |
| Summary with Gene Kelly.....                 | 3:53:03 |

## **HANDGUNS - DISC 3**

### **PISTOLS: DOUBLE ACTION AUTOMATICS**

#### ***“SMITH & WESSON”***

|                      |       |
|----------------------|-------|
| Disassembly          |       |
| Slide Assembly ..... | 01:02 |

|                                                           |         |
|-----------------------------------------------------------|---------|
| Safety .....                                              | 03:23   |
| Extractor.....                                            | 06:32   |
| Plungers & Rear Sight.....                                | 07:56   |
| Frame Assembly - Grip.....                                | 10:10   |
| Side Plate, Hammer & Internal Parts.....                  | 11:39   |
| Draw Bar & Trigger .....                                  | 14:22   |
| Magazine Catch.....                                       | 16:11   |
| Reassembly                                                |         |
| Frame Assembly.....                                       | 17:47   |
| Slide Assembly.....                                       | 24:50   |
| Design & Function                                         |         |
| Design & Function.....                                    | 28:50   |
| Safety .....                                              | 32:45   |
| Double Action Pull.....                                   | 35:25   |
| Lockup                                                    |         |
| Lockup.....                                               | 38:33   |
| Loose Breech & Correction .....                           | 46:41   |
| Problems & Corrections.....                               | 48:30   |
| Feed Ramp/Barrels .....                                   | 51:46   |
| Extractor.....                                            | 54:01   |
| Extractor - Problems & Corrections .....                  | 57:02   |
| Firing Pin.....                                           | 1:03:51 |
| Safety Timing – Tests & Corrections .....                 | 1:06:56 |
| Safe Notch                                                |         |
| Function & Problems .....                                 | 1:12:06 |
| Hammer Bounce – Correction.....                           | 1:13:04 |
| Premature Disconnect - Problem.....                       | 1:16:49 |
| Premature Disconnect - Function, Cause & Correction ..... | 1:17:09 |
| Single/Double Action                                      |         |
| Parts Function .....                                      | 1:27:23 |
| Double Action – Problems & Corrections .....              | 1:30:02 |
| Single Action – Trigger Job .....                         | 1:34:50 |
| Magazine Catch.....                                       | 1:40:20 |
| Ejector – Problems & Correction .....                     | 1:42:48 |
| Slide Stop – Problems & Correction .....                  | 1:44:59 |
| NEXT MENU                                                 |         |
| Miscellaneous Problems – Disconnecter, Ejector .....      | 1:47:48 |
| Questions & Answers – Troubleshooting .....               | 1:51:01 |

## **DOUBLE ACTION AUTOS – LOCKED BREECH**

### ***“GLOCK”***

|                               |         |
|-------------------------------|---------|
| Glock: Design.....            | 2:09:55 |
| Slide Disassembly             |         |
| Slide Assembly.....           | 2:11:55 |
| Striker Assembly.....         | 2:12:10 |
| Extractor.....                | 2:13:35 |
| Firing Pin Safety .....       | 2:14:40 |
| Striker.....                  | 2:15:55 |
| Striker Tip .....             | 2:19:10 |
| Slide – Comments.....         | 2:20:37 |
| Frame Disassembly             |         |
| Frame Assembly.....           | 2:22:17 |
| Locking Block & Ejector ..... | 2:22:35 |
| Trigger Mechanism .....       | 2:24:12 |
| Barrel Retaining Plate.....   | 2:24:22 |
| Magazine Release.....         | 2:25:40 |

|                                                              |         |
|--------------------------------------------------------------|---------|
| Reassembly.....                                              | 2:27:10 |
| Problems.....                                                |         |
| Problems.....                                                | 2:33:26 |
| Barrel – 3-Point Bind.....                                   | 2:34:01 |
| Ejector – Cause & Correction.....                            | 2:34:48 |
| Extractor.....                                               | 2:36:36 |
| Loose Breech.....                                            | 2:38:14 |
| Lockup – Comments & Function.....                            | 2:39:22 |
| Firing Pin Safety – Weakness & Correction.....               | 2:41:57 |
| Recoil Spring – Coil Bind Problem.....                       | 2:46:37 |
| Action.....                                                  |         |
| Function.....                                                | 2:48:33 |
| Trigger Pull – Options.....                                  | 2:49:59 |
| Trigger Mechanism – Detail Disassembly.....                  | 2:51:49 |
| Questions & Answers – Troubleshooting.....                   | 2:53:57 |
| NEXT MENU                                                    |         |
| <b>“SIG P220” &amp; SERIES</b>                               |         |
| Disassembly.....                                             |         |
| Slide Assembly – Barrel Lockup, Design, Function.....        | 2:59:51 |
| Rear Slide Block – Extractor Modification.....               | 3:06:03 |
| Frame Assembly.....                                          | 3:08:16 |
| Lock Piece – Removal.....                                    | 3:08:23 |
| Grip Removal & Spring Comments.....                          | 3:09:49 |
| Single Action – Function & Trigger Job.....                  | 3:11:24 |
| Double Action.....                                           |         |
| Function & Operation.....                                    | 3:12:18 |
| Locking Piece – Problems.....                                | 3:17:34 |
| Problems.....                                                |         |
| Problems.....                                                | 3:19:10 |
| Broken Extractors – Cause & Correction.....                  | 3:19:41 |
| Safety – Test, Cause & Correction.....                       | 3:20:39 |
| <b>“BERETTA 92”</b>                                          |         |
| Disassembly.....                                             |         |
| Disassembly, Design, & Function.....                         | 3:24:05 |
| Locking Block (Breech System) – Design & Function.....       | 3:26:50 |
| Loose breech - Description & Cause.....                      | 3:30:02 |
| Loose breech - Correction & Repair.....                      | 3:33:31 |
| Safeties – Comparison.....                                   | 3:34:46 |
| Feeding.....                                                 |         |
| Problems, Causes & Correction.....                           | 3:35:41 |
| Barrel Ramp - Design & Modification.....                     | 3:36:11 |
| Safety (Slide Mounted) - Disassembly, Design & Function..... | 3:40:57 |
| Fire Control System.....                                     |         |
| Design & Function.....                                       | 3:42:54 |
| Trigger job – Comments.....                                  | 3:45:06 |
| Double Action - Design & Function.....                       | 3:45:26 |
| Slide Stop – Comments & Troubleshooting.....                 | 3:48:17 |
| NEXT MENU                                                    |         |
| Magazine Catch – Removal.....                                | 3:51:23 |
| Safeties.....                                                |         |
| Safety (Firing Pin Block) – Design & Function.....           | 3:51:57 |
| Safety Lever – Design & Function.....                        | 3:53:42 |
| Extractor - Design & Function.....                           | 3:55:20 |
| Accuracy - Comments & Improvements.....                      | 4:00:21 |
| Trigger Job (Double Action) Methods.....                     | 4:01:51 |

## **HANDGUNS - DISC 4**

### **PISTOLS: STRAIGHT BLOWBACK AUTOMATICS**

|                                                               |       |
|---------------------------------------------------------------|-------|
| Introduction with Gene Kelly .....                            | 00:10 |
| Principles, Comparison, Design & Function .....               | 00:37 |
| Extractor - Principle, Operation, Design & Function .....     | 06:59 |
| Striker Fired - Principle, Operation, Design & Function ..... | 11:47 |
| Feeding Problems Description, Cause & Repair .....            | 15:31 |
| Striker Spring - Replacing & Testing .....                    | 17:52 |

#### ***"MELIOR .22"***

|                                                           |       |
|-----------------------------------------------------------|-------|
| Extraction - Function, Troubleshooting & Correction ..... | 20:48 |
| Ejector - Design & Function .....                         | 25:43 |
| Magazines - Design, Problems & Adjustments .....          | 26:48 |
| Chamber Mouth - Chamfer Procedure .....                   | 34:49 |

#### ***"HIGH STANDARD DURAMATIC"***

|                                                        |       |
|--------------------------------------------------------|-------|
| Disassembly, Design, Function, Problems & Repair ..... | 36:28 |
| Reassembly .....                                       | 44:05 |

#### ***"BROWNING BUCKMARK"***

|                                                      |         |
|------------------------------------------------------|---------|
| Disassembly, Design & Function .....                 | 46:37   |
| Slide Stop - Problems, Repair .....                  | 51:21   |
| Magazine Catch - Problems, Repair .....              | 55:27   |
| Hammer - Removal .....                               | 58:04   |
| Ejector - Problem & Correction .....                 | 58:40   |
| Firing Pin - Problems, Correction & Protrusion ..... | 59:39   |
| Reassembly .....                                     | 1:00:32 |

NEXT MENU

#### ***"S&W 422"***

|                                                      |         |
|------------------------------------------------------|---------|
| Disassembly .....                                    | 1:04:07 |
| Barrel Removal - Procedure & Installation .....      | 1:08:18 |
| Slide Stop - Troubleshooting & Repair .....          | 1:11:06 |
| Magazine Disconnect - Troubleshooting & Repair ..... | 1:12:00 |
| Extractor - Removal .....                            | 1:12:55 |
| Firing Pin - Removal, Protrusion & Checks .....      | 1:14:43 |
| Reassembly & Comments .....                          | 1:17:01 |

#### ***"RUGER STANDARD AUTO (MARK II)"***

|                                                  |         |
|--------------------------------------------------|---------|
| History & Manufacturing Comments .....           | 1:18:31 |
| Disassembly - Procedure, Design & Function ..... | 1:21:40 |
| Low Feeding - Causes & Corrections .....         | 1:25:58 |
| Extractors - Troubleshooting & Corrections ..... | 1:28:30 |
| Ejector - Cause & Corrections .....              | 1:30:15 |
| Hammer Following - Cause & Correction .....      | 1:30:57 |
| Magazine Catch - Removal & Comments .....        | 1:31:11 |
| Safety - Fit, Design & Function .....            | 1:31:32 |
| Trigger Job - Method, Parts & Adjustments .....  | 1:32:29 |

NEXT MENU

|                                          |         |
|------------------------------------------|---------|
| Loose Frame - Causes & Corrections ..... | 1:35:16 |
| Reassembly - Procedure .....             | 1:36:48 |

#### ***"HIGH STANDARD HD MILITARY"***

|                                                   |         |
|---------------------------------------------------|---------|
| Slide Removal - Procedure, Parts & Problems ..... | 1:38:50 |
| Recoil Spring - Cause & Repairs .....             | 1:41:12 |

|                                                  |         |
|--------------------------------------------------|---------|
| Recoil Spring Guide - Function & Repair.....     | 1:43:05 |
| Misfires – Headspace, Correction & Repairs ..... | 1:43:56 |
| Ejection - Causes & Corrections.....             | 1:50:31 |
| Fire Control Assembly - Design, Function.....    | 1:51:56 |
| Trigger Bar - Causes & Correction.....           | 1:54:31 |
| Hammer - Removal, Trigger Job & Adjustments..... | 1:56:32 |
| Magazine - Design & Modification .....           | 1:59:45 |

#### NEXT MENU

|                                                     |         |
|-----------------------------------------------------|---------|
| Safety - Cause, Correction & Sear Relationship..... | 2:01:54 |
| Reassembly - Procedure & Premature Disconnect.....  | 2:06:25 |
| Problems - Recoil Spring.....                       | 2:10:43 |
| Common Reassembly & Disassembly Mistakes.....       | 2:11:41 |

#### ***“HIGH STANDARD SPORT KING”***

|                                                                |         |
|----------------------------------------------------------------|---------|
| Disassembly.....                                               | 2:15:51 |
| Fire Control System - Design, Function & Problems.....         | 2:16:58 |
| Safety - Design, Function & Sear Relationship.....             | 2:20:05 |
| Barrel Retaining System - Design, Problems & Corrections ..... | 2:26:54 |
| Extractor, Ejector, & Magazine Problems – Comments.....        | 2:30:41 |

#### ***“BERETTA .380”***

|                                                             |         |
|-------------------------------------------------------------|---------|
| Comments.....                                               | 2:31:18 |
| Extractor – Design .....                                    | 2:32:37 |
| Firing Pin - Replacement & Construction .....               | 2:33:31 |
| Extractor – Fitting.....                                    | 2:33:54 |
| Fire Control System - Similarities, Design & Function ..... | 2:34:29 |
| Magazine - Problems & Corrections.....                      | 2:36:11 |
| Feed Ramp - Design & Steering.....                          | 2:36:57 |
| Barrel Looseness – Correction.....                          | 2:39:06 |
| Safety - Function & Fitting .....                           | 2:40:05 |
| Reassembly – Inspection .....                               | 2:41:27 |

#### ***“COLT WOODSMAN”***

|                                                         |         |
|---------------------------------------------------------|---------|
| Introduction & Evolution of Design .....                | 2:42:58 |
| Disassembly.....                                        | 2:44:38 |
| Barrel & Feed Ramp - Design, Function & Removal.....    | 2:46:26 |
| Slide – Disassembly.....                                | 2:49:37 |
| Extractor - Adjustment, Modification .....              | 2:51:14 |
| Misfires - Troubleshooting, Causes.....                 | 2:52:34 |
| Firing Pin - Protrusion & Correction .....              | 2:53:48 |
| Slide – Reassembly .....                                | 2:56:31 |
| Frame Assembly - Disassembly & Component Function ..... | 2:58:10 |

#### NEXT MENU

|                                                            |         |
|------------------------------------------------------------|---------|
| Reassembly - Trigger & Bar .....                           | 3:04:51 |
| Sear System - Design, Function, Tuning & Installation..... | 3:06:16 |
| Reassembly - Slide Stop Installation.....                  | 3:10:35 |
| Slide - Installation Procedure .....                       | 3:12:03 |
| Sear - Installation Procedure & Observations.....          | 3:13:08 |
| Clones - Other Manufactures & Comments.....                | 3:15:17 |

#### ***“RUGER STANDARD AUTOMATIC MARK III & .22/45”***

|                                          |         |
|------------------------------------------|---------|
| Intro by Gene Kelly .....                | 3:16:48 |
| MARK III Disassembly, New Features ..... | 3:17:02 |
| .22/45 Disassembly, Magazine.....        | 3:25:10 |
| Ergonomics & Features .....              | 3:45:11 |

## HANDGUNS - DISC 5

### REVOLVERS: SINGLE ACTION

#### ***"COLT SINGLE ACTION"***

|                                                               |         |
|---------------------------------------------------------------|---------|
| Introduction to Revolvers.....                                | 00:10   |
| Disassembly - Procedure & Parts Identification .....          | 02:35   |
| Cylinder Fit .....                                            |         |
| Cylinder Fit .....                                            | 09:52   |
| Headspace - Description, Tolerances .....                     | 10:30   |
| Fitting Cylinder - Procedures, Gauges .....                   | 18:46   |
| End Shake - Examples, Correction, Tolerances .....            | 23:50   |
| Barrel Cylinder Gap - Examples, Correction, Tolerances .....  | 35:37   |
| Barrel Setback - Procedure, Tips, Alterations.....            | 43:00   |
| Forcing Cone (Throat) - Procedure, Tools, Tolerances .....    | 57:52   |
| Reassembly - Procedure & Comments .....                       | 1:05:16 |
| Cocking Action - Design, Parts Function, Timing .....         | 1:16:38 |
| Safety - Carrying Methods & Options .....                     | 1:19:20 |
| Full Auto Cycle - Causes & Corrections.....                   | 1:23:29 |
| Bolt - Design, Function, Timing .....                         | 1:24:29 |
| Cylinder Stop .....                                           |         |
| Cylinder Stop - Illustration, Design, Function .....          | 1:31:09 |
| Timing - Principles, Adjusting, Alterations.....              | 1:38:30 |
| Bolt Ball - Design, Function, Tolerances, Timing, Shape ..... | 1:47:24 |
| Troubleshooting - Situations, Corrections .....               | 2:00:56 |

#### NEXT MENU

#### Hand

|                                                           |         |
|-----------------------------------------------------------|---------|
| Hand - Design, Function.....                              | 2:21:30 |
| Types - Comparison, Advantages.....                       | 2:22:39 |
| Operation - Fitting, Timing Methods, Adjustments .....    | 2:26:46 |
| Tuning - Surfaces, Preparation, Modifications .....       | 2:34:51 |
| Spring - Replacement, Installation Options .....          | 2:43:19 |
| Hammer - Positions, Function Relationship to Trigger..... | 2:47:11 |

#### Trigger

|                                                      |         |
|------------------------------------------------------|---------|
| Trigger Job - Diagram, Fundamentals .....            | 2:50:43 |
| Pre-75 Design - Diagram, Design, Function .....      | 2:54:36 |
| Creep - Cause, Correction, Timing Relationship ..... | 2:55:52 |
| Trigger Material - Types, Heat Treating .....        | 2:58:38 |
| Timing - Checking, Correction Options .....          | 3:00:14 |
| Trigger - Repairs, Fabrication.....                  | 3:02:39 |
| Hammer - Repairs, Material, Timing Notches .....     | 3:03:32 |

#### Non-Colt Models

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| Non-Colt Designs & Parts.....                                         | 3:10:18 |
| Cylinder Stop - Alternate Designs.....                                | 3:11:26 |
| Ruger - Designs, Variations.....                                      | 3:12:29 |
| Colt System - Diagram, Design, Function, Repairs, Timing.....         | 3:13:56 |
| Ruger System - Diagram, New & Old Design, Repairs, Timing .....       | 3:19:04 |
| Colt Percussion Hand System - Design, Function, Timing, Repairs ..... | 3:23:41 |
| S&W & Other Hand Systems - Timing, Repairs .....                      | 3:26:54 |

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Percussion Timing (Colt) - Differences, Design, Function, Repairs ..... | 3:28:01 |
| Barrel Adjustment (Range) - Problems, Correction.....                   | 3:31:05 |
| Sights - Adjustment, Troubleshooting, Correction .....                  | 3:34:03 |

