International Aerobatic Club

2015

Rules and Known Proposals
(Power and Glider Aerobatics)

Submitted by:
Brian K. Howard
Chairman, IAC Rules Committee
September 2014

PROPOSAL 2015-01

Affected Rule(s): 7.2.1
Subject: Wing Dips

Background

There continues to be confusion as to the allowable actions following the wing dips to signal the start or restart of a sequence. The rules have been modified to make clear that wing dips can be performed in other than level flight and either inside or outside the box. The remaining confusion, however, is in exactly what the pilot is allowed to do following the wing dips and prior to the first actionable figure. The most common maneuver following the wing dips is either a climb to dissipate energy or a dive to gain energy. Depending on what the first figure to be flown is, these maneuvers can easily be mistaken by the judges for a gradable figure.

Proposed Change

7.2.1
Once wings-level horizontal flight is established following the wing dips which signal the start or restart of a sequence, the next gradable figure begins at the moment the aircraft departs from that wings-level, horizontal flight path. This does not imply that the pilot may not abort the sequence start as allowed in 4.16.1(a). A figure is complete at the moment the aircraft returns to a wings-level, horizontal flight path (upright or inverted). Once horizontal flight path is established at the end of a figure, the beginning of the next figure is considered to have occurred. The only exceptions to this are in the grading of the exit lines in *Aresti Aerobatic Catalogue* Families 7.4.3.x thru 7.4.6.x (Square and Octagon Loops).

Summary

This change removes all ambiguity from the judging line as to when grading should begin following a wing dip signal to start or restart a sequence. The pilot is free to maneuver as necessary prior to the wing dip signal including turns and climbs/dives to adjust energy prior to the first figure, but once the wing dip signal has been completed and the aircraft returned to wings-level, horizontal flight, the next departure from that flight condition will be considered a gradable figure. Note that the change also does not preclude the pilot from aborting the start/restart following wing dips if not satisfied with the starting parameters.

PROPOSAL 2015-02

Affected Rule(s): 8.4.2
Subject: Grading Loops and Part-Loops

Background

Rule 8.4.2 currently suggests a methodology for downgrading observed changes in the radius within loops and looping segments, or when comparing two looping line segments which are required by the criteria to be of equal size. When judges do not have a specific criteria to follow (e.g., unequal line lengths), it results greater variability between judges and an inherent unfairness to pilots who may face a judging panel with widely varying ideas on how to judge looping line segments.

Proposed Change

8.4.2
To be consistent and objective when grading loops and part-loops, the judge must use a method similar to that used for lines and line segments *(See Figure 8.4.4)*. A visible variation in radius within a looping line segment, or in the size when comparing two part-loops, must receive a 0.5 point deduction for each variation; a clearly defined variation must receive not less than a one (1) point deduction for each variation.

Summary

Both judges and pilots are more comfortable when they know exactly what the penalty is for any given error and the magnitude of the downgrade is not left up to the whim of each individual judge. When judges have a set downgrade schedule associated with a given criteria, they are able to be far more objective and consistent, both within a given pilot's sequence and between pilots. The inherent fairness of the judging process is greatly increased by removing the variability in the current methodology. A similar criteria has proven to be valuable and welcome by judges and pilots when grading straight line segments. There is no reason a similar criteria should not be in place for looping line segments.

PROPOSAL 2015-03

Affected Rule(s): 2.1
Subject: Medical Certification for Military Pilots

Background

Rule 2.1 currently states that all pilots not competing in a LSA must possess a current FAA medical certificate. Pilots in the military use a different form in lieu of the FAA Medical Certificate. In addition, CFR 61.23 authorizes such use with:

(9) When a military pilot of the U.S. Armed Forces can show evidence of an up-to-date medical examination authorizing pilot flight status issued by the U.S. Armed Forces and--

(i) The flight does not require higher than a third-class medical certificate; and

(ii) The flight conducted is a domestic flight operation within U.S. airspace.

Proposed Change

2.1
A pilot competing in a Light Sport Aircraft (LSA), regardless of pilot certificate held, must also possess either a valid U.S. driver's license, or a current FAA medical certificate. All other certified pilots of powered aircraft must possess a current FAA medical certificate, ~~or~~ a current medical certificate appropriate to the pilot's license from another country, or the appropriate form from the U.S. Armed Forces. These licenses and certificates must be shown to contest officials on request.

Summary

U.S. military pilots are already allowed to compete at IAC contests without a civilian pilot's license. This change simply acknowledges the difference in paperwork between the civilian and military pilot communities without having any affect on operation or safety of the contests.

PROPOSAL 2015-04

Affected Rule(s): 1.4
Subject: Contest Jury

Proposed Change

At the end of 1.4, add:

1.4(a) An IAC safety representative shall be a member of any contest jury. The IAC Safety Chair should be the first selection as the jury member. Should the IAC Safety Chair not be available, another IAC safety representative shall be selected for the jury, in the order listed below:

1. The IAC Safety Chair

2. An IAC Regional Safety Coach

3. The contest Safety Director, as appointed by the Contest Director

1.4(b) The safety representative shall be a required member of any contest jury. In case of a conflict, the selected jury safety representative may be replaced, for the length of the single specific safety conference, by another safety representative, which must be one of the members noted in 1, 2 or 3 above, in the order listed above.

1.4(c) The IAC Regional Safety Coaches will be identified by the IAC Safety Chair, and will be updated at the beginning of each calendar year. The list of current IAC Regional Safety Coaches can be requested from the IAC Safety Chair.

Summary

This rule change ensures that an IAC Safety Representative is a member of all contest juries. The IAC Safety Representative hierarchy (IAC Safety Chair, IAC Regional Safety Coach, Contest Safety Director) requires the IAC Safety Chair to be the first safety representative selected, if possible. Further, in the case of a conflict during a jury conference or deliberation, there is a mechanism in place to substitute a safety representative with another, for the duration of the specific jury conference.

PROPOSAL 2015-05

Affected Rule(s): 2.6.3(a)
Subject: Judge Currency

Background

As contest participation shrinks, the limited number of available judges and volunteers has forced more and more contests to be run with two judging lines. For those judges that compete and are routinely counted upon to serve as Chief Judges, compiling enough grading judge credits in a contest season has become very difficult. This rule change would allow more judges to maintain currency and serve in a contest role critical to safety.

Proposed Change

2.6.3
(a) In order to attain currency and be added to the IAC Approved List of Judges for the current contest year, each Judge must pass the current year IAC Revalidation and Currency (R&C) Exam with a minimum score of 80% and have been a grading or Chief Judge for thirty (30) flights within the previous calendar year in IAC sanctioned contests. Equally acceptable will be judging twenty-five (25) flights provided at least 5 flights were Advanced or Unlimited Free Programs.

Summary

A good Chief Judge observes most every figure of every flight and is mentally assessing the quality of those figures. While not recording the marks for each figure as a grading judge does, the process is identical. By allowing judges who participate in IAC competition primarily as Chief Judges to be subject to the same currency rules as other judges, it will provide more flexibility in manning the judging lines at all contests.

PROPOSAL 2015-06

Affected Rule(s): 5.7 & Appendix 1
Subject: Primary Sequence

Background

None provided.

Proposed Change

Change the Primary sequence as depicted below:

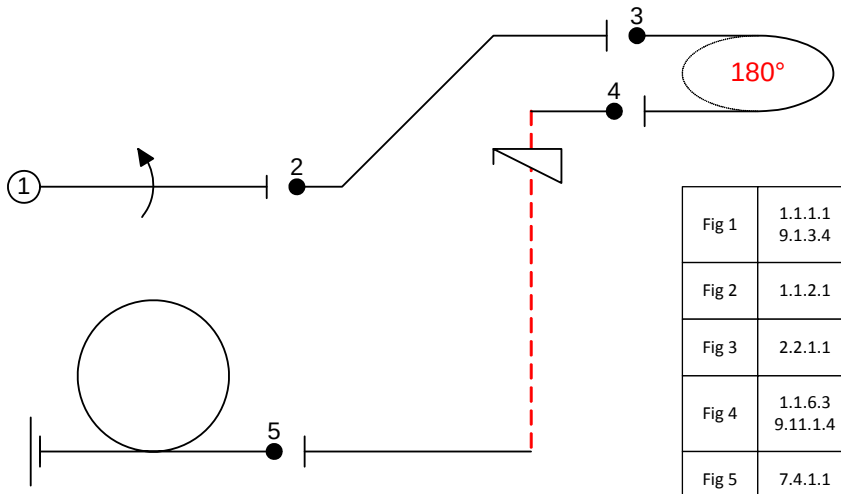


Fig 1	1.1.1.1 9.1.3.4	2 8	10
Fig 2	1.1.2.1	7	7
Fig 3	2.2.1.1	4	4
Fig 4	1.1.6.3 9.11.1.4	10 5	15
Fig 5	7.4.1.1	10	10
Total K = 46			

NOTE: See also Proposal 2014-7

PROPOSAL 2015-07

Affected Rule(s): 5.7 & Appendix 1
Subject: Primary Category

Background

Over the IAC's history we have seen a steady decline in the number of contestants as the performance and cost of our aircraft have dramatically increased. There were 51 Sportsman and 135 total competitors at the IAC Championships at Fond du Lac, WI, in 1975. The average Aerobatic Performance Index (API) calculated from the horsepower/weight ratio, maximum speed, and roll rate of the 1975 competitors was 27. In 2005 (the most recent year for which I have statistics), the average API was 62. Some representative API values are tabulated in Table 1.

