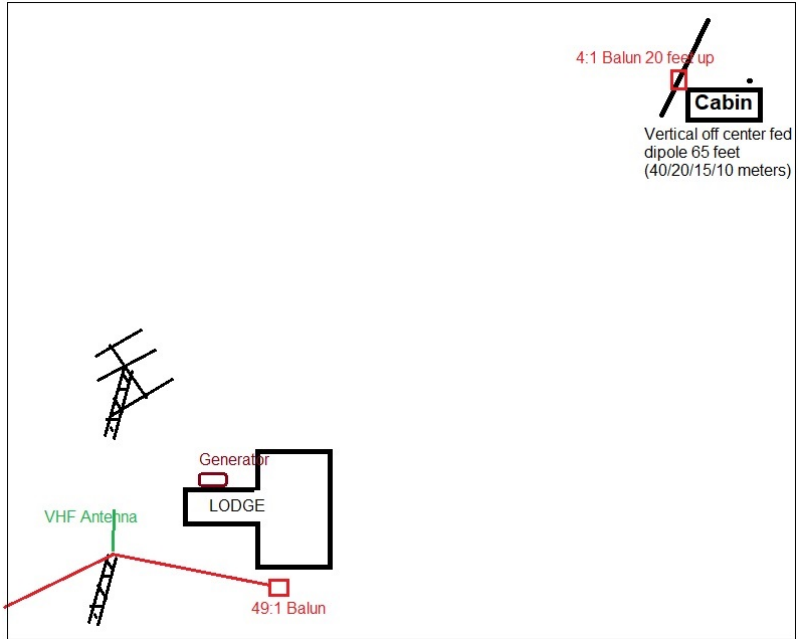


INCIDENT BRIEFING (ICS 201)

1. Incident Name:		2. Incident Number:		3. Date/Time Initiated: Date: Time:	
10. Resource Summary:					
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
STATIONS					
Station #1 (EOC equipment)				<input type="checkbox"/>	Huckstep will transport
Station #2 (Huckstep)				<input type="checkbox"/>	Huckstep radio (will bring)
Station #3 (Wendell)				<input type="checkbox"/>	Wendell radio (will bring) ALTERNATE: Earl Sloan
Station #4 (Gibby)				<input type="checkbox"/>	Gibby radio (will bring)
6m or additional				<input type="checkbox"/>	Rosemary will bring 746Pro GLG provides signalink equivalent
2 Meter Station				<input type="checkbox"/>	We will have Huckstep's system Gordon will bring small ICOM as well
Computers for every station				<input type="checkbox"/>	Huckstep brings his Huckstep brings 2 from EOC Gordon brings his + a spare Rosemary will bring computer Earl supplies rest NO NEW COMPUTERS AFTER DRESS REHEARSAL
Enough monitors for 2 on each station				<input type="checkbox"/>	Huckstep/Eric bring monitors from EOC Gordon brings 3 from home
PRINTER				<input type="checkbox"/>	Huckstep/Eric bring
ELECTRICAL POWER					
Generator Trailer				<input type="checkbox"/>	Leland will transport
Battery Cache				<input type="checkbox"/>	Eric brings EOC batteries Gordon brings his 35Ahr
Solar Panel System				<input type="checkbox"/>	Huckstep provided MTTP Gordon will transport solar system + panel
400 feet of extension cord				<input type="checkbox"/>	Various
ANTENNAS					
3-element YAGI			FRI		Gordon will transport and position

