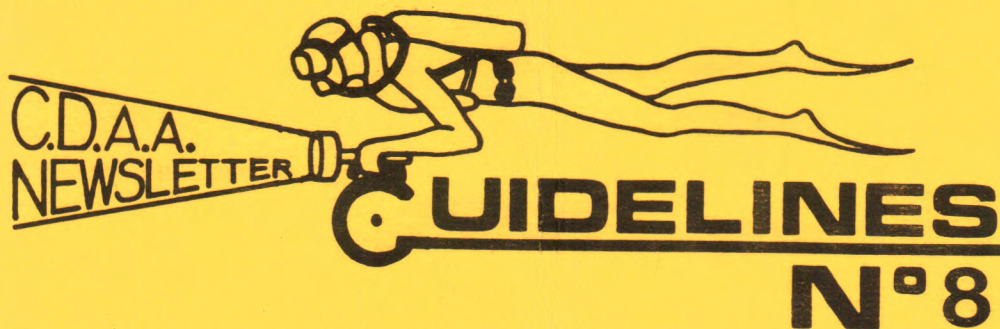


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CAVE DIVERS ASSOCIATION OF AUSTRALIA

(Incorporated in South Australia)

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GUIDELINES

NEWSLETTER OF THE
CAVE DIVERS ASSOCIATION OF AUSTRALIA.
No. 8. August 1981

contents

	Page.
Editorial	2
Special State Meetings	2
Batteries and Sealed Beams	3
General Business	3
Category 3 Test Weekend	4
Annual General Meeting	5
Allendale Discounts	5
Cave Diving Book	6
Fame For Your Fotos	6
Occasional Paper No. 2	7
Diver's Motel	8
The Bends	10
Lead Acid Battery Charger	
Constructional Details	
Circuit	
Charging details	
Battery Care	11
That Sinking Feeling...	14
Reel Modifications	15
Australian Cave Diving Improvements	16
SDFV Cave Diving Seminar	17

After three years as editor during the era of getting 'Guidelines' well and truly established, I have decided to stand down so a new member can come on the Committee. Preparing this newsletter involves knowing what is going on in the Association and it is time to encourage some new ideas. So here is my latest contribution.....

BARNOOLUT ACCESS: With the record heavy rains in the South-East this year all properties are sodden at present. While this situation persists for the next 6 weeks or so, the committee urges members to plan your weekends to minimize driving time on Barnoolut, considering the heavy use of this property by the Association.

With more than 800 members and only 20 sinkholes, the pressure by divers on the limited resources is becoming greater. The time is now not far off when consideration will have to be given to limiting access to the most popular holes - possibly on some form of roster basis. Barnoolut station would appear to be the prime example, and in anticipation of the situation the Association is considering its options. Some ideas suggested so far are 'on' and 'off' seasons, or diving on certain designated weekends per month and no diving on others. The sinkholes themselves certainly don't appear to be suffering from many dives per day (except visibility decreases during the day) but strain on the properties and the landowners is a real problem. Ultimately this problem will not be one that can be solved by the Committee alone, and needs to be considered by all cave divers visiting Mount Gambier.

Ian Lewis

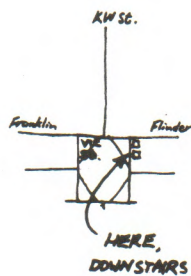
special state meetings

A Special State Meeting will be held for the South Australian branch of the Cave Divers Association on Monday, 14th September in the State Administration Centre, Victoria Square, ADELAIDE, commencing at 7.30pm.

Items -

- . Nominations for Committee 1981/82 as advised by recent circular.
- . In S.A. we are looking for a Records Officer and an Editor for 'Guidelines' especially.
- . Sale of 6 V, 10 ampour batteries (see opposite)
- . Sale of dual filament 15W/30W GE4308 sealed beams
- . Samples of brass, aluminium and stainless steel cave diving light reflectors will be displayed and orders taken
- . Sale of 3mm braided guideline; length as ordered at Dive 81
- . A film of Mt. Gambier diving made by Peter Horne will be shown.