## HANDGUNS - DISC 6

### REVOLVERS: SINGLE ACTION CONTINUED

#### ***"COLT SINGLE ACTION" CONTINUED***

|                                                         |       |
|---------------------------------------------------------|-------|
| Sights - Adjustments, Troubleshooting, Corrections..... | 00:10 |
|---------------------------------------------------------|-------|

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| Cylinder Fit Overview                                               |       |
| Cylinder Fit - Tolerances, Review .....                             | 07:14 |
| S&W Revolvers - Design, Function, Operation .....                   | 08:56 |
| End Shake - (Loose Cylinder) - Correction .....                     | 11:08 |
| Headspace - Correction, Alterations .....                           | 13:23 |
| Yoke (Crane) - Design, Function .....                               | 19:22 |
| Yoke Alignment - Positions, Causes, Tools, Corrections .....        | 21:00 |
| Range (Chamber Alignment) - Principle, Tool, Test, Correction ..... | 31:06 |
| Frame Disassembly - Procedure .....                                 | 46:57 |
| Cylinder Disassembly - Procedure, Thread Direction .....            | 51:28 |
| Reassembly - Procedure, Tools .....                                 | 56:01 |

## **REVOLVERS: DOUBLE ACTION**

### ***"SMITH & WESSON"***

#### Double Action

|                                                     |         |
|-----------------------------------------------------|---------|
| Double Action - Function, Operation, Movement ..... | 1:03:57 |
| Hand - Designs, Types, Comparison, Function .....   | 1:10:02 |
| Rebound Slide - Function .....                      | 1:12:55 |
| Bolt - Function .....                               | 1:14:55 |
| Cylinder Stop - Function .....                      | 1:17:36 |

#### Cylinder Fit Details

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Cylinder Fit - Procedures, Details, Tools, Tolerances .....       | 1:18:33 |
| Cylinder Assembly - Components, Parts Replacement .....           | 1:26:39 |
| Center Pin - Troubleshooting, Replacing, Fitting .....            | 1:28:55 |
| Ejector Rod - Troubleshooting, Replacing, Fitting .....           | 1:32:33 |
| Cramp/Rod Runout - Problem, Cause, Correction .....               | 1:36:43 |
| Cylinder Bind - Tests, Causes, Corrections .....                  | 1:42:44 |
| Cylinder Stop - Function, Troubleshooting, Repairs, Fitting ..... | 1:48:07 |
| Timing - Causes, Troubleshooting, Tool, Corrections .....         | 1:54:16 |
| Hand-Function, Timing, Troubleshooting, Fitting to Frame .....    | 2:15:41 |

#### NEXT MENU

|                                                           |         |
|-----------------------------------------------------------|---------|
| Sing - Definition, Cause, Tests, Repairs .....            | 2:19:40 |
| Fitting Ratchet Pads - Troubleshooting, Corrections ..... | 2:31:41 |
| Misfires - Troubleshooting, Causes, Cramp, Repairs .....  | 2:39:06 |

#### Questions & Answers - Troubleshooting, Repairs, Options

|                                                                 |         |
|-----------------------------------------------------------------|---------|
| Lock-Up - Test, Timing, Adjustments, Repairs .....              | 2:48:13 |
| Cylinder Not Rotating - Tests, Problems, Corrections .....      | 2:53:07 |
| Fitting Ratchet Pad - New Cylinder, Problems, Corrections ..... | 2:57:28 |

#### NEXT MENU

#### Double Action - Redux

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| Double Action - Design, Function .....                               | 3:05:30 |
| Sear Too Short, Problems, Repairs .....                              | 3:06:06 |
| Sear Too Long, Problems, Repairs .....                               | 3:09:08 |
| Sear Click - Cause, Problems, Repairs .....                          | 3:10:16 |
| Rebounding System - Design, Function, Troubleshooting, Repairs ..... | 3:17:46 |
| Fitting the Bolt - Procedure, Problems, Corrections .....            | 3:28:15 |
| Fitting the Shoe - Procedure, Problems, Corrections .....            | 3:32:02 |
| Hammer - Function, Diagram, Adjustments, Push Off .....              | 3:36:30 |
| Worn Cock Notch - Repairs, Options, Tests .....                      | 3:42:34 |
| Trigger - Hammer Fall, Cause, Correction .....                       | 3:48:06 |
| Rear Sight - Disassembly, Procedure, Cautions, Adjusting .....       | 3:59:12 |



## HANDGUNS - DISC 7

### REVOLVERS: DOUBLE ACTION CONTINUED

#### Smooth & Tuning

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Smooth & Tuning - Procedure & Order.....                                | 00:10 |
| Lap Fit Cylinder - Procedure & Material .....                           | 01:42 |
| Pinning - Preparation & Checks, Procedure, Lapping, Modifications ..... | 05:29 |

#### Smooth Areas

|                                                        |       |
|--------------------------------------------------------|-------|
| Cylinder Stop .....                                    | 11:23 |
| Trigger.....                                           | 12:10 |
| Hand .....                                             | 13:57 |
| Sear .....                                             | 15:04 |
| Hammer .....                                           | 16:06 |
| Rebound Slide.....                                     | 18:01 |
| Safety .....                                           | 19:29 |
| Main Spring - Modification, Adjustments .....          | 20:15 |
| Trigger Return Spring - Modification, Replacement..... | 23:35 |

#### NEXT MENU

|                                                           |       |
|-----------------------------------------------------------|-------|
| Main Spring - Theory.....                                 | 25:53 |
| Main Spring Screw - Tension, Function .....               | 27:42 |
| Spring Kits - Comments, Opinions, Firing Pin Energy ..... | 29:01 |

|                                                  |       |
|--------------------------------------------------|-------|
| Buffing - Procedure, Comments, Do's, Don'ts..... | 31:36 |
|--------------------------------------------------|-------|

#### Questions & Answers

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Yoke & Shake Correction .....                                     | 33:50 |
| Cylinder Opens Hard - Cause Repair.....                           | 36:12 |
| Cylinder Binding - Troubleshooting, Cause, Repair .....           | 37:52 |
| Binding (Action) - Troubleshooting, Cause, Repair .....           | 41:10 |
| Binding (After Shooting) - Design Change, Cause, Correction ..... | 45:33 |
| Misfires (DA) - Cause, Troubleshooting, Repairs.....              | 49:19 |
| Push Off - Review, Test .....                                     | 51:35 |
| Sear Click - Review, Test .....                                   | 51:59 |
| Sing - Review, Cause, Repair, Comments .....                      | 52:37 |

#### NEXT MENU

|                                                     |       |
|-----------------------------------------------------|-------|
| Sighting - Review, Comments.....                    | 53:11 |
| Shaving Lead - Review, Cause, Repair, Comments..... | 54:56 |

|             |       |
|-------------|-------|
| Tools ..... | 56:37 |
|-------------|-------|

### ***“CHIAPPA RHINO”***

|                                   |       |
|-----------------------------------|-------|
| Introduction with Gene Kelly..... | 57:14 |
|-----------------------------------|-------|

|                   |       |
|-------------------|-------|
| Disassembly ..... | 57:27 |
|-------------------|-------|

|                  |         |
|------------------|---------|
| Reassembly ..... | 1:21:21 |
|------------------|---------|

|                                   |         |
|-----------------------------------|---------|
| <b><i>“COLT PYTHON”</i></b> ..... | 1:46:00 |
|-----------------------------------|---------|

|                                                            |         |
|------------------------------------------------------------|---------|
| Design, Manufacturing Comments, Comparison, Function ..... | 1:46:56 |
|------------------------------------------------------------|---------|

|                                         |         |
|-----------------------------------------|---------|
| Disassembly - Procedure, Comments ..... | 1:54:20 |
|-----------------------------------------|---------|

#### NEXT MENU

|                                        |         |
|----------------------------------------|---------|
| Reassembly - Procedure, Comments ..... | 2:01:58 |
|----------------------------------------|---------|

|                                                  |         |
|--------------------------------------------------|---------|
| Cylinder Disassembly - Early & Late Design ..... | 2:05:31 |
|--------------------------------------------------|---------|

|                                                 |         |
|-------------------------------------------------|---------|
| Removing Ejector from the Stem - Procedure..... | 2:11:22 |
|-------------------------------------------------|---------|

#### Action Movement

|                                  |         |
|----------------------------------|---------|
| Action Movement - Function ..... | 2:16:00 |
|----------------------------------|---------|

#### Cylinder Fit

|                              |         |
|------------------------------|---------|
| Cylinder Fit - Comments..... | 2:22:21 |
|------------------------------|---------|

|                                                  |         |
|--------------------------------------------------|---------|
| Yoke Alignment - Procedure, Troubleshooting..... | 2:23:43 |
|--------------------------------------------------|---------|

|                              |         |
|------------------------------|---------|
| End Shake - Correction ..... | 2:24:48 |
|------------------------------|---------|

|                                             |         |
|---------------------------------------------|---------|
| Headspace - Correction, Causes, Tools ..... | 2:25:19 |
|---------------------------------------------|---------|

|                                                                                           |         |
|-------------------------------------------------------------------------------------------|---------|
| Hammer Rebound System                                                                     |         |
| Hammer Rebound System - Design, Function, Fitting .....                                   | 2:29:43 |
| Rebound Lever Diagram, Movement, Fitting, Repairs .....                                   | 2:38:40 |
| Bolt                                                                                      |         |
| Bolt - Function, Troubleshooting, Causes, Correction, Fitting .....                       | 2:47:27 |
| Ball Engagement - Fitting To Cylinder .....                                               | 2:51:54 |
| Timing - Rebound Lever, Operation, Adjustment, Options .....                              | 2:54:46 |
| Rebound - Reducing Procedure .....                                                        | 3:04:13 |
| Timing - Ball Notch Seating, Function, Cause, Corrections, Options .....                  | 3:06:21 |
| Cylinder Stop & Rebound Lever - Functions, Fitting, Procedures, Timing, Adjustments ..... | 3:20:17 |
| Fitting & Timing Review                                                                   |         |
| Bolt Late Start - Causes, Adjustments .....                                               | 3:28:27 |
| Wear Issues - Correction, Repairs, Adjustments .....                                      | 3:30:56 |
| Cylinder Stop - Repairs, Adjustments .....                                                | 3:31:50 |
| Throw-By - Cause, Correction & Adjustments .....                                          | 3:33:17 |
| Hand-Design, Function, Angles, Fitting .....                                              | 3:36:57 |
| Review                                                                                    |         |
| Fitting, Timing & Adjustments .....                                                       | 3:49:44 |
| Long Sweep - Cause Correction .....                                                       | 3:50:38 |
| Hand Spring - Troubleshooting, Corrections .....                                          | 3:51:44 |
| Failed Trigger Return - Causes, Corrections .....                                         | 3:53:18 |
| Timing Hand - Checking, Procedure, Adjustments .....                                      | 3:59:20 |

## **HANDGUNS - DISC 8**

### **REVOLVERS: DOUBLE ACTION CONTINUED**

#### ***"COLT PYTHON" CONTINUED***

|                                                            |       |
|------------------------------------------------------------|-------|
| Trigger System - Diagram, Design, Trigger Job .....        | 00:11 |
| Fine Tuning                                                |       |
| Fine Tuning - Sequence, Rules .....                        | 04:11 |
| Trigger - Bending, Modifying, Tools .....                  | 05:59 |
| Hammer - Modifying, Tools .....                            | 08:54 |
| Trigger Pull Adjustment - Timing .....                     | 10:43 |
| Smoothing Action - Stoning Parts .....                     | 12:18 |
| Lighten Pull - Modifying Springs .....                     | 14:10 |
| Latch Pin Assembly - Problems, Causes, Corrections .....   | 17:33 |
| Rod Run-Out - Corrections, Cautions .....                  | 22:27 |
| Pivot Pins - Replacement, Comments .....                   | 24:36 |
| Rear Sight - Types, Comments, Disassembly .....            | 27:11 |
| Minor Adjustments - Butt Bending Techniques (Timing) ..... | 32:46 |
| NEXT MENU                                                  |       |

|                                                           |       |
|-----------------------------------------------------------|-------|
| Latch - Sticking Problem, Cause, Correction, Insert ..... | 37:38 |
| S&W vs. Colt - Action Comparison .....                    | 44:09 |
| DA Timing - Comments, Parts, Function, Repairs .....      | 44:39 |
| Hammer Strut - Repairs, Modification .....                | 48:21 |
| Safety to Hammer - Relationships, Angles, Function .....  | 51:04 |

#### ***"COLT TROOPER 3"***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Introduction .....                                        | 52:05   |
| Disassembly                                               |         |
| Disassembly - Design, Function .....                      | 52:34   |
| Latch Pin - Design, Function .....                        | 55:33   |
| Hand - Design, Function .....                             | 56:11   |
| Transfer Bar - Design, Function .....                     | 56:29   |
| Trigger - Design, Function .....                          | 57:49   |
| Cylinder Stop (Bolt) - Throw-By, Timing, Correcting ..... | 58:55   |
| Trigger - Weak Points, Styles .....                       | 1:01:53 |

|                                                          |         |
|----------------------------------------------------------|---------|
| Hammer - System, Troubleshooting, Repairs.....           | 1:02:24 |
| Hand - Timing, Function, Procedure, Adjustments.....     | 1:03:48 |
| DA Pull                                                  |         |
| DA Pull - Design, Function, Adjustments.....             | 1:08:13 |
| Misfires - Causes, Corrections .....                     | 1:09:30 |
| Problems - Latch Pin Binding, Causes Corrections .....   | 1:12:47 |
| Reassembly - Frame .....                                 | 1:13:45 |
| Cylinder                                                 |         |
| Cylinder - Parts, Design, Troubleshooting, Repairs ..... | 1:16:57 |
| End Shake - Correction .....                             | 1:18:31 |
| Barrel Cylinder Gap - Correction .....                   | 1:18:44 |
| Dan Wesson - Comparison & Similarities .....             | 1:20:29 |

### ***“CHARTER ARMS”***

|                                                                  |         |
|------------------------------------------------------------------|---------|
| Introduction .....                                               | 1:21:37 |
| Disassembly - Procedure, Sequence.....                           | 1:23:24 |
| Sear System - Design, Function, Problems .....                   | 1:27:51 |
| Cylinder Stop                                                    |         |
| Cylinder Stop - Removal, Design, Function, Timing .....          | 1:29:25 |
| Problems - Cause, Corrections.....                               | 1:31:30 |
| Cylinder Release Screw - Problems, Causes & Corrections.....     | 1:34:16 |
| Hand Window - Problem, Maintenance, Correction.....              | 1:36:18 |
| Disassembly                                                      |         |
| Latch Assembly - Disassembly, Reassembly, Procedure, Tools ..... | 1:37:34 |
| Crane (Yoke) - Design.....                                       | 1:51:40 |
| Alignment - Procedure; Fixture, Tools.....                       | 1:53:02 |
| Cylinder - Problems, Correction .....                            | 1:57:34 |
| End Shake - Correction .....                                     | 1:58:19 |
| Reassembly Cylinder - Tools, Procedure, Technique .....          | 1:59:02 |
| Timing Hand - Problem, Cause, Correction, Fitting.....           | 2:03:43 |
| Firing Pin - Material, Caution.....                              | 2:05:55 |
| Comments - Hand Loading, Ammo, Tuning .....                      | 2:06:48 |

### ***“H&R/IVER JOHNSON/HIGH STANDARD STYLE REVOLVERS”***

|                    |         |
|--------------------|---------|
| Introduction ..... | 2:10:29 |
|--------------------|---------|

#### ***“H&R”***

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| H & R - Design, Parts, Hammer Function .....                            | 2:11:25 |
| Misfires - Cause, Correction, Options .....                             | 2:13:19 |
| Hand-Problems, Function, Timing, Corrections, Repairs .....             | 2:18:54 |
| Cylinder Stop - Design, Function, Timing, Adjustments .....             | 2:23:52 |
| Ranging - Comments, Correction, Repairs .....                           | 2:27:42 |
| Endshake - Comments, Correction, Repairs.....                           | 2:28:18 |
| Ejection System (Webley) - Disassembly, Design, Function, Repairs ..... | 2:28:59 |
| Cylinder Removal - System, Design.....                                  | 2:34:38 |
| Latching System (Barrel to Frame) - Design, Tightening.....             | 2:35:34 |

#### ***“IVER JOHNSON”***

|                                           |         |
|-------------------------------------------|---------|
| Cylinder Stop - Design, Function .....    | 2:37:31 |
| Hand - Timing, Procedure, Correction..... | 2:38:22 |
| Ratchet Pad - Design, Timing .....        | 2:40:24 |
| Comments - Miscellaneous.....             | 2:42:02 |

#### ***“HIGH STANDARD”***

|                                                |         |
|------------------------------------------------|---------|
| Hand - Timing, Correction, Action Design ..... | 2:43:45 |
| Cylinder Stop - Design, Function .....         | 2:44:20 |
| Yoke - Alignment, Comments .....               | 2:46:13 |

|                |         |
|----------------|---------|
| Comments ..... | 2:46:52 |
| NEXT MENU      |         |

|                                     |         |
|-------------------------------------|---------|
| Course Update with Gene Kelly ..... | 2:47:40 |
|-------------------------------------|---------|

### ***"TOP-BREAK REVOLVERS"***

|                  |         |
|------------------|---------|
| Disassembly..... | 2:47:57 |
| Reassembly ..... | 2:59:55 |

### ***"RUGER LCR"***

|                                |         |
|--------------------------------|---------|
| Disassembly.....               | 3:18:09 |
| Reassembly .....               | 3:37:25 |
| Pistolsmithing Conclusion..... | 3:51:40 |