1. Incident Name:		2. Incident Number:		3. Date/Time Initiated: Date: _____ Time: _____	
10. Resource Summary:					
Trailer			5:30		
MARC UNIT TOWER			Fri 1730	<input type="checkbox"/>	With pulley for HF antenna, Spare Pulley Assesmbly for Huckstep 2meter antenna on top American Flag
160 meter wire antenna			SAT	<input type="checkbox"/>	Eric - Gordon supplies MyAntenna Balun
2 meter antenna			Fri 1730	<input type="checkbox"/>	David Huckstep
65-foot vertical off center fed dipole			Sat	<input type="checkbox"/>	Gordon -- for Cabin
Backup 65foot EFHW under portico			Sat	<input type="checkbox"/>	Gordon (in reserve)
High Bands Multiplexer w/BPF			Sat	<input type="checkbox"/>	(Gordon making last minute improvements, will bring)
Low Bands Multiplexer w/BPF			Sat	<input type="checkbox"/>	Eric
MEASUREMENT SYSTEMS					
Spectrum Analyzer			Sat	<input type="checkbox"/>	Gordon - measure coupling Yagi->Vertical 160m->Yagi
COAXIAL CABLE					
700 feet of coaxial cable			FRI/ SAT	<input type="checkbox"/>	Various -- cable for 2m antenna must arrive Fri PM for MARC UNIT
VISITOR RELATED					
Info Table			SAT	<input type="checkbox"/>	Jeff Capehart (brochures and cards, get from Gordon at Dress Rehearsal)
CREATURE COMFORT					
Comfortable Chairs			SAT	<input type="checkbox"/>	Gordon, Wendell & others
Food, snacks, CrockPots, water			SAT	<input type="checkbox"/>	Rosemary
				<input type="checkbox"/>	
6. Prepared by: Name: _____ Position/Title: _____ Signature: _____					
ICS 201, Page 4			Date/Time: JUNE 1 RELEASE _____		

APPENDIX 1 ADDITIONAL ANTENNA DETAIL



**APPENDIX 2
ANTENNA COUPLING/ISOLATION MEASUREMENTS**

**ISOLATION/COUPLING YAGI --> CABIN VERTICAL
TRANSMIT on YAGI; Spectrum Analyzer on Cabin Vertical**

YAGI BEARING	FREQ	POWER (check one)	CABIN SIGNAL dBm	Calculated Isolation
0° North	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
330°	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
300°	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		

**Simultaneous testing to EFHW
ISOLATION/COUPLING YAGI --> 160m EFHW
(Transmit on YAGI, spectrum analyzer (with 20 dB attenuator) on EFHW;
can be measured at same time as above table)**

YAGI BEARING	FREQ	POWER (check one)	EFHW Signal dBm	Calculated Isolation
0° North	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
330°	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
300°	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	21-21.45(15m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	28.0-29.7 (10m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		

-----SEPARATE TEST-----

ISOLATION/COUPLING EFHW --> CABIN VERTICAL
(Transmit on YAGI, spectrum analyzer (with 20 dB attenuator) on EFHW;
can be measured at same time as above table)

	FREQ	POWER (check one)	EFHW Signal dBm	Calculated Isolation
	7-7.3 (40m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		
	14-14.35 (20m)	<input type="checkbox"/> 1watt(30dBm) <input type="checkbox"/> 5watt (36dBm)		

APPENDIX 3
TYPICAL HIGH SUNSPOT CYCLE FIELD DAY BAND USAGE
TYPICAL INCIDENT COMMANDER EFFORTS

Typical Band Usage

TIME PERIOD	Station 1	Station 2	Station3	Distant Station 4
DAY Peak of the afternoon when 10m is open (2023 10m was rarely open)	One station on 10 meters (any mode) One station on 15 meters (any mode) One station on 20 meters, voice or FT8/FT4			Most productive probably 20m CW
After 10m dies (this scenrio used all the way to 8PM in 2023)	One station on 15 meters (any mode) One station on 20 meters (likely voice) One station on 40 meters // alternate with Stn 4 (we ran 6 hrs of dual stations on 20 meters in 2023)			20m CW or 20m Data (Retune ultrasharp filter if moving to DATA with it!)
NIGHT After 15m dies (9PM to 9AM in 2023)	One station on 20 meters upper end One station on 40 meters If nighttime also have options of 80 m and 160m!			20m CW or 40 meters if coexisting with other stations
NIGHT IF 20m dies (did not occur in 2023)	One station one end of 40 meters One station on 80 meters One sttation on 160 meters			opposite end of 40 meters Alternative: put up 80 meter antenna and use ultra sharp 80/75 filters
SUNDAY: As sun rises, move back UP the chart as higher bands open back up, and lower bands die due to D-layer absorption; 80 and 160 will die quickly after sunrise.				

