

IDREO Training Outline

V 3.0

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IDREO Training Program

Detailed Training Outline

The IDREO training program is designed to train divers seeking to be involved in cave like exploration with rebreathers at extreme depths in IDREO projects worldwide.

IDREO Cave Rebreather Explorer Seminar may be at a very high level for most divers.

So IDREO team design in 3 steps from Open Water Diving, a sequence to assist them reach this objective through :

- Deep Explorer
- Cave Explorer
- Rebreather Explorer

We acknowledge that the modern entry level diver and equipment is way more capable than 15-20 yrs ago and therefore quite effortless going further than the limits of traditional “technical” diving courses.

CAVE EXPLORER

1. Course Description

This course is aim to experience technical deep divers searching to explore cave diving like environment. Proper information with most current procedures and techniques applied to safely explore caves and/or cave like overhead environment, such as wreck/mine penetration.

Intense skill mastering and actual experience build up are the basis in this program.

2. Course Parameters

2.1 Class limitations

- a) Student to instructor ratio is 1 : 3
- b) Only 1 Instructor "staffing" is allowed

2.2 Class Duration

- a) 7 Days*

(*For divers with limited Deep Diving experience, Cave Explorer training can be divided in two sessions of 5 & 4 day each. C1 to start and C2 to complete)

2.3 Course approved locations and limits

- a) Australia, Brazil, France, Finland, Italy, Mexico, Philippines, Spain, South Africa, Slovenia, Thailand, USA.
- b) 4 different cave entrances per class
- c) Depth min 50 mt. (Max to diver Tech. cert level)
- d) Minimum penetration 500 MT/ 1500 FT
- e) Continuous guidelines
- f) Minimum in water time is 20 hrs

2.4 Experience and Certification requirements

- a) 150+ dives
- b) 30+ Trimix / Deco dives -Trimix certification

*C1 requirements:

- a) Deep Explorer 1 and 50 dives

*CE2 requirements:

- a) C1 certification or eq (i.e. Full Cave + Stage)
- b) 25 Cave Dives
- c) D1 certification or eq. (i.e. Nitrox + Hiperoxic Trimix)

For Cave Scooter use:

- a) 50 scooter dives in ocean
- b) DPV certification
- c) Cave Instructor must be also DPV Instructor

For Cave Rebreather use:

- a) 50hrs RB Time in Open Water
- b) RB Certification
- c) Cave Instructor must be also RB Instructor

3. Course Content

- a) Guideline Use :
 - a) Primary permanent lines, Linear Penetration
 - b) Secondary permanent lines, T's
 - c) Temporary Lines, Jumps & Gaps
- b) Accident Analysis, yearly current analysis
- c) Environment Care, diver impact on cave
- d) Complex Navigation :
 - a) Circuits
 - b) Traverses
- e) Survey Techniques
- f) Advanced Gas Management & Planning
 - a) Stage, Deco Bottle use
 - b) Back Mount & Side Mount configuration
- g) Decompression Techniques
 - a) IDREO Decompression Strategy
 - b) Habitat & Decompression Rebreathers
- h) Course Examination

4. Course Equipment Requirements

4.1 For all Cave Explorer classes:

- a) Backplate with Harness & Crotchstrap
- b) Backmount Wing
- c) Back mounted reg set up with 2 MT long hose
- d) 1 Primary light (+4hr)
- e) 2 Back up light (4hr each)
- f) 1 Jump spool (50+ MT)
- g) 1 Safety spool (80+ MT)
- h) 1 Primary reel (100+MT)
- i) 3 Non directional markers
- j) Wetnotes with pencil
- k) Bottom timer and compass
- l) Back up mask
- m) Manifold Twin Tanks

4.2 C2 will also need :

- a) 2 Stage + 1 Deco Bottles Rig with Regulators
- b) Sidemount wing
- c) 2 jump spools (25 MT)
- d) 10 non directional markers
- e) P. Light Battery Burntime 8hrs

4.3 Recommended:

- a) Back up primary light head
- b) Electric heating
- c) Relief valve
- d) 1 Decompression rebreather
- e) Habitat

4.4 Equipment For DPV

- a) Tow Behind style
- b) Variable Speed
- c) Tow leash
- d) Main DPV - min 120 min
- e) Back Up DPV - min 60 min

4.5 Equipment for RB

- a) Manifold Back Mount Frame
- b) Switch Block
- c) 6 hr scrubber min.
- d) CO2 lime for 3 charges

5. Training Academic Materials

5.1 Online Class

- a) ["Become a Safe & Efficient Dive Explorer"](#)
- b) Cave Explorer Workbook
- c) Student Training Log

REBREATHER EXPLORER

1. Course Description

This course is aim to experience technical and/or cave divers searching to apply rebreather technology in all types of diving environments.

Proper information including most current procedures and techniques applied to safe preparation, operational management and efficient mantainance of rebreathers in all it's efficiency modes.(SCR, pSCr, ApSCR and mCCR).

Intense skill mastering and actual experience build up are the basis in this program.