In Victoria, their Special State Meeting for Committee nominations will be held in the Meeting Room, 1st Floor YWCA Building, Elizabeth St. MELBOURNE on Wednesday night 16th September 1981 at 7.30pm. After the meeting, films will be shown.



batteries and sealed beams

BATTERIES:

An order for 70 of the Yuasa 6-volt 10 ampour lead acid gel-cel batteries has been placed with the supplier, with provision for more if demand exists. The final negotiated price for these is \$12.74 + 15% sales tax (Sales tax legislation increasing this to 17½% has not yet been enacted in Federal Parliament).

These orders will be collected in several orders of 10 or 20. The Association will not pay for the goods - each person must provide the money at this meeting, or make arrangements with Ian Lewis (ph. 267 5917) to collect and pay for the batteries from the agent direct. The Association does not profit from this sale, which we are required to complete by 30th September 1981. Orders from Victoria are welcome but get them in quickly.

SEALED BEAMS:

Last Guidelines (No. 7) mentioned two types of sealed beams - the standard 4.75 volt 1.25 amp Hand Lantern beam (GE 4557) and the much brighter 6 volt 30 Watt Spot (GE 4515). A new beam is available in limited stocks which is a compromise between the above two types. It is the GE 4308 - a dual tungsten filament 12 watt/25 watt beam of the same size as the others. These have the advantage of giving more burn time per battery charge and will ideally suit Ocean-Pro torches with their two-way switches, while the beam fits the torch exactly. Only 22 of these are available at \$17.00 each, which is the last time they'll be available at this price. They can be ordered at the State Meeting or from Steve Treagust on 248 1133 before then.

general...

1. PICCANINNIE PONDS MAILING CARDS:

There still appears to be misunderstanding as to the mechanism of the Pics mailing card system. Note that the cards are colour coded as to the financial year. The colours so far have been:

July 80 - 81	fawn
July 81 - 82	orange

Those members who forwarded fawn cards to National Parks and Wildlife Service in the closing months of the '81 financial year only received permits up to the end of June '81. To obtain a permit for the '82 financial year you need an orange mailing card. If you have not received an orange card then you are either:

- i) not Cat. 2
- ii) unfinancial for the '82 year.

If this is not the case, please contact your State committee as soon as possible.

2. PROVISIONAL CATEGORY 2 STATUS:

A new temporary status has been arranged for those people who are joining the C.D.A.A. and training through the available shop courses. This status is issued to member divers who have passed the Category 1/2 theory and practical tests but who still have to complete the 5 hours pre-requisite Category 1 diving to qualify for full Category 2 rating. For these people, a temporary permit card is issued with a stamp indicating 'Provisional Category 2' and requiring the diver to list all Cat. 1 dives (5 hours worth) on the back of the card and post it to the Records Officer in exchange for a real Category 2 card!

3. PLASTICS TECHNICAL COURSE PROPOSAL:

Richard Megaw has raised the idea that any C.D.A.A. members who would like to make their own guideline reels and you-beaut cave diving lights (of the style shown in 'Cave Diving in Australia') could be organised for a technical plastics course. This would run for a series of nights possibly over a school term at a technical high school in Adelaide. You would learn about working and joining plastics and perspex, and finish the course with your own gear fully made.

If you are interested in this proposal, please indicate this to the Committee either at the State Meeting or via the S.A. postal address. If sufficient people decide to do this, arrangements for an instructor, a venue and material orders can be commenced. The Committee members think this is a good opportunity to diversify knowledge and skills, and thank Richard for his offer to initiate the matter.

category 3 test weekend

A final reminder that the forthcoming Category 3 test date is Saturday 19th September 1981 at Piccaninnie Ponds, Mt. Gambier, commencing at 9.00am. Examiners are required on site by 8.30am. Full equipment (lines, torches etc.-everything you've got!) to be brought. The Annual General Meeting is in the evening after the tests finish.

On Sunday 20th September (the day after the AGM) the C.D.A.A. has made preliminary arrangements to assist the Mt. Gambier Lions Club in their landscaping and cleanup of Englebrecht's Cave. This may involve shifting underwater rubbish, cleaning the entrance out and installing of underwater lights, prior to the cave being opened to controlled public access. The Association has been negotiating Category 3 access rights with the Mt. Gambier Council over the past few months and our assistance in this portion of the project is good public relations. The council has yet to decide upon its terms but is quite favourable toward our representations. Photographers are welcome.

