ABERDEEN AND DISTRICT SOARERS

NEWSLETTER NO. 7

APRIL 1981

34 Wallfield Crescent
Aberdeen

I hope you are all enjoying your flying this season and not bringing back too many crashed models. There have been quite a few holes (some deeper than others) made in the ground so far this year! In fact, has anyone not had a prang yet? It is interesting to note that Erik van Waart is presently constructing a "special" using parts from "written off" models. Can anyone help him with a tailplane?

To get back to the main purpose of this newsletter, which is to bring to your attention, amendments made to the competition calendar including the ADS Tuesday night competition dates. In order to avoid any confusion, Teun has decided to re-issue the complete calendar, so there should be no need to refer to the original calendar published in the January newsletter. Also we have taken this opportunity to publish the current membership list.

Mike Pirie

COMPETITIONS IN NORTHERN AREA

Due to a misunderstanding between the ADS committee and the committee of the Northern Area of the SAA the competition calendar as published in the previous newsletter was not fully correct.

The most important amendment is the change of dates for the competiti in Balmedie and Montrose in August.

The complete calendar and notes (also the latter had to be modified after the SAA amended some earlier information) are given again.

Date	Location	Type of Competition	SAA Trophy	BARCS League	SAA Comp.
12.4.81	Cairn-O-Mount	Slope			X
10.5.81	Elgin	Open ¼ slot		X	
23-25.5.81	Yorkshire	Radioglide		X	
31.5.81	Forfar	100 S (Maxwell Trophy)	X		X
7.6.81	Balmedie	100 S			
7.6.81	Balmedie	Open ¼ slot (BOC - Noscow Trophy)	X	X	X
13-14.6.81	?	Scots Nats		X	X
14.6.81	Montrose	Free Flight			X
21.6.81	Montrose	Open ¼ slot (Sparrow Shield)	X	X	X
5.7.81	Elgin	100 S			
19.7.81	Cairn-O-Mount	Slope (Grampian Cup)			X
9.8.81	Montrose	Scale Fly-in/Comp			X
23.8.81	Balmedie	Open ¼ slot (Brian Sherriff Trophy)	X	X	X
29-31.8.81	Cranwell	British Nats		X	
27.9.81	Elgin	Thermal (Taylor Trophy)	X		

Notes on the above competitions

The entry fee for the S.A.A. events is £1. The entry fee for the remaining competitions will be determined by the clubs themselves, but is likely to be £1 as well.

The competitions start at 1200 hours, i.e. all competitors must be present and have entered at that time.

On 7th June two competitions will be held on the Balmedie field. Flying of the 100 S competition will therefore start at 100 hours promptly. Those who are too late can always fly in the (S.A.A.) BARCS ¼ slot event. The first slot of that event will be around 1300 hours, but an earlier entry is required to allow for setting up a matrix.

The BARCS % events will count for the BARCS League if the entry exceeds 15 (not necessarily BARCS members).

All events (except the Taylor Trophy) will be flown according to BARCS rules.

The best three scores out of the five are to count for the S.A.A. Northern Area Thermal League Trophy.

The Scale competition in Montrose on 9th August is for power models only. Gliders are welcome and can join the flying, but the competit is for power models only.

In case of bad weather the slope competitions will be moved forward one week at a time until they can be flown (but not later than 1.1.8

The contact addresses for the different competitions are:

Montrose:	Ken Whyte	0674-4263
Forfar:	Rick Lorente	0307-66531
Aberdeen:	Teun van Waart	0224-874865
Elgin:	Pat Thompson	0343-3571

As you can see this year Teun is the ADS competition man. But if you can't find him, try Graham (20510).

TUESDAY EVENING ADS COMPETITIONS

The dates for the Tuesday evening competitions that were published in the previous newsletter were selected before the final competition calendar was available. With the latter available now it appears that these dates are not ideal as they fall in a period which is saturated with weekend competitions already.

Therefore the following new dates have been selected:-

12.5.81 100S Competition

26.5.81 Open % Slot

Both competitions will start at 1900 hours. If that's a bit tight for you, please pre-enter so that a matrix can be made. Especially the competition on 12.5.81 has to start in time to finish before darkness.

The entry fee is £0.50. The number of trophies (but a least one) will depend on the number of entries.

In case of doubt due to appalling weather conditions, try Teun (or Tineke) at 874865 or Graham at 20510.

NEW COMMITTEE

Most of the members will know by now who are in the new committee (elected in the AGM in October 1980). For those who practice a soaring-hibernation, or who build only and don't fly (and crash) during the winter, the names are given here:

Teun van Waart, chairman and competition secretary (Tel. 874865)

Graham Philip, secretary and treasurer (Tel. 20510)

Mike Pirie, editor and special assignments (Tel. 323640)

Please note that Graham has moved to 34 Wallfield Crescent and that his new telephone number is 20510.