Table 1. Some representative API values.

Citabria	3
Clipped Wing Cub	4
150 hp Decathlon	8
180 hp Great Lakes	9
Super Decathlon	10
Skybolt	23
Pitts S-2A	36
Extra 200	41
Pitts S-1S	48
Pitts S-2B	51
Extra 300	76
Edge 540	94

The future of our sport is highly dependent on attracting and retaining our entry level competitors. During the early years of IAC, Sportsman pilots were flying low-performance aircraft, many without inverted fuel or oil systems. Examples of that era include 115 hp Citabrias, 65 and 85 hp clipped-wing Cubs and Taylorcrafts, Luscombes, Ryan PT-22, stock Stearmans, the Great Lakes and Waco biplanes, the Bücker Jungmann,, Monocoupe, Chipmunk, CAP 10, Stitts Playboy, EAA Acrosport, PJ-260, Starduster, Skybolt, Pitts Special, and the Acroduster.

In recent years, we have seen most of these early classics sitting on the sidelines and replaced in the box by high performance monoplanes. Most of our current Sportsman competitors are flying such aircraft. The up-ramping of the energy requirements for the Sportsman sequence, aircraft performance, and cost has gradually excluded a great many aerobatic-capable aircraft and pilots.

The first-level (now called "Primary") category has the potential of attracting entry level competitors and providing a home for the classic, as well as RV, and other modern aircraft capable of light aerobatics. However, it's hard to justify the cost of attending a regional contest to fly three aerobatic figures. Many standard aerobatic flight training programs are now of the 10-hour variety concluding with an aerobatic sequence approximately 75% the difficulty of the present Sportsman Known. For these pilots, the Primary category, at its present level of difficulty, is a step backwards. Moreover, for those few that are attracted to IAC and fly Primary with a low API aircraft, the quantum jump in difficulty excludes many from

advancing to Sportsman. The transition from Primary to Sportsman currently has a more than 300% increase in K-value. The other rungs of our competition ladder are more uniformly spaced with an average increase of about 140% in the K-values of their respective Knowns. Indeed, past studies have revealed that few of the Primary pilots in a given year continue in subsequent years or advance to higher levels. For the experienced pilot flying a low API aircraft, the current Primary sequence is dumbed down to a humiliating level and certainly not serving its intended function.

There is little we can do to affect the health our nation's economy or the costs of fuel, hanger, insurance, and maintenance, all of which have and will take a significant toll on general aviation and our sport. We can, however, improve our entry-level competition environment. In recent years there has not been a good home for the low-performance aircraft (API < 20). The low-performance aircraft has insufficient energy to fly recent Sportsman sequences, the Primary sequence is too easy for the experienced pilot and too short to be cost-effective given the costs of attending a contest.

Our challenge is then to construct a first-level sequence that will encourage and retain new participants and provide a home for the low-performance aircraft with a sequence that measures airmanship rather than API values. In order to address the issues discussed above, the sequence should target a K-value of perhaps 80 or 100. The most fundamental consideration for a well-designed sequence that meets our criteria is energy flow. The low-API aircraft requires careful energy management with the right hand, not the left. The pilot must expend a finite amount of altitude rather than more horsepower on kinetic energy. In my view, fair competition can exist between aircraft of widely different API providing the sequence gives the low-performance aircraft access to its potential energy. If a given figure has a critical minimum energy requirement, there must be an opportunity to convert altitude into speed in the preceding figure. A sequence at this level will provide sufficient challenge to attract and retain new participants, provide a home for the low-performance aircraft, and a much more reasonable platform to advance to Sportsman.

Should this proposal be adopted, a new name for this category which more accurately reflects its purpose would be desirable. However, that's an editorial change which can be addressed later.

Footnote:
*Aerobatic competition is recognized as an extreme sport and, yes, we are all very much aware of how botched Immelmanns, hammerheads, etc. can evolve into various spin modes and how a miss handled spin has a lethal potential, particularly in some types of aircraft. All the more reason to make sure that aerobatic competition pilots at all levels are familiar with proper spin recovery techniques.

Proposed Change

New ‘first-level’ sequence to replace Primary:

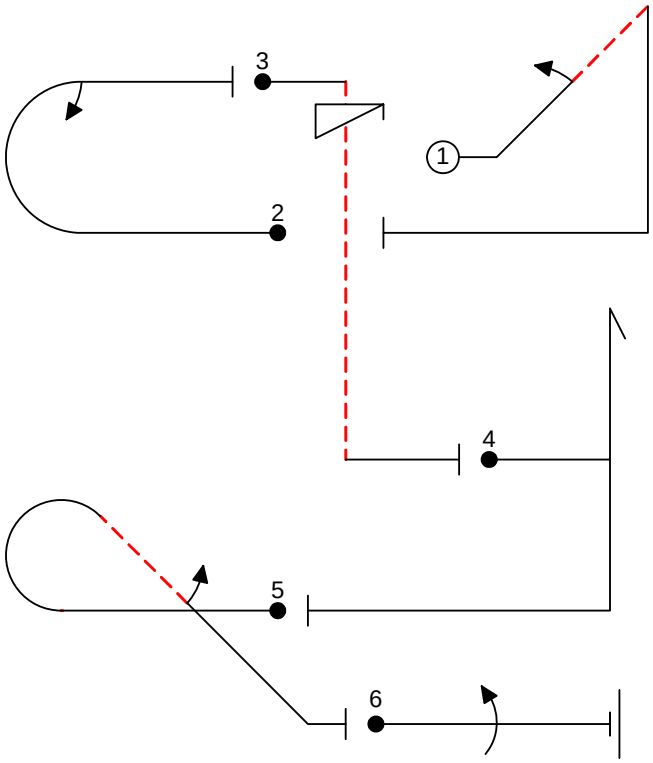


Fig 1	1.2.3.1 9.1.2.2	12 6	18
Fig 2	7.2.2.1 9.1.3.2	6 4	10
Fig 3	1.1.6.3 9.11.1.4	10 5	15
Fig 4	5.2.1.1	17	17
Fig 5	8.5.6.1 9.1.4.2	10 4	14
Fig 6	1.1.1.1 9.1.3.4	2 8	10
Total K = 84			

PROPOSAL 2015-08

Affected Rule(s): 2.6.3(c)
Subject: Judge Currency

Background

It is not uncommon for a judge / competitor to have to take time off from the competition world and miss a season or two. The current requirement to travel to a judges school to regain current judge status if the judge did not grade the required 30 flights the season before can be both time and cost prohibitive. We have lost quite a few good judges in our sport simply because they have missed one season and getting to the second day of judges school may be too difficult. These noncurrent judges are still very active in the sport and competing, however, they are unable to make it to judges school. Therefore, they are not able to become current judges again. I believe that the same amount of knowledge can be gained in the field by assisting a number of flights at a contest, as well as taking an oral exam with a current national judge or two current regional judges, and taking and passing the online exam.

Proposed Change

2.6.3
(c) If a judge did not serve as a grading judge for the number of flights prescribed in 2.6.3(a) and has not attended an approved IAC "Advanced Aerobatic Judging" seminar or the "recurrency portion" (2nd day) of an approved IAC "Introduction to Aerobatic Judging" seminar within the previous two (2) calendar years, currency may be retained by attending an approved IAC "Advanced Aerobatic Judging" seminar or the "recurrency portion" (2nd day) of an approved IAC "Introduction to Aerobatic Judging" seminar and passing the current year IAC Revalidation and Currency (R&C) Exam.

Additionally, if a judge did not serve as a grading judge for the number of flights prescribed in 2.6.3(a) and has not attended an approved IAC "Advanced Aerobatic Judging" seminar or the "recurrency portion" (2nd day) of an approved IAC "Introduction to Aerobatic Judging" seminar within the previous two (2) calendar years, currency may be regained by assisting 30 flights at an IAC sanctioned contest, taking a Practical Exam with two current judges, and passing the current year IAC Revalidation and Currency (R&C) Exam.

Summary

This change would provide an option of regaining currency for an active IAC member who is already at IAC contests. This year at one particular contest, two former judges could have become current judges on the first day of the contest under this proposed change.

PROPOSAL 2015-09

Affected Rule(s): 2.1
Subject: Change Medical Requirement

Background

The population of the acro community is aging. Some highly qualified pilots (even Unlimited caliber) have lost their medicals either temporarily or permanently. With the slow response time of the FAA's medical office, competitors can miss an entire competition season waiting for a response on a trivial medical condition.

Proposed Change

2.1
A pilot competing in a Light Sport Aircraft (LSA), regardless of pilot certificate held, must also possess either a valid U.S. driver's license, or a current FAA medical certificate. All other certified pilots, except those flying with a Safety Pilot *(See 2.2)* of powered aircraft must possess a current FAA medical certificate, or a current medical certificate, appropriate to the pilot's license, from another country. These licenses and certificates must be shown to contest officials on request.