Also, the now traditional Hells Hole trip (following each Cat. 3 test) is likely to be on again on Sunday 20th September, in such a way as to hopefully not clash with the Englebrecht's project. More details at the State Meeting. Photographers particularly welcome here too.

annual general meeting

The Annual General Meeting of the C.D.A.A. will be held on Saturday 19th September 1981 at the CWA Hall, Lawrence St., Mount Gambier starting at 7.30 pm. The usual presentations of committee reports will be made and recorded for publication in the following issue of 'Guidelines'. However, due to procedural changes foreshadowed by the upcoming Special State Meetings, certain Constitutional Amendments are necessary.

Notice is hereby given of motions proposed to alter the Constitution at the Annual General Meeting -

- 12 c to read 'Officers shall be elected to general vacant positions at either the Annual General Meeting, or Special State Meetings called for the purpose to be held in Adelaide and Melbourne not less than 14 days and not more than 30 days before the date of the AGM.'
- (This clause to set up the State Meetings)
- 15 b insert at end of this clause 'Any casual vacancy may be filled by the Committee.'
- (This clause to tidy up the previous clause 12 c)
- 17 a 'The Committee members shall be elected by ballot at the AGM or Special State Meetings called for the purpose to be held in Adelaide and Melbourne not less than 14 days and not more than 30 days before the date of the AGM.'
- (This clause to define conditions of holding office.)
- 20 c(4) 'Allocation of Officer appointments among committee members elected at the immediately preceding Special State Meetings or at the AGM.'
- (This clause because elections will not normally be held at the AGM.)
- 21 a To read 'Each financial diving member (not prospective member) shall have one vote at any General or Annual General or Special State Meeting of the Association.'

These amendments proposed byIan Lewis
and seconded by.....Robin Garrad.

allendale discounts

Brian Vauser has asked us to mention that he wants to set up a discount deal for divers who regularly use his air filling facilities. He is especially interested in dealing with clubs and training groups, but is quite happy to arrange for a discount scheme with individual C.D.A.A. members as well. His proposal is for a ticket-book system entitling the purchaser to 8 air fills for \$20.00, payable upon purchase of the authorised tickets. These can be presented whenever a fill is required. For further information, speak to Brian next time you're down at Allendale.

cave diving book

In July 1980 this book finally hit the market after years of people saying 'When are ya gonna finish it?' Well, a year later there aren't any left, and the entire stock of 1000 are distributed around the country and overseas. In the very near future this book is being reprinted, and will be revised and indexed in the process as some information has changed and suggestions for improvements made. The new edition should be available in October.

Peter Stace and Ian Lewis.

fame for your fotos ...

Following the success of 'Cave Diving in Australia', I have been preparing material for a more eye-catching book about the sinkhole diving at Mount Gambier. This book is planned to be a colour-pikky hardback coffee-table type, incorporating the best photographs of the Mount (from above and below) that I have, and a small amount of text, but presented in a very imaginative way. Work is well under way, and it's a fairly big budget!

To do the book full justice, I want excellent, spectacular photographs. An obvious source for more of these are all you sinkhole-diving underwater photography freaks in the Association's membership somewhere...and I want to make a loud appeal to everyone who has at least on (if not many) outstanding Mount Gambier photos. I have seen many, and most of them are different - which is all helpful in getting varied material (different angles, light conditions etc.) for publication.

In return, I will pay for each photo published and give you written credit for your photos on the page it will appear. Depending on the budget for the book (which I am currently working on) I will negotiate a good price for your prints - as close to commercial rates as can be arranged for a moderate-market book. This book will be aimed at the Australian diving market, all overseas markets through my contacts and at the wider tourist level and regional outlets.

Please come forward with anything good you have. The book will probably take 6 - 8 months to complete but I hope to have it available by mid-1982. Even average-grade photos are of great use, as the particular topic or angle you have may provide just the inspiration to go down the Mount and obtain just the exact and excellent scene I need for a pictorial sequence. Your best photos may become as recognisable as 'Cave Diving's' front cover!

