



ROUNDTABLE

PRESIDENT'S MESSAGE

By Gerry Villhauer – W0GV

Hello DRC Members,
 I sincerely hope you all are having a wonderful summer. I hope you all agree that our new meeting place, the Jefferson County Court and Administration Building, is a wonderful facility! It is very difficult to find a meeting place with all the amenities that are available at this building. I feel we are very fortunate to be there and a big DRC THANK YOU goes to our members Dave Baysinger, WG0N and Jeff Irvin, KB0CHT. Their contacts and negotiating ability put us there...Thank You Again!

A couple weeks ago our technical committee completed the installation of a new antenna at our 147.330 east site. We had a great turnout of tech committee members, thanks to each one of you. We still have some technical issues with the repeater to finish, but this is well underway and will be completed soon.

Welcome to our new members. Thank you for choosing the DRC as YOUR club. I invite you to stay active and join in all club activities.

There was so much to say last month about our new meeting location that I forgot to mention our Field Day in June. It was a big success thanks to Jason, AC0UA for organizing it. We had the largest number of visitors we've ever had at a field day event, there was lots of interest from new hams and folks curious about joining the ham ranks. The bands were not the best but; a good time was had by all! A special thanks to Berry, KA0BBQ, for bringing and manning The Salvation Army Canteen. Nobody went away hungry or thirsty.

Bryan, KBOA, was the first presenter at our new meeting place. Thanks Bryan for an interesting presentation on the MFJ Analyzer and the other new and continuously changing technology available to ham radio. Our August program will be given by Jim Beal, K0TOR. Jim will be giving precursor presentation in preparation for the tour planned for September at the Lockheed Martin Failure Analysis Lab. This will be a rare opportunity to visit a facility that few people will ever get to see. Details are in this RT issue.

Please don't forget OUR BIG EVENT, THE DRC Hamfest on Sunday August 17, 2014 at the Jefferson County Fairgrounds. Details are in this RT issue and on our website w0tx.org. Please come support YOUR hamfest and bring along a friend. I hope to see you at the next event.

73,
 Gerry, W0GV
 President

New Meeting Location!
 For more information on the new meeting location and how to get there go to Page 9 in this publication.

INSIDE THE ROUND TABLE

July Meeting - What'd I Miss	Pg 2	Up Coming Events	Pg 6
Tech Committee Report	Pg 3	Calendar	Pg 7
Message from The ARRL	Pg 4	DRC Information	Pg 8
Franktown Repeater Going Up	Pg 5	Big News	Pg 9 & 10

JULY MEETING - WHAT'D I MISS

By Bill – W6OAV

We met this month in our new facilities at the Jefferson County Administration building. This facility is first class with great audio and video facilities. A special "Thank You" goes to Jeff, K8OCHT, and Dave, WG0N, for obtaining the facility for us.

There were 53 attendees. After introductions, W0GV gave an overview of the 147.33 repeater antenna party that took place at K8TZZ's location. K0TOR then announced that, if there is interest, he will conduct a 14 week general license class (see article elsewhere in this publication). He will also conduct a tour of the Lockheed failure analysis lab on Sept 6th at 9AM.

The meeting was then turned over to the guest speaker, Bryan, KB0A. His PowerPoint, titled "Choosing the Right Platform", covered two subjects. The first subject was a comparison of the Beagle Bone Black (BBB) and Raspberry Pi (Pi) single board computers. The second subject was an overview of the Tiny Python Panadapter that Bryan is building for his KX3 transceiver.



Bryan gave an in depth comparison of the BBB and Pi single board computers. He covered the following areas:

- Ease of setup.
- Connections.
- Processors.
- Hardware Accessibility.
- When to choose one over the other.

Bryan then discussed the Tiny Python Panadapter which appeared in the April 2014 QST. It is basically a BBB based radio spectrum scope which displays the magnitude of input signals versus frequencies within one or more bands. Bryan covered the following areas:

- Panadapter architecture.
- 4DCAPE-43 display architecture.
- Configuring the system.

Bryan finished his panadapter presentation by demonstrating his BBB with a 4DCAPE-43 display. He hopes to complete and demo the panadapter in the very near future.

Bryan ended his presentation with an overview of the MFJ225 Graphical Antenna Analyzer. He covered the following areas:

- Specifications.
- Standalone measurements.
- Computer Interfaced measurements.
- Using the software.
- Types of graphs produced.
- Checking coax parameters filters, etc.
- Available apps.

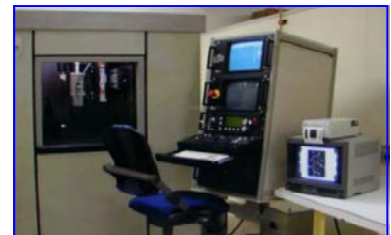
The audience was very impressed with what they had learned from the presentations.