Summary

Allowing competitors without a current medical certificate to fly with a safety pilot keeps them current and fills our categories with quality aerobatics.

PROPOSAL 2015-10

Affected Rule(s): 6.2
Subject: Limit number of figures for Sportsman Free

Proposed Change

Change Table 6.2.1, Sportsman, Maximum Number of Figures, from 15 to, "Current Sportsman Known + 1"

Summary

This change would prevent watered down sequences with nothing but straight lines, turns, and the odd looping figure.

PROPOSAL 2015-11

Affected Rule(s): 6.14
Subject: Free Program Certification

Background

Currently a judge may not certify their own Free. All penalties for illegal Free Programs accrue to the competitor alone. Therefore, to prohibit self-certification of a current IAC Judge/Competitor's own Free Program serves no valid purpose, renders Free Program revision and certification unnecessarily cumbersome, and unfairly and without justification disrespects and impugns the ability, and the integrity, of the entire IAC Judge corps.

Proposed Change

Prior to a contest, it is the competitor's responsibility to have his or her three (3) Free Program Forms checked for compliance with these rules, signed, and dated by a current Judge who must provide their IAC member number on the Form A. The judge's signature does not have to have been in the current contest year, if there were no rule changes which affected a previously certified Free Program's legality. Competitors arriving without Forms A, B, and C being certified in accordance with these rules may be refused entry. Such certification does not relieve the competitor of the final responsibility for the legality and legibility of the forms. ~~A competitor who is also a judge may not sign off his or her own Free Program.~~

PROPOSAL 2015-12

Affected Rule(s): 2.3(t)
Subject: Gliders Flying In Power Categories

Background

Unlimited glider pilots have 3281 feet of vertical space allowed to fly their sequences. Pilots flying a power Intermediate sequence are allowed 2300 feet of vertical space to fly a sequence. An unlimited glider pilot will rarely/never be able to complete the power Intermediate sequence in only 2300 feet of altitude. Glider pilots may not be able to simply start higher than the top of the box and take their chances on getting called "out high" because they may have to exceed the contest waiver altitude limitations to do so. The only other alternative would be to take a break and attempt to use thermals to climb up high enough to finish the sequence. However, thermals of sufficient strength may not be available, so a retow is the only available alternative.

Proposed Change

Add new paragraph to the end of 2.3(t):

Gliders flying power Sportsman or Intermediate categories shall be permitted to take a break during a program and land. As soon as practicable, the glider will be towed to altitude and be released into the box by the Chief Judge to continue their program with the next unflown figure. A break penalty shall not be assessed. Other competitors in the category may be allowed to fly their sequences while the glider is being towed.

PROPOSAL 2015-13

Affected Rule(s): 2.6.1 & 2.6.2
Subject: Judge Qualifications

Background

Change the rules to allow another route to becoming a judge. Any pilot that is or has been on a world team, either Advanced or Unlimited, should be qualified to be a judge. No assistant judge log required. Just take the exam.

Proposed Change

Specifics not provided.

Summary

Any pilot that becomes proficient enough to qualify for the U.S. team has put in the time and has the skills to assess quality of flight.

PROPOSAL 2015-14

Affected Rule(s): 4.16, 4.16.1, 4.16.2
Subject: Signalling

Background

While wing dips are a good idea to signal your intentions to the grading Judges, and should remain part of our sport, they are too easily missed or misinterpreted. As a grading judge, I've seen far too often where a safety roll is thought to be the initial wing dip, then the judge goes head down to review the sequence or socialize and ends up missing the first figure due to the time needed to re-acquire the aircraft when people start yelling "Wing wags!" It also assists the removal of missing the first figure(s) in fast paced contests where the Chief Judge is calling in aircraft quickly to keep the contest moving along.

Moving from wing dips to radio as primary also assists with contest safety and situational awareness. Using the radio to broadcast intentions improves the situational awareness of the Chief Judge, Starter, and aircraft in the hold(s) as to the pace of the sequence currently being flown. Too much is left to interpolation as to what is happening, especially when a competitor is struggling and taking multiple breaks, leaving the aircraft in the hold curious as to the elapsed time and concerned regarding fuel consumption. This change also helps the Starter with launching aircraft at safe intervals if a competitor is taking an unusually long time in the box. The Chief Judge will have more freedom to keep watch over the entire airspace for incursions or other safety issues during a contest as opposed to being required to keeping eyes on the competitor from the hold into the box, increasing the safety margin for the contest.

Competitors should be graded upon the quality of their figures, ability to stay within the box and how they present the figures to the judges. They should not be penalized for wing dips that are deemed "too shallow" or missed completely by personnel on the judges line.

It is time to move forward to using a more reliable and safer method of communication. We finally retired the hot box panels. It's time to move away from wing dips as a primary communication tool.

Proposed Change

4.16 SIGNALING

(a) The standardized signal to the Chief Judge to communicate the beginning, interruption, resumption and end of a sequence will be the aircraft radio. The Chief Judge will relay verbally to the Judges that the competitor has communicated their intentions.

(b) The standardized signal to the Judges is a visible and distinct dipping of the wings. The ideal wing dip signal consists of three (3) wing dips, each with a 45-degree or greater bank angle.

(c) The wing dip signaling may be performed on a horizontal, climbing, or descending flight path, either inside or outside the aerobatic box. If the first figure following the wing dips begins in inverted flight, the wing dips must be performed in inverted flight and the competitor must change the flight attitude from upright to inverted only by a half roll prior to the first wing dip.

(d) The Chief Judge is responsible for assessing one additional Program Interruption penalty for each improper or missing radio communication required by the following subsections

(except in the case of a Chief Judge ordered program interruption). In no case shall the Chief Judge assess more than two interruption penalties per Program Interruption event (one penalty for the actual interruption and not more than one additional penalty for improper or missing radio communication).

4.16.1 Start and End of a Sequence

(a) Each competitor must signal readiness and intent to start a sequence using radio communication in accordance with 4.16, above. The competitor may also signal using wing dips in accordance to 4.16, above, to assist the Judges in acquiring their aircraft visually.

If the signal to start a sequence is made, and the competitor subsequently does not initiate an aerobatic figure and flies through the box, no penalty shall be incurred. When the competitor is again ready to start the sequence, a new radio communication in accordance with 4.16 shall be made.

(b) The pilot should signal the completion of the program and intent to leave the Aerobatic Box by once again communicating via radio. If the competitor desires to perform wing dips and the program ends in inverted flight, the competitor may execute a half roll to upright prior to performing the wing dips. No penalty shall be incurred if this signal is omitted at the end of the program.

4.16.2 Explicit Program Interruption and Resumption

An “explicit” Program Interruption is defined as any interruption to the unbroken flow of a sequence initiated directly by the pilot.

(a) An explicit Program Interruption must be signaled using radio communication described in 4.16, above.

(b) The intent to resume the program after an explicit Program Interruption must be signaled using radio communication described in 4.16, above. The competitor may also signal using wing dips in accordance to 4.16, above, to assist the Judges in acquiring their aircraft visually.

(1) The program must be resumed with the figure immediately preceding the point of interruption, the figure in progress at the time of interruption, or the figure immediately following the point of interruption.

(2) If the program is resumed at any other point, one additional Program Interruption penalty shall be assessed.

(c) Judges will resume grading with the first full figure following the original point of interruption.

(d) Should the Program be interrupted on the Y axis, the Program may be resumed in either direction on the Y axis.

(e) The Chief Judge, or the Assistant Chief Judge, will record each interruption and assess the proper penalty. In no case shall the Chief Judge assess more than two penalties per Program Interruption event (one penalty for the actual interruption and not more than one additional penalty for improper resumption of the program).

Summary

Per 2.3(q), all competitor aircraft are required to have, "A radio capable of transmitting and receiving common VHF frequencies." The rules pertaining to wing dips date back to the days where not all aircraft had, or were required to have, radios.