Ian Lewis

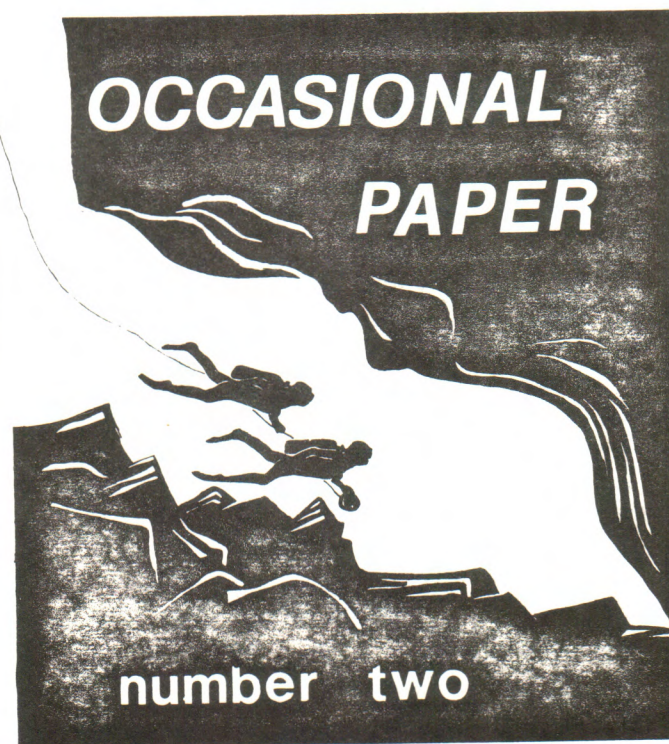
OCCASIONAL PAPER NUMBER 2

At long last the cave diving membership will be able to read about the topics presented at the last Cave Diving Conference (September, 1979) in Occasional Paper No. 2 - copies will be available at the State Meetings and AGM for \$1.00.

Contents: Fossils from Fossil Cave
Diving for Fossils (in Fossil Cave)
Laddering Safety
Hydrogeology of Mt. Gambier Area
Cave Diving at Jenolan Caves
August 1979 Cocklebidy Cave Diving Expedition

Jenny Hiscock

Cave Divers Association of Australia



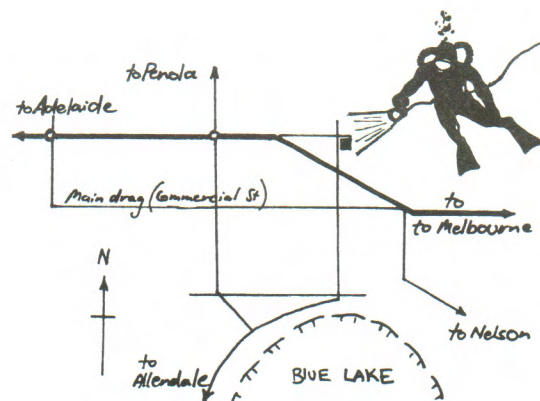
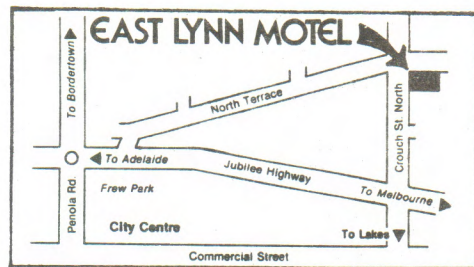
september 1981

divers' motel

Tired of wet caravans and cold draughty showers? Want a first class breakfast to start the day? Nowhere to sit and relax on Saturday night to talk diving around a fire?

EAST LYNN MOTEL now offers all that and more, with package deals and facilities particularly with divers in mind. Russell Jeavons is a diver himself and understands the needs of divers for comfort, good food and a place to dry your wetsuits. We offer discount rates to all divers, generous group concessions plus a central information facility covering all aspects of diving in the region. Since the idea of a divers' motel began, we have accommodated several large diving parties for full weekends.

LOCATION: The best possible access in town, as the main highway (Melbourne - Adelaide) passes virtually under our windows.



DETAILS:

East Lynn Motel: corner North Terrace and Crouch St. North, Mt. Gambier.

Postal address: 44 North Terrace, MT. GAMBIER, 5290
phone: 087 252354

Proprietors: Russell and Patricia Jeavons

Dining Room: All meals catered for.
3 course evening meal \$6.00
Big breakfasts - main courses between \$1.80 - \$2.60 (diver size)

Rooms: 2 rooms with double beds plus 2 single beds
2 rooms with double beds
2 rooms with single beds

*NOTE: Extra stretchers are available for large groups

All rooms have: Hot shower
Electric blankets and wall heating
Colour TV and telephone
En-suite bathrooms and toilets
Refridgerators, plus tea and coffee facilities

Rates: Standard rate is \$20 per double plus \$5 extra per person, but see below.....