2. Course Parameters

2.1 Class limitations

- a) Student to instructor ratio is 1 : 4. (3 : 1 in overhead)
- b) Only 1 Instructor "staffing" is allowed

2.2 Class Duration

- a) 7 Days*

(*For divers with limited deep/cave diving experience, Rebreather Explorer training can be divided in two sessions of 3 & 5 day each. RB1 to start and RB2 to complete)

2.3 Course approved locations and limits

- a) Worldwide OW
- b) Cave approved locations : Australia, Brazil, France, Finland, Italy, Mexico, Philippines, Spain, South Africa, Slovenia, Thailand, USA.
 - a) 4 different cave entrances per class
 - b) Depth min 50mt (Max to diver Tech. cert level)
 - c) Minimum penetration 500 mt / 1500 ft
 - d) Continuous guidelines
 - e) Minimum in water time is 20 hr

2.4 Experience and Certification requirements

- a) 150+ dives
- b) 30+ Mixed Gas / Deco dives
- c) Trimix certification

*RB1 requirements:

- a) Deep Explorer 1 or eq. (i.e. Nitrox + Hyperoxic Trimix)
- b) 50 dives

*RB2 requirements:

- a) RB1 certification or eq (i.e. CCR or pSCR RB Diver)
- b) 25 hr on RB

For Scooter use:

- a) 25 scooter dives in ocean
- b) DPV certification
- c) RB Instructor must be also DPV Instructor

For Cave Rebreather use:

- a) 150 Cave Dives
- b) C1 Certification or eq. (Full Cave + Stage)
- c) RB Instructor must be also Cave Instructor

3. Course Content

- a) RB Technology :
 - a) All Types SCR, pSCR, CCR, ApSCR
 - b) Efficiency vs Injection
 - c) O2 drop
- b) Problem Solving :
 - a) Flooding
 - b) Lost gas
 - c) Volume loss
 - d) Failures
- c) Accident Analysis. Current up to date
- d) Mixed Gas RB Diving.

- a) Nitrox and Trimix
- b) Single gas injection
- c) Multiple gas injection management
- d) RB Decompression Procedures
- e) Advanced gas management & Planning
 - a) Stage use,
 - b) RB Sidemount
 - c) Bailout Rebreathers
- f) Decompression techniques
 - a) Decompression rebreathers
- g) Course Examination

4. Course Equipment Requirements

4.1 For all RB Explorer classes:

- a) Backplate with Harness & Crotchstrap
- b) Backmount or Sidemount Wing
- c) Backgas Reg. set up with 2mt long hose or Stage Reg.
- d) 1 Safety spool (80+mts)
- e) 1 Primary reel (100+mts)

- f) 1 Back up light (4hr each)
- g) knife
- h) Bottom timer and compass
- i) Back up mask
- j) Wetnotes with pencil
- k) SMB with 30mt spool
- l) RB Bottles
- m) Bailout Bottles

4.2 RB2 will also need :

- a) 2 Stage + 1 Deco Bottles Rig with Regulators & QC6
- b) Sidemount wing
- c) 2 jump spools (25 mts)
- d) 10 non directional markers
- e) P. Light Battery Burntime 8hrs

4.3 Rebreather Parts

- a) PO2 Gauge
- b) BOV

- c) Switch Block
- d) ADV
- e) MAV
- f) 6 hr scrubber min.
- g) CO2 lime for 3 charges
- h) Stage Reg with QC6
- i) IDREO Configuration

4.4 Equipment For DPV

- a) Tow Behind style
- b) Variable Speed
- c) Tow leash
- d) Main DPV - min 120 min

4.5 Equipment for Cave

- a) Manifold Back Mount Frame or Sidemount Rig
- b) Primary Light (6+ hr)
- c) 2 Back up Lights (6+ hr)
- d) 2 Jump Spools

e) 10 Non directional Markers

Recommended for Cave

- a) Back up primary light head
- b) Electric heating
- c) Relief valve
- d) 1 Decompression rebreather
- e) Habitat

5. Training Academic Materials

5.1 Online Class

- a) ["Become a Safe & Efficient Dive Explorer"](#)
- b) Rebreather Explorer Workbook
- c) Student Training Log

Deep Explorer

1. Course Description

This course is aim to experience OW divers searching to explore deeper enviroment while creating a solid foundation for cave or rebreather diving. Proper information, most current procedures and techniques to safely explore the depth.

Intense skill mastering and actual experience build up are the basis in this program.

2. Course Parameters

2.2 Class limitations

- a) Student to instructor ratio is 1 : 4
- b) only 1 Instructor "staffing" is allowed

2.3 Class Duration

- a) 7 Days*

(*For divers with limited experience, deep explorer class can be divided in two sessions of 4 day each. D1 and D2)

2.4 Course approved locations and limits

- a) Worldwide in Open Water
- b) Cave

- a) Australia, Brazil, France, Finland, Italy, Mexico, Philippines, Spain, South Africa, Slovenia, Thailand, USA.
- b) 4 different cave entrances per class
- c) Depth min 50mts. (Max to diver Tech. cert level)
- d) Minimum penetration 500mt / 1500ft
- e) Continuous guidelines
- f) Minimum in water time is 20hrs

