COMPANION GUIDE TO ONLINE TRAINING

Accompanies the online training at fortunefavorstheprepared.com

COM-09

Cryptographic Security (CRYPTOSEC)

STUDENT COMPANION GUIDE

Discipline, Not a Cipher.

A field-usable companion to COM-09: quick-reference lesson summaries, blank worksheets for key custody, cipher selection, and CRYPTOSEC SOP drafting, plus a glossary and doctrinal cross-reference table.

5 Lesson Summaries · 3 Worksheets · 1 Glossary
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COM-09: Cryptographic Security (CRYPTOSEC)

Student Companion Guide

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About This Guide

This guide accompanies the COM-09 online lessons, including their knowledge checks and certificate of completion. Support the development and availability of these courses by subscribing to my Patreon. This guide is a companion to that training, not a substitute for it.

Online Training Access

The COM-09 lessons live at fortunefavorstheprepared.com/com-09-landing/ and are unlocked in sequence as each lesson's knowledge check is passed. Progress is tracked in the browser you use to take the course; the Certificate of Completion becomes available once all four graded lessons are done.

Instructor-Led Group Training

This guide's worksheets and quick-reference material are also built to support a group or team walking through COM-09 together with an instructor — for example, as part of a net's own onboarding or a station's annual refresher — using the Part II worksheets as the shared working documents for that session.

How to Use This Companion Guide

Reminder: the lessons themselves — including every knowledge check and the certificate — are only available through the gated online training at fortunefavorstheprepared.com. This guide does not contain them.

What This Guide Contains

• Part I — Quick Reference: a one-page summary of each of COM-09's five lessons (Orientation through the Capstone).

• Part II — Worksheets: blank, fillable versions of the Key Custody Log, the Cipher-Selection Decision Worksheet, and the CRYPTOSEC SOP Worksheet.

• Part III — Appendix: a glossary, a quick-reference card, the doctrinal/cross-reference table, and any open items.

Required Workflow

1. Complete each online lesson and its knowledge check before using that lesson's worksheet.
2. Fill out worksheets during or immediately after the matching lesson, while the reasoning is fresh.
3. Keep completed worksheets with your net's own records — the Key Custody Log especially is meant to become a living document, not a one-time exercise.
4. Return to Part III's Quick Reference Card during real net operations; it is built for that, not just for study.

Not a Standalone Course

This guide cannot replace the online lessons. It has no knowledge checks, no gating logic, and no certificate. It is reference and practice material for someone who has taken — or is actively taking — COM-09 online.

Guide Map — What to Reference When

Situation	Go To
Reviewing a lesson before the knowledge check	Part I — that lesson's Quick Reference
Setting up custody for the first time	Part II — Key Custody Log
Deciding which cipher category fits a net	Part II — Cipher-Selection Decision Worksheet
Writing a net's CRYPTOSEC SOP	Part II — CRYPTOSEC SOP Worksheet
Mid-net, need a term or step fast	Part III — Quick Reference Card
Unsure what a term means	Part III — Glossary

PART I — QUICK REFERENCE

Orientation — Why CRYPTOSEC Is Its Own Course

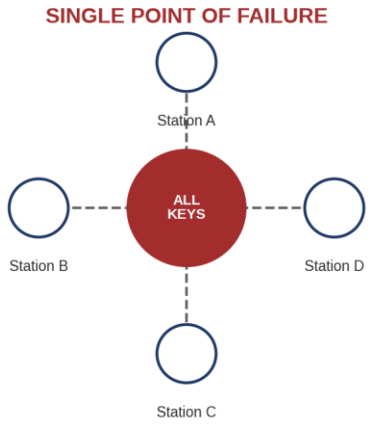
COMSEC, authentication, and EMCON are three separate protections — this course covers only COMSEC's discipline side.

- COMSEC protects content, authentication protects identity, EMCON protects existence.
- Crypto discipline fails silently — a compromised key doesn't announce itself.
- This course frames COM-07 (OTP) and COM-12 (DRYAD) rather than teaching either end to end.

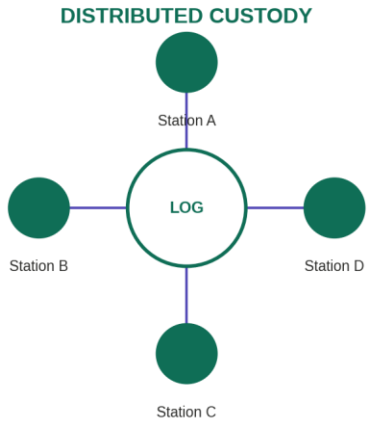
Lesson 01 — Key Generation, Distribution, and Custody

A cipher is only as strong as the discipline around the key.

- Key material must come from a genuinely random source — human-generated sequences carry unconscious patterns.
- Every distribution method trades convenience against an exposure window (in-person, courier, pre-positioned).
- Custody logging records who holds what, since when — without it, a compromise can't be scoped.
- Avoid both single-point-of-failure custody (one person, all copies) and scattered custody (no one can say who holds what).
- Never distribute keys, ciphers, or code words electronically — and rotate keys on a schedule (a 30-day government baseline is common) even without a known compromise.



One custodian holds every copy.
If they're lost, so is the net's key access.