AUGUST MEETING PRESENTATION

By Jim – K0TOR

At our August meeting Jim Beall, K0TOR will give a presentation on the Lockheed Martin Failure Analysis Lab. The Mission of the Failure Analysis Lab is to identify the root cause (failure initiation mechanism) of a hardware failure. The presentation will describe the analysis process and the related equipment in the lab. This is a state of the art facility that contains many fascinating instruments. This presentation will serve as a precursor to the tour of the Failure Analysis Lab on Saturday, September 6th from 9:00 AM to 11:30 AM. A description of major instruments, basic operation and typical applications will be covered. This will help give you a better understanding of how the instruments operate and what they do.

An example is the Fein Focus 160Kv High Resolution CT (Computerized Tomography) scanner. This instrument provides x-ray imaging at magnifications up to 1,000 X. Samples can be manipulated during imaging.



I believe you will find this field of work intriguing and the equipment capability surprising. A spin off of this field of work has benefited each one of our personal lives.

(Continued on page 3)

(Continued from page 2)

Who's New In The DRC

The DRC is a very active club in the Denver metro area and we'd like to have all of our members listen for these new calls and personally to make them feel welcome.

Rick Reid	No Call
Ed Weston	K7EDW
Rodney Johnson	KA0USE
Linda Gates	No Call
Norman Smith	AD0BQ
Cathy Villhauer	KE0BCZ

Welcome to our newest members. We have a number of activities throughout the year and we'd like very much for you to participate in serving your community. If you have questions please feel free to ask on any of the repeaters or see the contact information on the last page of this publication. Also please join us once a month at the regular club meeting on the 3rd Wednesday at 7pm. For new hams we have the Elmer session which starts at 6:00pm before the regular meeting.

More information can be found on the Denver Radio Club website at <http://www.w0tx.org>.

JULY TECH COMMITTEE REPORT

By Bill – W6OAV

This report provides an overview of the items discussed at the July meeting.

TS-940 Repair (K0TOR)

Goal: Determine if re-soldering and cleaning connectors will fix radio.

K0TOR has the repairs almost completed.

Voter System Redesign - South (W0GV)

Goal: Install and evaluate the test repeater at K8ZTT's site:

Antenna installation on the tower went well. However, the Mastr II suffered a sensitivity problem. Consequently, the Kenwood was left in place. AC0UA later determined that a power supply problem was causing the sensitivity problem. AC0UA repaired the Mastr II. The following needs to be done:

- Build a shelf for the repeater.
- Install PolyPhaser.
- Replace the Kenwood with the Mastr II.

Initial tests indicate an improvement in repeater coverage. Members are asked to send coverage reports to the tech committee.

Voter System Performance Testing - East (W0GV)

Goal: Evaluate the test location at N1ETV's site:

System is working well. WW0LF will provide a test signal generator to be used to align the links. Members are asked to send coverage reports to the tech committee.

145.49/448.625 Repeater - New Controller Programming (AC0UA)

Goal: Program and test our 7330 controller to allow the splitting of the repeaters when D13 ARES uses the 145.49 repeater for emergency activities (plus other features).

AC0UA has completed Phase 1 (repeater control). Phase 2 will be programming the voice announcements, etc.

145.49/448.625 Repeater - Controller and Radio Upgrade (WW0LF)

Goal: Replace the S Com 7k with the preprogrammed S Com 7330 and replace the Synors with Kenwoods.

WW0LF has all cables assembled and ready to go. Installation will occur when the Kenwood is freed up at the K8ZTT test site.

DRC/TSA Station Move (W0GV)

Goal: Dismantle the station and install in the new TSA location:

- Inspect the new location and design the new station layout.
- Develop a move plan and move date.
- Obtain volunteers.

No move date yet. W0GV will write up a document for the TSA specifying what the DRC requires for the new station.

Voter System Expansion - East (W0GV)

Goal: Locate additional sites.

Members are researching several possible sites.

DRC IRLP/Allstar (Group discussion)

Goal: Determine if IRLP/Allstar will add enhancements to the DRC/Echolink system.

Research has shown that IRLP will not add any advantages to the DRC system. Members will research Allstar and report at the next meeting.

The calls in red are project coordinators.

VOLUNTEERS NEEDED FOR HAMFEST

Our club's annual hamfest is coming up later this month on Sunday the 17th. As always we will need volunteers to assist with set-up, vendor registration, ticket sales and clean-up after the Hamfest. No kitchen duty, we have outsourced that to the local Lions Club.

The biggest need for support is at 6:30 AM to set up the table covers (the tables and chairs are set for us by Jeffco). We also need help for the vendor check-in this will include some folks to watch the doors, assist vendors and keep non-vendors out of the facility. Once the doors open to the public at 8:30 things slow down but we need help for the clean-up which starts at about 1 PM. All that's left at that time is to remove the cardboard covers from the tables, repack them and sweep the floor and take out the garbage.