B	Contest: PROPOSAL 'A'	Category: Sportsman
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

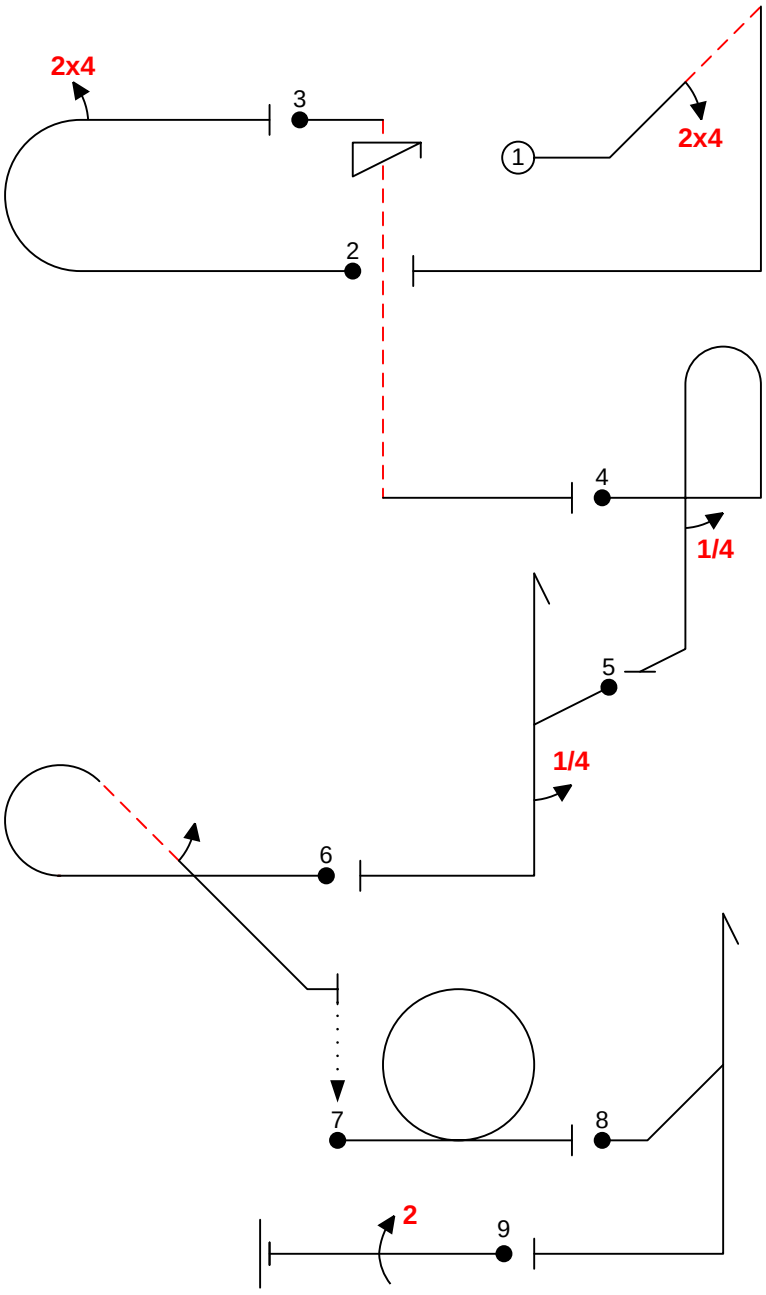


Fig 1	1.2.3.1 9.4.2.2	12 7	19
Fig 2	7.2.2.1 9.4.3.2	6 5	11
Fig 3	1.1.6.3 9.11.1.4	10 5	15
Fig 4	9.1.5.1 8.4.1.1	2 13	15
Fig 5	5.2.1.1 9.1.5.1	17 2	19
Fig 6	8.5.6.1 9.1.4.2	10 4	14
Fig 7	7.4.1.1	10	10
Fig 8	5.3.1.1	18	18
Fig 9	1.1.1.1 9.2.3.4	2 9	11
Total K = 132			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'B'	Category: Sportsman
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

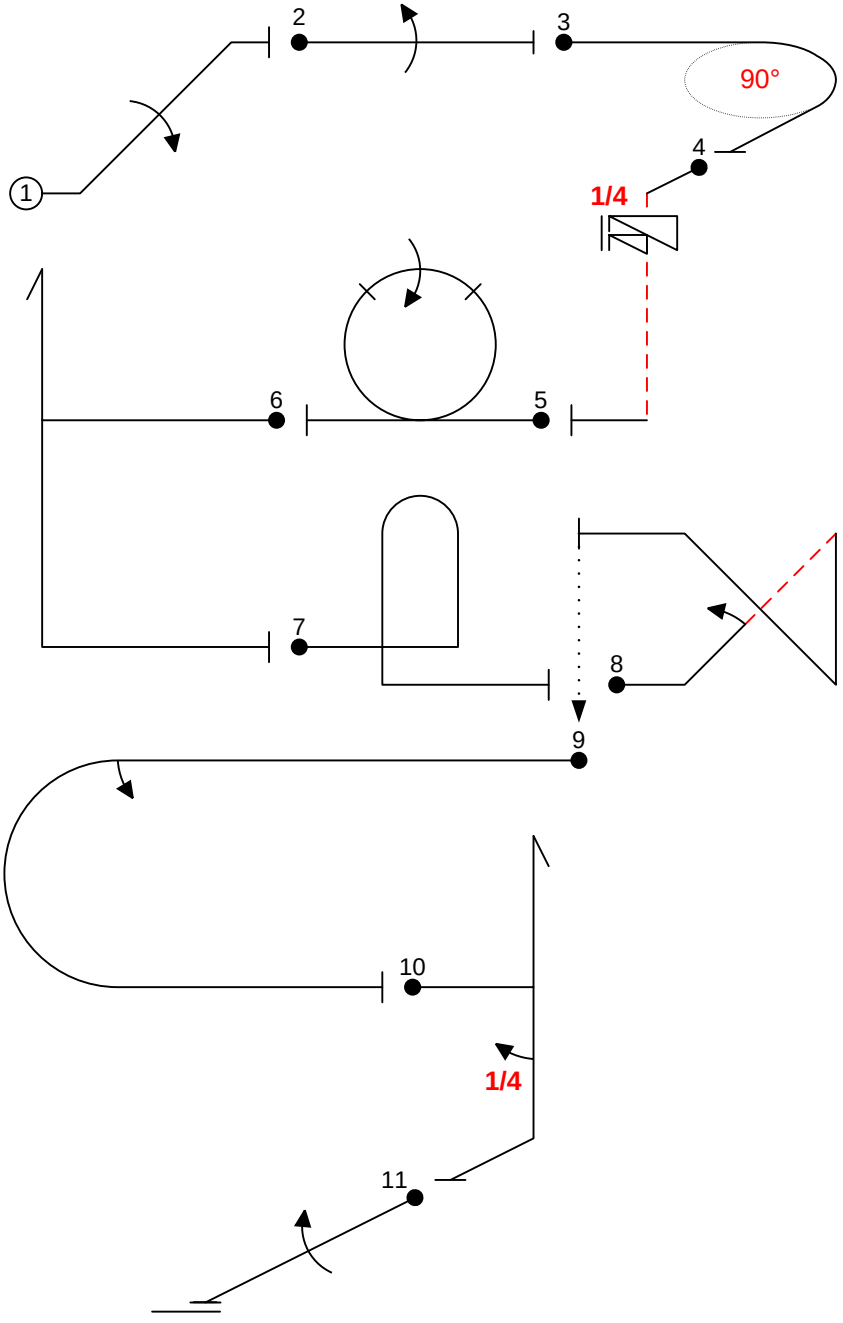


Fig 1	1.1.2.1 9.1.2.4	7 10	17
Fig 2	1.1.1.1 9.1.3.4	2 8	10
Fig 3	2.1.1.1	3	3
Fig 4	1.1.6.3 9.11.1.5	10 4	14
Fig 5	7.4.1.1 9.1.3.4	10 8	18
Fig 6	5.2.1.1	17	17
Fig 7	8.4.1.1	13	13
Fig 8	1.3.2.1 9.1.2.2	18 6	24
Fig 9	7.2.3.3 9.1.3.2	6 4	10
Fig 10	5.2.1.1 9.1.5.1	17 2	19
Fig 11	1.1.1.1 9.1.3.4	2 8	10
Total K = 155			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'C'	Category: Sportsman
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