Each station holds only what it needs.
A shared log tracks every copy's location.

Lesson 02 — Cipher System Fundamentals: A Comparative Survey

Different cipher types trade strength for speed and complexity.

- Table/substitution ciphers (COM-12) and one-time pads (COM-07) sit at opposite ends of the security-vs-overhead trade-off.
- “Unbreakable in theory” (OTP) is a different question from “right tool for this net.”
- Match cipher choice to three dials: traffic volume, time pressure, and operator skill/training depth.
- This lesson does not teach either system's execution — that's COM-07 and COM-12.



Match the choice to traffic volume, urgency, and operator training — not just to which end has the higher ceiling.

Lesson 03 — Destruction Discipline and Compromise Response

Used key material is a liability the moment it's used.

- “Put away” is not “destroyed” — destruction must be immediate and irrecoverable.
- Watch for four signs of compromise: traffic anomalies, lost or stolen material, unaccounted-for material, and personnel change (a member with custody or convention knowledge leaving the group).
- Compromise-response order: (1) immediate changeover, (2) net-wide notification, (3) resume only on new key material, (4) document for after-action review.
- The order matters more than any single step — resuming early reopens the exposure.

Lesson 04 — Capstone — Does This Message Need Crypto?

Not every message needs encryption — knowing when the overhead is worth it, message by message, is the actual skill.

- Sensitivity is judged message by message — not once for an entire net.
- Keys and code words must never be sent electronically; a smartphone app's encryption may not extend past the hop it was built for.
- A pre-agreed code word or convention can protect a location or meeting time without formal cipher overhead — but not a casualty name.
- A CRYPTOSEC SOP fragment fixes the protection, custody owner, and changeover trigger in advance, and plans COMSEC, authentication (COM-06), and EMCON (COM-04) together.

PART II — WORKSHEETS

Key Custody Log

Matches Lesson 01. Log every copy of every key: who holds it, since when, and who authorized the handoff. Distribute this log only in person — never electronically.

Key ID / Date	Holding Station	Received (date)	Authorized By

Cipher-Selection Decision Worksheet

Matches Lesson 02. Rate this net on the three dials, then note which cipher category fits.

Dial	This Net's Situation
Traffic Volume	
Time Pressure / Urgency	
Operator Skill & Training Depth	

Recommended cipher category and why:

Notes

CRYPTOSEC SOP Worksheet

Matches Lesson 04's capstone. Fix these three answers in advance, before traffic starts.

SOP Element	This Net's Answer
Which System	
Custody Owner (+ backup)	
Changeover Trigger	

Integration check — confirm before traffic starts:

- Authentication procedure (COM-06) is settled.
- EMCON posture (COM-04) is settled.
- Custody owner and backup are both named and know their role.

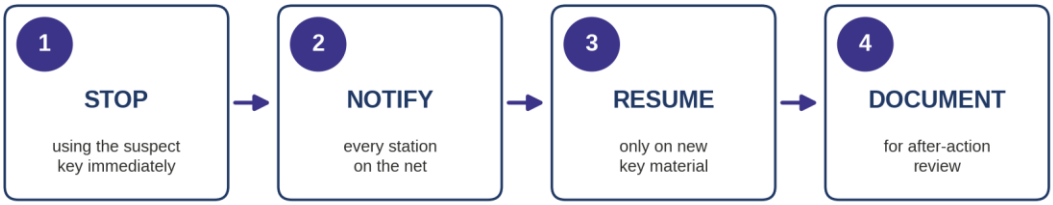
PART III — APPENDIX

Glossary

COMSEC	Communications security — protecting the content of a transmission from being read by someone outside the net.
Custody	The record of who currently holds a copy of a given key, and since when.
Changeover	Switching a net from suspect or exhausted key material to fresh, never-used material.
EMCON	Emissions control — protecting the existence of a transmission (that it happened at all), distinct from COMSEC.
Key material	The physical or recorded content — a pad, sheet, or table — used to encipher and decipher traffic.
OTP (One-Time Pad)	A cipher system using truly random key material, used exactly once per message and then destroyed.
Single point of failure	A custody arrangement where one person's loss or unavailability takes down the whole net's key access.
Table cipher	A reusable table or sheet (e.g., DRYAD-style) mapping plain characters to cipher characters, changed on a schedule.

Quick Reference Card

Compromise-Response Sequence



Does This Message Need Crypto? — The Three Factors

Message Sensitivity	How much harm results if this specific message is read outside the net.
Net Duration	Short-lived nets absorb overhead very differently than long-running ones.
Operator Capacity	Whether operators can sustain formal-cipher discipline, or a convention fits better.

Doctrinal Sources / Related Courses

COM-09 is a principles course; it draws on the following courses in the FFTP Communications track rather than external doctrine.

Code	Relationship to COM-09
COM-03	COMSEC — prerequisite; introduces the concept this course builds custody discipline around.
COM-04	EMCON — parallel protection (existence), integrated in the Lesson 04 capstone.
COM-06	Authentication — parallel protection (identity), integrated in the Lesson 04 capstone.
COM-07	One-Time Pads — tool-level execution this course's framework governs.
COM-12	DRYAD Sheet Encryption — tool-level execution this course's framework governs.