## **SHOTGUNS - DISC 1**

### **DESIGN, FUNCTION & REPAIR SHOTGUNS: PUMPS**

## ***SHOTGUNS***

#### ***"REMINGTON 870"***

|                                            |         |
|--------------------------------------------|---------|
| Design & Function.....                     | 00:17   |
| Disassembly.....                           | 05:11   |
| Ejector .....                              | 09:18   |
| Cartridge Stops & Action Bar.....          | 14:16   |
| Breech Bolt / Firing Pin .....             | 30:16   |
| Breech Bolt - Safety & Modifications ..... | 34:53   |
| Headspace .....                            | 46:54   |
| Barrel .....                               | 59:13   |
| Stock Fit & Removal.....                   | 1:01:04 |
| NEXT MENU                                  |         |

|                                          |         |
|------------------------------------------|---------|
| Forearm Assembly.....                    | 1:06:05 |
| Cartridge Carrier - Stop & Function..... | 1:09:40 |
| Trigger System .....                     | 1:14:58 |
| Detailed Reassembly: Trigger Group ..... | 1:25:14 |
| Bolt & Receiver Assembly.....            | 1:28:23 |
| Carrier Dog & Cartridge Stop.....        | 1:30:05 |
| Locking System .....                     | 1:35:20 |
| Barrel Alignment .....                   | 1:37:33 |
| Advanced Troubleshooting.....            | 1:41:07 |

#### ***"MOSSBERG 500"***

|                                                |         |
|------------------------------------------------|---------|
| History .....                                  | 1:49:53 |
| Disassembly & Components.....                  | 1:56:17 |
| Cartridge Stop.....                            | 2:11:49 |
| Headspace/Locking Block & bbl. Extension ..... | 2:22:09 |
| Safety & Locking Block .....                   | 2:30:35 |
| Ejector.....                                   | 2:31:15 |
| Elevator & Cartridge Carrier.....              | 2:35:22 |
| Trigger Group Disassembly & Design .....       | 2:45:50 |
| Detailed Reassembly: Action .....              | 2:58:07 |
| NEXT MENU                                      |         |

|                                  |         |
|----------------------------------|---------|
| Trigger Group.....               | 3:11:14 |
| Function Testing & Comments..... | 3:19:58 |
| Forearm & Stock .....            | 3:29:21 |

#### ***"ITHACA MODEL 37"***

|                                                          |         |
|----------------------------------------------------------|---------|
| History.....                                             | 3:33:14 |
| Breach Bolt & Carrier Assembly - Design & Function ..... | 3:41:15 |

|                        |         |
|------------------------|---------|
| Trigger Group.....     | 3:43:55 |
| Cartridge Stop.....    | 3:47:01 |
| Feeding Problems ..... | 3:55:35 |

## **SHOTGUNS - DISC 2**

### **DESIGN, FUNCTION & REPAIR SHOTGUNS: PUMPS**

#### ***“ITHACA MODEL 37 CONTINUED”***

|                           |       |
|---------------------------|-------|
| Feeding Problems.....     | 00:14 |
| Trigger Plate.....        | 08:52 |
| Stock 16:01               |       |
| Detailed Reassembly ..... | 17:36 |
| Design & Function.....    | 23:14 |
| Firing Pin & Safety ..... | 35:05 |

#### ***“WINCHESTER MODEL 1200”***

|                                          |         |
|------------------------------------------|---------|
| Disassembly & Design.....                | 38:22   |
| Trigger Group with Cartridge Stops ..... | 48:51   |
| Headspace .....                          | 1:14:11 |
| Problems .....                           | 1:15:58 |
| Ejector.....                             | 1:20:58 |

#### ***“WINCHESTER MODEL 12”***

|                                 |         |
|---------------------------------|---------|
| Locking Bolt .....              | 1:29:28 |
| Action Bar.....                 | 1:31:01 |
| Fire Control & Firing Pin ..... | 1:38:46 |
| Ammo Feed.....                  | 1:50:06 |
| Bolt .....                      | 1:58:22 |

#### ***“WINCHESTER MODEL 97”***

|                        |         |
|------------------------|---------|
| Design & Function..... | 2:03:45 |
|------------------------|---------|

#### ***“SAVAGE MODEL 67”***

|                                                |         |
|------------------------------------------------|---------|
| Disassembly.....                               | 2:09:35 |
| Bolt & Carrier - Headspace.....                | 2:18:19 |
| Firing Pin - Misfires.....                     | 2:22:41 |
| Cartridge Stop, Carrier & Trigger Housing..... | 2:37:32 |
| Stock .....                                    | 3:05:52 |
| Ejector & Extractor.....                       | 3:07:34 |
| Action Bar.....                                | 3:15:38 |
| Safety .....                                   | 3:18:03 |
| Barrel Ribs .....                              | 3:23:51 |

#### ***“NOBLE (S&W) 916”***

|                                                                  |         |
|------------------------------------------------------------------|---------|
| Disassembly - Procedure & Comments.....                          | 3:24:34 |
| Headspace - Cause & Correction .....                             | 3:30:20 |
| Ejector - Design & Replacement .....                             | 3:31:08 |
| Cartridge Stop - Design, Adjustments, Problems & Repairs.....    | 3:32:03 |
| Extractor - Comments.....                                        | 3:34:49 |
| Fire Control System - Design, Function, Problems & Repairs ..... | 3:35:10 |

#### ***“SQUIBMAN MODEL 30”***

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| Comments - Similarities with Remington Model 31 & High Standard..... | 3:47:30 |
| Disassembly - Procedure, Problems, Design & Function.....            | 3:48:56 |
| Bolt Carrier - Design & Problems .....                               | 3:53:10 |
| Magazine Tube - Removal Procedure .....                              | 3:53:46 |
| Ejector - Design, Function & Adjustments.....                        | 3:55:31 |
| Bolt Assembly - Firing Pin, Design & Function .....                  | 3:58:16 |

|                                             |         |
|---------------------------------------------|---------|
| Cartridge Carrier - Design, Function .....  | 3:58:48 |
| Feeding Problems - Causes, Correction ..... | 4:00:03 |

## **SHOTGUNS - DISC 3**

### **DESIGN, FUNCTION & REPAIR SHOTGUNS: PUMPS/AUTOS**

#### ***"SQUIBBMAN MODEL 30 CONTINUED"***

|                                                                  |       |
|------------------------------------------------------------------|-------|
| Headspace - Problems, Corrections .....                          | 00:17 |
| Fire Control System - Design, Function, Problems & Repairs ..... | 01:49 |
| Carrier - Adjustments & Tests .....                              | 11:33 |

#### ***"SAVAGE MODEL 520"***

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Comments & Repairs - Design, Takedown & Bedding Stock .....             | 12:56 |
| Disassembly (Receiver Assembly) - Procedure .....                       | 19:13 |
| Bolt Assembly - Design, Function & Components .....                     | 22:08 |
| Carrier - Design, Function. Repairs & Adjustments .....                 | 24:56 |
| Fire Control System - Design, Function, Engagement, Repairs .....       | 27:19 |
| Locking System - Design & Function .....                                | 30:38 |
| Action Bar Lock - Design, Function & Comments .....                     | 31:12 |
| Fire Control System - Design, Function, Troubleshooting & Repairs ..... | 33:16 |
| Lock Up - Design, Function, Headspace & Correction .....                | 35:58 |

#### ***"BROWNING BPS"***

|                                 |         |
|---------------------------------|---------|
| Disassembly .....               | 39:57   |
| A Message from Gene Kelly ..... | 1:23:16 |

#### ***"BENELLI NOVA"***

|                                        |         |
|----------------------------------------|---------|
| Overview .....                         | 1:23:45 |
| Disassembly - Design & Function .....  | 1:30:57 |
| Magazine Tube, Follower & Spring ..... | 1:40:18 |
| Action Bars .....                      | 1:43:47 |
| Rotating Bolt .....                    | 1:50:40 |
| Ejector .....                          | 1:57:24 |
| Extractor - Rotating Bolt Head .....   | 1:59:11 |
| Firing Pin - Blow Ups .....            | 2:06:00 |
| Fire Control .....                     | 2:14:37 |
| NEXT MENU                              |         |

|                                       |         |
|---------------------------------------|---------|
| Cartridge Stops .....                 | 2:21:05 |
| Push-Button Shell Stop .....          | 2:36:01 |
| Bolt Hang-Up, Repair .....            | 2:40:46 |
| Troubleshooting - Trigger Group ..... | 2:42:08 |
| Reassembly .....                      | 2:55:45 |
| A Message from Gene Kelly .....       | 3:01:20 |

### **SEMI-AUTO SHOTGUNS**

#### ***"BROWNING A5" (REMINGTON, SAVAGE MODELS)***

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| Theory of Operation - Design, Function .....                           | 3:01:39 |
| Brake System - Operation, Design, Function & Adjustment .....          | 3:10:32 |
| Conversion - to 3" Magazine & Differences .....                        | 3:16:09 |
| Barrel Movement - Design, Function, Components & Repairs .....         | 3:19:59 |
| Disassembly: Stock-Fit, Bedding .....                                  | 3:26:07 |
| Trigger Guard - Removal & Carrier Spring .....                         | 3:30:40 |
| Receiver Components - Removal, Identification, Design & Function ..... | 3:33:45 |
| Bolt Assembly - Removal .....                                          | 3:37:42 |
| Cartridge Stop & Miscellaneous - Removal & Comments .....              | 3:41:16 |
| NEXT MENU                                                              |         |

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| Magazine Tube - Removal Procedure, Repairs & Replacement .....         | 3:44:28 |
| Stock Tube - Removal, Repairs & Replacement .....                      | 3:54:30 |
| Barrels - Ring Repairs, Replacement & Tests .....                      | 3:59:08 |
| Recoil Buffer (Remington Model), Design, Cautions & Modification ..... | 4:03:40 |

## **SHOTGUNS - DISC 4**

### **DESIGN, FUNCTION & REPAIR SHOTGUNS: AUTOMATICS**

#### ***"BROWNING A5 CONTINUED"***

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| Manufacturing Variations, Comments .....                                  | 00:17 |
| Firing Operation - Design, Function .....                                 | 03:04 |
| Locking Block & Breech Bolt - Design, Function & Operation .....          | 13:52 |
| Extractors - Design, Function, Comments & Tests .....                     | 25:25 |
| Ejector - Variations, Design & Function .....                             | 30:35 |
| Carrier & Latch - Design, Function, Operation, Timing & Adjustments ..... | 32:46 |
| Locking Block - Design, Function & Timing .....                           | 40:23 |
| Firing Pin - Design, Function & Safety .....                              | 42:20 |
| Headspace - Description, Problems, Causes, Corrections & Repairs .....    | 44:41 |
| NEXT MENU                                                                 |       |

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| Headspace - Loose Breech, Parts Replacements & Fitting .....             | 54:12   |
| Parts Variations - Comments, Differences, Fitting .....                  | 1:02:55 |
| Trigger Assembly - Comments, Differences & Fitting .....                 | 1:07:32 |
| Cartridge Stop & Carrier Latch - Design, Function, Troubleshooting ..... | 1:25:18 |
| Reassembly - Comments, Procedure, Tips & Suggestions .....               | 1:35:44 |
| Timing Action - Comments, Problems, Troubleshooting & Corrections .....  | 1:49:00 |
| Tools - Forward Barrel Movement .....                                    | 2:10:51 |
| Questions & Answers - Troubleshooting .....                              | 2:12:37 |

#### ***"REMINGTON MODEL 1100"***

|                                                   |         |
|---------------------------------------------------|---------|
| Introduction .....                                | 2:29:54 |
| Disassembly - Procedure & Comments .....          | 2:31:49 |
| Action Spring Follower - Design, Function .....   | 2:39:12 |
| Trigger Assembly - Design & Function .....        | 2:42:05 |
| Feed & Interceptor Latch - Design, Function ..... | 2:42:33 |
| Action - Function & Operation .....               | 2:44:03 |
| Cartridge Stop & Timing .....                     | 2:57:11 |
| Bolt, Locking Block & Headspace .....             | 3:20:06 |
| Link & Follower .....                             | 3:24:19 |
| NEXT MENU                                         |         |

|                                   |         |
|-----------------------------------|---------|
| Carrier System .....              | 3:26:36 |
| Problems: Stock Shortening .....  | 3:38:07 |
| Short Cycle .....                 | 3:40:27 |
| Trigger, Hammer, Firing Pin ..... | 3:58:53 |
| Action Bar Assembly, Barrel ..... | 4:02:33 |

## **SHOTGUNS - DISC 5**

### **DESIGN, FUNCTION & REPAIR SHOTGUNS: AUTOMATICS**

#### ***"REMINGTON 1187"***

|                                 |       |
|---------------------------------|-------|
| Differences from the 1100 ..... | 00:18 |
|---------------------------------|-------|

#### ***"BROWNING B-2000"***

|                                    |       |
|------------------------------------|-------|
| Disassembly .....                  | 07:54 |
| Design & Function .....            | 13:21 |
| Piston & Seals .....               | 20:49 |
| Action Bar & Forearm Bushing ..... | 25:07 |
| Bolt Assembly .....                | 27:23 |

|                                          |       |
|------------------------------------------|-------|
| Carrier Dog & Trigger Group.....         | 30:25 |
| Carrier System.....                      | 39:13 |
| Locking Block, Locking Pin & Safety..... | 41:06 |
| Detailed Reassembly .....                | 47:19 |
| NEXT MENU                                |       |

|                       |       |
|-----------------------|-------|
| Carrier Latches.....  | 51:56 |
| Cartridge Stops ..... | 57:41 |

### ***“BROWNING B-80” (BERETTA)***

|                                                     |         |
|-----------------------------------------------------|---------|
| Disassembly, Design & Function .....                | 1:07:25 |
| Trigger Group .....                                 | 1:17:26 |
| Carrier Latches & Reassembly, Cartridge Stops ..... | 1:28:56 |
| Stock.....                                          | 1:49:39 |

### ***“BERETTA AL 391”***

|                                          |         |
|------------------------------------------|---------|
| Overview .....                           | 1:51:21 |
| Features.....                            | 1:54:23 |
| Bolt, Lockup & Barrel.....               | 1:56:56 |
| Gas System.....                          | 2:00:12 |
| Locking System .....                     | 2:05:57 |
| Problems – Firing Pin, Extractor.....    | 2:07:01 |
| Action Bar.....                          | 2:10:01 |
| Trigger Guard Assembly – Operation ..... | 2:12:36 |
| Reassembly .....                         | 2:23:21 |

### ***“REMINGTON VERSAMAX”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:33:17 |
|------------------------------|---------|

## **SHOTGUNS - DISC 6**

### **DESIGN, FUNCTION & REPAIR: AUTOMATICS**

|                       |       |
|-----------------------|-------|
| Gene – Monologue..... | 00:12 |
|-----------------------|-------|

### ***“WINCHESTER 50 & 59”***

|                                                        |       |
|--------------------------------------------------------|-------|
| Design & Function.....                                 | 00:33 |
| Trigger Guard & Fire Control System – Design .....     | 05:34 |
| Bolt & Floating Chamber – Removal .....                | 12:01 |
| Weak Points – Cam Pin .....                            | 21:15 |
| Hammer – Replacement & Fabrication.....                | 21:45 |
| Extractors & Firing Pins.....                          | 22:59 |
| Bolt Assembly – Disassembly .....                      | 23:43 |
| Comments – Points To Remember.....                     | 24:40 |
| Reassembly (Action Assembly) Procedure, Sequence ..... | 25:39 |
| NEXT MENU                                              |       |

|                                                          |       |
|----------------------------------------------------------|-------|
| Reassembly (Trigger Assembly) Procedure, Sequence .....  | 28:56 |
| Adjustments: Buffer – Procedure .....                    | 35:00 |
| Feeding Problems: Primary Cartridge Stop – Problems..... | 37:58 |
| Magazine Surge – Troubleshooting.....                    | 41:35 |
| Secondary Cartridge Stop – Problems & Correction .....   | 43:43 |
| Carrier Latch – Problems & Correction.....               | 45:44 |
| Review – Design & Comments.....                          | 48:51 |

### ***“BENELLI M1, M2, M3”***

|                                            |         |
|--------------------------------------------|---------|
| Inertia Operated Shotguns .....            | 50:48   |
| Ammo Feed – Carrier, Cartridge Stops ..... | 1:00:47 |



|                                                |         |
|------------------------------------------------|---------|
| Lockup .....                                   | 1:12:31 |
| Trigger Group – Fire Control, Carrier Dog..... | 1:15:23 |
| Bolt – Lockup, Problems .....                  | 1:25:23 |
| Inertia System – Operation, Variations .....   | 1:31:58 |
| Troubleshooting & Repair .....                 | 1:37:20 |

### ***“BENELLI M4”***

|                           |         |
|---------------------------|---------|
| Design And Function ..... | 1:48:38 |
|---------------------------|---------|

### ***“WINCHESTER 87”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:02:25 |
|------------------------------|---------|

### ***“SUPER BLACK EAGLE”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:44:18 |
|------------------------------|---------|

## **SHOTGUNS - DISC 7**

### **DESIGN, FUNCTION & REPAIR: SINGLE & DOUBLE BARREL PIVOTS SINGLE BARREL PIVOTS**

|                                                                  |       |
|------------------------------------------------------------------|-------|
| Introduction .....                                               | 00:19 |
| Basic Theory: Hinge Pin – Design & Function.....                 | 00:41 |
| Loose Breech – Causes, Corrections & Pin Replacements .....      | 04:58 |
| Hinge Pin – Fitting Diagram & Procedure .....                    | 12:32 |
| Ejector - Fitting.....                                           | 19:22 |
| Chambering – Reamer.....                                         | 21:01 |
| Alternate Corrections - TIG Welding Rim Cut.....                 | 21:34 |
| TIG Weld Ejector.....                                            | 24:02 |
| Forearm – Design Types, Adjustments, Fitting & Corrections ..... | 25:15 |
| NEXT MENU                                                        |       |