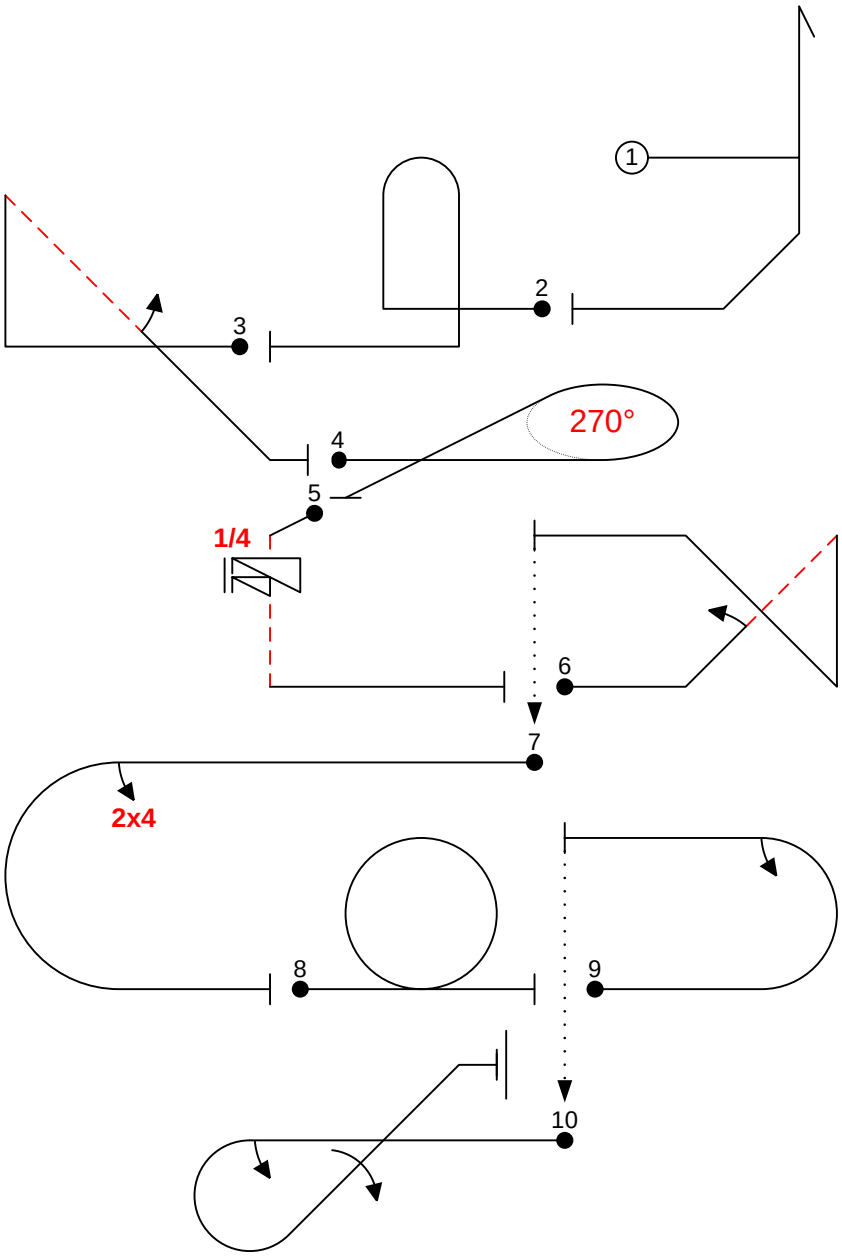


Fig 1	5.3.3.1	18	18
Fig 2	8.4.1.1	13	13
Fig 3	1.2.7.1 9.1.4.2	13 4	17
Fig 4	2.3.1.1	5	5
Fig 5	1.1.6.3 9.11.1.5	10 4	14
Fig 6	1.3.2.1 9.1.2.2	18 6	24
Fig 7	7.2.3.3 9.4.3.2	6 5	11
Fig 8	7.4.1.1	10	10
Fig 9	7.2.2.1 9.1.3.2	6 4	10
Fig 10	8.5.7.3 9.1.3.2 9.1.2.4	10 4 10	24
Total K = 146			

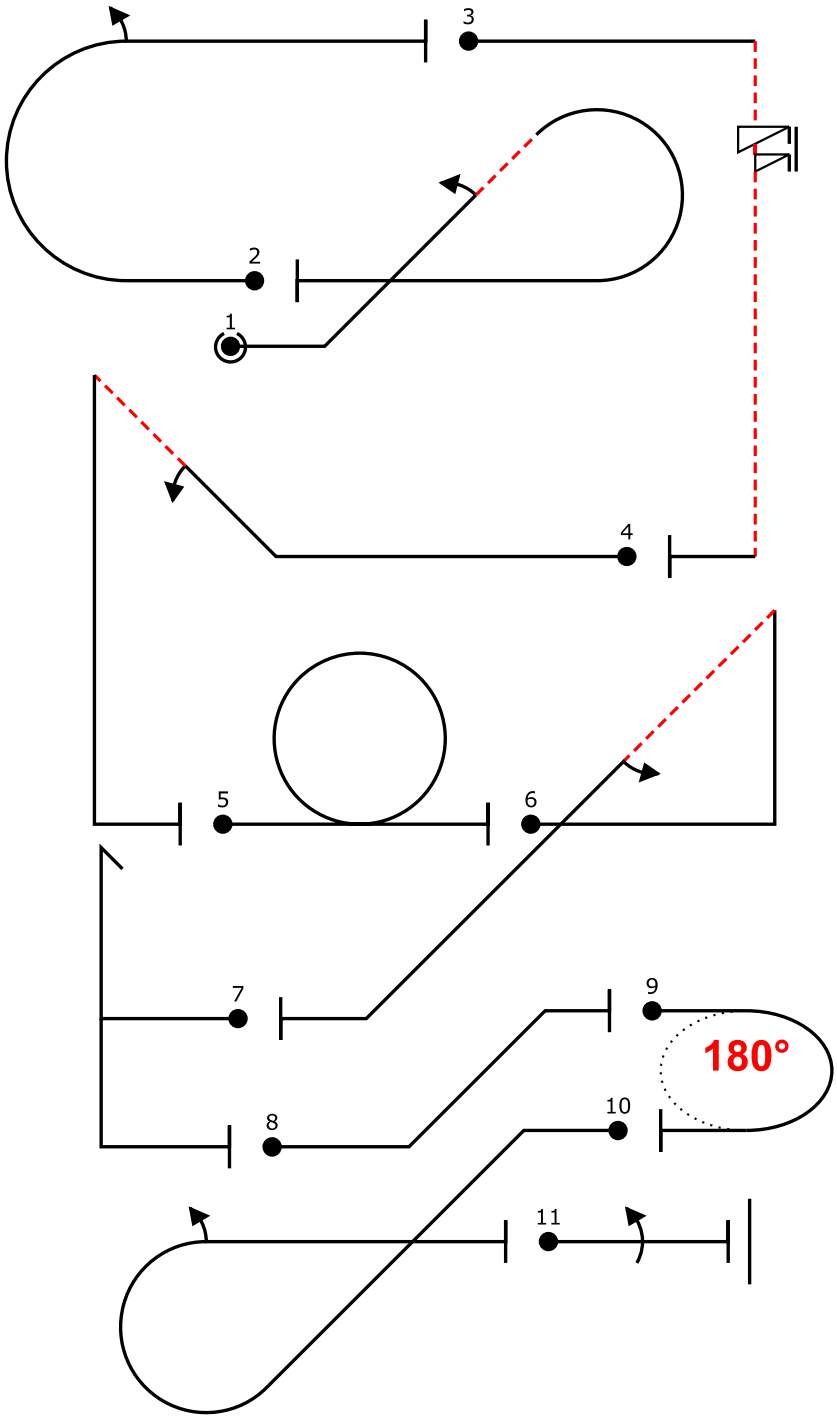
A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'D'	Category: Sportsman
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction



Power			
Fig 1	8.5.2.1 9.1.2.2	10 6	16
Fig 2	7.2.2.1 9.1.3.2	6 4	10
Fig 3	1.1.6.3 9.11.1.6	10 3	13
Fig 4	1.2.3.1 9.1.2.2	12 6	18
Fig 5	7.4.1.1	10	10
Fig 6	1.2.7.1 9.1.4.2	13 4	17
Fig 7	5.2.1.1	17	17
Fig 8	1.1.2.1	7	7
Fig 9	2.2.1.1	4	4
Fig 10	8.5.3.3 9.1.3.2	10 4	14
Fig 11	1.1.1.1 9.1.3.4	2 8	10
Total K = 136			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'E'	Category: Sportsman
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

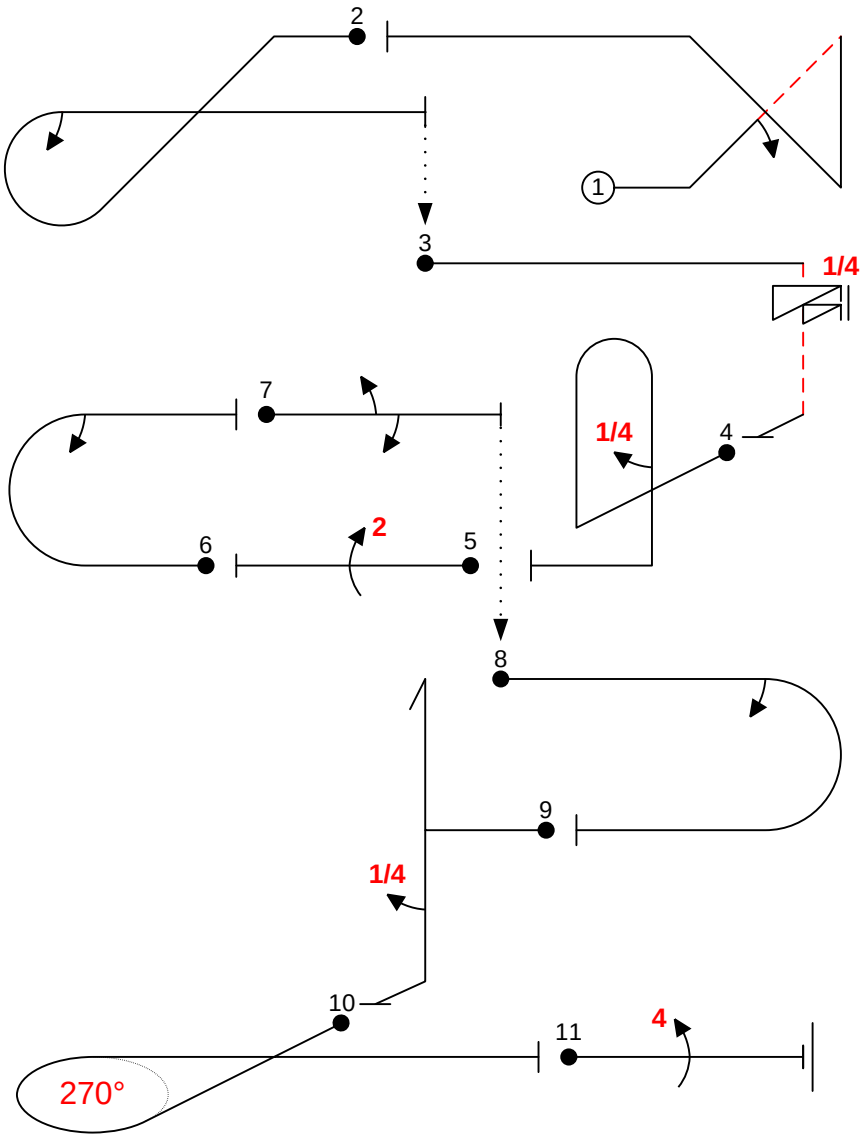


Fig 1	1.3.2.1 9.1.2.2	18 6	24
Fig 2	8.5.3.3 9.1.3.2	10 4	14
Fig 3	1.1.6.3 9.11.1.5	10 4	14
Fig 4	8.4.1.1 9.1.5.1	13 2	15
Fig 5	1.1.1.1 9.2.3.4	2 9	11
Fig 6	7.2.2.1 9.1.3.2	6 4	10
Fig 7	1.1.1.1 9.1.3.2 9.1.3.2	2 4 4	10
Fig 8	7.2.3.3 9.1.3.2	6 4	10
Fig 9	5.2.1.1 9.1.5.1	17 2	19
Fig 10	2.3.1.1	5	5
Fig 11	1.1.1.1 9.4.3.4	2 11	13
Total K = 145			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'A'	Category: Intermediate
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