Discounts for Divers: 10% overnight
25% weekends

more for large groups and clubs (we'll fit them in)
But for peak holidays (Easter, long weekends) standard rates apply.

You can see the advantages to a group of (say) 10 divers. A wetsuit hanging room is available also. We also are seeking cave diving photos, maps and display material for our central diving room which we hope to develop into a centre for cave divers to meet when in Mt. Gambier. So get in out of the cold and rain, put your feet up and have a great weekend's diving while EAST LYNN MOTEL looks after you with down-to-earth service. Contact Russell and Patricia Jeavons soon, before your next trip down here.

FOOTNOTE: On a recent trip to Mount Gambier several of us stayed at East Lynn Motel to check it out. We ate well, slept well and generally enjoyed life instead of slouching around a caravan park somewhere at a cold early hour. The rates offered by Russell are highly competitive and may well usher in a new era of comfortable diving trips at very fair cost. If that makes diving better, what more could you want?

Ian Lewis and Peter Stace.

the bends ...

Peter Horne

Just what would you do if one of your diving friends suddenly took ill on the surface, after a lengthy deep dive in one of the cold sinkholes near Mount Gambier? If he complains of itchy skin, difficulty in breathing, or a choking sensation, chances are he's got a very serious problem, and so have you. There you all are, maybe at the bottom of a 10m ladder, all panicking about what the correct procedures are when it comes to decompression sickness.

All cave divers understand how useful recompression chambers are, and how they work (at least in a basic sense), but there is no recompression chamber within 300 miles. Most cave divers have heard that you can recompress a diver in warm water in an emergency, but you're probably already shivering after half an hour in 15°C water by now, and you're not about to perform another dive which could be fatal to the victim anyway!

So what are the alternatives? A mad dash to the nearest hospital? Keep the victim strung upside-down like a chopped chook? Make him breathe harder?

Some of the latest research indicates that all cave divers can carry a simple small first-aid 'bends' kit which can dramatically improve a Bends victim's chances of survival or recovery. Recent papers presented to the South Pacific Underwater Medicine Society - in particular by Dr. John Knight in 1980 - suggest three distinct procedures as an immediate measure.

These are: OXYGEN FLUIDS ASPIRIN

a) PURE OXYGEN UNTIL MEDICAL HELP ARRIVES

The average person can endure hours of pure oxygen on the surface without becoming afflicted with convulsions. Pure oxygen helps rid the blood of the killer nitrogen much faster, and often, the oxygen therapy completely cures the victim.

b) PLENTY OF FLUIDS

The fluid counteracts dehydration and keeps the blood even more in a fluid state, slowing down the clotting and blockages caused by 'bunching up' of bubbles. The best fluids are those containing both sugar and extra salt. Natural fruit juices are excellent and need no extras. If only water is available, add 1 teaspoon of salt per litre of water and sugar to taste.

c) TWO ASPIRIN

But don't wait until morning to call the Doctor! Seriously, the aspirin help to stop blood platelets from forming around intruding nitrogen bubbles and causing clotting. Another useful side-effect is to cut out a bit of pain.

Interesting? Perhaps enough interest in this vital subject can be raised to warrant a mini-seminar, perhaps at an A.G.M. when diving doctors can present this recent information to us all.

lead acid battery charger

INTRODUCTION

This battery charger is designed to charge 6 volt (3 cell) lead acid batteries and indicate a state of charge.

The charging method used is a constant voltage, current limited technique. (See Figure 2)

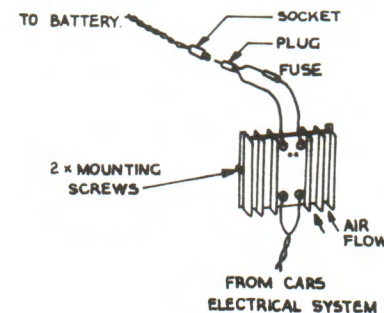
The circuit is based around an LN723 voltage regulator with an external series pass transistor. Two 'LEDS' are fitted to the charger which indicate charge current.