TYPICAL INCIDENT COMMANDER EFFORTS		
1	Respond to visitors or news media	May call on others to assist
2	Observe private network LOGGING for steady progress of stations	Assist any operators who are having difficulties
3	Help solve equipment issues	May call on others for help
4	Monitor for SOLAR FLARES (public internet)	NOAA site helpful: https://www.swpc.noaa.gov/ Watch the GOES XRAY FLUX chart
5	Monitor for Sporadic E 6-meter openings (public internet)	Consider pskreporter.info Use any call Set OPTIONS for - hide monitors if no report

		<ul style="list-style-type: none">- don't hide connection lines- 6 m only- ANY CALLSIGN- 1 hour Observe for any connection!
--	--	--

APPENDIX 4

Step-By-Step CW<-->WSJT-X

GOING TO CW (N3FJP must be able to send CW by controlling ICOM 7300 via port)		
Step	Accomplish	Explantion
1	Close WSJT-X if running	Will release control of ICOM port, in case you want to allow N3FJP to monitor frequency data from 7300
2	N3FJP Settings Transmit CW Setup -- open WINKEYER	(N3FJP must open and keep open, connection to WINKEYER via USB connection) Winkeyer controls ICOM via straight key input so does not need any port on the 7300
3	Optional whether you use N3FJP Rig Interface to allow reading of frequency information	More of a bother to me

GOING TO FT8/FT4 (WSJT-X) (WSJT-X must have port connection to 7300)		
Step	Accomplish	Explanation
1	Close N3FJP usage of WINKEYER <u>if that was happening</u> Settings Transmit CW Setup close the WINKEYER connection	
2	Close N3FJP Rig Interface to 7300 <u>if that was happening</u> Settings Rig Interface Click "END TEST" (Once disconnected, click DONE to exit dialog box)	Should be sufficient to stop connecion to the ICOM 7300. If insufficient, select "NONE" for the type of rig...
3	Start up WSJT-X File Settings go through both Radio and Audio tabs: Make proper selections to connect to ICOM port (baud: 115200) (verify with tests) and Audio Souncards	Once connected you should see signals on the WSJT-X waterfall and correct frequency displayed and WSJT-X able to switch bands on the ICOM 7300.

APPENDIX 5

POSSIBLE NEW ASSET CONSTRUCTION

PRIORITY: HIGHEST

No.	Item	Justification	Volunteer(s)
1	Repair YAGI traps	If working, this antenna significantly reduces WORKLOAD while adding GAIN.	COMPLETED
2	15 meter bandpass filter	Our existing 15-meter paintcan has self-destructed already once	GLG COMPLETED
3	Add new 80m bandpass to Quintplexor	Would allow us to separate out 80 and 160 so we can work both	Gordon COMPLETED
4	Re-do Quintplexer 80/160 to 160 LPF	Part of separating out 80 and 160 so we can work on both	Gordon COMPLETED
5	Redo 80/160 external LPF to be just 160LPF or bandpass filter	Allows for the external bandpass/lowpass for the 160m band	Gordon COMPLETED
6	20 meter receive only FT8/FT4 ultra sharp receive filter	Will allow either CW or Phone to operate simultaneously with 20m FT8/FT4 Constructon Article: http://www.ka2c.com/wp-content/uploads/2021/01/Field-Day-Ultra-Sharp-RX-Filters.pdf	Gordon COMPLETED
7	GROUND RODS	3 Dog Leash with Receptacles for YAGI Tower 2 Grounds with wires for Cabin Generator / Antenna 1 Dog Leash for 160m EFHW	GORDON COMPLETED