A MESSAGE FROM THE ARRL

Subject: [FCG] ARLB015 House Bill Would Require FCC to Extend PRB-1 Coverage to Restrictive Covenants

SB QST @ ARL \$ARLB015
ARLB015 House Bill Would Require FCC to Extend PRB-1 Coverage to Restrictive Covenants

CZCZ AG15
QST de WIAW
ARRL Bulletin 15 ARLB015
>From ARRL Headquarters
Newington CT June 28, 2014
To all radio amateurs

SB QST ARL ARLB015
ARLB015 House Bill Would Require FCC to Extend PRB-1 Coverage to Restrictive Covenants

A bill with bipartisan support has been introduced in the US House of Representatives that calls on the FCC to apply the "reasonable accommodation" three-part test of the PRB-1 federal pre-emption policy to private land-use restrictions. HR.4969, the "Amateur Radio Parity Act of 2014" was introduced on June 25 at the request of the ARRL, which worked with House staffers to draft the proposed legislation. The bill's sponsor is Rep Adam Kinzinger (R-IL). It has initial co-sponsorship from Rep Joe Courtney (D-CT). If the measure passes the 113th Congress, it would require the FCC, within 120 days of the Bill's passage, to amend the Part 97 Amateur Service rules to apply PRB-1 coverage to include homeowners' association regulations and deed restrictions, often referred to as "covenants, conditions, and restrictions" (CC&Rs). Presently, PRB-1 only applies to state and local zoning laws and ordinances.

"There is a strong federal interest in the effective performance of Amateur Radio stations established at the residences of licensees," the bill states. "Such stations have been shown to

be frequently and increasingly precluded by unreasonable private land-use restrictions, including restrictive covenants."

The 11-page PRB-1 FCC Memorandum Opinion and Order is codified at Part 97.15(b) in the FCC Amateur Service rules, giving the regulation the same effect as a federal statute. In short, PRB-1 states that local governments cannot preclude Amateur Radio communications; they must "reasonably accommodate" amateur operations, and the state and local regulations must be the minimum practicable regulation to accomplish a legitimate governmental interest. Subject to those guidelines, municipalities may still establish regulations with respect to height, safety, and aesthetic concerns.

For 28 years, FCC regulations have "prohibited the application to Amateur Radio stations of state and local regulations that preclude or fail to reasonably accommodate Amateur Service communications," the bill points out, "or that do not constitute the minimum practicable regulation to accomplish a legitimate state or local purpose." Since PRB-1 was enacted, the FCC has said several times that it would prefer to have some guidance from Congress before extending the policy to private land-use regulations.

HR.4969 has been referred to the House Energy and Commerce Committee. Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure.

ARRL Hudson Division Director Mike Lisenco, N2YBB, is a principal advocate for the current legislative initiative to gain PRB-1 recognition for CC&Rs. Lisenco said the most urgent task now is to get additional co-sponsors to sign onto HR.4969.

NNNN
/EX

TECH COMMITTEE HARD AT WORK

By Gerry – W0GV

Our Technical Committee recently completed the installation of a four (4) bay antenna for our 147.330 East Repeater site near Franktown, Colorado. We have been testing this location as a replacement for our Hudson site that we were forced to vacate. We are evaluating the Franktown site for extended coverage into the foothills and mountain areas that lack coverage from our West 147.330 site. We had a great turnout of the Tech Committee. Dave, WG0N, and Jason, AC0UA, were our tower climbers. Manning the ropes and assisting on the ground were Dave, K0HTX, Frank, N3PQ, Bill, AC0VC, Jeromy, N0JPL, Dick, K8ZTT, and Gerry, W0GV. Pictures were taken by Doug, N4ATA. Orlen, WW0LF, and Jason, AC0UA, provided tech support prior to our site visit by getting the equipment ready for the installation.



Members are encouraged to help test the new site and report your findings back to the Tech Committee. Useful information in your report would be your general location, radio type (HT or mobile), antenna type, and transmitter power. Also a general report of the signal you receive from the station you are communicating with. Remember the East site requires use of the 131.8 Hz tone on your transmitter to access the repeater.

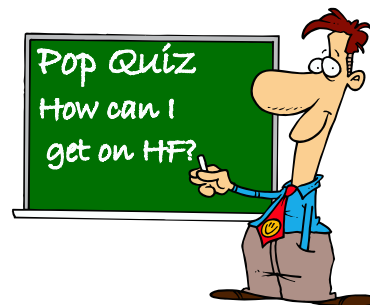
Please Note!
The Denver Radio Club Meeting
at the Jefferson County Admin. &
Courts Building
Hearing Room #2

General Meeting: 7:00PM
The Elmer Session: 6:00PM.