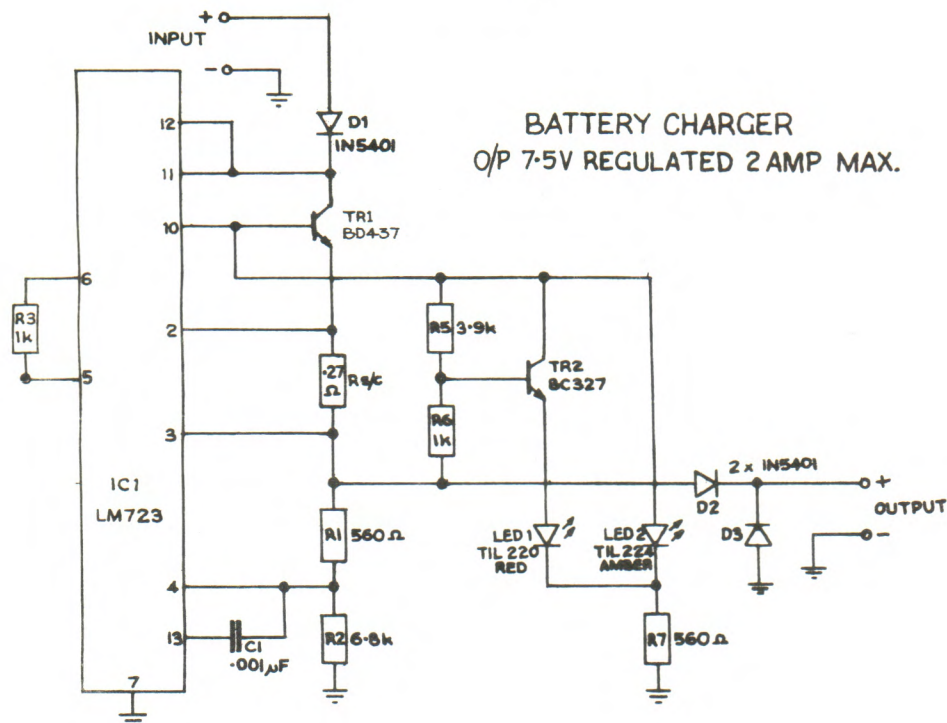
CONSTRUCTIONAL DETAILS

The charger is built around a four inch length of aluminium finned heatsink material. The printed circuit board (or veroboard) is mounted on the back of the heatsink using suitable spacers, power transistor (TR1) being mounted on the heatsink so that its leads can be terminated on the printed circuit board. Two holes can also be drilled in the heatsink to allow the two indicator LEDs to poke through and be seen from the front. The output fuse is mounted in series with the positive output lead.

The output voltage can be trimmed by varying R2 - this could be achieved by putting a trim pot in series with R2 (eg. 5K trim pot in series with an R2 value of 3K3).

A neat end result can be achieved by encapsulating the rear of the heatsink (incorporating the printed circuit board and wiring) in a rubber/silicon potting compound such as "Silastic".





Observe the following instructions for correct connection

- 1) Connect 'INPUT' terminals to a 12 volt vehicle electrical system. If indicator fails to light, reverse 'INPUT' leads. DO NOT connect to mains or to output of a mains operated car battery charger.
- 2) Ensure that the battery to be charged will accept the charge current as stated on the charger. Connect battery terminals '+ve and -ve' to charger 'OUTPUT' terminals observing the following polarity:-
+ve battery to +ve charger
-ve battery to -ve charger
If 'OUTPUT FUSE' blows polarity has been reversed.
Correct polarity and replace fuse with one of the same value. DO NOT connect any other voltage to these terminals or remove 'OUTPUT FUSE'. It is recommended to use a polarised plug and socket to connect battery to charger to avoid blowing the fuse.
- 3) Allow air to circulate over the charger. It is recommended to mount the charger with cooling fins vertical on a panel of the vehicle and not exposed to the weather or heat from the engine.

CHARGE INDICATION

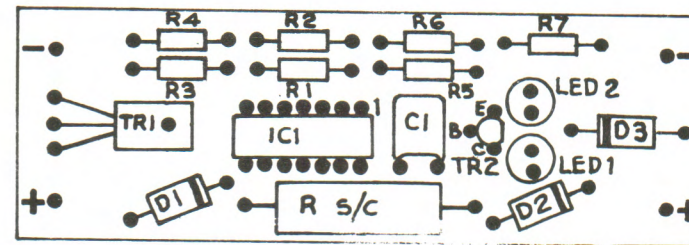
Two 'LEDs' are fitted to the charger which indicate charge current.