PRIORITY: MEDIUM

No.	Item	Justification	Volunteer(s)
1	Comfortable Chairs	Improvement Item #6, would make life more comforable for operators	1) Gordon bought 1 Need another 4 avail 2) Wendell will bring 3) Wendell will bring 4) 5)
2	Cables to run receive only filters from 7300	Wiring from relay "send" output (phono plugs) to control filters that are receive only	Gordon COMPLETED

PRIORITY: LOWER

No.	Item	Justification	Volunteer(s)
1	True 80m bandpass	We can currently use 80 & 75 m receive only (relay controlled) filters	GORDON Completed
2	Ultra sharp 40m receive CW or FT4 filter	Would allow simultaneous phone operation from non-colocated site; adds another 20 dB to 50 dB antenna separation Construction article: http://www.ka2c.com/wp-content/uploads/2021/01/Field-Day-Ultra-Sharp-RX-Filters.pdf	NOT DONE
3	Ultra sharp 40m receive only phone filter	Would allow simultaneous CW or FT4/FT8 operation from non-colocated site; adds another 20 dB to 50 dB antenna separation Construction article: http://www.ka2c.com/wp-content/uploads/2021/01/Field-Day-Ultra-Sharp-RX-Filters.pdf	NOT DONE

APPENDIX 6: SWR MEASUREMENTS

ANTENNA:			
Indicate SWR at all applicable frequencies.			
BAND	SWR @ Bottom Edge GENERAL CLASS	SWR @ Bottom of Phone Band GENERAL CLASS	SWR @ Top of Band
160 meters	1.8MHz:	N/A	2.0MHz
80 meters	3.525MHz:	3.8MHz	4.0MHz:
40 meters	7.025MHz:	7.175MHz:	7.3MHz:
20 meters	14.025MHz:	14.225MHz:	14.350MHz:
15 meters	21.025MHz:	21.275MHz:	21.450MHz:
10 meters	28.0 MHz:	28.300MHz:	N/A
6 meters	50.0 MHz	N/A	54.0 MHz
2 meters	144MHz:	N/A	148 MHz:

**APPENDIX 7
DUE DILIGENCE
REVIEW OF 2023 FIELD DAY IMPROVEMENT PLAN**

No.	Item	Comment / Assignment / Completion
1	Winkeyer Problems Investigate why WINKEYER kept closing and Function Keys not working for N3FJP CW scripts on HF-1	SOLVED: lack of "saving" config See: https://qsl.net/nf4rc/2023/FieldDay2023/CWContactSuggestions.pdf (hidden file gets saved without notice)
2.	Computer Configurations Issues More training on computer configuration & setups	A. Winter field day big success B. Tech Nite April - attended by Eric, David, Mike, Brian, Earl, Rosemary, Manish
3	Computer Configurations Issues Block diagram of how to switch between CW & WSJT-X (each wants control of the 7300 port!)	COMPLETED!
4	CW Paddles More emphasis on the 1/4" versus 1/8" connectors required of paddles to go into 7300 versus WINKEYER ¹ Operators may wish to have converters or have their entire setup ready to connect to 7300.	Will be emphasized
5	Avoid need for External Tuner If Possible -- Not Applicable: not planning to use Antenna #2 this year.	
6	CHAIRS Borrow some bigger, very comfortable chairs for longer operations	Gordon bought prototype. Other volunteers to buy / borrow?
7	Dual Monitors Provide dual monitors for at least four positions, to make data operations easier	Gordon brought 2 and Earl indicates he has another 2! Gordon planning to buy another in Black Mountain
8	Larger PIO team - Lorilyn had volunteered	Lorilyn no longer participating, need additional help
9	Additional computer training a) Provide a Tech Nite dealing with computer issues b) Provide a test station at either the EOC or at a dress rehearsal at a time when people can come and spend several hours	A) Tech nite April delivered - 7 attendees B) Practice Station @ EOC scheduled for Wednesday June 19 C) Need Quiz