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| Silver Soldering – Repair Techniques.....                                | 30:13   |
| Forearm System – Types Of Designs, Function & Repairs .....              | 35:39   |
| Forearm Latch – Types Of Designs, Function & Repairs .....               | 41:55   |
| Spring Catch System – Design, Function, Troubleshooting .....            | 42:24   |
| Loose Forearm – Cause & Repair Options.....                              | 45:01   |
| Plunger Catch System – Design, Function, Repairs & Fitting .....         | 1:09:18 |
| Locking Systems – Repairs & Adjustments & Replacements.....              | 1:20:23 |
| Locking Lug & Locking Block – Repairs & Adjustments & Replacements ..... | 1:26:29 |
| NEXT MENU                                                                |         |

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| Straight Line Locking Block (Ithaca/Savage) – Design, Function ..... | 1:41:29 |
| Repairs – Comments, Problems & Diagram of Block Repair.....          | 1:43:17 |
| Fire Control Systems – External Hammer Designs & Function.....       | 1:52:23 |
| Safety – Types, Design, Function, Comments .....                     | 1:55:14 |
| Hammer – Design & Function Diagram of Stroke (Rebounding) .....      | 1:59:34 |
| Firing Pin – Design, Function, Protrusion, Comments .....            | 2:09:21 |
| Ejector's – Design Functions & Types .....                           | 2:12:10 |
| Rebounding Hammer – Diagrams of Designs, Function & Adjustments..... | 2:15:27 |
| NEXT MENU                                                            |         |

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| Rebounding Hammer Assembly – Design, Function, Types .....          | 2:35:15 |
| Rebounding Hammer Assembly (Win. M37 Designs).....                  | 2:40:00 |
| Rebounding Striker Assembly (Win. M37 Designs).....                 | 2:40:47 |
| Ejectors – Designs, Functions & Types .....                         | 2:51:25 |
| Problems – Causes, Repairs, Troubleshooting & Checking Systems..... | 2:56:54 |
| Forearms & Stocks – Comments .....                                  | 3:12:16 |

## ***“WINCHESTER 37”***

|                              |         |
|------------------------------|---------|
| Ejector System Problem ..... | 3:15:30 |
|------------------------------|---------|

## ***DOUBLE BARREL PIVOTS***

|                                                       |         |
|-------------------------------------------------------|---------|
| Introduction .....                                    | 3:18:21 |
| Basic theory.....                                     | 3:18:42 |
| Hinge pin designs.....                                | 3:34:52 |
| Barrel/Breech Designs (Monobloc) & Trigger Types..... | 3:39:45 |

## **SHOTGUNS - DISC 8**

### **DOUBLE BARREL PIVOTS**

|                                                          |         |
|----------------------------------------------------------|---------|
| Hinge Pin Repair .....                                   | 00:17   |
| Forearm Fitting .....                                    | 29:18   |
| Locking Systems .....                                    | 1:08:18 |
| Integral Firing Pins – Design & Function .....           | 1:55:51 |
| Floating – Design & Function .....                       | 2:02:50 |
| Double Trigger - Design & Function.....                  | 2:08:46 |
| Single Trigger, Non-Selective - Function, & Design ..... | 2:17:46 |

|                                   |         |
|-----------------------------------|---------|
| <b><i>“ZOLI”</i></b> DESIGN ..... | 2:29:19 |
|-----------------------------------|---------|

|                                                 |         |
|-------------------------------------------------|---------|
| <b><i>“BERETTA O/U”</i></b> Inertia Design..... | 2:39:02 |
| NEXT MENU                                       |         |

|                                                                              |         |
|------------------------------------------------------------------------------|---------|
| Single Trigger, Selective - Function, & Design.....                          | 2:44:15 |
| Barrel Locking System .....                                                  | 2:57:17 |
| Dolls Head Design – <b><i>“Winchester M24”</i></b> .....                     | 2:58:52 |
| Dolls Head Design – <b><i>“Greener/Kristen”</i></b> .....                    | 3:01:09 |
| Dolls Head Design – <b><i>“VALMET/KREIGHOFF/REMINGTON 32/3200”</i></b> ..... | 3:04:25 |
| Trigger Mechanism .....                                                      | 3:06:03 |
| Troubleshooting <b><i>“BROWNING/WINCHESTER 101,”</i></b> O/U Design .....    | 3:09:03 |

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| <b><i>“BROWNING VARIATION,”</i></b> Single Trigger, Non-Selective..... | 3:24:46 |
| NEXT MENU                                                              |         |

|                                    |         |
|------------------------------------|---------|
| <b><i>“UVELA DESIGN”</i></b> ..... | 3:29:52 |
|------------------------------------|---------|

|                                  |         |
|----------------------------------|---------|
| <b><i>“L.C. SMITH”</i></b> ..... | 3:38:43 |
|----------------------------------|---------|

## **SHOTGUNS - DISC 9**

### **DOUBLE BARREL PIVOTS**

|                                       |       |
|---------------------------------------|-------|
| Ejectors & Extractors (Doubles) ..... | 00:18 |
| Non-Auto Ejectors (S/S).....          | 07:43 |

|                                                |       |
|------------------------------------------------|-------|
| <b><i>“SAVAGE 311” &amp; Similar</i></b> ..... | 16:31 |
|------------------------------------------------|-------|

|                                                       |       |
|-------------------------------------------------------|-------|
| <b><i>“ZOLI” DESIGN &amp; SIMILAR (O/U)</i></b> ..... | 22:06 |
|-------------------------------------------------------|-------|

|                                               |         |
|-----------------------------------------------|---------|
| <b><i>“BERETTA” (O/U)</i></b> .....           | 24:11   |
| O/U Rifle/Shotgun Combination .....           | 24:49   |
| <b><i>“WINCHESTER MODEL 24”</i></b> .....     | 27:08   |
| Automatic Ejectors - Design, & Function ..... | 30:17   |
| Hammer Type Ejectors (S/S) .....              | 1:13:22 |
| NEXT MENU                                     |         |

|                                                        |         |
|--------------------------------------------------------|---------|
| <b><i>“Anson &amp; Deeley”</i></b> Cocking System..... | 1:20:30 |
| Safeties, Sear Block Type.....                         | 1:41:58 |
| Single Trigger Design .....                            | 1:53:34 |

## Miscellaneous Shotgun

|                                                 |         |
|-------------------------------------------------|---------|
| Repair .....                                    | 1:59:25 |
| Shortening Barrels .....                        | 2:00:32 |
| Soldering Ribs & Barrels .....                  | 2:03:26 |
| Regulating Barrels .....                        | 2:11:29 |
| Chokes - Design, Function, & Installation ..... | 2:18:08 |
| Choke Designations .....                        | 2:29:00 |

|                                          |         |
|------------------------------------------|---------|
| <b>"THOMPSON CENTER CONTENDER"</b> ..... | 2:31:27 |
|------------------------------------------|---------|

## **"CHARLES DALY FIELD II"**

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 3:13:43 |
|------------------------------|---------|

## SHOTGUNS - DISC 10

### DOUBLE BARREL PIVOTS

#### **"BROWNING SUPERPOSED"**

|                                             |       |
|---------------------------------------------|-------|
| Introduction .....                          | 00:17 |
| Locking Lever - Operation .....             | 02:55 |
| Sear - Safe Notch, Sear Faces .....         | 08:55 |
| Trigger - Pull, Development, Problems ..... | 12:09 |
| Hinge Pin & Lockup .....                    | 28:31 |
| Cocking System .....                        | 42:10 |
| Auto-Eject Sear - Operation, Problems ..... | 43:35 |

#### **"BROWNING CITORI"**

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 49:58 |
|------------------------------|-------|

#### **"BROWNING CYNERGY"**

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:14:15 |
|------------------------------|---------|

## SHOTGUNS DISK 11

### DOUBLE BARREL PIVOTS

#### **"IAC MODEL 99"**

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 00:18 |
|------------------------------|-------|

#### **"SAVAGE MODEL 24"**

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 1:02:16 |
|------------------------------|---------|

#### **"DICKENSON SIDE-BY-SIDE"**

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:08:55 |
| Conclusion .....             | 3:13:48 |

## .22 RIMFIRES - DISC 1

## RIMFIRES

|                                               |         |
|-----------------------------------------------|---------|
| Prologue .....                                | 00:18   |
| Introduction to Rimfires                      |         |
| General Theory .....                          | 00:58   |
| Theory Demonstration .....                    | 19:32   |
| Extractors - Theory, Design & Function .....  | 37:41   |
| Rimfire Cartridge Ignition .....              | 1:14:54 |
| Headspace .....                               | 1:28:40 |
| Firing Pins - Theory, Design & Function ..... | 1:43:20 |

#### **"REMINGTON NYLON 66"**

|                                        |         |
|----------------------------------------|---------|
| Disassembly .....                      | 2:16:55 |
| Bolt - Design, Function & Repair ..... | 2:24:12 |

|                                                |         |
|------------------------------------------------|---------|
| Magazine Removal.....                          | 2:30:38 |
| Trigger Assembly & Receiver Parts Removal..... | 2:33:46 |
| Reassembly.....                                | 2:38:34 |
| Problems & Comments.....                       | 2:57:25 |
| Fire Control System – Design & Function.....   | 3:01:37 |
| Feeding System – Cartridge Stops.....          | 3:14:10 |
| Troubleshooting.....                           | 3:20:10 |

### ***“CRICKETT”***

|                             |         |
|-----------------------------|---------|
| Disassembly/Reassembly..... | 3:24:13 |
|-----------------------------|---------|

## **.22 RIMFIRES - DISC 2**

### ***“SAVAGE 87”***

|                                        |         |
|----------------------------------------|---------|
| Design & Function.....                 | 00:17   |
| Trigger Assembly.....                  | 12:23   |
| Cycle Designation & Model Changes..... | 13:06   |
| Bolt & Carrier Assembly.....           | 32:00   |
| Hammer Assembly & Extractor.....       | 45:55   |
| Fire Control Problems & Redesigns..... | 48:34   |
| Safety Problems & Types.....           | 1:06:38 |
| Magazine Removal.....                  | 1:10:00 |
| Headspace.....                         | 1:10:49 |

### ***“CHARTER AR-7”***

|                                     |         |
|-------------------------------------|---------|
| History & Evolution.....            | 1:13:47 |
| Disassembly, Design & Function..... | 1:21:06 |
| Feeding Problems.....               | 1:30:34 |
| Extractor.....                      | 1:36:00 |
| Firing Pin.....                     | 1:38:57 |
| Magazine.....                       | 1:43:47 |
| Headspace.....                      | 1:49:55 |
| Troubleshooting Review.....         | 1:52:36 |
| NEXT MENU                           |         |

|                                   |         |
|-----------------------------------|---------|
| Reassembly.....                   | 1:54:46 |
| Fixing Pin & Bolt Correction..... | 1:55:59 |
| Short Cycling.....                | 2:00:59 |
| Reassembly.....                   | 2:01:56 |
| Sight Adjustments.....            | 2:08:50 |

### ***“MOSSBERG RIFLES”***

|                                |         |
|--------------------------------|---------|
| Magazine & Catch Assembly..... | 2:11:36 |
| Bolt.....                      | 2:17:26 |
| Trigger.....                   | 2:19:36 |
| Firing Pin Replacement.....    | 2:23:03 |
| Barrel Removal.....            | 2:29:06 |
| Extractor Variations.....      | 2:30:02 |
| Short Striker Fall.....        | 2:33:44 |
| Headspace Repair.....          | 2:36:24 |
| Reassembly.....                | 2:43:00 |
| NEXT MENU                      |         |

|                                                        |         |
|--------------------------------------------------------|---------|
| Semi-Auto Design - Design, Function & Disassembly..... | 2:47:19 |
| Sear and Trigger Bar.....                              | 2:56:09 |
| Hammer.....                                            | 3:02:15 |
| Bolt Assembly/Feed Mechanism.....                      | 3:04:42 |
| Ejector.....                                           | 3:18:06 |

|                                              |         |
|----------------------------------------------|---------|
| Reassembly .....                             | 3:26:23 |
| Feed Mechanism (Bolt Action) Variation ..... | 3:36:45 |

### ***“HIGH STANDARD”/“SEARS”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 3:41:24 |
| Bolt Assembly, Extractor .....       | 3:43:14 |
| Fire Control System .....            | 3:48:15 |
| Feed Guide System & Carrier .....    | 3:56:15 |
| Reassembly .....                     | 4:03:30 |

## **.22 RIMFIRES - DISC 3**

### ***“SAVAGE MODEL 29”***

|                                      |       |
|--------------------------------------|-------|
| Disassembly, Design & Function ..... | 00:16 |
| Headspace Discussion .....           | 04:22 |
| Bolt .....                           | 06:21 |
| Carrier .....                        | 08:54 |
| Troubleshooting Misfires .....       | 12:04 |

### ***“MOSSBERG (NEW VERSION)”***

|                                |       |
|--------------------------------|-------|
| Feed & Trigger Mechanism ..... | 13:02 |
| Bolt & Ejector .....           | 15:41 |

### ***“MOSSBERG (TUBEFEED VERSION)”*** .....

### ***“MARLIN 99/GLENFIELD 60”***

|                                      |       |
|--------------------------------------|-------|
| Disassembly, Design & Function ..... | 20:08 |
| Problems - Feeding, Ejection .....   | 30:33 |
| Extraction/Bolt .....                | 33:18 |
| Repairs .....                        | 36:01 |
| Timing .....                         | 42:34 |
| Feeding & Misfires .....             | 45:25 |
| Barrel Removal .....                 | 50:12 |
| Reassembly .....                     | 51:32 |

### ***“SQUIBMAN 20 & SQUIRES BINGHAM”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 57:11   |
| Problems & Repairs .....             | 1:03:50 |
| Trigger Replacement .....            | 1:07:34 |
| Reassembly .....                     | 1:08:10 |
| Troubleshooting List .....           | 1:11:26 |

### ***“RUGER 10/22”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Detailed Disassembly/Reassembly .....                     | 1:13:46 |
| Extractor .....                                           | 2:07:27 |
| Firing Pin .....                                          | 2:09:04 |
| Trigger .....                                             | 2:09:34 |
| Feeding .....                                             | 2:12:05 |
| Trigger Job .....                                         | 2:13:08 |
| Repairs - Barrel Setback, Magazine Catch, Bolt Lock ..... | 2:17:15 |
| Bedding .....                                             | 2:19:26 |

### ***“REMINGTON MODEL 550 & 550-1”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 2:24:13 |
| Sear - Design & Function .....       | 2:30:46 |
| Trigger .....                        | 2:35:15 |
| Floating Chamber .....               | 2:37:01 |

|                                       |         |
|---------------------------------------|---------|
| Ejectors/Extractors .....             | 2:38:26 |
| Detailed Disassembly/Reassembly ..... | 2:41:08 |

### ***“BROWNING BPR”***

|                                         |         |
|-----------------------------------------|---------|
| Disassembly, Design & Function .....    | 2:50:38 |
| Headspace .....                         | 2:56:46 |
| Sear System, Breech Bolt .....          | 2:59:14 |
| Extractor/Ejector & Striker System..... | 3:05:26 |
| Feed Mechanism.....                     | 3:14:42 |

### ***“BROWNING AUTO”***

|                                       |         |
|---------------------------------------|---------|
| Detailed Disassembly/Reassembly ..... | 3:17:21 |
| Takedown.....                         | 3:51:04 |
| Barrel Adjustment, Scope Mount.....   | 3:58:05 |
| Disassembly, Design & Function .....  | 4:02:22 |
| Cartridge Guide & Stop.....           | 4:07:33 |

## **.22 RIMFIRES - DISC 4**

### ***“BROWNING AUTO CONTINUED”***

|                                                             |       |
|-------------------------------------------------------------|-------|
| Cartridge Guide & Stop .....                                | 00:16 |
| Extractor/Ejector – Design, Function, Troubleshooting ..... | 12:07 |
| Ejection Problems Review .....                              | 25:57 |
| Fire Control System .....                                   | 26:18 |
| Retrofitting Parts/Guns.....                                | 32:39 |
| Remington Design/Parts.....                                 | 34:56 |
| Reassembly .....                                            | 37:53 |

### ***“WINCHESTER MODEL 77”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 42:37   |
| Bolt, Ejector, Extractor.....        | 48:15   |
| Firing Pin – Problems, Repair.....   | 50:10   |
| Timing Rod & Sear .....              | 54:00   |
| Safety & Trigger.....                | 1:06:40 |
| Feed Mechanism .....                 | 1:09:04 |
| Comments .....                       | 1:13:34 |
| Reassembly .....                     | 1:14:08 |

### ***“GSG MP5-22”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 1:20:57 |
|------------------------------|---------|

### ***“REMINGTON ROLLING BLOCK & SAVAGE LITTLE SCOUT”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 2:44:56 |
| Locking System .....                 | 2:48:43 |
| Problems & Repair.....               | 2:52:52 |
| Chamber Face Resurfacing.....        | 2:53:12 |
| Firing Pin .....                     | 2:55:09 |
| Misfires .....                       | 2:57:10 |
| Headspace .....                      | 2:59:46 |
| Extractor System.....                | 3:01:47 |
| Repairs Review.....                  | 3:11:53 |
| Safety & Hammer Positions .....      | 3:18:24 |

### ***“ITHACA MODEL 49”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 3:20:51 |
| Firing Pin & Rebound System .....    | 3:25:10 |
| Ejector Problems .....               | 3:28:14 |
| Reassembly .....                     | 3:34:08 |

### ***“MARLIN 57”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 3:42:44 |
| Extractors .....                     | 3:48:58 |
| Safeties .....                       | 3:51:21 |
| Misfires & Troubleshooting .....     | 3:54:47 |
| Headspace .....                      | 3:57:19 |
| Trigger .....                        | 4:00:14 |
| Reassembly & Comments .....          | 4:00:56 |