'RED' or 'CHARGING' indicates a high charge current.

'AMBER' or 'CHARGED' indicates a low charge current.

INDICATION SEQUENCE

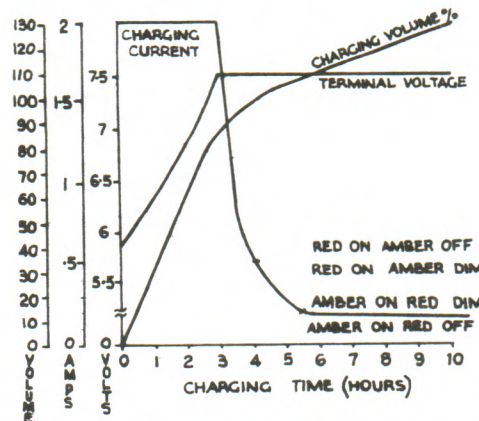
1. Charger connected to vehicle, battery not connected.
'RED' OFF
'AMBER' ON
2. Battery connected to charger, and accepting charge.
'RED' ON
'AMBER' OFF
3. Battery nearing a charged state, charge current reducing.
'RED' ON then DIM
'AMBER' DIM then ON
4. Battery charged and ready for use.
'RED' OFF
'AMBER' ON



NOTE: R4 not required for 7.5V output

BATTERY CARE

1. Avoid over discharge. Turn load off before battery is dead flat. (ie. when light is going yellow or dim)
2. Avoid over charging. Charger is designed to charge batteries for cyclic use; disconnect battery from charger when battery is not in regular use.
3. Charge battery after use, particularly if leaving for long time.
4. If battery does not indicate as being charged after several hours connected to charger, battery is showing signs of deterioration. Discharge battery and recharge; this cycle can be continued until battery charges correctly.
5. The above cycle should be carried out occasionally during long periods of non-use.



THAT SINKING FEELING.....

Time, May 25 1981

Three Orange County housing workers arrived last Tuesday at the home of Tommy and Mae Rose Owens in Winter Park, Fla., a suburb of Orlando, to complete paper-work on the couple's federal loan for home improvements. But the Owens were not there. Neither were the house and yard. They had fallen—along with five expensive foreign cars, a truck, a parking lot, part of a four-lane road and much of a municipal swimming pool—into a sinkhole. That geological oddity resulted when underground limestone caverns, which are usually filled and strengthened by water, were gradually drained during a severe drought. The cavern collapsed and a circular hole 340ft across and 100ft deep opened up in the middle of a busy neighborhood.

Mrs Owen had watched it start, hearing what she called 'a queer swishing noise' and then a 'ploop' as a big sycamore tree in the next lot plummeted straight into the earth. She called the police. They could do nothing but cordon off the area as thousands of sightseers arrived to watch the hole grow. The owner of a \$40,000 1979 Porsche 928 hired a helicopter and then a construction crane to retrieve his car, in for repairs at a garage bitten into by the hole.

Sinkholes are common in Florida. State law makes sinkhole insurance standard in a homeowner's policy — it covers a house but not, ironically the land that disappears beneath. As Orange County appraisers last week were pondering what to do about the Owens' next property tax bill, at least seven more sinkholes opened up elsewhere in the state.

reel modifications

DO YOU USE AN ELECTRIC CORD REEL FOR YOUR GUIDELINE ?

It could be a potential hazard! Basically these reels are not constructed for underwater use and in my view, require modification before they can be used safely for cave diving.

It has been found that if used as bought, these reels jam up to one side whilst being re-wound. Also the feed point is far too small, as this should be wide enough so that if in zero visibility the diver can by feel, ensure that the guideline is being re-wound correctly, and in an even manner (not bunching to one side).

Both of these instances could create a situation where a dive group still some distance from the exit, with a jammed reel, would virtually have to back-pedal an operation necessitating pulling off metres of rope and re-winding in a correct manner, or at least dropping the reel. These alternatives could effect a state of panic.

My suggestions are that if this is the only reel that you are prepared to use, then the following are some modifications that will make this reel a lot safer:

1. A disc should be fixed to the inside of the reel, this disc allowing the reel to spin free of the outer casing.
2. Enlarge the feed point; this being an assistance in zero visibility.
3. A stainless steel or brass shaft placed through the centre to spin the reel on.
4. A more practical handle fitted for re-winding; this should be large enough to be grasped by hand and not just by fingers.