1 Documented in our CW Suggestions Document: <https://qsl.net/nf4rc/2023/FieldDay2023/CWContactSuggestions.pdf> but not recognized by everyone

	working out computer learning issues c) Provide a Quiz designed to help participants learn where they may have important blind spots in the computer interfacing skills needed	
10	REDUCE paperwork reading#1 Provide new Incident Action plans only on specified days every two weeks and have a " change list " that details "changes" or updates to help participants know what has been improved	Version 1 came out MAY 1 Version 2 came out JUNE 1
11	REDUCE paperwork reading#2 Move RESOURCE details to a separate document just as PIO duties, OPs duties, CW, Voice, Digital, and Field Day Bulletin, as well as Antennas etc have already been.	COMPLETED
12	REDUCE Paperwork #3: Bite-Sized Tasks Provide bite-sized tasks every week in the months leading up to the Field Day and provide Assessment Reports (e.g., by Google Forms) that allow people to gauge their success at the bite-sized task and the group to gauge preparation	Bite Sized #1: IAP Page 1 - March 20 Bite Sized #2: New Construction Vol List April 8 2024 Potential examples include: <ul style="list-style-type: none"> • Read FT8 Suggestions • Sign up for desired time slot • Read antenna descriptions • Sign up for niche tasks as desired • Read how to capture ARRL Bulletin • Contact Logistics Chief with items this week • Tag all your items • Read Field Day Rules from ARRL • Purchase buffet tickets at meeting • Read Dimension 4 document • Read N3FJP SSB logging suggestions <p>This FAILED as only a very small percentage returned the included "quiz." Without reading, writing is a waste of time.... So it was DISCONTINUED in favor of SCRAMBLE PLANNING.</p>
13	Reduce lesser-effective outreach efforts <i>Reduce the effort and time spent on GOTA efforts and on visitor outreach</i> to allow more focused energy on contacts	Minor effort planned 2024

14	Bluetooth Unnecessary No further need for the Bluetooth monitoring of radios; this was never needed by docents	Discontinued
15	Winter Field Day Practice Operate in WINTER FIELD DAY, where voice, cw, and PSK/RTTY are usable modes, and attempt to dramatically reduce antenna requirements through a multiplexer type device; consider operating 3I (3 station, indoor) at the EOC. <i>Practice the above Paperwork Reduction ideas in this effort.</i>	Big Success! > 10,000 points. Results typically don't come out until nearly the next year....
16	Reduce Antenna Setup Effort Pursue tri- quad- or penta-plexor so that we can reduce the effort required to have multiple transmitting antennas ² A total separation of at least -40dB is required for safety; -50dB minimum for good operation; use of attenuators may be required.	BIG SUCCESS: Setup dramatically reduced by construction of 20/15/10 Triplexer and 80/160/40 addition.
17	Intermediate Coax Lengths Obtain additional 18-25 foot lengths of RG8X coax	Earl indicates he has 350' of RG8X and willing to make plenty of cables! Take him up on it! SUCCESS: Wendell has made several lengths
18	Night Air Conditioning Investigate if we can have some AC at night in the Freedom Center	Operations will need to check the controls at Cuscowilla!
19	Unwanted PACC Contest Investigate the unwanted PACC designation in WSJT-X. Provide training how to set and remove contest designations.	DONE! Was explained how to "uncheck" the box to include the contest type.
20	Automatic Emergency Defibrillator AED at the site	Cuscowilla has an AED

2 Note that our calculations that > 50dB separation between stations is required for coexistent operations proved generally correct. Our antennas were generally in the 30-40 dB separation range except for Antenna #5 which was much better isolated. K6KV-type triplexer (e.g. Dunestar) achieve only -26 dB reduction. DXEngineering triplexers are more in the -30 dB reduction. VA6AM designs utilize a combination of LPF,HPF and Bandpass in triplexers with dedicated series-tuned traps to notch out undesired bands--and achieve -30 to -33 dB reductions (still requires additional bandpass filtering to achieve desired -50 dB) Those are available in kit form in a range of \$150, as triplexers. VA6AM prefers to use a HPF/LPF "split diplexer" in an attempt to add 40m to the 20/15/10 system. His designs focus of minimum LOSS. HPF/LPF generally have lower loss than bandpass designs. See data at: <https://va6am.com/2017/01/25/first-blog-post/>