## **.22 RIMFIRES - DISC 5**

### ***“Winchester 9422”***

|                                      |       |
|--------------------------------------|-------|
| Disassembly, Design & Function ..... | 00:16 |
| Bolt Assembly, Cartridge Stop .....  | 03:30 |
| Extractor/Ejector .....              | 11:44 |
| Cartridge Carrier .....              | 22:28 |
| Cartridge Stop .....                 | 27:41 |
| Trigger .....                        | 28:38 |
| Firing Pins .....                    | 29:01 |
| Reassembly .....                     | 33:19 |
| Stock Bedding .....                  | 34:47 |

### ***“Steven's Favorite”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 35:36 |
|------------------------------|-------|

### ***“Remington 12 & 121”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 1:04:41 |
| Bolt Assembly & Locking System ..... | 1:06:03 |
| Extractor .....                      | 1:16:37 |
| Firing Pin .....                     | 1:18:28 |
| Feeding Mechanism .....              | 1:30:24 |
| Trigger .....                        | 1:41:59 |
| Comments & Hints .....               | 1:43:34 |
| Reassembly .....                     | 1:49:57 |

### ***“Marlin 39A”***

|                                                    |         |
|----------------------------------------------------|---------|
| Disassembly, Design & Function .....               | 1:53:14 |
| Lever Arm Repair & Adjustment .....                | 1:57:20 |
| Headspace & Barrel Setback .....                   | 2:00:19 |
| Extractor/Ejector Design & Function .....          | 2:02:46 |
| Cartridge Stop .....                               | 2:12:45 |
| Feeding - Design, Function & Troubleshooting ..... | 2:18:00 |
| Bolt Face Repair .....                             | 2:20:21 |
| Bolt Assembly & Firing Pin .....                   | 2:21:25 |
| Extractor Replacement .....                        | 2:27:59 |
| Next Menu .....                                    |         |

|                                            |         |
|--------------------------------------------|---------|
| Cartridge Guide Spring .....               | 2:30:34 |
| Carrier - Function & Troubleshooting ..... | 2:32:28 |
| Stock Fit .....                            | 2:40:04 |
| Reassembly .....                           | 2:41:41 |
| Detailed Disassembly/Reassembly .....      | 2:42:33 |

### ***“Henry Lever Action”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 3:23:40 |
|------------------------------|---------|

## **.22 RIMFIRES - DISC 6**

### ***“Remington 552 & 572”***

|                                          |       |
|------------------------------------------|-------|
| Auto Disassembly, Design & Function..... | 00:14 |
| Bolt.....                                | 04:28 |
| Fire Control System.....                 | 06:37 |
| Feed Mechanism.....                      | 07:56 |
| Ejector/Extractor.....                   | 13:40 |
| Component/Part Differences.....          | 23:56 |
| Bolts & Fire Control System.....         | 24:22 |
| Pump Disassembly, Design & Function..... | 25:10 |
| Locking System.....                      | 26:07 |
| Next Menu                                |       |

|                                                              |         |
|--------------------------------------------------------------|---------|
| Locking System Troubleshooting.....                          | 33:54   |
| Automatic Conversion.....                                    | 39:48   |
| Additional Repairs & Troubleshooting.....                    | 40:57   |
| Headspace.....                                               | 43:20   |
| Locking Bar.....                                             | 46:46   |
| Forearm.....                                                 | 50:33   |
| Reassembly & Troubleshooting.....                            | 53:48   |
| Trigger Group & Safety – Disassembly, Design & Function..... | 1:10:12 |
| Next Menu                                                    |         |

|                            |         |
|----------------------------|---------|
| Reassembly & Comments..... | 1:18:35 |
| Stock.....                 | 1:26:36 |

### ***“Winchester 200 Series”***

|                                                     |         |
|-----------------------------------------------------|---------|
| Disassembly, Design & Function.....                 | 1:28:11 |
| Bolt Assembly – Firing Pin, Extractor, Ejector..... | 1:40:18 |
| Bolt Reassembly.....                                | 1:49:44 |
| Feeding Mechanism & Troubleshooting.....            | 1:51:57 |
| Fire Control System – Disassembly & Design.....     | 1:59:22 |
| Reassembly & Repair Tips.....                       | 2:11:49 |
| Pump – Disassembly, Design & Function.....          | 2:20:30 |
| Locking Block – Troubleshooting & Repair.....       | 2:25:36 |
| Reassembly.....                                     | 2:32:39 |

### ***“H&K Model 300”***

|                                            |         |
|--------------------------------------------|---------|
| Disassembly, Troubleshooting & Repair..... | 2:33:43 |
| Bolt Assembly & Extractor.....             | 2:36:13 |
| Fire Control Mechanism.....                | 2:39:16 |
| Reassembly.....                            | 2:41:50 |

### ***“High Standard A1041, Sears 25, Savage 87”***

|                                            |         |
|--------------------------------------------|---------|
| Disassembly, Troubleshooting & Repair..... | 2:44:38 |
| Bolt, Extractor, Firing Pin.....           | 2:48:09 |
| Feed Mechanism.....                        | 2:51:57 |

### ***“Canadian .22 Rifle”***

|                                            |         |
|--------------------------------------------|---------|
| Disassembly, Design, Function, Repair..... | 2:53:14 |
| Bolt, Firing Pin, Ejector.....             | 2:55:43 |
| Fire Control System – Troubleshooting..... | 3:02:27 |
| Magazine – Housing, Retrofitting.....      | 3:06:51 |
| Reassembly.....                            | 3:11:50 |

### ***“Mystery Gun”***

|                              |         |
|------------------------------|---------|
| Observations & Comments..... | 3:16:35 |
|------------------------------|---------|



### ***“Browning T-Bolt”***

|                                                 |         |
|-------------------------------------------------|---------|
| Disassembly, Design & Function .....            | 3:19:16 |
| Bolt Assembly, Locking System & Firing Pin..... | 3:20:50 |
| Locking Block & Repair.....                     | 3:24:40 |
| Extractor & Bolt Troubleshooting.....           | 3:26:50 |
| Trigger Group – Troubleshooting.....            | 3:27:51 |
| General Repair Tips.....                        | 3:32:12 |
| Reassembly, Safety & Repair .....               | 3:34:13 |

## **.22 RIMFIRES - DISC 7**

### ***“Mossgberg 320”***

|                                             |       |
|---------------------------------------------|-------|
| Disassembly, Design, Function & Repair..... | 00:16 |
| Trigger Assembly, Safety & Sear.....        | 04:14 |
| Bolt Assembly – Firing Pin .....            | 09:29 |
| Headspace .....                             | 15:13 |
| Extractors.....                             | 18:04 |
| Reassembly .....                            | 21:37 |

### ***“Savage Model 15”***

|                                                     |       |
|-----------------------------------------------------|-------|
| Disassembly, Design, Function & Repair .....        | 27:39 |
| Bolt Assembly, Extractor, Firing Pin, Striker ..... | 29:45 |
| Headspace & Ejection.....                           | 38:33 |

### ***“Wards Model 36, Savage 521, Mossberg 10”***

|                                            |       |
|--------------------------------------------|-------|
| Disassembly, Design & Function.....        | 42:29 |
| Bolt Assembly, Firing Pin, Extractor ..... | 43:27 |
| Trigger Assembly & Headspace.....          | 46:38 |

### ***“Wards Model 31A, Mossberg 40 & 44”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function.....  | 50:26   |
| Bolt, Extractor & Ejector.....       | 51:18   |
| Headspace .....                      | 54:26   |
| Firing Pin & Cocking Piece.....      | 55:49   |
| Trigger.....                         | 1:00:54 |
| Reassembly & Feeding Mechanism ..... | 1:02:50 |

### ***“REMINGTON NYLON 11 & 500 SERIES”***

|                                             |         |
|---------------------------------------------|---------|
| Disassembly, Design & Function .....        | 1:09:55 |
| Trigger Assembly & Safety.....              | 1:16:42 |
| Bolt Assembly, Firing Pin & Extractor ..... | 1:26:22 |
| Headspace .....                             | 1:32:33 |
| Reassembly .....                            | 1:33:57 |

### ***“Savage Model 63 & Sears”***

|                                                      |         |
|------------------------------------------------------|---------|
| Disassembly, Design & Function .....                 | 1:43:51 |
| Fire Control System.....                             | 1:46:07 |
| Bolt Assembly, Extractor, Firing Pin & Ejector ..... | 1:49:15 |
| Headspace .....                                      | 1:53:50 |
| Trigger Assembly .....                               | 1:54:48 |
| Reassembly .....                                     | 2:00:32 |

### ***“Ruger American .22”***

|                             |         |
|-----------------------------|---------|
| Disassembly/Reassembly..... | 2:02:39 |
|-----------------------------|---------|

## **.22 RIMFIRES - DISC 8**

### ***“Remington Model 514”***

|                                     |       |
|-------------------------------------|-------|
| Disassembly, Design & Function..... | 00:15 |
|-------------------------------------|-------|

|                                                      |       |
|------------------------------------------------------|-------|
| Bolt Assembly, Extractor, Ejector & Firing Pin ..... | 02:36 |
| Headspace .....                                      | 07:13 |
| Bolt Assembly .....                                  | 09:06 |
| Fitting Extractor .....                              | 10:13 |
| Trigger Assembly .....                               | 12:04 |
| Reassembly .....                                     | 17:00 |

### ***“Savage Model 34”***

|                                      |       |
|--------------------------------------|-------|
| Disassembly, Design & Function ..... | 19:42 |
| Bolt Assembly .....                  | 23:12 |
| Trigger Assembly & Hammer .....      | 26:48 |
| Reassembly & Comments .....          | 31:01 |

### ***“Marlin Model 81 & Western Auto”***

|                                              |       |
|----------------------------------------------|-------|
| Disassembly, Design & Function .....         | 35:26 |
| Carrier Assembly .....                       | 36:26 |
| Trigger & Sear Assembly .....                | 44:05 |
| Bolt Assembly, Firing Pins & Extractor ..... | 47:11 |
| Reassembly & Safety .....                    | 51:36 |
| Headspace & Cartridge Guide Spring .....     | 57:03 |

### ***“Winchester Model 69, 72 & 75”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 59:32   |
| Bolt Assembly .....                  | 1:01:18 |
| Trigger Mechanism & Safety .....     | 1:03:23 |
| Headspace .....                      | 1:11:08 |
| Reassembly .....                     | 1:13:50 |

### ***“Mossberg Single Shot”***

|                                             |         |
|---------------------------------------------|---------|
| Disassembly, Design & Function .....        | 1:16:27 |
| Bolt Assembly, Firing Pin & Extractor ..... | 1:18:00 |
| Safety .....                                | 1:19:49 |
| Headspace .....                             | 1:21:12 |
| Sear System & Reassembly .....              | 1:22:52 |
| Extractor & Firing Pin Comments .....       | 1:24:08 |

### ***“Tiros Coyote (Mexico)”***

|                                 |         |
|---------------------------------|---------|
| Design, Function & Repair ..... | 1:26:18 |
|---------------------------------|---------|

### ***“Daisy Legacy 2202”***

|                                      |         |
|--------------------------------------|---------|
| Disassembly, Design & Function ..... | 1:33:22 |
| Bolt Assembly & Headspace .....      | 1:35:43 |
| Trigger Mechanism & Reassembly ..... | 1:38:21 |

### ***“BSA Raylock”***

|                                 |         |
|---------------------------------|---------|
| Design, Function & Repair ..... | 1:41:02 |
| Epilogue .....                  | 1:50:04 |

## **RIFLES - DISC 1**

## ***RIFLES***

### **BOLT ACTIONS**

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| Introduction to Rifles .....                                        | 00:15   |
| Theory                                                              |         |
| Headspace & Case Head Designs .....                                 | 01:51   |
| Breeching - Powder & Pressure .....                                 | 44:12   |
| Cone Breech (Springfield) & Safety Breech (Remington) Designs ..... | 1:05:27 |
| Mauser Breech Design .....                                          | 1:09:39 |
| Firing Pin - Design & Function .....                                | 1:17:09 |

|                                    |         |
|------------------------------------|---------|
| Size (Diameter) .....              | 1:24:59 |
| Protrusion .....                   | 1:30:20 |
| Tip Shape .....                    | 1:43:36 |
| Data Review .....                  | 1:47:30 |
| Introduction to Bolt Actions ..... | 1:49:37 |

### ***“Mauser M98”***

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Action Design .....                                               | 1:50:05 |
| Barrel Tightness Theory .....                                     | 1:51:43 |
| Bolt and Lug Fit .....                                            | 1:53:48 |
| Camming Action .....                                              | 2:00:36 |
| Firing Pin – Assembly .....                                       | 2:04:04 |
| Protrusion .....                                                  | 2:09:00 |
| Bolt - Alterations, Cocking Mechanism, Heat Treating .....        | 2:13:03 |
| Extractor - Design, Function, Fitting, Removal & Reassembly ..... | 2:20:56 |
| Bolt Reassembly .....                                             | 2:33:11 |
| Next Menu .....                                                   |         |

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| Feeding - Design, Function, Problems, Alteration, Troubleshooting .....    | 2:44:46 |
| Box Magazines - Design, Function, Problems, Alteration .....               | 2:47:24 |
| Body Rails - Design, Function, Problems, Alteration, Troubleshooting ..... | 2:59:11 |
| Trigger (Timney) - Design, Function, Problems, Alteration .....            | 3:13:38 |

## **RIFLES - DISC 2**

### **BOLT ACTIONS**

#### ***“Springfield 03A3”***

|                                                       |       |
|-------------------------------------------------------|-------|
| Design, Function & Disassembly .....                  | 00:16 |
| Bolt - Design, Function, Disassembly .....            | 00:40 |
| Bolt Stop - Design & Function .....                   | 05:37 |
| Bolt Disassembly .....                                | 07:36 |
| Bolt Reassembly .....                                 | 13:28 |
| Drilling & Tapping Receiver Methods .....             | 16:19 |
| Reassembly .....                                      | 19:05 |
| Trigger (Two Stage) - Design, Function & Tuning ..... | 21:56 |
| Cocking System .....                                  | 35:20 |

#### ***“Remington 700”***

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Design, Function & Disassembly .....                                      | 38:49   |
| Bolt Assembly - Plunger Type Ejector & Extractor .....                    | 47:44   |
| Striker – Disassembly .....                                               | 50:48   |
| Extractor - Design, Function, Types, Problems, Replacement, Fitting ..... | 53:46   |
| Camming Design & Bolt Handle Repair .....                                 | 1:07:21 |
| Box Magazine (ADL) - Design, Reassembly .....                             | 1:09:20 |
| Trigger Mechanism – Adjustments, Comments .....                           | 1:11:54 |
| Feeding Problems - Troubleshooting Magazine Box .....                     | 1:17:39 |
| Ejector - Troubleshooting, Repair .....                                   | 1:23:20 |

#### ***“Winchester Model 70”***

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| Disassembly, Design & Function .....                               | 1:30:03 |
| Extractor - Design, Function, Repair .....                         | 1:33:32 |
| Ejector (Plunger Type) - Design, Function, Repair .....            | 1:35:45 |
| Changing Angle of Ejector .....                                    | 1:37:09 |
| Short Case Ejection .....                                          | 1:39:49 |
| Trigger Mechanism - Design, Function, Adjustment .....             | 1:42:47 |
| Safety (3 Position) – Disassembly, Design, Function, Fitting ..... | 1:48:17 |
| Safety Reassembly .....                                            | 2:00:42 |
| Magazine Box & Reassembly .....                                    | 2:02:56 |

### ***“Enfield P-14 & Remington 30”***

|                                                   |         |
|---------------------------------------------------|---------|
| Disassembly, Design, Function & Alterations ..... | 2:06:42 |
| Magazine Floor Plate – Removal .....              | 2:15:52 |

### ***“Savage 110”***

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Disassembly, Design & Function .....                                      | 2:19:16 |
| Bolt Assembly - Disassembly, Design & Function .....                      | 2:24:46 |
| Firing Pin Protrusion .....                                               | 2:27:48 |
| Extraction Cam Design .....                                               | 2:31:09 |
| Trigger Assembly/Safety - Design, Function, Variations, Adjustments ..... | 2:32:46 |
| Magazine Box - Removal, Feeding .....                                     | 2:40:15 |
| Comments & Reassembly .....                                               | 2:42:09 |

### ***“BRNO .22 Hornet”***

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Disassembly, Design & Function .....                              | 2:46:06 |
| Bolt - Disassembly, Design, Function .....                        | 2:47:04 |
| Headspace – Repair Options .....                                  | 2:49:26 |
| Firing Pin - Protrusion, Repair .....                             | 2:52:24 |
| Ejector & Bolt Stop - Design, Function .....                      | 2:57:32 |
| Magazine – Troubleshooting, Repair .....                          | 3:00:31 |
| Trigger (Double Set) - Design, Function, Adjustment, Repair ..... | 3:03:21 |

### ***“BRNO 7X57”***

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Disassembly, Design & Function .....                                    | 3:25:22 |
| Bolt/Safety -Design, Function .....                                     | 3:26:09 |
| Trigger (Double Set) - Repair, Alterations.....                         | 3:31:01 |
| Magazine Release - Design, Function .....                               | 3:34:04 |
| Headspace/Bolt Stop – Repair .....                                      | 3:39:19 |
| Ejector (Mauser Types) Review .....                                     | 3:42:29 |
| Feeding – Review, Comments.....                                         | 3:43:02 |
| Reassembly.....                                                         | 3:47:14 |
| Integral Scope Mounts - (European) Design, Function, Installation ..... | 3:51:48 |