You will realise this involves some work. With a little more effort it is possible to make yourself a reel that has been specifically designed for underwater use, and it has been thoroughly tested over the past 18 years.

The plans for this reel are available from me and simply require having a copy taken off of the original.

Category 2 divers should make use of their guideline reel when entering an unknown sinkhole. It is also a positive way of finding a shot line when returning from a dive and a decompression stop is required or desired, as some sinkholes are very murky between 15 - 20 metres from the surface.

By Dave Warnes, 356 6110

FOOTNOTE: The C.D.A.A.'s National Testing Officer (Alan Joliffe) has placed a ban on non-modified electric reels being used in Category 3 tests. Both Alan and Dave strongly recommend that members inspect the various special cave diving reels that are around and construct one of their own. A chance to do this on the proposed plastics tech. course may arise shortly (see page 4).

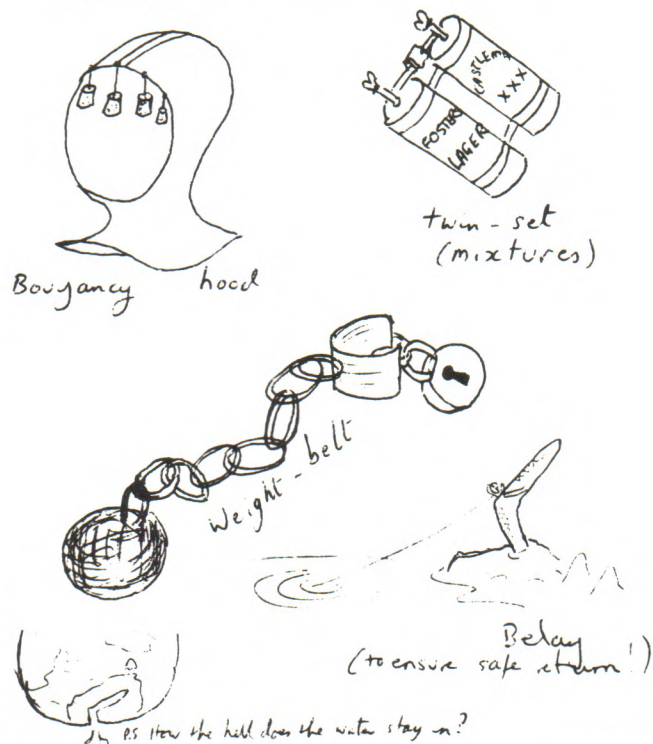
sdfv cave diving seminar

AUSTRALIAN CAVE DIVING IMPROVEMENTS

. 16 .

Recently one of our English cave diving mates sent me a letter that reads thus (in part)....

Dear Dingo - G'day old chap.
Many thanks for your excellent book "Muff Diving in Australia". Keep up the good work. One small criticism - I noticed you omitted several vital pieces of Cave diving equipment, illustrations of which I have appended to this letter.....



Ian Lewis

The Scuba Divers Federation of Victoria are conducting a cave diving Seminar later this year.

DATE: 7th November

LOCATION: North Melbourne Football Social Clubrooms,
Arden St.,
NTH. MELBOURNE.

TIME: from 1.00 pm to 10.00 pm.

There are six speakers who will cover the whole range of cave diving activities, with adequate opportunity to meet them and ask questions during intervals and informal meal breaks.

The programme is as follows:-

- . Russell Kitt will talk on the aims, objects and formation of the C.D.A.A..
- . Barry Heard will discuss the developments in cave diving equipment becoming available, and being specially constructed for the sport.
- . Winston Boord will summarise the geology and hydrogeology of the Mt. Gambier area
- . Peter Stace will describe the various exploits of advanced cave divers in remote locations throughout Australia

After dinner, an informal evening of speakers and films will be held.

- . Ian Lewis will present to you a wide range of examples and anecdotes about cave diving all over the world - even behind the Iron Curtain.
- . Reg Lipson will list and discuss the varied freshwater life in the springs and sinkholes of Mount Gambier, and will wrap up the evening with a special showing of the ABC documentary he made there, called 'The Land That Sank'. A New Zealand spring diving film may also be included.

For bookings contact Andrew Cox of the SDFV at:

46 Cresser St.,
ALTONA NTH., ph. (hm) 03 391 3935