21	Practice Logging Database Investigate the process of switching to a new database at the beginning of the Field Day period	There is some nuance to this that we don't yet recognize; HF-4 was still seeing "practice" QSOs in the main database at start time.
22	Time Services Build a 2nd NTP time server	Not Yet Built <i>Doubt that it can be done this year</i>
23	VHF Data Systems Test winlink systems prior to Field Day	Will need testing at Dress Rehearsal
24	Sunlight Readable Display(s) for any outdoor stations Sunlight readable displays for a possible GOTA effort or other outdoor operation.	We may have reduced or no outside efforts; however consider solutions pointed out by David et al.
25	Generator Trailer Wiring Extension Flat 4-blade trailer wiring extension for the mast/generator trailer so it can reach Leland (or other) pickup truck wiring	ORDERED: 4/8/2024 DONE!!
26	Generator Kill Switch Repair Grease, improve, or replace the gas generator kill switch	DONE! Exercised. Works now.
27	Generator Start Key Secure the diesel generator key, and possibly get a duplicate key	Secured; haven't yet found duplicate
28	Diesel Priming / Fuel Gauge System Add a priming piping (known Navy modification) to the diesel generator fuel piping. If possible, make out of clear TYGON to allow dual function as "gas gauge"	NOT YET DONE The alternative is to provide 17mm wrench so that either end of the fuel system can be loosened to bleed air. Replaced the failed FUEL FILTER. Planning to install BETTER FILTER
29	Slingshot Maintenance Annually, purchase replacement slingshot bands	Earl points out his launcher (which is an EXCELLENT one) is readily available! Extra slingshot rubber tubing sets ordered 5/29/2024 -- DONE - ARRIVED
30	Onsite Printer Consider obtaining an onsite printer	We already have a portable printer of our own at the EOC; might get current inkjet cartridges. DONE -- NEW PRINTER @ EOC
31	Operating Schedule Post copies of the operator schedule	To Be Done
32	Training Room	SET UP!!! Either at EOC during daytime, or at Gordon's house (by appt) June 19th

	<p>Mentoring for participants for whom reading the IAP is a stumbling block:</p> <p>Provide a "training room" where a separate transceiver can be operated with mentoring if requested, to practice operating in Field Day. A training video may also be helpful.</p>	<p>afternoon/evening Wednesday June 19 just before Field Day</p>
33	<p>Buffet tickets</p> <p>Use "tickets" @ a nominal cost, such as \$3, to help us know who really intends to be part of the buffet -- and Hotwash, and teardown! These can be made available at two meetings prior to the event, and at any Dress Rehearsal and any Antenna Setup Day. After that, foodstuffs can be accurately purchased.</p>	<p>To Be Done</p>
34	<p>W1AW ARRL Bulletins</p> <p>Teach techniques to use FLDGI to copy ARRL bulletins via RTTY, PSK, and MFSK-16 and hold practice at this</p>	<p>We only had 3 persons attempt to copy the bulletin 2023; this was no improvement from the prior year and suggests a need for additional training.</p> <p>1) - explained during April Tech Nite 2) - Hands-on June TechNite - attended by 6</p>
35	<p>Backup Mice for Computers</p> <p>Unexpected all our identical mice would not work! Had to have different vendor type mice for them to work in the same room.</p>	<p>Earl found TWO dead batteries & they seemed to work afterwards. Need to check interference to see if they all work in same room. ADD: BRING EXTRA BATTERIES!!</p> <p>Gordon put batteries in his computer bag.</p>