## **RIFLES - DISC 3**

### **BOLT ACTIONS**

#### ***“Short Magazine Lee Enfield (SMLE)”***

|                                            |       |
|--------------------------------------------|-------|
| Design, Function & Disassembly .....       | 00:17 |
| Bolt - Design, Function, Disassembly ..... | 02:38 |
| Headspace - Parts, Repair .....            | 05:58 |
| Magazine - Troubleshooting, Repair .....   | 09:44 |
| Trigger Mechanism - Design, Function ..... | 11:35 |
| Extractor - Design, Function, Repair.....  | 13:14 |
| Ejector .....                              | 15:34 |
| Extraction - Problems, Repairs.....        | 15:58 |
| Safety - Design, Function .....            | 20:02 |

#### ***“French MAS Model 35”***

|                                                                       |       |
|-----------------------------------------------------------------------|-------|
| Design, Function & Disassembly.....                                   | 22:00 |
| Extractor - Design, Function, Disassembly .....                       | 25:12 |
| Bolt & Firing Pin - Design, Function, Disassembly.....                | 26:32 |
| Stock – Fitting .....                                                 | 28:32 |
| Feeding - Comments.....                                               | 29:56 |
| Trigger, Bolt Stop & Ejector - Design, Function, Troubleshooting..... | 31:12 |
| Extraction Cam, Firing Pin, Safety.....                               | 34:18 |
| Reassembly.....                                                       | 38:08 |

### ***“Mannlicher Schoenauer”***

|                                                                |       |
|----------------------------------------------------------------|-------|
| Disassembly, Design, Function .....                            | 41:48 |
| Magazine (Rotary Design) - Disassembly, Design, Function ..... | 44:19 |
| Headspace .....                                                | 47:37 |
| Bolt - Disassembly .....                                       | 49:41 |
| Extractor & Ejector - Design .....                             | 51:07 |
| Bolt Head - Headspace Correction .....                         | 52:44 |
| Trigger (Double Set) .....                                     | 54:57 |
| Reassembly - Bolt .....                                        | 55:25 |
| Ejection & Feeding - Design, Function .....                    | 58:29 |
| NEXT MENU .....                                                |       |

|                                  |         |
|----------------------------------|---------|
| Safety - Design, Function .....  | 59:38   |
| Scope Mounting - Comments .....  | 1:01:18 |
| Magazine & Latch - Repairs ..... | 1:01:57 |

### ***“Mannlicher Berthier”***

|                                                    |         |
|----------------------------------------------------|---------|
| Disassembly, Design, Function .....                | 1:05:02 |
| Magazine System & Trigger - Design, Function ..... | 1:07:55 |
| Bolt - Disassembly .....                           | 1:09:28 |
| Camming Action & Reassembly .....                  | 1:13:24 |

### ***“BRNO ZKW 465”***

|                                                       |         |
|-------------------------------------------------------|---------|
| Overview .....                                        | 1:17:30 |
| Bolt - Extractor, Disassembly .....                   | 1:20:24 |
| Trigger & Sear - Operation, Design, Adjustment .....  | 1:25:57 |
| Barrel - Adjustment, Headspace, Repair .....          | 1:33:11 |
| Stock - Recoil Lug, Fitting, Cross-pin, Bedding ..... | 1:36:22 |

### ***“Walther .22 Hornet”***

|                                               |         |
|-----------------------------------------------|---------|
| Overview & Disassembly .....                  | 1:43:41 |
| Trigger - Operation .....                     | 1:46:40 |
| Extractor - Operation, Problems .....         | 1:48:44 |
| Magazine - Design .....                       | 1:50:52 |
| Barrel - Headspace .....                      | 1:51:55 |
| Bolt - Disassembly, Striker, Reassembly ..... | 1:53:57 |
| Stock - Bedding .....                         | 2:00:27 |
| Trigger Job .....                             | 2:02:40 |
| Trigger Guard - Material .....                | 2:04:49 |
| Reassembly - Comments .....                   | 2:07:49 |

### ***“Vetterli”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Overview & Operation .....                                | 2:09:48 |
| Bolt-Disassembly, Firing Pin, Operation, Reassembly ..... | 2:16:06 |
| Safety .....                                              | 2:20:22 |
| Comments .....                                            | 2:22:15 |
| Headspace - Comments .....                                | 2:22:59 |
| Trigger & Sear - Operation .....                          | 2:26:57 |
| Barrel - Setback, Rechambering .....                      | 2:28:26 |
| Trigger Job .....                                         | 2:30:13 |
| Magazine Spring .....                                     | 2:32:30 |
| Reassembly Comments .....                                 | 2:38:11 |

### ***“Schmidt Ruben”***

|                                                 |         |
|-------------------------------------------------|---------|
| Overview & Cartridges .....                     | 2:41:39 |
| Bolt - Disassembly, Extractor, Reassembly ..... | 2:45:15 |
| Disassembly .....                               | 2:50:53 |

|                                                   |         |
|---------------------------------------------------|---------|
| Trigger – Design, Function .....                  | 2:54:01 |
| Firing Pin Protrusion .....                       | 3:00:10 |
| Problems – Firing Pin, Extractor, Headspace ..... | 3:01:15 |
| Trigger Pull – Adjustment .....                   | 3:03:56 |
| Ejector – Operation, Eject Angle .....            | 3:04:38 |
| Magazine – Operation, Mag Catch .....             | 3:07:34 |
| Comments – Stock, Bolt, Cam, Magazine .....       | 3:09:29 |

## RIFLES - DISC 4

### BOLT ACTIONS

#### ***“Mosberg 810 “***

|                                          |       |
|------------------------------------------|-------|
| Overview & Operation .....               | 00:17 |
| Magazine – Floor Plate, Feed Lips] ..... | 04:21 |
| Lock-Up .....                            | 08:59 |
| Sear-Safety, Adjustments .....           | 10:20 |
| Trigger – Design, Function, Repair ..... | 19:03 |

#### ***“Mosin-Nagant”***

|                                            |         |
|--------------------------------------------|---------|
| Overview, Quality & Operation .....        | 33:33   |
| Bolt – Firing Pin, Extractor, Repair ..... | 54:02   |
| Disassembly .....                          | 1:10:10 |
| Ammo Feed – Ramp, Magazine .....           | 1:11:31 |
| Sear – Spring, Repair .....                | 1:18:50 |
| Headspace .....                            | 1:21:40 |
| Stock – Recoil Lug, Receiver Fit .....     | 1:22:39 |
| Scope Mounting .....                       | 1:25:35 |
| Troubleshooting .....                      | 1:26:50 |

#### ***“Weatherby Mark V”***

|                                    |         |
|------------------------------------|---------|
| D&R (Disassembly/Reassembly) ..... | 1:32:19 |
|------------------------------------|---------|

#### ***“Italian Carcano”***

|                                               |         |
|-----------------------------------------------|---------|
| Ammunition – Clip, Feed, Extraction .....     | 2:20:18 |
| Variations .....                              | 2:21:39 |
| Trigger – Sear, Bolt Stop, Hardness .....     | 2:25:23 |
| Safety .....                                  | 2:29:11 |
| Bolt – Extractor, Firing Pin, Headspace ..... | 2:32:36 |

#### ***“Ruger M77”***

|                                                 |         |
|-------------------------------------------------|---------|
| Overview .....                                  | 2:35:55 |
| Recoil Lug – Operation, Bedding .....           | 2:43:16 |
| Magazine – Spring, Adjusting .....              | 2:46:27 |
| Bolt Stop .....                                 | 2:52:31 |
| Safety – Repair, Operation .....                | 2:57:02 |
| Trigger – Operation .....                       | 2:59:17 |
| Trigger Job .....                               | 3:05:35 |
| Reassembly .....                                | 3:19:35 |
| Bolt – Disassembly, Firing Pin, Extractor ..... | 3:25:47 |

## RIFLES - DISC 5

### BOLT ACTIONS

#### ***“KRICO”***

|                                                          |       |
|----------------------------------------------------------|-------|
| Overview & Disassembly .....                             | 00:16 |
| Trigger – Design, Modification, Repair .....             | 04:40 |
| Bolt – Repairs, Disassembly, Firing Pin, Extractor ..... | 24:23 |
| Ejector – Modifications .....                            | 38:37 |
| Reassembly – Bedding .....                               | 40:06 |

### ***“Weatherby Vanguard D&R”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 55:00 |
|------------------------------|-------|

### ***“Howa 1500”***

|                                                    |         |
|----------------------------------------------------|---------|
| Bolt – Firing Pin Hole, Extractor, Ejector .....   | 1:42:46 |
| Ammo Feed – Problems, Extraction, Correction ..... | 1:52:57 |
| Bolt Stop – Operation, Repair .....                | 1:58:18 |
| Trigger – Operation, Problems, Adjustment .....    | 2:04:35 |
| Safety – Operation, Repair .....                   | 2:19:50 |
| Bolt Variations .....                              | 2:42:47 |
| Floor Plate – Problems, Repair .....               | 2:48:55 |
| Firing Pin Tip – Geometry .....                    | 2:50:50 |

### ***“Remington 788 D&R”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 2:57:07 |
|------------------------------|---------|

## **RIFLES - DISC 6**

### **BOLT ACTIONS**

#### ***“Sako Finn Bear D&R”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 00:15 |
|------------------------------|-------|

#### ***“Browning A-Bolt D&R”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 44:03 |
|------------------------------|-------|

#### ***“Browning X-Bolt”***

|                                                 |         |
|-------------------------------------------------|---------|
| Overview & Features .....                       | 1:41:32 |
| Bolt – Firing Pin, Extractor, Design .....      | 1:46:01 |
| Stock – Disassembly, Bedding .....              | 2:02:58 |
| Recoil Lug & Barrel – Design, Function .....    | 2:05:00 |
| Bolt Stop – Disassembly, Function .....         | 2:06:59 |
| Trigger Assembly – Adjustments .....            | 2:09:02 |
| Safety – Problems .....                         | 2:14:24 |
| Buttstock .....                                 | 2:15:01 |
| Magazine – Disassembly, Reassembly, Tools ..... | 2:18:41 |

## **RIFLES - DISC 7**

### **LEVER ACTIONS**

|                                     |       |
|-------------------------------------|-------|
| Introduction to Lever Actions ..... | 00:13 |
|-------------------------------------|-------|

#### ***“Savage 99”***

|                                                                |       |
|----------------------------------------------------------------|-------|
| Disassembly, Design, Function .....                            | 00:31 |
| Bolt – Disassembly, Design, Function .....                     | 06:32 |
| Receiver – Disassembly .....                                   | 06:56 |
| Locking System (Bolt) – Design, Function .....                 | 11:21 |
| Receiver – Design Changes & Evolution .....                    | 12:34 |
| Drill & Tapping .....                                          | 14:18 |
| Safety – Removal, Repair .....                                 | 18:20 |
| Rotary Magazine – Design, Function, Disassembly .....          | 19:44 |
| Cartridge Cut-Off & Ejector – Design, Functions, Repairs ..... | 25:45 |

#### **NEXT MENU**

|                                                                  |       |
|------------------------------------------------------------------|-------|
| Feeding – Principles, Troubleshooting, Repairs .....             | 26:57 |
| Headspace – Cause, Repairs .....                                 | 31:40 |
| Bolt, Extractor – Design, Function & Repairs .....               | 35:14 |
| Barrel Removal – Tools, Procedure .....                          | 38:22 |
| Headspace – Alternate Corrections on Lever & Heat Treating ..... | 44:35 |
| Bolt, Firing Pin – Disassembly, Design, Function .....           | 56:26 |

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| Trigger, Sear & Safety – Design, Function, Troubleshooting, Repair ..... | 1:00:37 |
| Tang Safety & Revised Sear System – Design, Troubleshooting .....        | 1:08:58 |
| NEXT MENU                                                                |         |

|                                                    |         |
|----------------------------------------------------|---------|
| Repair Bent Frame, Etc .....                       | 1:17:06 |
| Reassembly .....                                   | 1:19:56 |
| Trigger Job .....                                  | 1:29:07 |
| Stock & Forearm Fit – Repairs, Glass Bedding ..... | 1:33:40 |

### ***“Winchester 94”***

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| Introduction, Differences Between Pre & Post '64] .....            | 1:44:22 |
| Receiver Finishes .....                                            | 1:50:02 |
| Design & Function.....                                             | 1:54:49 |
| Disassembly - Hammer & Spring Variations.....                      | 2:08:56 |
| Bolt – Firing Pin Options .....                                    | 2:16:05 |
| Mainspring – Replacing, Retrofitting .....                         | 2:21:18 |
| Headspace – Corrections Method.....                                | 2:23:59 |
| Barrel Set-Back Alterations .....                                  | 2:33:47 |
| Feeding (Pre-64) – Design, Function, Troubleshooting, Repair ..... | 2:37:53 |
| NEXT MENU                                                          |         |

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| Timing – Testing, Adjusting .....                                      | 2:48:31 |
| Cartridge Guides – Removal Methods.....                                | 2:52:32 |
| Reassembly (Pre-64) .....                                              | 2:59:05 |
| Mainspring Assembly & Safety – Design, Function, Troubleshooting ..... | 3:11:25 |
| Trigger & Sear – Design, Function, Trigger Job .....                   | 3:20:15 |
| Ejector – Design, Function .....                                       | 3:26:12 |
| Cartridge Stop – Removal, Design, Function .....                       | 3:26:52 |
| Spring Cover – Design, Troubleshooting, Repair .....                   | 3:29:35 |
| NEXT MENU                                                              |         |

|                                                       |         |
|-------------------------------------------------------|---------|
| Carrier Spring – Design, Troubleshooting, Repair..... | 3:34:11 |
| Reassembly .....                                      | 3:37:09 |
| Sights .....                                          | 3:44:44 |
| Magazine .....                                        | 3:45:22 |
| Stock Fit – Bedding.....                              | 3:49:40 |
| Forearm Fit .....                                     | 3:50:37 |

## **RIFLES - DISC 8**

### **LEVER ACTIONS**

#### ***“Marlin 336”***

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Disassembly, Design, Function .....                               | 00:15 |
| Two-Piece Firing Pin – Design, Function.....                      | 09:52 |
| Safety, Sear & Trigger – Design & Function.....                   | 10:47 |
| Locking System – Design, Function, Repair .....                   | 13:25 |
| Headspace – Problems, Options for Correcting.....                 | 18:43 |
| Trigger Pull, Ejector, Extractor.....                             | 20:15 |
| Headspace – Review, Barrel Setback.....                           | 23:30 |
| Feeding – Design, Function .....                                  | 27:08 |
| Timing – Troubleshooting, Correction, Areas of Wear, Repair ..... | 35:07 |
| NEXT MENU                                                         |       |

|                                         |         |
|-----------------------------------------|---------|
| Reassembly .....                        | 54:47   |
| Stock & Forearm – Fitting, Bedding..... | 1:02:38 |
| Testing – Feeding & Timing .....        | 1:03:04 |



### ***“Browning BLR D&R”***

|                              |         |
|------------------------------|---------|
| Disassembly/Reassembly ..... | 1:07:26 |
|------------------------------|---------|

### ***“Browning BLR Design, Function & Repair”***

|                                                  |         |
|--------------------------------------------------|---------|
| Disassembly, Design, Function .....              | 2:10:39 |
| Problems – Headspace (Bolt) Cause & Repair ..... | 2:14:08 |
| Failure to Open – Cause, Correction .....        | 2:17:21 |
| Extractor – Removal .....                        | 2:22:54 |
| Hammer & Sear – Design, Function, Repair .....   | 2:25:09 |
| Trigger Job .....                                | 2:29:09 |
| Reassembly – Procedures .....                    | 2:30:13 |
| Mistakes – Gear Indexing, Correction .....       | 2:32:19 |
| Feeding – Comments .....                         | 2:43:11 |
| Barrel Setback – Method .....                    | 2:44:38 |

### ***“Winchester 1873”***

|                                                     |         |
|-----------------------------------------------------|---------|
| Overview, Model Differences, Design, Function ..... | 2:47:16 |
| Headspace – So What? .....                          | 2:58:17 |
| Parts Availability .....                            | 3:02:53 |
| Hammer/Sear Relationship – Check .....              | 3:04:28 |
| Evolution – Early Designs .....                     | 3:07:56 |
| Carrier Block – Operation, Problems, Lockup .....   | 3:11:00 |
| Safety .....                                        | 3:25:01 |
| Trigger – Hardness Testing, Repairs .....           | 3:25:44 |
| Repairs – Tang, Dust Cover, Springs, Stock .....    | 3:29:03 |
| Magazine Tube – Repairing Dents .....               | 3:35:17 |

## **RIFLES - DISC 9**

### **LEVER ACTIONS**

#### ***“Martini”***

|                                        |       |
|----------------------------------------|-------|
| Overview .....                         | 00:16 |
| Features – Forend, Sights, Stock ..... | 02:11 |
| Action – Removal, Operation .....      | 06:07 |
| Bolt & Cocking Piece .....             | 10:12 |
| Problems – Headspace, Misfires .....   | 15:21 |
| Firing Pin – Problems, Repair .....    | 22:08 |
| Reassembly – Lever Repair .....        | 25:52 |

#### ***“Ruger #1 D&R”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly ..... | 33:41 |
|------------------------------|-------|

#### ***“Ruger #3”***

|                                                         |         |
|---------------------------------------------------------|---------|
| Overview & Features .....                               | 1:53:38 |
| Stock & Forend .....                                    | 1:58:06 |
| Safety .....                                            | 1:59:38 |
| Disassembly .....                                       | 2:01:25 |
| Trigger – Adjustments .....                             | 2:05:35 |
| Breech Block – Problems, Repair .....                   | 2:06:31 |
| Sear System – Hammer Notch, Problems, Trigger Job ..... | 2:09:52 |
| Headspace .....                                         | 2:14:24 |
| Reassembly .....                                        | 2:14:53 |

## **RIFLES - DISC 10**

### **SEMI-AUTOS**

|                                       |       |
|---------------------------------------|-------|
| Introduction to Semi-Automatics ..... | 00:15 |
|---------------------------------------|-------|

