Monterey County Sheriff's Office
Armorer – Patrol Rifles
Course Outline
24 Hours

Day One (1)

A. Introduction

1) Course Roster
2) Certificate Roster
3) Course Outline
    a) Terms/Terminology/Nomenclature
    b) Tools – Proper Usage & Common Mistakes
    c) Operation for Auto-Loading weapons
    d) Parts Identification
    e) Malfunctions

B. Weapons Safety

1) Fundamentals of Clearing
    a) Muzzle in Safe Direction
    b) Remove Magazine
    c) Retract Charging Handle, Bolt Group to Rear
    d) Visually & Physically Inspect Chamber
2) Philosophy
3) Procedures

C. Intro to Main M16 Components

1) Upper Receiver Group
    a) Barrel, Sights, etc.
2) Lower Receiver Group
    a) Trigger, Hammer, Pistol Grip, etc.
3) Bolt Group
    a) Bolt, Firing Pin, Bolt Carrier, etc.

D. Operator Field Strip

1) Procedures & Techniques
2) Carbines vs. Rifles
3) Parts Interchangeability
4) M1913 Rail System
5) Buffers and Action Springs
6) Bolt Group & Bolt Assy
    a) Check Key
    b) Check Ejector
    c) Check Gas Rings
    d) Types of Firing Pins
    e) "Cam-Snap" safety check
7) Extractor Spring Inserts

E. Operating Systems

1) Blowback
2) Recoils
3) Gas
    a) Standard
    b) Direct

F. Cycle of Operation

1) Eight Steps
    a) Feed
    b) Chamber
    c) Lock
    d) Fire
    e) Unlock
    f) Extract
    g) Eject
    h) Cock
2) Recoil & Counter-Recoil Phases
3) Framework of Understanding

G. The "Stoner" Direct Gas System (M16)

1) Ammunition Concepts and Terminology
2) System Benefits and Drawbacks
3) Basic Components

H. Basic Weapons Nomenclature

1) AR-15®
2) M16
3) M4 & M4A1
4) Commercial vs. Military Grade
5) Rifles & Carbines

I. Bolt Group – Armorer Disassembly

1) Field Strip
2) Remove Gas Rings
3) Remove Ejector – Special Tool Usage
4) Re-Assemble

J. Lower Receiver Group – Armorer Disassembly

1) Sliding Stock
2) Fire Control System
3) Bolt Catch Assy – Special Tool
4) Magazine Catch Assy
5) Pivot Pin
6) Winter Trigger Guard

K. Lower Receiver Group – Re-Assembly

1) Special Techniques
2) Roll Pin Holders
3) Pivot Pin Tool

L. Upper Receiver Group – Armorer Disassembly

1) Gas Tube
2) Ejection Port Cover Assy
3) Forward Assist Assy
4) Rear Sight Assy's
    b) 800 Meter
    c) 600 Meter
    d) Elevation Spring Tool

M. Upper Receiver Group – Re-Assembly

1) Special Techniques
2) Indexing – Tool
3) Ejection Port Cover, Rod and Spring
4) Forward Assist Orientation
5) Gas Tube Installation

N. Re-Assemble Complete Weapon/Wrap up Day 1

1) Clean-Up
2) Study Objectives
3) Brief Overview of Day Two

O. Discuss brief Homework Assignment and Study Objectives

Day Two (2)

A. Question & Answer

B. Review

1) Highlights of Day One
2) Discuss Ammunition and 5.56mm/.223

C. Fire Control System

1) Overview of Parts and Mechanical Operation
    a) Hammer Assy
    b) Automatic Sear Assy
    c) Selector
    d) Disconnector
    e) Trigger
2) Selector Positions
    a) Safe
    b) Semi/Fire
        "Thud" vs. "Snap"
        "Selector Test"
        Parts Replacement Order
    c) Automatic
3) Parts Interactions
    a) Internal Relationships
    b) Related Springs

c) Malfunctions
d) Real-World Incidents and Damage

4) Disassemble Fire Control System only
5) Individual Components and Retaining Functions
    a) Trigger Pin – Hammer Spring
    b) Hammer Pin – "J-Spring"
    c) Automatic Sear Pin – Sear Assy
6) Hammer/Trigger Pins
    a) 0.155 vs. 0.170
    b) SMG Pins
    c) Issues & Mistakes
7) Spring Placement & Orientation
    a) Trigger Spring – "The Huey"
    b) Hammer Spring – "Loops to Rear, On from the Rear"
    c) Sear Spring – Always in front of Selector ("Groove")
8) Re-Assemble the Fire Control System
9) Instructor Inspections

D. Armorer Disassembly I

1) All Three Groups – Entire Firearm
    a) Section by Section
    b) Manual as Reference
2) Lay Out All Parts
    a) Assemblies
    b) Related Parts

E. Correctly Re-Assemble Firearm

1) Proper Tool Use
2) Instructor oversight & advice

F. Student Checks and Inspections

G. Armorer Disassembly II

1) Rifle Lower Receiver Group
    a) Fixed Stock
    b) Semi-Auto
    c) Reversible Selector
2) Complete Disassembly
3) Lay Out All Parts
    a) Assemblies
    b) Related Parts
4) Magazines
    a) Disassembly
    b) Cleaning
    c) Re-assembly

H. Correctly Re-Assemble Firearm

1) Place Related Parts Together
2) Work Carefully

I. Armorer Disassembly III

1) Carbine Lower Receiver Group
    a) Select-Fire
    b) Ensure students work on 800M & 600M sights
2) Complete Disassembly
3) Pass Out Parts Cups
    a) Mix All Small parts within the Cup
    b) Pour Parts onto Armorer Towel

J. Correctly Re-Assemble Firearm

1) Basic Parts ID Techniques
    a) Manuals
    b) Parts ID charts/diagrams
2) Common Mistakes
    a) Hammer Spring
    b) Detent Spring (under pistol grip)

K. Instructor Inspections

1) Clean-Up
2) Discuss Certification Exams
    a) Written
    b) Practical ("Hands-On")
3) Study Objective
4) Brief Overview of Day Three

Day Three (3)

A. Question & Answer

B. Review –

1) Highlights of Day Two

C. Pre-Test

1) Disassemble Firearm Completely
2) Mix Parts in Armorer Cup
3) Correctly Re-Assemble Firearm
4) Student Inspections
5) Instructor Inspections – Optional
6) Break as Needed

D. Written Examination

1) Question Types: True-False, Multiple-Choice, Fill-In
2) A Score of 70% is Required
3) No Books, Manuals or Notes Allowed
4) Firearms, Cutaways, Tools, and Other Training Aids May Be Used for Reference

E. Corrections, Review & Final Score

F. Practical Examination (1.5 hrs)

1) Disassemble Firearm Completely
2) Mix Parts in Armorer Cup
3) Notify Instructor
4) Upon Clearance, Correctly Re-Assemble Firearm
5) Pass Instructor Inspections
6) Errors Are Correctable within Time Limit
7) Any Lost Parts Must Be Found—During Testing Time Limit
8) Any Parts or Tools Damaged beyond Use during Testing Will Result in Non-Certification.
9) Break as Needed