Attention Competitors

At the 2009 Provincial Skills Competition Safety is #1

Each Event Area Will Have Safety Equipment Requirements That Competitors Must Follow

Important: Must Read!

Competitors Must Meet All Safety Requirements To Compete At The Provincial Skills Competition

Please Consult The Scope Document To Determine The Safety Requirements For Your Area

It Is Recommended That Competitors Check The Scope Document To Ensure All Safety Requirements Are Met

Scope Documents May Be Updated Until January 8th, 2009

EVENT: ELECTRONICS	**LEVEL:** SECONDARY
START TIME: 8:00 a.m., April 3, 2009 Note: Orientation Morning of Competition	**LOCATION:** SIAST Wascana Campus, Rm.
INTERNATIONAL TRADE #: 16	**DURATION:** 8 HOURS (8:00-4, including orientation and lunch)

SAFETY REQUIREMENTS: Competitors are required to follow all industry safety standards during the competition. Safety glasses are mandatory for all competitors.

PURPOSE OF THE CHALLENGE:

to evaluate each competitor's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of electronics technology. Also, this competition is designed to develop and foster an interest in the electronics trade.

SKILLS AND KNOWLEDGE TO BE TESTED:

Each competitor will be evaluated in the following areas:

Practical: **100%**

The competition will cover the theoretical and practical aspects of current state-of-the-art electronic industry standards. The competitor may be asked to demonstrate abilities in the following areas:

- Interpret electronic schematic diagrams, pictorials, manufacturer's technical specifications.
- Identify common electrical and electronic components.
- Construct, analyse and troubleshoot DC circuits including series resistance, series parallel resistance and solid state switching.
- Construct, analyse and troubleshoot AC circuits including capacitive, inductive and complex RLC circuits.
- Construct, analyse and troubleshoot analog circuits.
- Construct, analyse and troubleshoot digital circuits including TTL/CMOS gates, timers, and optical devices.
- Hand-solder components on a printed circuit board to acceptable industry standards.
- Hand-desolder through-hole-mount components on a printed circuit board.
- Set-up and demonstrate use of common electronic measuring equipment including multimeters, 0-12 VOLT DC power supply,
- Troubleshoot simple electronic circuits having a preinstalled fault.
- Reverse Engineer a simple electronic circuit.

EQUIPMENT AND MATERIALS:

Supplied by the Committee:

- Dual Power Supply 0 to +/- 15 volts @ 1 amp
- Digital Multimeter
- Solder station (competitors may bring their own stations, **except** Butane soldering devices)
- Projects and Documentation

Supplied by the Competitor:

- Pencils, pens, erasers, rulers
- Safety glasses – not required if prescription glasses are worn
- Two Breadboards, minimum size each 2" x 6" (wire will be supplied)
- Hand-vacuum solder extractor--with or without heating tip-- or solder wick
- Long nose pliers
- Side cutters
- Adjustable pliers
- Wire stripper
- Screwdrivers: blade, Phillips, Robertson (#1, #2)
- "Third Hand" including magnifying glass, or similar PCB holding device
- Power bar, 4 or more outlet (at least)

The Technical Committee will inspect other tools for suitability

CLOTHING REQUIREMENTS:

Competitor Must Provide:

Competitors are to be dressed in a clean and appropriate manner.

No jewellery on hands or wrists. A wrist-watch may be worn.

Competitors will be allowed to listen to music from a personal player during the competition. Only original recordings will be acceptable.

JUDGING CRITERIA

Point Breakdown:

The following descriptors will be used:

Perfect =	10	Medium =	5		
Very Good =	9	Weak =	4	REVERSE ENGINEERING:	20%
Good =	8	Insufficient =	3	BREADBOARD PROJECT:	30%
Rather Good =	7	Bad =	2	SMALL KIT CONST.:	20%
Sufficient =	6	Very Bad =	1	TROUBLESHOOTING:	15%
		Zero =	0	DESOLDER:	15%
					100%

ADDITIONAL NOTES:

In the event of a tie in the competition, the tie will be broken by the mark achieved on the following project sections:

-Construction project
-Troubleshooting assignment
-Reverse engineering assignment
-Current competition documents will be available to the competitor only at the time of the competition.
-Safety glasses must be worn for the soldering/desoldering project.

COMMITTEE MEMBERS:

Brad Amy: L.P.Miller Comprehensive School, Nipawin
Jerry Peters: Swift Current Comprehensive School, Swift Current