### ***“Remington 740 & 760”***

|                                                                 |       |
|-----------------------------------------------------------------|-------|
| Pump vs. Semi-Auto, Design, Function, Disassembly .....         | 00:47 |
| Barrel – Components (3), Headspace.....                         | 04:46 |
| Bolt – Design, Function, Disassembly, Headspace Correction..... | 07:21 |
| Trigger Group – Design, Function, Repair.....                   | 12:03 |
| Accuracy – Comments, Changes, Bedding.....                      | 15:12 |
| Stock – Comments, Changes & Bedding .....                       | 19:08 |
| Fire Control – Design, Function Disassembly .....               | 21:08 |
| Misfires – Cause, Repairs.....                                  | 27:56 |
| Trigger, Sear & Safety – Design, Function, Repairs .....        | 33:00 |
| NEXT MENU                                                       |       |

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| Connectors – Problem, Repair .....                                  | 39:36   |
| Trigger Job – Method, Comments, Spring Modification.....            | 40:10   |
| Right & Left Safety Conversion .....                                | 47:24   |
| Magazines & Latch – Design, Function, Changes, Retrofitting.....    | 49:37   |
| Pump Tube – Design, Function, Problems .....                        | 53:43   |
| Semi-Auto Design – Similarities, Design, Function, Revisions.....   | 57:25   |
| Forearm Retention – Design, Function, Troubleshooting, Repair ..... | 58:15   |
| Gas System – Design, Function, Troubleshooting, Repair .....        | 1:04:17 |
| NEXT MENU                                                           |         |

|                                                            |         |
|------------------------------------------------------------|---------|
| Gas Hole – Adjustment, Tool.....                           | 1:11:29 |
| Short Cycle – Causes, Correction, Repairs .....            | 1:13:46 |
| Disassembly – Procedure .....                              | 1:18:29 |
| Magazines – Fit, Variation, Troubleshooting & Repairs..... | 1:20:01 |
| Reassembly – Forearm Assembly .....                        | 1:27:17 |
| Trigger Group.....                                         | 1:28:13 |
| Misfires – Causes, Repairs.....                            | 1:32:30 |
| Barrel Assembly – Procedure (Pump) .....                   | 1:35:47 |
| NEXT MENU                                                  |         |

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| Multi-Lug Design – Comments, Design, Function, Problems .....         | 1:38:48 |
| Bolt Lock – Problems, Repair.....                                     | 1:44:09 |
| Improvements (New Style) – Gas System Design, Function, Repairs ..... | 1:45:03 |
| Additional Problems – Safety Detent, Causes, Repair .....             | 1:48:28 |
| Comments, Model Updates & Redesigns.....                              | 1:52:43 |

### ***“Browning BAR”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Design, Function & Disassembly .....                      | 1:56:53 |
| Magazine – Removal, Design, Problems, Repair .....        | 1:57:35 |
| Stock – Attachment, Bedding .....                         | 2:01:12 |
| Forearm – Removal .....                                   | 2:04:08 |
| Gas System – Design, Function, Disassembly .....          | 2:05:04 |
| Bolt – Design, Function, Disassembly.....                 | 2:08:06 |
| Piston – Design, Function.....                            | 2:09:39 |
| Internal Safety – Design, Function, Misfires.....         | 2:13:29 |
| Gas System – Operation, Troubleshooting, Correction ..... | 2:17:40 |
| NEXT MENU                                                 |         |

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Bolt – Operation, Components, Troubleshooting, Repair .....             | 2:22:58 |
| Trigger Group – Operation, Components, Troubleshooting, Correction..... | 2:29:52 |
| Reassembly – Procedures.....                                            | 2:38:27 |
| Buffer – Inspection, Operation .....                                    | 2:40:11 |
| Short Cycling – Causes, Corrections .....                               | 2:41:24 |
| Accuracy Improvements – Bedding Forearm, Modification.....              | 2:51:06 |
| Orifice Wear – Cause, Repair.....                                       | 2:53:28 |

## RIFLES - DISC 11

### SEMI-AUTOS

#### ***“Colt AR-15”***

|                                                                |       |
|----------------------------------------------------------------|-------|
| Design, Function, Disassembly .....                            | 00:15 |
| Buffer Assembly – Design, Function, Operation.....             | 07:00 |
| Bolt Assembly – Design, Function, Operation, Disassembly ..... | 08:21 |
| Gas System – Design, Function, Operation .....                 | 11:08 |
| Short Cycling – Troubleshooting, Causes, Corrections.....      | 13:57 |
| Barrel – Removal, Wrench.....                                  | 18:48 |
| Barrel Extension – Removal, Tool .....                         | 22:15 |
| Short Cycling – Additional Causes, Repairs .....               | 24:14 |
| Firing Pin Protrusion – Specs.....                             | 27:45 |
| NEXT MENU                                                      |       |

|                                                     |       |
|-----------------------------------------------------|-------|
| Bolt Head Assembly .....                            | 28:57 |
| Extractor – Removal, Pad, Repair .....              | 29:19 |
| Ejector – Comment .....                             | 31:46 |
| Action Spring Tube – Removal .....                  | 32:34 |
| Magazine Catch & Slide Stop – Comments .....        | 33:24 |
| Feeding – Comments, Problems, Corrections.....      | 33:46 |
| Magazines – Troubleshooting, Testing, Repairs ..... | 34:20 |
| Low Feed – Problem, Cause, Modification .....       | 38:34 |
| NEXT MENU                                           |       |

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Fire Control – Components, Design, Function, Troubleshooting..... | 40:45 |
| Trigger Job – Operation, Modifications .....                      | 48:32 |
| Accuracy – Comments, Improvements, Modifications.....             | 50:38 |
| Forearm – Inspection, Fit.....                                    | 52:23 |
| Accurizing Details.....                                           | 53:17 |
| Magazines – Additional Repairs.....                               | 55:12 |
| Reassembly – Comments, Procedures .....                           | 56:03 |
| Hammer - Correcting Bolt Lock-Back .....                          | 58:25 |
| NEXT MENU                                                         |       |

|                                                              |         |
|--------------------------------------------------------------|---------|
| Reassembly Continued .....                                   | 1:01:39 |
| Hammer Following Problem – Illustration, Cause, Repair ..... | 1:06:05 |

#### ***“AK-47, AKS”***

|                                                 |         |
|-------------------------------------------------|---------|
| Design, Function, Disassembly .....             | 1:08:44 |
| Bolt – Firing Pin Hole Repair .....             | 1:19:58 |
| Firing Pin – Removal, Variations .....          | 1:21:19 |
| Extractor – Removal, Design, Repair .....       | 1:23:54 |
| Reassembly & Checking Extractor .....           | 1:27:09 |
| Magazines – Comments, Repairs, Variations ..... | 1:29:15 |
| Reassembly – Procedure .....                    | 1:32:32 |
| Stock Bedding .....                             | 1:35:20 |

#### ***“Galil”***

|                         |         |
|-------------------------|---------|
| Design & Function:..... | 1:36:11 |
|-------------------------|---------|

#### ***“Valmet”***

|                                                   |         |
|---------------------------------------------------|---------|
| AK vs. Valmet – Design, Function .....            | 1:39:26 |
| Fire Control - Components, Operation.....         | 1:43:20 |
| Trigger Job – Procedure.....                      | 1:45:57 |
| Doubling – Causes, Correction .....               | 1:47:06 |
| Safety – Design, Operation, Troubleshooting ..... | 1:49:33 |

|                                            |         |
|--------------------------------------------|---------|
| Magazine Catch – Comments.....             | 1:50:16 |
| Reassembly – Procedure .....               | 1:51:26 |
| Disconnecter Check – Function, Safety..... | 2:03:38 |
| Minor Differences – Keeper Springs.....    | 2:04:30 |

### ***“MK-760, S&W”***

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| Design, Function, Disassembly .....                                   | 2:07:09 |
| Bolt Assembly – Components, Design, Function, Repairs.....            | 2:09:24 |
| Barrel – Removal, Headspace .....                                     | 2:12:19 |
| Misfires – Causes, Corrections.....                                   | 2:14:24 |
| Feeding – Ramp Modifications.....                                     | 2:15:37 |
| Fire Control – Design, Components, Operation, Problems, Repairs ..... | 2:16:27 |
| Trigger Job – Method .....                                            | 2:17:11 |
| Sear System – Function, Repairs .....                                 | 2:19:43 |
| Reassembly .....                                                      | 2:21:48 |

### ***“AR-180”***

|                                                     |         |
|-----------------------------------------------------|---------|
| Design, Function, Disassembly .....                 | 2:24:46 |
| Bolt Assembly .....                                 | 2:28:22 |
| Barrel Extension .....                              | 2:28:38 |
| Pushrod System – Design, Operation, Components..... | 2:29:14 |
| Reassembly – Procedure, Comments.....               | 2:32:48 |
| Problems .....                                      | 2:35:22 |
| Feeding – Correcting Ramp, Headspace .....          | 2:35:32 |
| Bolt Catch – Design, Function.....                  | 2:37:30 |

### ***“Leader”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Design, Function, Disassembly .....                       | 2:38:57 |
| Bolt Assembly – Design, Components .....                  | 2:39:32 |
| Fire Control – Design, Components.....                    | 2:40:33 |
| Gas System (Pushrod Design) – Operation, Reassembly ..... | 2:40:57 |

### ***“Sig”***

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| Design, Function, Operation .....                                   | 2:45:26 |
| Disassembly .....                                                   | 2:53:17 |
| Bolt Head & Carrier – Design, Components, Function, Operation ..... | 2:53:44 |
| Extractors (2) .....                                                | 3:00:25 |
| Headspace – Bolt Repair & Corrections Options .....                 | 3:01:14 |
| Ejection – Design, Function, Operation.....                         | 3:08:18 |
| Trigger Group – Removal, Design, Operation, Disassembly .....       | 3:09:56 |
| Reassembly – Procedure .....                                        | 3:11:28 |

### ***“Heckler & Koch”***

|                                                      |         |
|------------------------------------------------------|---------|
| Design, Function, Disassembly .....                  | 3:15:33 |
| Bolt & Bolt Carrier – Design, Components .....       | 3:19:20 |
| Timing – Function, Operation, Problems, Causes ..... | 3:20:37 |
| Reloads – Problems, Causes .....                     | 3:21:43 |
| Roller Lock – Advantages, Ammo Variations .....      | 3:24:06 |
| Fluted Chamber .....                                 | 3:26:17 |
| Comments & Review – Headspace, Extractors .....      | 3:27:03 |

## **RIFLES - DISC 12**

### **SEMI-AUTOS**

#### ***“M-1 Garand”***

|                                                                |       |
|----------------------------------------------------------------|-------|
| Design, Function, Disassembly.....                             | 00:15 |
| Fire Control – Design, Function, Components, Sear System ..... | 08:32 |
| Trigger Job - Method .....                                     | 12:36 |

|                                                      |       |
|------------------------------------------------------|-------|
| Safety – Design, Function, Operation.....            | 16:59 |
| Reassembly – Procedure.....                          | 18:59 |
| Loading Mechanism – Design, Function, Operation..... | 19:46 |
| Feed Mechanism – Design, Function, Operation.....    | 23:25 |
| Disassembly – Procedure.....                         | 24:41 |
| Clip Release – Function.....                         | 25:30 |
| NEXT MENU                                            |       |

|                                                            |       |
|------------------------------------------------------------|-------|
| Disassembly – Procedure.....                               | 26:26 |
| Bolt Assembly – Components, Disassembly.....               | 27:55 |
| Safety – Design, Function, Operation.....                  | 29:38 |
| Headspace – Inspection, Barrel Setback, Modifications..... | 30:44 |
| Short Cycle – Causes, Correction.....                      | 37:24 |
| Sights – Types, Operation.....                             | 39:26 |
| Reassembly – Procedure, Inspection.....                    | 40:36 |

### ***“M-14”***

|                                                 |         |
|-------------------------------------------------|---------|
| Disassembly, Design, Function.....              | 53:25   |
| Gas System – Design, Function.....              | 54:46   |
| Bolt Assembly – M-1 Similarities.....           | 57:58   |
| Short Cycle – Problems, Causes, Correction..... | 59:38   |
| Comments.....                                   | 1:02:18 |
| Reassembly.....                                 | 1:04:25 |

### ***“Ruger Mini-14”***

|                                                     |         |
|-----------------------------------------------------|---------|
| Disassembly, Design Similarities, Function.....     | 1:05:09 |
| Fire Control – Design Similarities (See M-1).....   | 1:09:36 |
| Bolt Assembly – Components, Design.....             | 1:09:56 |
| Shortcomings – Short Cycling, Cause Correction..... | 1:11:28 |
| Extractor – Plunger Wear & Hook.....                | 1:13:08 |
| Comments.....                                       | 1:14:43 |

### ***“M-1 Carbine”***

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| Disassembly, Design, Function.....                                  | 1:17:54 |
| Tappet Gas System – Components, Design, Function, Operation.....    | 1:24:44 |
| Extractor – Design, Disassembly.....                                | 1:27:33 |
| Gas System – Tappet & Chamber, Design Types, Removal.....           | 1:30:55 |
| Misfires – Headspace, Barrel Setback.....                           | 1:33:57 |
| Reassembly.....                                                     | 1:37:00 |
| Fire Control – Disassembly.....                                     | 1:37:55 |
| Hammer & Sear – Function, Operation, Troubleshooting, Repair.....   | 1:40:34 |
| Bluing – Problems, Comments.....                                    | 1:48:25 |
| Reassembly – Procedure.....                                         | 1:49:35 |
| Comments – Magazine & Magazine. Catch Differences in M-1 & M-2..... | 1:53:39 |

### ***“Ruger .44 Carbine”***

|                                                       |         |
|-------------------------------------------------------|---------|
| Overview.....                                         | 2:00:19 |
| Stock Removal.....                                    | 2:02:18 |
| Gas Block – Operation.....                            | 2:04:57 |
| Disassembly.....                                      | 2:08:23 |
| Gas Piston – Operation, Problems.....                 | 2:10:37 |
| Bolt – Extractor, Headspace, Firing Pin.....          | 2:14:18 |
| Fire Control – Operation, Ammo Feed, Disassembly..... | 2:17:41 |
| Extractor – Operation, Repair.....                    | 2:36:05 |
| Reassembly.....                                       | 2:40:06 |

### ***“Winchester 100”***

|                                             |         |
|---------------------------------------------|---------|
| Overview .....                              | 2:48:11 |
| Disassembly.....                            | 2:50:30 |
| Gas Block – Problems, Repair .....          | 2:54:38 |
| Bolt – Operation, Extractor, Headspace..... | 2:56:15 |
| Fire Control – Operation, Problems .....    | 3:00:17 |
| Firing Pin Recall .....                     | 3:04:02 |
| Accuracy – Issues .....                     | 3:04:42 |
| Reassembly .....                            | 3:05:50 |

### ***“VZ-52”***

|                                                        |         |
|--------------------------------------------------------|---------|
| Overview, Disassembly.....                             | 3:12:03 |
| Bayonet Mount.....                                     | 3:17:49 |
| Upper Receiver – Disassembly, Gas System, Lockup ..... | 3:18:37 |
| Trigger Group – Operation, Safety.....                 | 3:23:13 |
| Bolt – Extractor, Gas Pressure .....                   | 3:28:59 |
| Barrel – Replacement.....                              | 3:34:49 |
| Ejector – Operation .....                              | 3:36:03 |
| Firing Pin – Removal, Design .....                     | 3:37:18 |
| Extractor – Removal, Operation .....                   | 3:39:27 |
| Reassembly .....                                       | 3:41:24 |

## **RIFLES - DISC 13**

### **SEMI-AUTOS**

#### ***“Hi-Point Carbine D&R”***

|                             |       |
|-----------------------------|-------|
| Disassembly/Reassembly..... | 00:16 |
|-----------------------------|-------|

### ***“SKS”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Overview .....                                            | 1:08:54 |
| Operation – Gas System .....                              | 1:12:41 |
| Disassembly.....                                          | 1:14:17 |
| Bolt – Operation, Headspace, Firing Pin, Extractor .....  | 1:18:54 |
| Ammo Feed – Magazine, Problems.....                       | 1:25:58 |
| Trigger Assembly – Operation, Problems, Trigger Job ..... | 1:32:59 |
| Barrel – Bore.....                                        | 1:45:20 |
| Safety .....                                              | 1:45:56 |
| Bolt Carrier .....                                        | 1:46:33 |
| Reassembly .....                                          | 1:47:36 |

### ***“Tavor”***

|                                                            |         |
|------------------------------------------------------------|---------|
| Overview – Operation .....                                 | 1:51:51 |
| Disassembly.....                                           | 2:04:34 |
| Fire Control – Operation, Bolt Stop, Trigger .....         | 2:14:49 |
| Cleaning 2:23:29                                           |         |
| Potential Problems.....                                    | 2:24:08 |
| Bolt – Disassembly .....                                   | 2:25:13 |
| Gas System – Operation .....                               | 2:26:43 |
| Left-Handed Operation – Bolt.....                          | 2:31:29 |
| Reassembly – Iron Sights .....                             | 2:34:40 |
| Bolt Carrier – Disassembly, Reassembly, Installation ..... | 2:46:49 |

### ***“FN FAL”***

|                                              |         |
|----------------------------------------------|---------|
| Overview .....                               | 2:58:37 |
| Magazine Catch .....                         | 3:01:37 |
| Gas System – Operation .....                 | 3:02:41 |
| Bolt – Operation, Problems, Firing Pin ..... | 3:07:04 |
| Extractor & Ejector – Design, Problems ..... | 3:15:16 |

|                                                      |         |
|------------------------------------------------------|---------|
| Barrel – Removal.....                                | 3:20:21 |
| Gas Rod & Gas Tube – Problems .....                  | 3:23:43 |
| Fire Control – Operation, Trigger Job, Problems..... | 3:26:49 |
| Take-Down Latch.....                                 | 3:38:15 |
| Stock.....                                           | 3:38:53 |