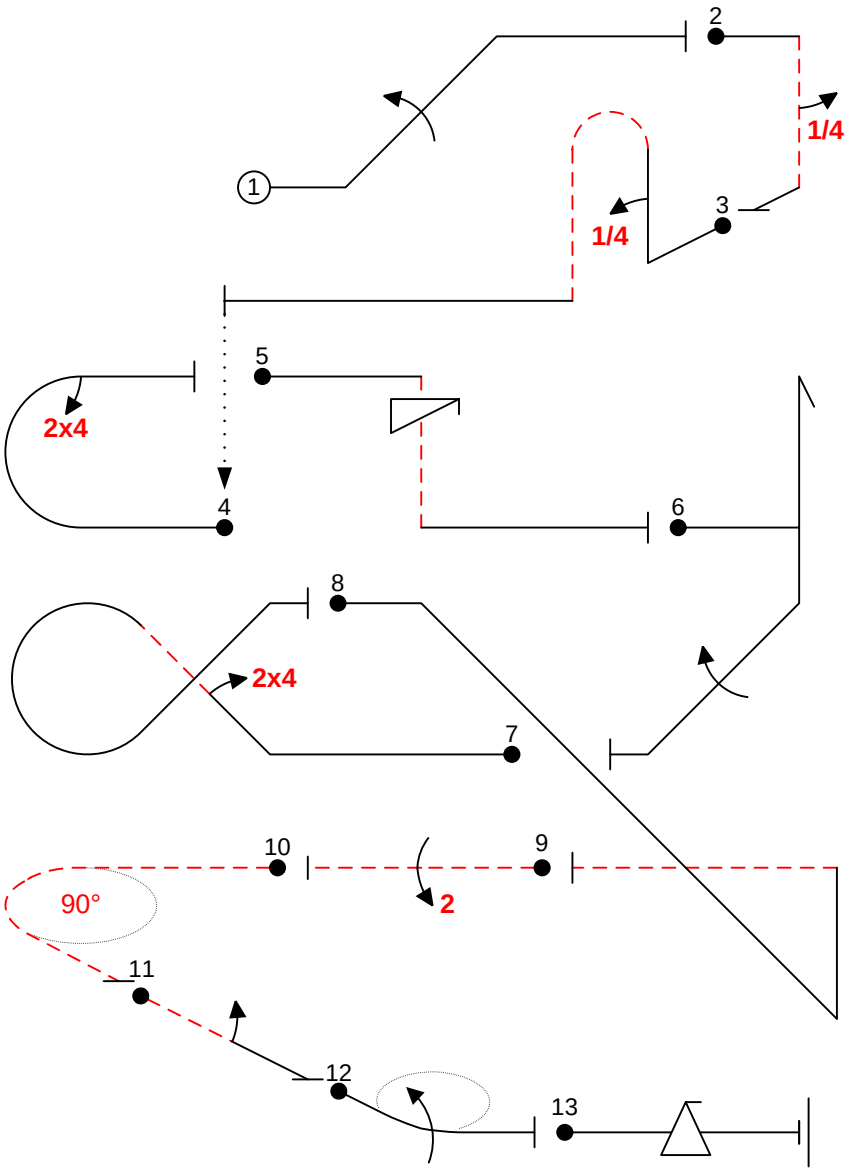


Fig 1	1.1.2.1 9.1.2.4	7 10	17
Fig 2	1.1.6.3 9.1.5.1	10 2	12
Fig 3	8.4.3.1 9.1.1.1	15 6	21
Fig 4	7.2.2.1 9.4.3.2	6 5	11
Fig 5	1.1.6.3 9.11.1.4	10 5	15
Fig 6	5.3.3.1 9.1.4.4	18 8	26
Fig 7	7.3.2.1 9.4.2.2	14 7	21
Fig 8	1.2.2.3	12	12
Fig 9	1.1.1.2 9.2.3.4	3 9	12
Fig 10	2.1.1.2	4	4
Fig 11	1.1.1.4 9.1.3.2	2 4	6
Fig 12	2.1.3.1	14	14
Fig 13	1.1.1.1 9.9.3.4	2 11	13
Total K = 184			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'B'	Category: Intermediate
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

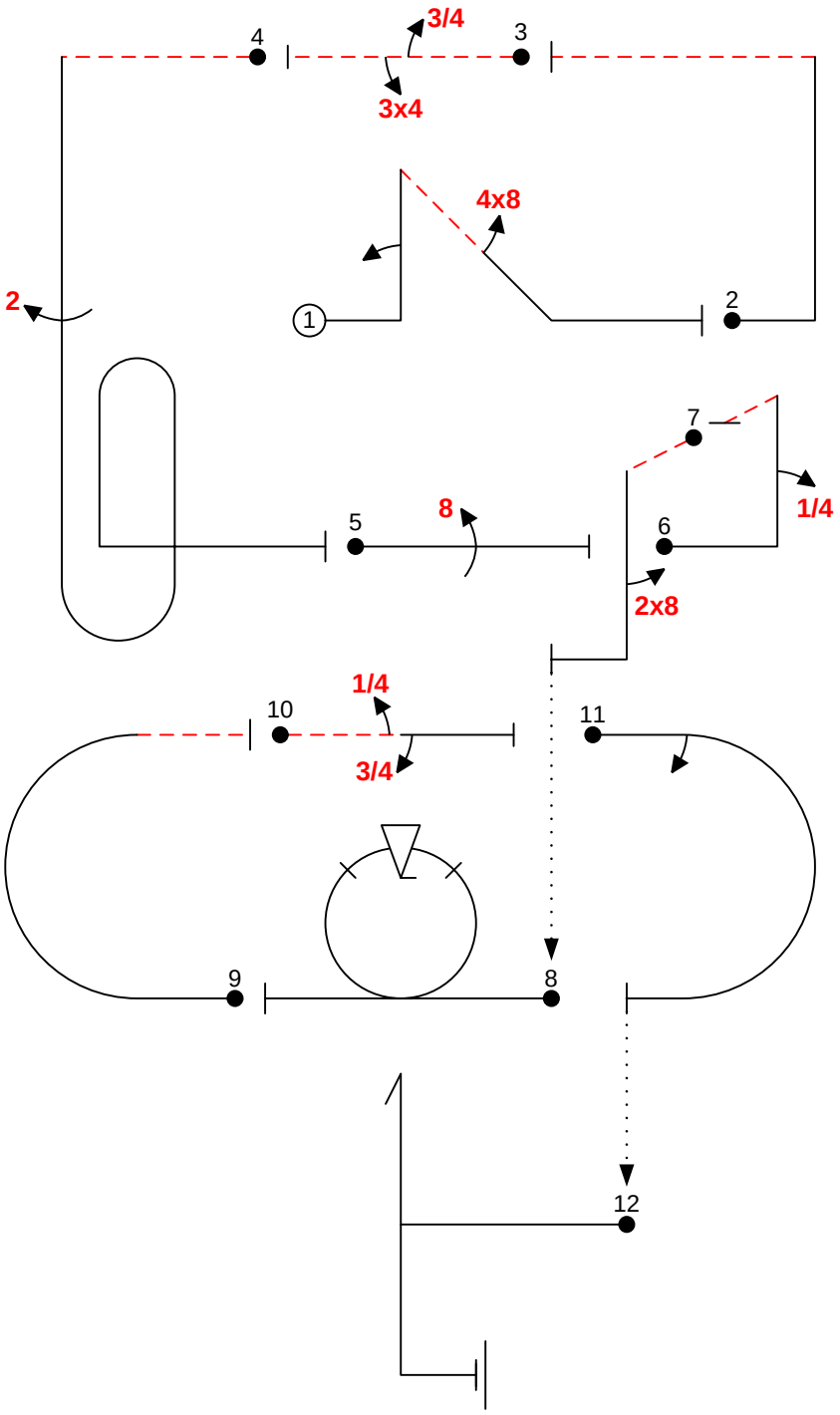


Fig 1	1.2.7.1 9.1.1.2 9.8.4.2	13 8 7	28
Fig 2	1.1.7.1	9	9
Fig 3	1.1.1.2 9.1.3.3 9.4.3.3	3 6 8	17
Fig 4	8.8.1.4 9.2.5.4	18 9	27
Fig 5	1.1.1.1 9.8.3.4	2 15	17
Fig 6	1.1.7.1 9.1.1.1	9 6	15
Fig 7	1.1.7.4 9.8.5.1	9 3	12
Fig 8	7.4.1.1 9.9.3.4	10 11	21
Fig 9	7.2.1.1	6	6
Fig 10	1.1.1.4 9.1.3.1 9.1.3.3	2 2 6	10
Fig 11	7.2.3.3 9.1.3.2	6 4	10
Fig 12	5.2.1.1	17	17
Total K = 189			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'C'	Category: Intermediate
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

