

THE GIZMATRIX™ USER & SKILL-TRAINING GUIDE

OPERATOR CANDIDATE HANDOUT

Portal: <https://gizmatrix.com> | <https://uas.city>

WHY GIZMATRIX™? YOUR ROLE IN THE 2-PERSON CREW

Flying BVLOS from surface to 400' AGL is too complex for one pilot alone. A Field Pilot steering a camera at an indoor desk cannot simultaneously read 3D radar maps or '2 o'clock' calls without disorientation.

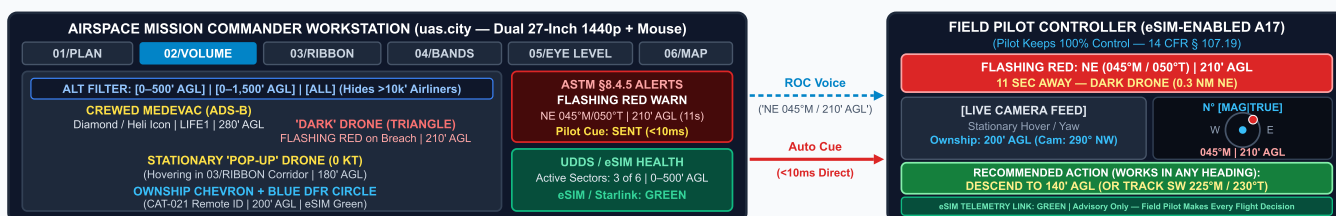
- **In Live Operations:** The Field Pilot flies the drone on an eSIM A17 controller (**14 CFR § 107.19**), while you—the **Airspace Mission Commander** (proposed **14 CFR Part 108 Flight Coordinator**)—monitor the console, filter false alarms, and issue Mag/True-North traffic advisories.
- **In Phase 0 Training (Gaming With a Purpose™):** Before reporting to our 640-acre **Camp Tahuaya** range in Belton, TX, log into **uas.city** from home to build 3D muscle memory.

MANDATORY HOME SETUP CHECKLIST

- **Portal Login & eSIM Profile:** Open **uas.city** on a desktop browser and sign in with your credentials and assigned **eSIM telemetry profile** (routes to Training Sandbox).
- **Desktop Monitor (1440p QHD Min.):** Required so all 6 views, FAA UDDS symbols, AGL altitude tags, and Mag/True bearings are crisp and readable.
- **Physical Mouse / Trackball:** Required for fast, accurate 3D camera rotation and target clicking.
- **No Touchscreens or Tablets:** Small screens and touch controls create reaction delays that our console eliminates.

YOUR GIZMATRIX™ 6-VIEW COMMANDER WORKSTATION (LEFT) vs. THE FIELD PILOT CONTROLLER (RIGHT)

FAA UDDS / ASTM F3442-25 §8.4.5 Symbology, AGL Altitude Filter (<500'<1,500'), & North-Up Scope (14 CFR § 107.19)



SKILL 1: BUILD THE 3D MENTAL PICTURE (6 VIEWS, AGL TAGS & ALTITUDE FILTER)

01/PLAN — North-Up & Filter

Outer geofence in Mag (°M) or True (°T) with **0-500' / 0-1,500' AGL Filter** hiding >10k' airliners.

02/VOLUME — 3D Obstacles

Displays hills, towers, and buildings in 3D so aircraft stay safely clear of ground obstacles.

03/RIBBON — Sky Highways

Shows 3D transit corridors (where 'pop-up' drones hover) and live **eSIM signal maps**.

04/BANDS — Altitude Layers

Slices the sky into vertical height bands (**100', 200', 300' AGL**) for instant separation.

05/EYE LEVEL — Horizon View

Simulates the visual horizon from the drone's camera or ground perspective.

06/MAP — 2D Chart + AGL Tags

North-Up street chart with automatic **AGL altitude tags** on every track—zero MSL math.

SKILL 2: READ THE SYMBOLOGY LEGEND (FAA UDDS & ASTM F3442-25 §8.4.5)

TARGET IDENTITY (COLORBLIND-SAFE SHAPES & COLORS)

- **Ownship Chevron & Cooperative Circles (CAT-021):** Ownship is a **Cyan Filled Chevron**. Friendly Remote ID drones are **Open Circles**—**Blue** for Public Safety (DFR) and **Green** for commercial traffic, each with AGL tags.
- **Crewed Aircraft (ADS-B Diamond / Heli vs. Fixed-Wing Icons):** Low-flying helicopters share 0-400' AGL and maneuver unpredictably. Tracks show a dashed Amber Well-Clear Ring and **Callsign | AGL | Heading** tag, with a toggle between FAA UDDS Diamond and Helicopter / Fixed-Wing silhouettes.
- **Non-Coop 'Dark' Triangles & Simulated Brackets:** Unannounced radar/acoustic targets (**CAT-048/062**) are **Slate/Grey Filled Triangles**; simulated LVC targets are **Cyan Corner Brackets** [].

COLLISION THREAT STATE (FLASHING RED = HAZARD ONLY)

- **Why 'Dark' Drones Aren't Red All the Time:** Coloring every distant non-cooperative drone Red would dilute Red's urgency as a collision alert and hinder colorblind operators.
- **Amber Caution to Flashing Red Warning (ASTM F3442-25 §8.4.5):** Any target (friendly circle, dark triangle, or Medevac) turns **Amber (Caution)** when closing and **Flashing Red (Warning)** only upon breaching the Well-Clear or UA-UA safety buffer.
- **Always Call Compass + Mag/True Bearing + AGL:** On Flashing Red, call Compass Direction, Mag/True Bearing, AGL Altitude, and Action ("Traffic from NE 045° Mag / 050° True, 210 ft AGL — recommend descend 140 ft").

