

2017 Canada Summer Games Timing & Results Equipment Purchase

1. **TIMING OPERATIONS** – how elaborate the operation is varies by level of meet (is **very “scale-able”**). Emphasis has always been on **reliability, ease of setup and teardown** and **minimizing wear and tear** on equipment (to make it last a long time and to keep volunteer officials coming back).

		A	B	C	D	E	F	G	H	I	J	K	
Type of Meet	“Level of Service”	Double transducers for start signal	Single “outside” timing camera (indoors* or out)	Photo crew manually triggers timing camera to record	Manual sprint /hurdle race wind measurements	Distance race finish order from finish line crew	Photo crew uses photocells to trigger timing camera	Running time clock(s) set out on infield	Daktronics display for results & messages	Additional infield and/or outside timing camera	Running time feed to television broadcaster	Connection to HyTek results system	Comment
1	Small, evening-long Grand Prix meets (~10-20 races)	✓	✓	✓	✓	✓						✓	Most basic setup, quick-and-easy for photo crew.
2	Larger Grand Prix meets and the like (>~25 races)	✓	✓		✓	✓	✓					✓	More setup but easier operation for photo crew.
3	Manitoba Championships like Boeing or MHSAA	✓	✓		✓	✓	✓	✓				✓	Much more elaborate setup, especially indoors.
4	National Championships like CanWest, CIS, National Jrs.	✓	✓		✓	✓	✓	✓	✓	✓		✓	Setup is more elaborate again. Need larger crew.
5	National Championships like National Srs. /Canada Games	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	Most elaborate setup. Precise operation needed to support TV.
<i>Equipment Purchase Item Reference (page 2)</i>		7	1	--	3	2	--	6	4	1	--	5	

* **Note:** Indoor meets require 2 separate timing cameras because of the two finish lines for the infield (sprints & hurdles) and oval (all other races).

2. CANADA GAMES TIMING GEAR PURCHASE

Priority <i>A</i>	Timing Operations Table Ref. <i>B</i>	Equipment <i>C</i>	From <i>D</i>	Rationale <i>E</i>	Number <i>F</i>	Unit Price (CDN) <i>G</i>	Total Price w. taxes <i>H=G+tax(es)</i>	Estimated Freight @ 1.5% <i>I=H*1.5%</i>	Total Price w. taxes & freight <i>J=H+I</i>	Total Cumulative Cost <i>K</i>
1	1	STAR "20/20 Vision" colour photofinish camera with 4-axis head & spatial alignment	RecTec/Swiss Timing	Replacements for: - OSV Bridge console - Hawkeye & OSV Pro cameras - capture and judge laptops	1	\$ 20,800	\$ 21,840	\$ 328	\$ 22,168	
		STAR "220" colour photofinish camera (NO 4-axis head or spatial alignment)	RecTec/Swiss Timing		1	\$ 15,000	\$ 15,750	\$ 236	\$ 15,986	
		Nikon F-mount remote control zoom lens	Winnipeg local		2	\$ 500	\$ 1,130	\$ -	\$ 1,130	
		Laptop for Star operation & judging	Winnipeg local		2	\$ 900	\$ 2,034	\$ -	\$ 2,034	\$ 41,318
	2	ICU front camera system (operate with existing laptop)	RecTec/ICC Sweden	New to improve speed and accuracy judging distance races & relays.	1	\$ 3,800	\$ 3,990	\$ 60	\$ 4,050	\$ 45,368
2	3	Mistral wind gauge	RecTec/Swiss Timing	New to improve consistency & accuracy of wind measurements outdoors.	1	\$ 2,000	\$ 2,100	\$ 32	\$ 2,132	
		Serial signal distribution box	RecTec/Swiss Timing		1	\$ 300	\$ 315	\$ 5	\$ 320	\$ 47,499
3	4	Daktronics Galaxy AF-3160 wireless kit	Daktronics USA	Permit wireless communication with large display board (much easier use).	1	\$ 2,156	\$ 2,264	\$ 34	\$ 2,298	\$ 49,797
4	--	2-way radios travel/charger cases	Big Deal Winnipeg	Streamline care and transport of 2-way radios	2	\$ 500	\$ 1,130	\$ -	\$ 1,130	\$ 50,927
5	5	Field event data terminals	TBD	Allow electronic running of field events & seamless HyTek integration.	4	\$ 750	\$ 3,390	\$ -	\$ 3,390	
		Hytek software licence	TBD		1	\$ 500	\$ 565	\$ -	\$ 565	\$ 54,317
6	6	Running time display boards	RecTec/Oakville ON	Supplement/replacement to UNT4, UNT7 single line running time clocks.	2	\$ 3,000	\$ 6,300	\$ 95	\$ 6,395	\$ 60,712
7	7	OST4 start transducer	RecTec/Swiss Timing	Backup/spares to current start transducers	2	\$ 800	\$ 1,680	\$ 25	\$ 1,705	\$ 62,417