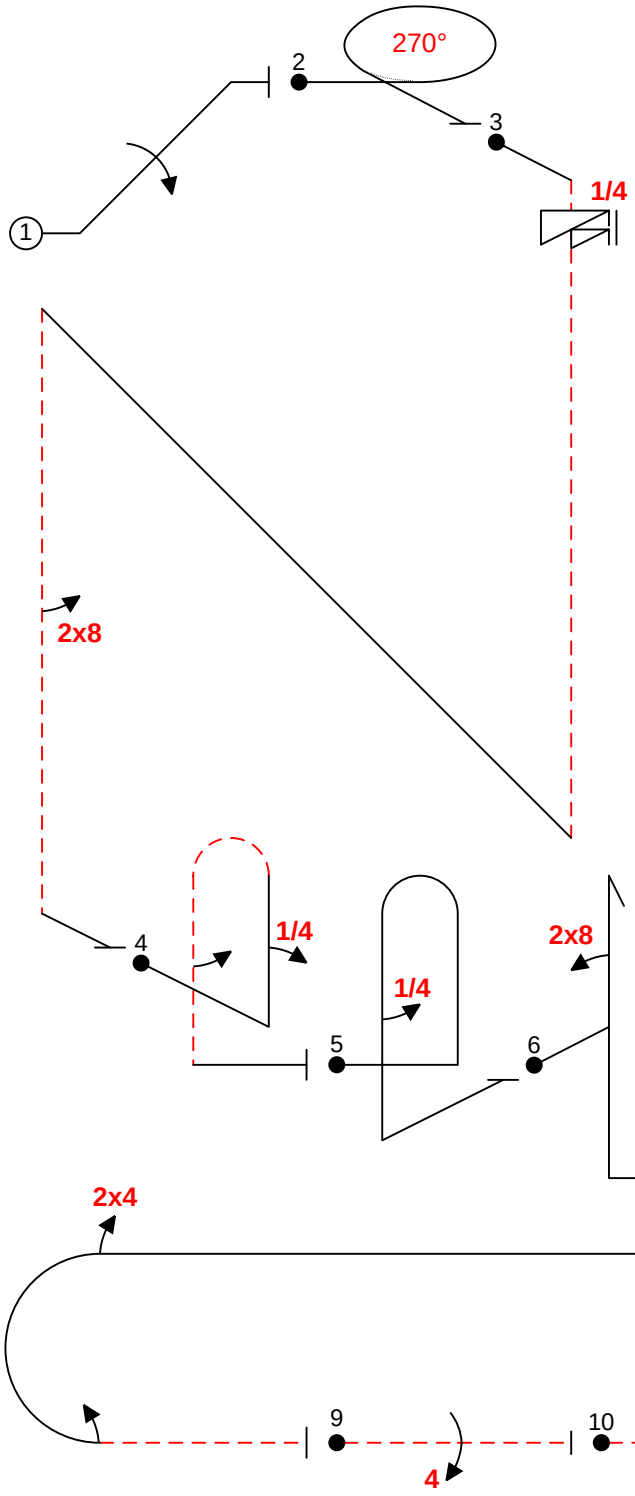


Fig 1	1.1.2.1 9.1.2.4 9.8.5.1	7 10 3	20
Fig 2	2.3.1.1	5	5
Fig 3	1.3.13.3 9.11.1.5	23 4	27
Fig 4	8.4.3.1 9.1.1.1 9.1.5.2	15 6 4	25
Fig 5	8.4.1.1 9.1.5.1	13 2	15
Fig 6	5.2.1.1 9.8.1.1	17 7	24
Fig 7	7.2.2.1 9.2.3.4 9.1.3.2	6 9 4	19
Fig 8	7.2.4.3 9.4.3.2 9.1.3.2	6 5 4	15
Fig 9	1.1.1.2 9.4.3.4	3 11	14
Fig 10	8.5.1.2 9.1.3.8	10 12	22
Total K = 186			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'D'	Category: Intermediate
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

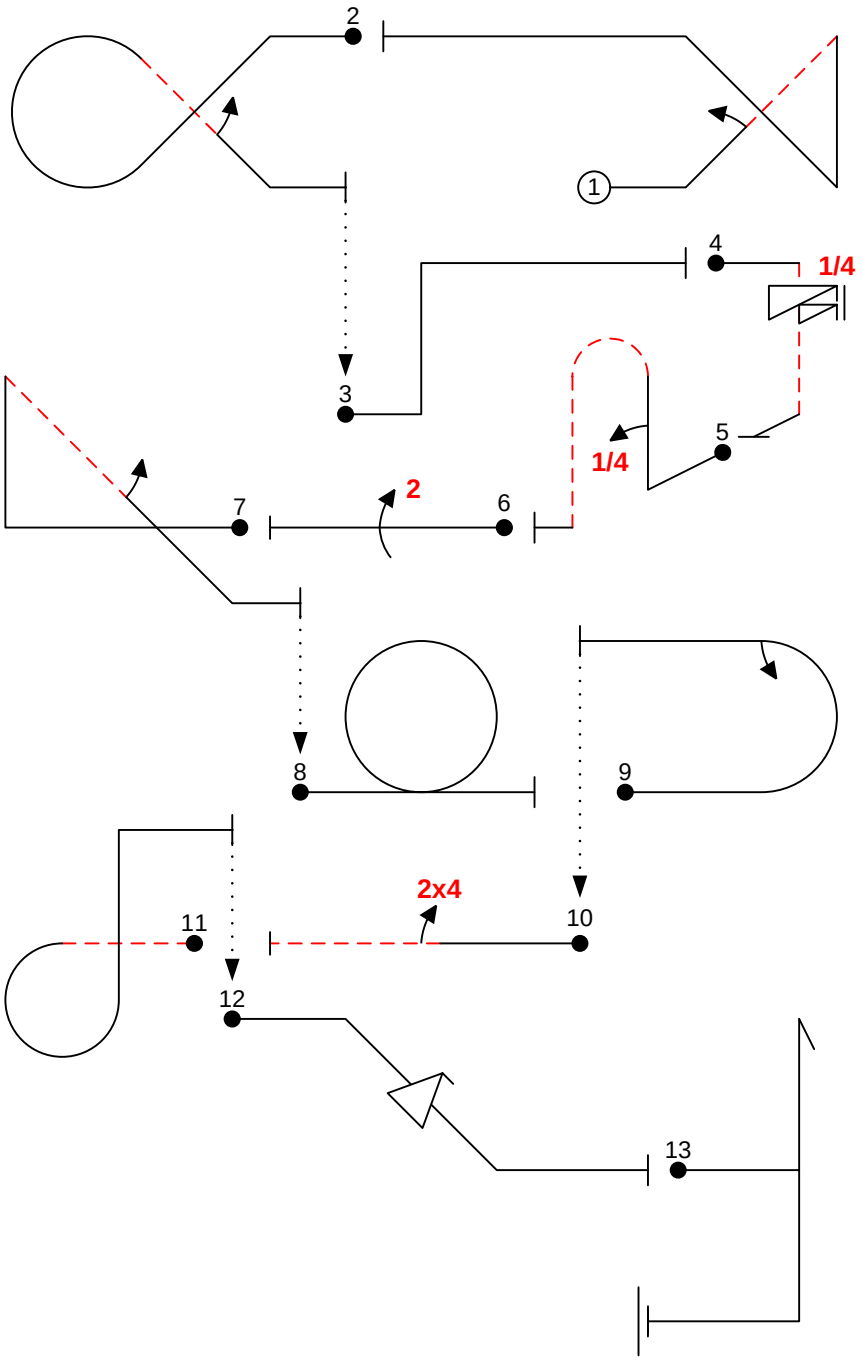


Fig 1	1.3.2.1 9.1.2.2	18 6	24
Fig 2	7.3.3.3 9.1.4.2	14 4	18
Fig 3	1.1.6.1	10	10
Fig 4	1.1.6.3 9.11.1.5	10 4	14
Fig 5	8.4.3.1 9.1.1.1	15 6	21
Fig 6	1.1.1.1 9.2.3.4	2 9	11
Fig 7	1.2.7.1 9.1.4.2	13 4	17
Fig 8	7.4.1.1	10	10
Fig 9	7.2.2.1 9.1.3.2	6 4	10
Fig 10	1.1.1.3 9.4.3.2	2 5	7
Fig 11	8.6.6.4	13	13
Fig 12	1.1.2.3 9.9.4.4	7 11	18
Fig 13	5.2.1.1	17	17
Total K = 190			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: **PROPOSAL 'E'**	Category: **Intermediate**
Date: **2015**	Program: **Known**	Pilot's No.