2.5 Experience and Certification requirements

- a) 150+ dives a) 30+ cave dives
- b) Cave certification

*D1 requirements:

- a) OW
- b) 50 dives

*D2 requirements:

- a) D1 certification or eq (ie.Nitrox + Hiperoxic Trimix)
- b) 25 Mixed Gas Dives

For Scooter use:

- a) Deep Explorer Instructor must be also DPV Instructor

For Cave:

- a) 150 Cave Dives
- b) C1 Certification or eq. (Full Cave + Stage)
- c) Deep Explorer Instructor must be also Cave Instructor

3. Course Content

- a) Explorer 5 Basics :
 - a) Equipment Configuration
 - b) Trim & Propulsion Techniques
 - c) Buoyancy Management
 - d) Equipment removal UW
 - e) OOG

- b) O2 Drop
 - a) MOD and MinOD
- c) Advanced Gas Management & Planning
 - a) Dive Planning
 - b) Bailout
 - c) Single Stage/deco bottle use
- d) Mixed Gas Diving
 - a) Nitrox
 - b) Trimix with
 - c) O2 decompression

- e) Accident Analysis. Yearly current analysis
- f) Decompression Techniques
 - a) IDREO Decompression Strategy
 - 1) NDSL vs NDL
 - 2) Multiple deco bottle management
 - 3) Habitat & Decompression rebreathers
- g) DPV
- h) Course Examination Academic and in water

4. Course Equipment Requirements

4.1 For all Deep Explorer classes:

- a) Back mount backplate
- b) Back mount wing
- c) Back mounted reg set up with 2 mt long hose
- d) 1 Primary light (+4hr)
- e) 1 Back up light (4hr each)
- f) 1 Safety spool (80+mts)
- g) 1 Primary reel (100+mts)

- h) Wetnotes with pencil
- i) Bottom timer and compass
- j) Back up mask
- k) knife
- l) SMB with 30mt spool

4.2 D2 will also need :

- a) 2 Stage rig with Regulators
- b) 1 Decompression rebreather
- c) sidemount wing

4.3 Recommended:

- a) Primary Light 4+ hr
- b) electric heating
- c) -relief valve

4.4 For DPV classes:

- a) -1 DPV (1hr)

IDREO Explorer Instructor

1. Course Description

This course is aim to experience Instructors and Explorers searching to share own experience with future explorers.

Proper information including most current training procedures and techniques to safely train divers combined with a complete mentoring program, focus in exploration projects development.

Intense skill mastering and actual experience build up are the basis in this program.

There is three levels of Instructor Cave Explorer and Rebreather explorer, both include Deep Explorer foundation levels which includes also DPV.

2. Course Parameters

2.1 Class limitations

- a) Student to instructor ratio is 1 : 3
- b) Examination once a year

2.2 Class Duration a) 7 Days*

(*For Instructors with limited experience, IDREO Explorer Instructor class can be divided in two sessions of 3 and 5 day each. Cave and RB Instructor, with Deep Explorer Instructor being the foundation)

a) Deep Explorer Instructor is the starting base for IDREO training programs, divers becoming Instructors will be divided in two levels

- 1) D1, Deep Explorer Level 1
- 2) D2, Deep Explorer Level 2

2.3 Course approved locations and limits

- a) Worldwide Deep and RB Explorer
- b) Cave

- a) Australia, Brazil, France, Finland, Italy, Mexico, Phillipines, Spain, South Africa, Slovenia, Thailand, USA.
- b) 4 different cave entrances per class
- c) Depth min 50mts. (Max to diver Tech. cert level)
- d) Minimum penetration 500mt / 1500ft
- e) Continuous guidelines
- f) Minimum in water time is 20hrs

2.4 Instructor Candidate Experience and Certification requirements

a) Deep Explorer Instructor :

1. OW Instructor for 3+yrs min
2. 100+ students certified
3. 250 dives
4. 100+ Mixed Gas Dives, D1 50+
5. 25+ DPV dives
6. 25+ Overhead dives
7. RB Explorer or Cave Explorer
8. 1 IDREO Project

b) RB Explorer Instructor :

1. Deep Explorer Instructor or eq. (2 yr min)
(ie Hipoxic Trimix + DPV)
2. Cave Explorer, 25+ Overhead Dives
3. 300+hr rb time, (50hr for RB1)
4. Staffing program completed
5. 2 IDREO projects

c) Cave Explorer Instructor :

1. Deep Explorer Instructor or eq. (5 yr min)
2. RB Explorer, 25+ hr
3. Cave Explorer,
4. 250 Cave Dives, 100+ Cave Dives for L1
5. 25+ DPV RB Cave dives
6. Staffing program completed
7. 2 IDREO projects

3. Course Content

a) IDREO

- a) About IDREO
- b) Seminars vs Training
- c) Training Program
- d) Training Materials

b) Teaching Techniques

a) IDREO Class Rules

b) IDREO Teaching Method

1. Academic Presentation

2. Land drills

3. In water assessment

4. IDREO Debriefing Techniques

c) Failures Training

c) Organization Contact

a) Projects

b) Newsletter

c) Certification Process