Things to keep in mind:

1. There is no account of equipment needed to support Television coverage of the Canada Games (though there are rumours of a CBC/TSN combo coverage operation?).
2. There would be an opportunity to mitigate the total cost of an equipment purchase by synchronizing some of this AM purchase with one that Aquatics has pending for an upgrade of the timing equipment in the Pan Am Pool. This creates opportunities to leverage better pricing for both sports' purchases, and save on shipping by having all of the equipment shipped together.
3. There will be a limited amount of cabling changes needed in support of the Star camera and Mistral wind gauge. Expect to be able to carry these out largely by ourselves with minimal extra cost.
4. There may be some minor expenses required to repair some of the 2-way radio antennas. These are not included explicitly above.

3. TIMING GEAR PURCHASES AVOIDED

Advantage to making purchase through RecTec is **compatibility** with pretty well all of AM's current timing gear and fieldhouse/stadium cabling. There is therefore the advantage of a number of **avoided expenditures**:

- A. **Start transducers** – have ~4 OST1s (red “Coke can” design) and 3 newer OST4s (small red pencil-sized design).
- B. **Photocells** – have 4 pairs (transmitter + receiver) which were refurbished to new condition in 2014. Highly reliable, these are used at finish lines for impulses to automatically trigger timing cameras to record and stop running time clock with winner's time.
- C. **IDB1 timing signal distribution box** – used to split start and finish signals to feed to different timing devices at the same time (e.g. multiple timing cameras).
- D. **UNT4 and UNT7 single-line running time clocks** – these can be integrated with the Star camera seamlessly and be spread around infield for additional running time displays during races.
- E. **Timing camera tripods and mounts** in Max Bell (including in the ceiling above infield sprint straight), at University Stadium, in Selkirk and in Brandon.
- F. **Cabling** between the timing rooms and infields in Max Bell, at University Stadium, in Selkirk and in Brandon (limited amount).
- G. **Two-way radios** – have total of 10 two channel radios
- H. **Daktronics AF-3160 Display Board (start lists, results and messaging to spectators)** - we have one of these already

Savings by avoiding purchases of the above equipment is estimated in the order of \$75,000 to \$80,000.

ADDITIONAL PHOTO TIMING INVESTMENT

Details and rationale will be provided at the board meeting, this summary is being provided as a brief overview in advance of the meeting

1. **FlashTiming system and carrying case** - \$5000.00: This is a simple photo timing system we can use at Track Attack, High School Series, Royal Rumble, Carman Hershey, Manitoba Games and many other rural meets. It provides accurate timing, we can train teachers to use it in 90 minutes and we can rent it out allowing AM to provide timing services to more of the province. Investment in this system alleviates the stress of finding photo timing officials for day time meets. Sanction and rental fees would allow for replacement and insurance deductibles should the equipment be damaged. The system we are looking at can be viewed here: http://flashtiming.com/products/pkgDeals/pc_strtStandPKG60.php I have had a tutorial with this system, it is straight forward and easy to use.
2. **Timing Booth and Results Building at Stadium (\$20k - \$30k)**: There is an urgent need for a second building in the stands at the stadium for results and photo timing. This building would be 16 X 16 and sit at the same height as the press box but in line with the finish line. This building will provide a separate and quiet area for results and photo as well as better sight lines. The press box gets full, busy and loud during meets and the radio chatter between the track officials and photo interferes with announcing. The addition of this building will provide a much better working environment for the photo timing and results officials, create room in the press box for other meet management functions and improve the sight lines for the photo finish officials. We have preliminary approval to go ahead and get drawings from the U of M. **Through CSG we have the opportunity to get the building built for the cost of materials only, thus presenting AM with a significant opportunity.** This would be ready and in place for the 2017 CSG; ideally in place by May 2017.

SUMMARY OF PROPOSED PHOTO TIMING INVESTMENTS FROM AM

Total cost of all outlined elements: \$97, 417

Grant from CSG: \$40,000

AM Juniors Legacy: \$14,000

AM Proposed Surplus Investment: \$43,417