Pilot:

wind direction

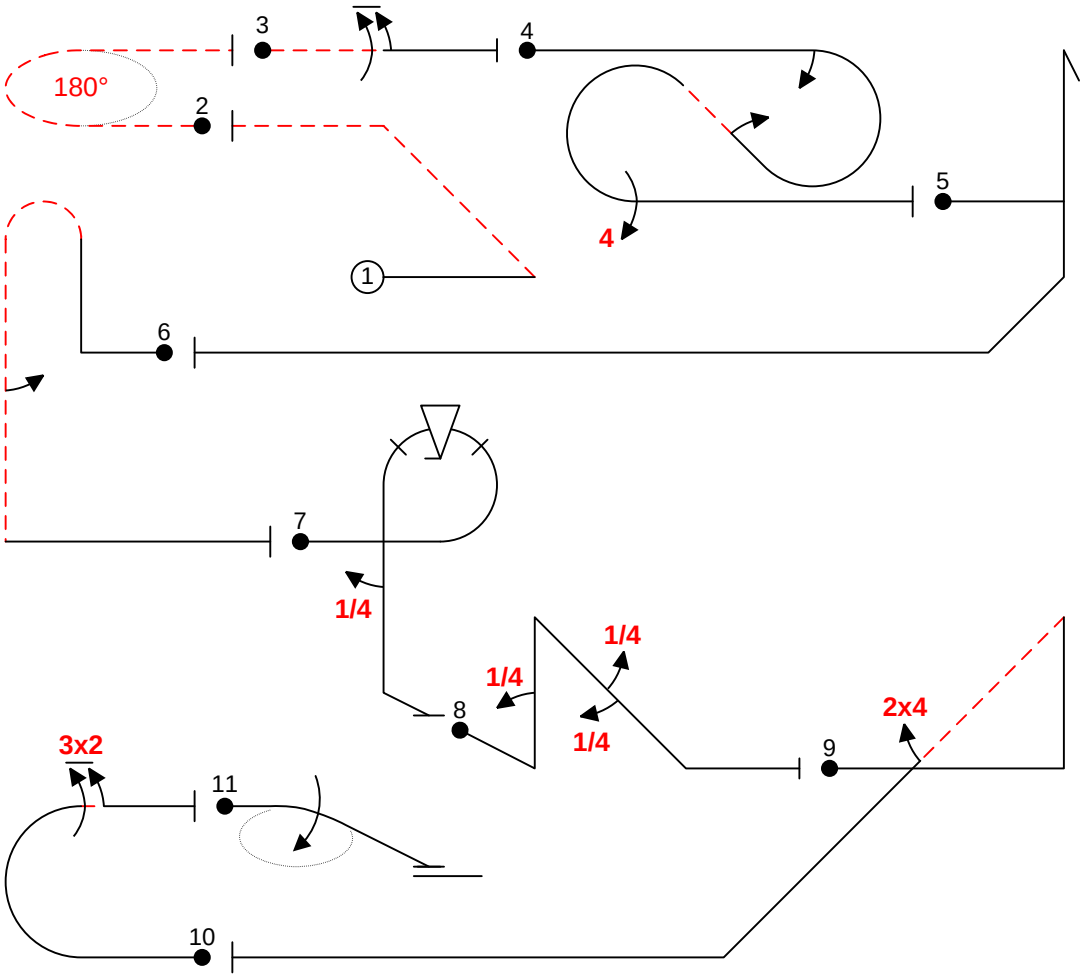


Fig 1	1.1.10.1	9	9
Fig 2	2.2.1.2	5	5
Fig 3	1.1.1.4 9.1.3.6	2 10	12
Fig 4	7.8.2.3 9.1.3.2 9.1.2.2 9.4.3.4	15 4 6 11	36
Fig 5	5.3.3.1	18	18
Fig 6	8.4.3.1 9.1.5.2	15 4	19
Fig 7	8.6.5.1 9.9.3.4 9.1.5.1	11 11 2	24

Fig 8	1.2.6.1 9.1.1.1 9.1.4.1 9.1.4.1	14 6 2 2	24
Fig 9	1.2.7.1 9.4.4.2	13 5	18
Fig 10	7.2.2.1 9.2.3.6	6 12	18
Fig 11	2.1.3.1	14	14
Total K = 197			

A/C:

FREE PROGRAM CHECK BY: (signature/date)

B	Contest: PROPOSAL 'F'	Category: Intermediate
Date: 2015	Program: Known	Pilot's No.

Pilot:

wind direction

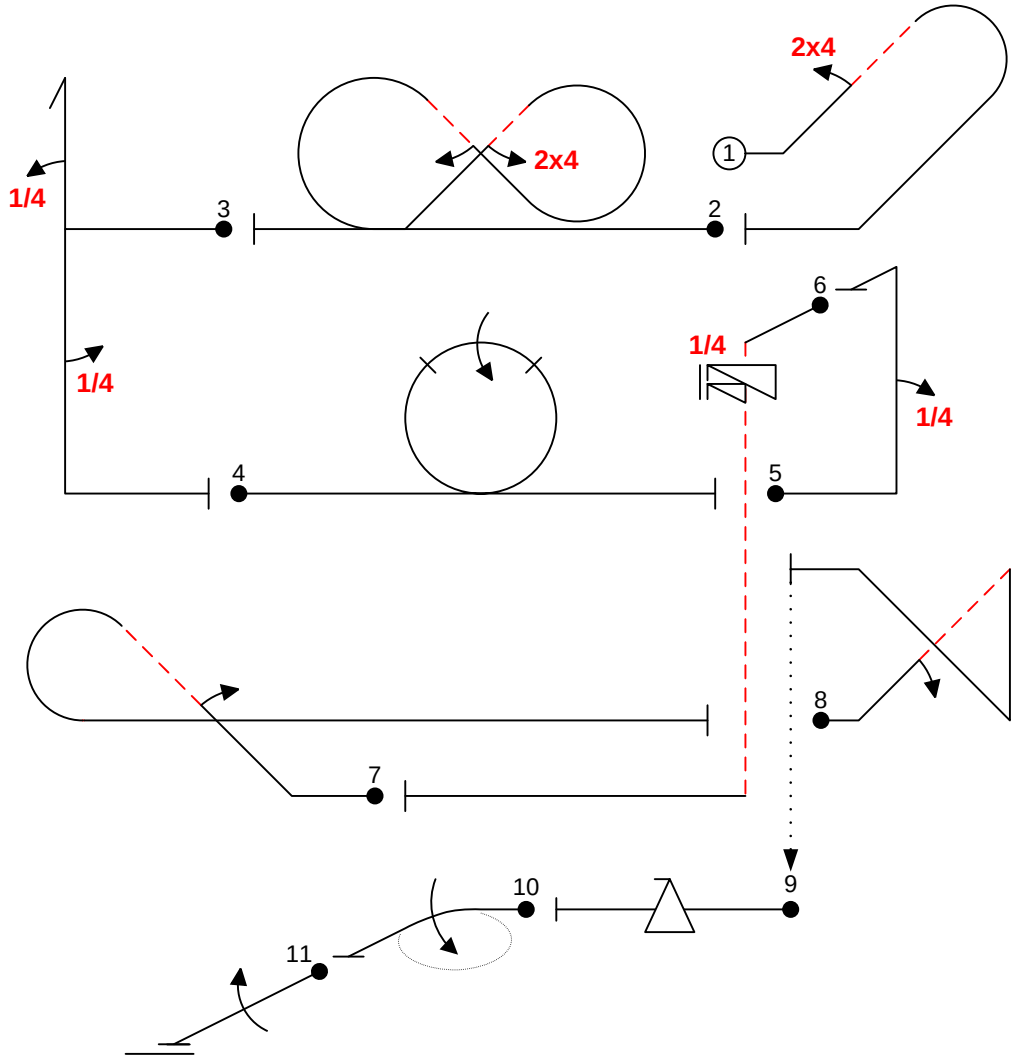


Fig 1	8.4.15.1 9.4.2.2	12 7	19
Fig 2	7.8.4.1 9.1.4.2 9.4.4.2	19 4 5	28
Fig 3	5.2.1.1 9.1.1.1 9.1.5.1	17 6 2	25
Fig 4	7.4.1.1 9.1.3.4	10 8	18
Fig 5	1.1.6.1 9.1.1.1	10 6	16
Fig 6	1.1.6.3 9.11.1.5	10 4	14
Fig 7	8.5.2.1 9.1.2.2	10 6	16
Fig 8	1.3.2.1 9.1.2.2	18 6	24
Fig 9	1.1.1.1 9.9.3.4	2 11	13
Fig 10	2.1.3.1	14	14
Fig 11	1.1.1.1 9.1.3.4	2 8	10
Total K = 197			

A/C:

FREE PROGRAM CHECK BY: (signature/date)