SKILL 3: KNOW WHO DOES WHAT WHEN SECONDS COUNT (PROGRESSIVE SCENARIO DRILLS)

Locate the **'Scenarios / Simulated Data'** toggle in the upper right-hand corner of **uas.city** to practice the division of teamwork across Levels 1 to 4:

Training Level	What Happens in the Sky	What the Computer & Field Pilot Do	Your Job as Airspace Commander
Level 1: Routine Traffic (Scenario 01)	A friendly commercial delivery drone approaches an active police drone sector.	On-site computer continuously checks 5-second safety buffers (ASTM F3442-25) and converts MSL to AGL; Field Pilot flies ground mission.	Set Altitude Filter (0–500' AGL) to hide >10,000' airliners; watch closure paths and AGL tags across 01/PLAN , 04/BANDS , and 06/MAP .
Level 2: Mixed & 'Pop-Up' Traffic (Scenario 03)	Friendly circles and 'dark' triangles enter the sector, while a stationary 'pop-up' drone (0 kt hover) blocks a planned 03/RIBBON route.	On-site computer tracks both fast-closing targets and zero-speed corridor obstructions, flashing a <10ms warning if safety buffers are breached.	Beat tunnel vision: Don't just scan for fast movers—spot the stationary pop-up drone hovering in the planned corridor early and reroute or step-down the friendly drone.
Level 3: Multi-City Surge & Medevac (Scenario 05)	Workload scales from 1 to 6 sectors while a low-flying Medevac helicopter enters an active emergency.	Under 5 Seconds: Target turns Flashing Red (ASTM §8.4.5); on-site computer flashes <10ms North-Up cue ('FROM NE 045°M 210' AGL') and vertical action ('DESCEND TO 140 FT') on Pilot's A17 screen (14 CFR § 107.19).	At 15–60 Seconds: Read the Helicopter ADS-B tag (Callsign/AGL/Heading), switch to Magnetic North (°M), give calm radio backup, draw an Advisory Keep-Out Zone , and ask Watch Supervisor to shed load if busy.
Level 4: Equipment / Link Failure (Scenario 06)	Surprise equipment fault: primary eSIM cellular link drops or a corner radar is blinded.	System switches from eSIM cellular to Starlink satellite backup in <1s ; Field Pilot switches to conservative flight or Return-to-Home (RTH).	Spot the degraded sensor/eSIM signal alert on 03/RIBBON right away, widen safety buffers manually using last-known tracks, and warn the Field Pilot.

YOUR PATH TO CERTIFICATION: THE GIZMATRIX™ 4-STAGE TRAINING & QUALIFICATION PIPELINE**MANDATORY 180-DAY RECURRENT SIMULATOR & EQUIPMENT-FAILURE CURRENCY CHECK-RIDES ACROSS CERTIFIED CREWS****STAGE 1: PREREQUISITES**

Vetted Veteran Intake (RLF Core Cadre & Onward Ops). Military service is entry only—candidates must pass the updated **FAA Part 107 Exam** first.

STAGE 2: HOME SIMULATOR

Train on **uas.city** + eSIM profile. Master 6 views, FAA UDDS / ASTM §8.4.5 symbology, SAFER SKIES Tier 1 deconfliction & pop-up drills.

STAGE 3: CAMP TAHUAYA

Report to our 640-acre Belton, TX proving ground. Operate the multi-screen console under live + simulated traffic in a graded failure & brevity check-ride.

STAGE 4: CERTIFIED CREW

Hired via **RecruitMilitary (EOR)** aligned with Part 108 Flight Coordinator & Ops Supervisor (max 8-hr shift, 30-min breaks every 2 hrs, 180-day currency).

OBJECTIVE EARLY WASHOUT FILTER (AT NEAR-ZERO COST): Candidates showing tunnel vision, slow failure recognition, or task overload in Stage 2 home drills (Scenarios 01–06) are screened out automatically before reaching the live flight range.

3 OBJECTIVE SCORES LOGGED IN PHASE 0 (uas.city)

- Metric 1 — Threat & Pop-Up Spotting Speed:** Milliseconds from when a 'dark' triangle (CAT-048/062) or stationary 0 kt corridor pop-up appears to when you click and call its Magnetic/True bearing and AGL altitude.
- Metric 2 — Multi-Sector Awareness & Crash Prevention:** Keeping clean safety buffers and drawing immediate Advisory Keep-Out Zones across **1 to 6 sectors** without cognitive tunneling or back-to-back 1:N crashes.
- Metric 3 — Equipment-Failure Recovery:** How fast you spot surprise eSIM cellular link or corner radar dropouts in **Scenario 06** and establish manual safety buffers.

TEAMWORK, BLUE-FORCE STERILIZATION & INTERCOM

- The Field Pilot Commands the Aircraft (14 CFR § 107.19):** You are an advisory Airspace Mission Commander (Part 108 Flight Coordinator)—not Air Traffic Control (ATC). You never seize controls; during security incursions, your rapid advisories execute **Blue-Force Sterilization** so friendly DFR aircraft clear the corridor safely.
- Never Use '2 O'Clock' Calls (Use Mag/True Bearings + AGL):** Multi-rotor drones hover while rotating and pilots sit at fixed indoor desks—making clock codes disorienting. Always call **Compass Direction + Mag/True bearing, AGL altitude, and vertical action** ("Traffic from NE 045° Mag / 050° True, 210 ft AGL — recommend descend 140 ft").
- Watch Supervisor Load-Shedding (Part 108 Ops Supervisor):** During multi-threat surges, request immediate sector handoff so you maintain 100% focus on the active emergency.