## RIFLES - DISC 14

### SEMI-AUTOS / ASSAULT

#### ***“Ruger SR 55 D&R”***

|                              |       |
|------------------------------|-------|
| Disassembly/Reassembly)..... | 00:14 |
|------------------------------|-------|

#### ***“UZI”***

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| Design, Function & Disassembly.....                                  | 18:35 |
| Bolt Assembly – Design, Components, Operation .....                  | 21:04 |
| Feed Problems – Causes, Correction, Ammo Types & Headspace.....      | 22:29 |
| Fire Control Assembly – Removal, Design, Operation, Components ..... | 28:06 |
| Grip Safety – Design & Purpose.....                                  | 30:36 |
| Reassembly.....                                                      | 33:24 |

|                                                     |       |
|-----------------------------------------------------|-------|
| <b><i>Introduction To Assault Pistols</i></b> ..... | 35:51 |
|-----------------------------------------------------|-------|

#### ***“MAC-10”***

|                                                            |       |
|------------------------------------------------------------|-------|
| Design, Function, Disassembly.....                         | 36:02 |
| Fire Control System – Design (Sealed Unit) & Function..... | 39:48 |
| Disconnect System – Problems & Repairs .....               | 40:38 |
| Over Travel Disconnect – Problems & Repairs .....          | 42:23 |
| Trigger Job – Bolt Removal Method.....                     | 44:05 |
| Bolt – System Design, Function & Operation.....            | 46:45 |
| Fire Pins – Problems & Repairs.....                        | 50:08 |
| Extractors – Problems & Repairs.....                       | 53:19 |
| Problems – Additional Comments .....                       | 54:19 |
| NEXT MENU                                                  |       |

|                                                |         |
|------------------------------------------------|---------|
| Magazine – Types, Fit, Problems & Repair ..... | 55:56   |
| Trigger – Removal.....                         | 1:00:37 |
| Bolt Assembly – Disassembly .....              | 1:01:01 |
| Reassembly.....                                | 1:01:23 |

#### ***“KG-9 (Tech 9)”***

|                                                           |         |
|-----------------------------------------------------------|---------|
| Design, Function & Disassembly.....                       | 1:02:46 |
| Bolt – Components, Design & Function .....                | 1:03:20 |
| Fire Control System – Components, Design & Function ..... | 1:05:10 |
| Feeding – Operation, Problems, Causes & Headspace .....   | 1:07:05 |
| Safety – Design & Operation .....                         | 1:09:54 |
| Reassembly .....                                          | 1:11:54 |

Epilogue: 1:12:37



# American Gunsmithing Institute

## OUR PHILOSOPHY

*AGI exists to provide firearm enthusiasts with the knowledge needed to keep their guns in safe and top-notch condition, maximizing their shooting experience and potential in a way that preserves the gunsmithing art and ensures "that the right of the people to keep and bear arms shall not be infringed."*

At AGI we are dedicated to preserving and distributing gunsmithing knowledge for current and future generations. If a picture is worth a thousand words, these courses are precious beyond words. You will possess the most authoritative information available on the design, function, maintenance, and repair of your or your customer's firearm, with the ease of understanding that can only come from watching live action video. Owning this course is like having the country's best gunsmithing instructors available whenever you need them.

Instructor Emeritus Bob Dunlap's unique "Design, Function, Repair" teaching system uses one section to build on the next. For example, in the Handguns Section, you are taught how all the various models and systems work. You begin by learning in comprehensive detail about locked breech single action automatic pistols that use a link system, like the 1911 .45 Auto. Once you fully understand how those types of mechanisms work, the focus turns to teaching the differences between that system and the cam lock system, used in the Browning Hi-Power, and so on.

By building on a foundation of previous instruction and providing only new information on each model or major variation of firearm, great amounts of time are saved by not endlessly repeating the same information. This same building block teaching method is continued throughout the Shotgun, .22 Rimfire and Rifles sections of the course. This teaching style greatly compresses the time it takes to become a Professional Gunsmith and covers many times the number of guns and systems than other gunsmithing courses.

It is our belief you can't fix a firearm properly unless you really understand how it is designed to work. Bob's teaching method makes complex concepts easy to understand through his Design, Function, Repair system. The way he shows and describes how the firearm's mechanisms work illuminates the subject, the fog and mystery is removed. You will possess the "How and Why" knowledge of firearm design and function and then be able to understand how to make the appropriate repair.

AGI designed cutaway firearms are used as teaching aids for many of the models covered. This provides you with a unexampled look inside the firearm, to clearly understand how everything works together. The American Gunsmithing Institute has helped thousands of aspiring gunsmiths achieve the skills, knowledge and expertise it takes to become competent and successful in this rewarding field.



# FACULTY

## Master Gunsmith Instructor - Robert "Bob" Dunlap

AGI Instructor Emeritus, Master Gunsmith Robert "Bob" Dunlap is recognized nationally as the top instructor in his field and is an expert witness in firearms court cases. His unique and personally developed "Design, Function, Repair system is at the core of AGI's Professional and Consumer courses.



Throughout his career as a state accredited college gunsmithing instructor Bob also ran a fully staffed gunsmithing shop which did warranty work for Colt, Smith & Wesson, Charter Arms, Hi-Standard, Remington, Browning, Winchester and numerous other well known manufacturers. Bob has been personally responsible for the repair of well over 250,000 guns.



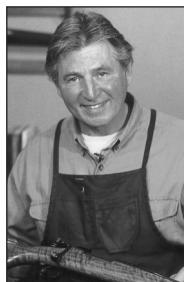
## Darrell Holland

Mr. Holland is well known as a custom rifle builder, writer and lecturer. He builds some of the tightest shooting custom rifles in existence. Darrell is always inventing new performance shooting products and is constantly pushing the envelope with regards to integrating the latest technology and ideas into his rifle designs to increase accuracy and improve reliability.

Darrell is a Master Machinist and instructs the AGI Machine Shop Course. He has also instructed many other courses for AGI which take advantage of his unsurpassed knowledge and expertise in optics, accurizing, hunting, and machining. His simple, direct instructional style makes learning any subject easy and his attention to detail is legendary. He enjoys teaching and has taught gunsmithing and marksmanship courses internationally. Even the most experienced shooters and gunsmiths learn from his courses.

## Gene Shuey

Gene Shuey is a former world class competitive shooter, custom pistolsmith, and trainer. A Master Gunsmith specializing in 1911 and Glock pistols, IPSC limited and open class guns, and high end classic custom rifles, Mr. Shuey has contributed extensively to AGI's instructional gunsmithing courses. Gene is featured throughout the Professional Course and has instructed numerous AGI courses on customizing and building firearms.

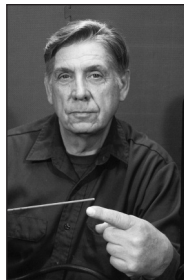


## Ken Brooks

A graduate of and former instructor at the gunsmithing program at Lassen College, Ken worked full time with Bob Dunlap at his shop as a professional gunsmith in Coquille, Oregon before taking over the reins when Bob retired. Ken is a Senior Instructor teaching the design, function and repair system AGI is renowned. He is a master at video Disassembly/Reassembly and has also done over 200 D/R and Armorer courses along with hosting on-going technical classes for AGI gunsmithing students.

## Robert Rizzetto

Robert Rizzetto has over 37 years of experience in the welding trade and is a Credentialed Welding Instructor. Because of his thorough training and experience he understands exactly what is happening when you are welding and how to explain it to the student in a detailed and easy to understand style. He enjoys teaching and introducing students to the amazing, demanding world of welding.

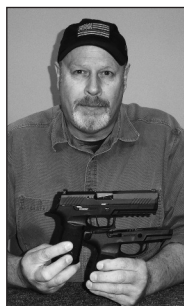


## John Bush

Mr. John Bush is a Master Armorer and has a long and colorful connection with firearms. He is constantly traveling as a consultant to manufacturers and importers of military firearms and is certified as an expert witness in firearm cases. John has instructed numerous AGI courses including building classic military style firearms from parts kits.

## Mark Foster

Mark also graduated from the Lassen College Gunsmithing program where he studied with Gene Kelly and Darrell Holland under Bob Dunlap. Mr. Foster has over 30 years of gunsmithing experience and is a 30 year veteran of the Sheriff's Department where he was the Chief Armorer and a Firearms Training Officer.



## Jack Landis

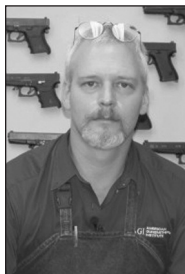
Jack is a graduate of gunsmithing programs at Lassen and Yavapai Colleges and he has been building, repairing, and modifying guns for over 50 years. After 30 years in the security industry, he went to work for the American Gunsmithing Institute in 2005 where his broad knowledge and logical problem solving abilities resulted in his becoming the Technical Services Manager, an instructor, and GunTech Video Magazine Editor. He is the "Go To" person for student and customer technical questions on the courses, content, and test questions. He does instructional videos, firearm and product evaluations in our

monthly GunTech video magazine, and answers gunsmithing questions from our AGI students and Gun Club of America members on our monthly webcasts.

## Fred Zeglin

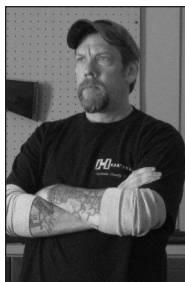
Fred has published numerous books which include, "Hawk Cartridges Manual," "PO Ackley, America's Gunsmith," and "Wildcat Cartridges, Reloaders Handbook of Wildcat Cartridge Design." Fred is an expert on wildcat cartridges and a well-known builder of high end custom hunting rifles. He currently

operates 4D Reamer Rentals LTD, specializing in rentals of gunsmithing tools to the trade and hobbyists.



## T.R. Graham

T.R. Graham is a known authority, author, and gunsmith specializing in Glocks and other handguns. An NRA Certified Pistol Instructor, T.R. has worked in all facets of the civilian firearms industry including research and development, public relations, manufacturing, instruction, and gunsmithing. His personal training includes instruction and certification from several manufacturers on their weapons.

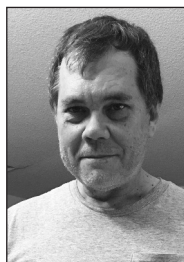


## Robert Dunn

Robert Dunn began his AGI experience as a student, first investing in Armorer's Courses and then the Master Gunsmithing Course. After spending 25 years in the music industry, Robert sent AGI a resume and was later asked to "try out" for a videographer position. Robert was hired as a Video Producer and went on to contribute dozens of articles for publication in Hot Brass and GunTech in his column, The Dunn Armory. Robert has built and restored countless firearms over the years and continues to be an avid shooter, hunter, and gunsmith. Robert is also a moderator on the GCA website.

## James Lummel

James Lummel is the owner of TrapCity Productions and provides video post-production and DVD/Blu-ray disc authoring services to AGI on all their courses including finalizing, remastering, and chaptering the course video to disc and/or online service for final delivery to AGI students. James first joined the team as a Pro Course student and has worked with AGI ever since to help make gunsmithing and the AGI material more accessible to aspiring gunsmiths. In addition to the work James does for AGI and as an AGI trained gunsmith, he is a co-founder of Mojave Drone Services LLC based out of Kingman, Arizona and as a certified UAS pilot flies drones for both fun and profit.



## Keith Hezmalhalch - Producer

Keith started down the path to becoming a producer when he shot and edited his first film in high school. He entered the Telecommunications Program at college and after graduating worked for several years as an engineer in broadcast television before returning to the same college to teach. He left teaching to start Kaleidoscope Productions in 1984 and in 1993 began a collaborative effort with Gene Kelly to produce low cost, high quality, instructional videos. Keith has been instrumental in the development and production of AGI gunsmithing courses, as well as being the producer of GCA's monthly video magazine GunTech.

## Gene Kelly - President, AGI

Gene graduated from the gunsmithing program at Lassen College, where Bob Dunlap was his instructor. Gene has worked as a professional gunsmith, is a licensed firearms manufacturer, and businessman. While working as a professional gunsmith Gene recognized the need for gunsmithing courses on video to preserve this vital information. He recruited Mr. Dunlap who was retiring from Lassen College and the American Gunsmithing Institute was born. Tens of thousands of gun owners and professional gunsmiths have already benefited from this effort. His vision is to train thousands more professional and hobby gunsmiths to protect our firearms freedom and ensure "that the right of the people to keep and bear arms shall not be infringed."



# What our students have to say:

*I wanted to take the opportunity to thank you for all of your hard work and support during my time with AGI. Your program changed my life for the better and now I started CJ's Custom Shop in Lemon Grove, CA with my business partner. I was a bit lost on what to do after I retired from the United States Navy and decided to give your program a whirl. Wow! It was challenging and fun. I never thought there was so much more to learn. I am now a certified Master Gunsmith. The sky is the limit.*

*This program really gives the individual a chance to shine or the opportunity to fail. Your choice. You get out what you put in. I put in the study time, worked an apprenticeship, and then struck out on my own so to speak. If you make the decision to succeed and raise yourself up to the next level, American Gunsmithing Institute is your type of people.*

*Hands down, best knowledge base I have seen yet. And they (the instructors) are from all over . . . successful business owners . . . true Masters of their trade. The AGI support staff works their tails off to give the best service for you. Feel free to lean on them for help too. Cheri, you are amazing. Thank you again for your dedication and perseverance. Our nations Veterans need more of you in the world! Bravo Zulu!!*

*Sincerely, James N. Woods, Master Gunsmith, CJ's Custom Shop*

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"I have always dreamed that one day I would open my own Gunsmithing business. I found AGI's Professional Gunsmithing Course to be just what I was looking for and more. This course of instruction has given me the knowledge and confidence to open my own business."
G.L. James, Elk Grove, CA

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*"The Lathe Course was superb and, since the Milling Course is even better, I am at a loss for a term of description higher than superb. I learned more tricks and insights from these courses than 35 years of hands-on taught me. Just his tips for tramming in the head quickly and easily were worth the cost of the course to me. Darrell is not only a master machinist and gunsmith, but a natural instructor as well. Thanks for another great course!"*

*Steve Bird Sr., Failure Analysis Engineer, San Jose, CA*

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"I am truly amazed at the level of detail and ease of understanding your course provides."
S.M. Willenbecher

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*"Gaining a working knowledge of positive and negative engagement for sears and triggers alone was worth the investment." Ed's Gun Repair, Rock Creek, OH*

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"I wanted to be a gunsmith from the time I was old enough to hold my first gun. After researching the many courses offered I decided on your Professional Gunsmithing Course. The course has given me an abundance of information. Your staff has been most helpful with my questions and have responded promptly." D. McKim, Highland, MI

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*"I completed a 'Gun Pros' course and felt it left out a lot of information. With your course, however, I was impressed with the detail right from the beginning and more so when I realized how many specific gun types were covered. I have not been disappointed!"*  
*K.W. Domenichelli, Felton, CA*

*First of all, I was thoroughly pleased with the quality of instruction I received as an "Enhanced Master Gunsmith" Program student including all the staff support. The information was easy to understand, the view of what the instructor was doing was incomparable - you just can't get that in a classroom setting. The ability to watch the classes over and over again is something you just can't get in any school.*

*As I was going through my training, I borrowed guns from friends and fellow church members to have in-hand as I did my training. As a thank you to them, I would do a complete detailed cleaning and inspection of the gun, replacing any broken parts and returning the gun "as good as new" which went a long way for word of mouth advertising.*

*My goal during the training was to open a home gunsmith shop as retirement income and be the local gunsmith as the next closest gunsmith is a 35 mile drive. I also was interested in learning to Cerakote and providing that service as well. As I was going through my business start-up phase, I would pass by a shop offering firearms coatings occasionally and stopped in to see what they do.*

*Introduced myself as a gunsmith and asked about their coatings and how they go about disassembling/reassembling their guns for painting. The man I talked to was extremely busy, so I left a card and went my way.*

*He called me about 10 minutes later, and another 10 minutes after that I was back in his shop looking at projects for the next day - I've been working with him ever since, not only sharpening my skills and gaining experience, but gaining gunsmithing customers as well.*

*Thank you AGI for the training - and the materials to continue learning, Tim Foster*

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I opened as a one man show in September 2015. I was backed up with 6 weeks of work in the first 4 weeks I'd been open and I hadn't even leveled the mill and lathe yet!

Not long after that a guy came to the door and asked if I needed help. He was an AGI student too. Mike Fulk came in, leveled the machines, set up the Cerakote room and did much, much more. He works here after a full day of doing body repair work AND completed the AGI Master Course as well.

Since then we've added another three part time guys. We are very close to having repaired, customized or restored 2000 firearms. We have over 300 repeat customers and have become the area's most recognized and recommended gunsmith. Do I sound proud? All my best.

*Jed Nadler, FIRST Gunsmithing, LLC
Firearm Improvement & Repair with Specialized Technologies*

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*"The information presented in the Professional Gunsmithing Course is clear, concise, and to the point. It is just the ticket for the busy professional."  
C.L. Gunsmithing, Boca Raton, FL*

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I received the welding course as part of the Master Gunsmithing Course. I decide to review this first because I have an extensive background in welding; I took classes starting in high school through college and have been doing welding off and on ever since. I own my own business and I have fabricated many items for my business instead of purchasing similar items from the factory, etc. I have used my skills to make necessary repairs on equipment, etc. throughout the last 25 years. I thought I knew a lot about welding but I quickly realized I didn't.

What an excellent course! I wish I'd had this years ago. Even though I have experience, your course taught me things that will help me tremendously in every facet of welding. I would highly recommend this course to all those who are serious about learning proper welding procedures. Keep up the good work. I am now looking forward to completing the rest of the gunsmithing, lathe and milling courses.

Ronald Stephenson, Phillipsburg, MT

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings on the page.

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This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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