ABERDEEN AND DISTRICT SOARERS MEMBERSHIP

	Name	Address	Tel. No.
1.	J. Anderson	39 Richmondhill Road, Aberdeen	33601
2.	K. Anderson	32 Mid Stocket Road, Aberdeen	637105
3.	J. Barns	13 Crown Terrace, Aberdeen	
4.	J. Barnetson	40 Kaimhill Circle, Aberdeen	39835
5.	I. Buglass	11 Allathan Park, Pitmeddan	Udny 687
6.	G. Donaldson	7 Ashgrove Road West, Aberdeen	46961
7.	I. Donaldson	7 Ashgrove Road West, Aberdeen	46961
8.	D. Hosie	37 Murray Terrace, Aberdeen	24473
9.	D. Kay	51 St. Olav Street, Lerwick, Shetland	
10.	N. Kerr	55 Raeden Crescent, Aberdeen	324722
11.	N. Logan	23 Ashill Way, Aberdeen	493011
12.	J. R. Love	58 Garthdee Road, Aberdeen Photo Dept.	3903[illegible] 690222
13.	B. McCluskie	37 Inverdon Court, Aberdeen	40413
14.	J. McConville	56 Berrywell Gardens, Dyce	724498
15.	J. McCurrach	7 Ashgrove Gardens South, Aberdeen	
16.	G. Mitchell	69 Ivanhoe Road, Aberdeen	324828
17.	A. Morrison	11 Glenhome Avenue, Dyce	
18.	A. Mutch	33 Davidson Place, Aberdeen	691270
19.	G. Philip	34 Wallfield Crescent, Aberdeen	20510
20.	N. Philip	12 Kincorth Place, Aberdeen	876703
21.	M. Pirie	67 Angusfield Avenue, Aberdeen	323640
22.	P. Rink Braker	STR 7 D2800 Bremen, Germany	01049/421/388759
23.	M. Starr	26 Eden Drive, Peterhead	2784
24.	A. Stewart	25 Glenhome Gardens, Dyce	722663
25.	F. Stronach	10 Colthill Crescent, Milltimber	
26.	G. Taylor	21 Summerhill Terrace, Aberdeen	39075
27.	C. Thompson	18 Kinmundy Gardens, Westhill	
28.	T. van Waart	1 Boyd Orr Avenue, Aberdeen Office	874865 882329
29.	G. Wishart	Arisdale, Gulberwick, Shetland	Lerwick 2965 Aberdeen 33210
30.	J. Yau	68 Dee Street, Aberdeen	54436

RESTRICTIONS AT DURRIS

It is now fairly certain that use of the slopes at Durris will be restricted this year from approx. June till November. This is because of the grouse shooting.

This has yet to be confirmed so anyone wishing to ascertain the position nearer the time should contact one of the committee who should have the exact dates.

HANDY TIP

Below an electronic handy tip copied from Practical Electronics. Who knows, maybe we get some mighty thermals this summer.

If your radio controlled model out-ranges the transmitter, pre-program it to avoid a crash, with this simple circuit

MODERN digital radio control equipment is normally very reliable, but there is always a danger of loss of signal, due to faulty transmitter, dead transmitter battery, or the model even going out of range.

The normal result of this is total loss of control, and probable loss of the model as well!

The unit to be described can eliminate this problem, because when it is connected in line with a servo, if the signal is lost, after a short time (approx. half a second) the unit feeds a signal to the servo, which causes it to take up a preset position (which can be adjusted throughout the servo's normal range of movement), where it will remain until signal is regained, when control will revert to the transmitter as normal.

A typical installation may require two to four units, normally one for each servo in use, set so that if signal is lost, a model aircraft for example, may go into a shallow dive, circling slowly, with engine at idle.

It is also possible to use them on a glider, so the transmitter may be switched off, and the model left circling, thereby conserving battery life, as receiver consumption is minimal with no servo movement.

CIRCUIT DESCRIPTION

Referring to Fig. 1, IC1 is a CMOS quad 2 input NAND gate connected to function as a data selector. When pins 2 and 12 are "high" the pulses on pin 13 appear at the output, pin 8. When pins 2 and 12 are "low", pulses from the 555 oscillator (connected to pin 5 of IC1), are fed to pin 8.

