

## 2.2.7 Doubles Primer

### 2.2.7.1 Course Outcomes

GUE's Doubles Primer is a non-certification course designed to teach divers how to safely and comfortably dive a double tank configuration using proper equipment and techniques. Course outcomes include, but are not limited to: buoyancy and trim practice and refinement, familiarity with the theory and use of double tank configuration, GUE equipment configuration, and valve management.

### 2.2.7.2 Prerequisites

Applicants for a Doubles Primer must:

- a. Submit a completed Course Registration Form, Medical History Form, and Liability Release Form to GUE HQ.
- b. Hold insurance that will cover diving emergencies such as hyperbaric treatment, e.g., DAN Master-level insurance or equivalent.
- c. Be physically and mentally fit.
- d. Be a nonsmoker.
- e. Obtain a physician's prior written authorization for the use of prescription drugs, except for birth control, or for any medical condition that may pose a risk while diving.
- f. Be a minimum of 16 years of age. Documented parental or legal guardian consent must be submitted to GUE HQ when the participant is a minor.
- g. Be a certified autonomous scuba diver from a recognized training agency.

### 2.2.7.3 Course Content

The Doubles Primer is normally conducted over one day. It requires a minimum of two dives and at least eight hours of instruction, encompassing classroom lectures, land drills, and in-water work.

### 2.2.7.4 Doubles Primer Specific Training Standards

- a. Student-to-instructor ratio is not to exceed 6:1 during land drill or surface exercises; it cannot exceed 3:1 during any in-water training.
- b. Can be run with one trainee
- c. Maximum depth of 60 ft/18 m
- d. No overhead diving
- e. All dives must be within minimum decompression limits (MDLs), i.e., no required stops.

### 2.2.7.5 Training Materials

GUE training materials and recommended reading as determined by the course study packet received via online download after GUE course registration.

### 2.2.7.6 Academic Topics

- a. Introduction: GUE organization and course overview (objectives, limits, expectations)
- b. Double tank introduction, tanks/cylinders and bands, manifolds
- c. Regulators, depth gauges, pressure gauges, and hose routing
- d. Buoyancy and trim
- e. Pre-dive sequence and GUE EDGE

- f. Situational awareness

#### **2.2.7.7 Land Drills and Topics**

- a. Equipment fit and function, assembly and disassembly
- b. Gas analysis and labeling
- c. GUE EDGE and pre-dive sequence
- d. Basic 5 scuba skills
- e. Valve drill
- f. Dive team protocols

#### **2.2.7.8 Required Dive Skills and Drills**

- a. Demonstrate proficiency in safe diving techniques, including pre-dive preparation, in-water activity, and post-dive assessment.
- b. Demonstrate proficiency with required course equipment and an understanding of the GUE equipment configuration.
- c. Demonstrate good buoyancy and trim, i.e., approximate reference is a maximum of 30 degrees off horizontal while remaining within 5 ft/1.5 m of the target depth.
- d. Demonstrate an efficient valve drill with double tanks.
- e. Demonstrate aptitude in the following open water skills: mask clearing, mask removal and replacement, regulator removal and exchange, long hose deployment.
- f. Demonstrate safe ascent and descent procedures.
- g. Comfortably demonstrate at least one propulsion technique that would be appropriate in delicate and/or silty environments.
- h. Demonstrate a safe and responsible demeanor throughout all training.

#### **2.2.7.9 Equipment Requirements**

GUE base equipment configuration as outlined in Appendix A, plus:

- a. GUE double tank configuration

Excluding:

- a. Backup mask

Prior to the commencement of the class, students should consult with a GUE representative to verify equipment requirements and appropriateness of any selected equipment.

## **Appendix A - GUE Base Equipment Configuration**

The GUE base equipment configuration is comprised of:

- a. Tanks/cylinders: Students may use a single tank/cylinder with a single- or dual-outlet valve. Students may also use dual tanks/cylinders connected with a dual-outlet isolator manifold, which allows for the use of two first stages. Dual tanks/cylinders connected with a dual-outlet, non-isolator manifold can be used, but only in recreational (no decompression) diving, and are considered an alternative for a single tank/cylinder. Consult course-specific standards and your instructor to verify size requirements.

- b. Regulators:
  - i. Single tank: The first stage must supply a primary second stage via a 5 to 7 ft/1.5 to 2 m hose. A backup second stage must be necklaced and supplied via a short hose. The first stage must also supply an analog pressure gauge, inflation for the buoyancy compensator (BC), and (when applicable) inflation for a drysuit.
  - ii. Double tank: One first stage must supply a primary second stage via a 5 to 7 ft/1.5 to 2 m hose (7 ft/2 m hose is required for all cave classes), and inflation for the buoyancy compensator (BC). The other first stage must supply a necklaced backup second stage via a short hose, an analog pressure gauge, and (when applicable) inflation for a drysuit.
- c. Backplate system:
  - i. Is held to the diver by one continuous piece of webbing. This webbing is adjustable and uses a buckle to secure the system at the waist.
  - ii. A crotch strap is attached and looped through the waistband to prevent the system from riding up a diver's back.
  - iii. The continuous webbing must support five D-rings;
    - 1. The first placed at the left hip
    - 2. The second placed in line with a diver's right collarbone
    - 3. The third placed in line with the diver's left collarbone
    - 4. The fourth and fifth are placed on the front and back of the crotch strap when divers plan to use advanced equipment such as DPVs.
  - iv. The harness below the diver's arms has small restrictive bands to allow for the placement of backup lights. The webbing and system retains a minimalist approach.
- d. Buoyancy compensation device (BC):
  - i. A diver's BC is back-mounted and minimalist in nature.
  - ii. It is free of extraneous strings, tabs, or other material.
  - iii. There are no restrictive bands or restrictive elastic affixed to the buoyancy cell.
  - iv. Wing size and shape is appropriate to the cylinder size(s) employed for training.
- e. At least one time/depth measuring device
- f. Wrist-mounted compass
- g. Mask and fins: Mask is low-volume; fins are rigid, non-split.
- h. Backup mask
- i. At least one cutting device
- j. Wetnotes with pencils
- k. Surface marker buoy (SMB) with spool: when required, the SMB should be appropriate for environmental conditions and deployed using a spool with at least 100 ft/30 m of line.
- l. Exposure suit appropriate for the duration of exposure

### Additional Course-Specific Equipment

- a. Where required, back gas and stage cylinders are marked in accordance with the GUE General Training Standards, Policies, and Procedures document and configured in line with GUE protocols.

- b. When drysuit inflation systems are applicable, they should be sized appropriately for the environment; small tanks are placed on the left side of the backplate with larger supplies affixed to the diver's left back gas tank.
- c. Underwater lights:
  - i. When required, backup lights should be powered by alkaline batteries (not rechargeable) and stowed on the D-rings at a diver's chest.
  - ii. Backup lights should have a minimal amount of protrusions and a single attachment at the rear.
  - iii. The primary light should consist of a rechargeable battery pack and be fitted with a Goodman-style light handle.
  - iv. When burn time requirements create the need for an external battery pack, it should reside in a canister mounted on the diver's right hip.
- d. Guideline devices, as required during cave diving activities:
  - i. A primary reel is required for all cave diving and provides a minimalist form factor with a handle designed to support a Goodman or "hands free" handle operation. The primary reel must contain at least 150 ft/45 m of line.
  - ii. A safety spool is required for each diver while cave diving and must contain at least 150 ft/45 m of line.
  - iii. A jump or gap spool is required during Cave 2 diving and must contain at least 75 ft/23 m of line.