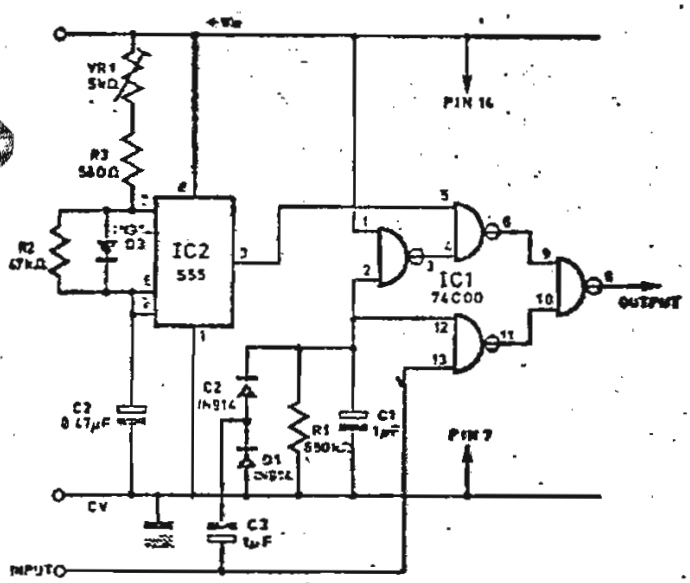
Control of pins 2 and 12 is via the rectifier circuit consisting of C3, D1, D2, R1, and C1. When there is a signal from the receiver coming into pin 13 on IC1 (and also C3), the voltage on the positive end of C1 will be around 4·5 volts, well above the threshold of the CMOS logic i.c., so the pulses from the receiver will be fed through to pin 8, and from there to the servo.

When the signal is lost, there will be a d.c. level on the input to the unit, no signal will pass through C3, capacitor C1 (1μF) will discharge via R1 (680kΩ), and the voltage on C1 will fall below the switching threshold of IC1, and so approximately half a second after loss of signal, control of the servo will be transferred to IC2. When the signal is recovered, C1 will again charge, and control of the servo will be transferred back to the receiver.

The oscillator formed by IC2 is slightly unusual, in that instead of the usual near square wave output, the output consists of short 1–2ms (variable by VR1) positive pulses,

with a gap of approximately 20ms between, thus simulating the output of the receiver decoder.

The operation of the oscillator is as follows: C2 charges via VR1, R3, and D3, until the voltage across it equals two thirds of the supply voltage, at which point pins 3 and 7 of the i.c. go "low", as the internal comparator (I/P at pin 6) switches. C2 then discharges at a much slower rate, via R2 (D3 now being reversed biased) until the voltage on it is reduced to one third of the supply voltage, when the other comparator (I/P at pin 6) in IC2 switches, pin 7 is then effectively open circuit, pin 3 goes "high", and the cycle commences again.



CONSTRUCTION

This unit is *only suitable for positive pulse systems*, which the majority of modern R.C. equipments use.

Construction is fairly straightforward, if normal care is taken. Figs. 2 and 3 show the p.c.b. layout.

Insert and solder all components (taking care to observe correct polarity, etc.), leaving IC1 to the last. This is a CMOS device, and may be damaged by careless handling, unless precautions are taken.

A servo extension lead to suit the equipment is required. To connect the unit, the positive and negative wires in the extension lead should be cut, a short length of insulation should be removed, both positive leads connected to the positive pad on the board, and both negative leads to the negative pad. Now trace the control lead from the receiver (in three wire systems the remaining wire), normally if the receiver connecting block is checked, it will be the only wire not common to all servos.

This should be cut and the insulation removed from the ends. The end that will connect to the receiver should be connected to the "in" pad on the unit, and the other end to the "out" pad. The unit is now ready for testing.

TESTING

Set the preset to mid travel, connect up the R.C. equipment with the unit in line, with the servo. Switch on the transmitter, then the receiver, and check that control is as normal. Switch off the transmitter, the servo should jerk towards one end of its travel, as normal. After a short delay, the servo should move back towards the centre of its travel, and the position may now be varied by means of the preset.

COMPONENTS...

Resistors
R1 680kΩ
R2 47kΩ
R3 680Ω
All ¼ watt 5%

Potentiometers
VR1 5kΩ Sub min hor preset (4·7kΩ will do)

Capacitors
C1, C3 1µF Tantalum bead (2 off)
C2 0·47µF Tantalum bead

Integrated Circuits
IC1 74C00
IC2 LM/NE555

Diodes
D1, D2, D3 1N914/1N4148

Miscellaneous
Printed circuit board (available from W.K.F. Electronics, Worksop 720695)
Servo extension lead—to suit equipment in use.

Fig. 1. (left). Circuit diagram of Failsafe

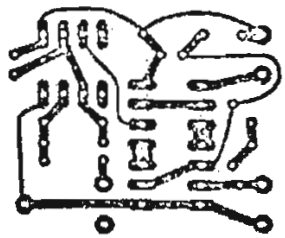


Fig. 2. Printed circuit layout (actual size)

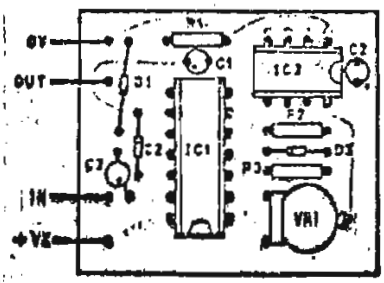


Fig. 3. Component layout