TRAINING CLASS GENERAL CLASS LICENSE

By Jim – K0TOR

I will conduct a class for the General Class license this fall providing there is sufficient interest. The class will run for 14 weeks with week 14 being a VE testing session. Class is held one night a week for 2 hours per night, typically 7:00 PM to 9:00 PM. This could be the last opportunity for a General Class taught by myself. The General Class question pool will change on July of 2015. The rework of course material to conform to the new question pool can take 2-3 man months. This is only preparation time to get prepared to start the class. I truly enjoy teaching the class but can not commit this much personal time to rework the course material. I hope to have a minimum of 6 students that will attend class this fall. If you hold a Technician Class license and are interested in attending a General Class license class this fall, please call or email me at 303-798-2351 or k0tor@arrl.net. If you have questions regarding this class please contact me.



INTERESTING CALENDAR FACT AUGUST 2014

This is the only time you'll see this phenomenon in your lifetime. Even at your young age! This year the month of August will have 5 Fridays, 5 Saturdays, and 5 Sundays. According to calendar experts this only happens every 823 years.

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

The Chinese call this "Silver pockets full."

银充分装在口袋里

UP COMING EVENTS

HAMFESTS & CONVENTIONS

The following are the HAMfests & Conventions which have been registered with the ARRL so far. More information can be found on www.arrl.org/hamfests.

- August 17** – **DRC Hamfest**
Jefferson County Fairgrounds
<http://www.w0tx.org>
- Sept. 13** – **PHC Pueblo HamFest**
First United Methodist South Building
Email: sworley.sw@gmail.com
- Sept. 28** – **BARCfest**
Boulder County Fairgrounds
Email: BARC70@arrl.net
- Nov. 1** – **TechFest 2014**
Lakewood Elks Club
<http://www.na0tc.org>

2015

- Feb. 8** – **ARA The Swapfest**
Adams County Fairgrounds
<http://www.n0ara.org>

New Meeting Location!
For more information on the new meeting location and how to get there go to **Page 9** in this publication.



HRO 12 STORE BUYING POWER WORKS FOR YOU!
www.hamradio.com
8400 E. Iliff Ave #9, Denver, CO 80231
303-745-7373 800-444-9476
24 HOUR FAX 303-745-7394
e-mail: denver@hamradio.com



The Denver Radio Club
Is an ARRL
Special Service Club
Support your hobby
Join the ARRL TODAY



The “Big One” is only a couple of weeks away!
The DRC Hamfest committee still needs your help. The work is easy and more importantly fun.
For More information see the note at the top of page 4 or give Bryan KB0A a call or drop him an email. Check the roster for his phone number.
The email address is: drcfest@w0tx.org

PAST & FUTURE PROPAGATION CONDITIONS

By Bill – W6OAV

The charts below show the Solar Flux and “A” indexes for last month and the forecast for this month’s Solar Flux index.

Refer to the September 2010 *Roundtable* for more complete information on interpreting these charts. Issues of the *Roundtable* are available at <http://www.w0tx.org/RoundtableAccessPage.htm>.

Sorry, No Propagation Charts this month.



The BIG ONE is HERE!

The Denver Radio Club Hamfest

Jefferson County Fair Grounds

When: Sunday August 17

8:30am to 1pm

Food + Fun

Seminars ~ Great subjects and lots to learn





Lots of vendors with everything you need

Computers ~ Radios ~ Antennas

Parts + pieces

You name it and you'll see it here!!!

*For more information!
contact Bryan-KBOA
drcfest@w0tx.org
Or visit www.w0tx.org
Volunteers Needed*

AUGUST 2014						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2 ARRL UHF Contest Begins 1800U
3 ARRL UHF Contest Ends 1800U	4	5  First Quarter	6 Learning Net 7:30pm	7	8	9
10  Full Moon	11 International Left-Handers Day	12	13 Learning Net 7:30pm	14	15	16 10GHz & Up Contest (Round 1) 6am to Midnight Sunday, August 18
17 Our Very Own! DRC Hamfest 8:30am - 1pm  Last Quarter	18 Rookie Roundup -RTTY >>August 17<< 1800U to 2359U	19	20 DRC Meeting Elmer 6:00pm General 7:00pm	21	22	23
24/31	25  New Moon	26	27 Learning Net 7:30pm	28	29	30

DRC Net Sunday's at 8:30pm Local on 145.490 & 448.625 (No PL)

DRC BOARD OF DIRECTORS

President	W0GV	Gerry Villhauer	303-467-0223	w0gv@arrl.net
Vice-President	K0HTX	Dave Gillespie	303-795-8225	k0htx@comcast.net
Secretary	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
Treasurer	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
Board Member	N4ATA	Doug Parker	303-922-3305	n4ata@arrl.net
Board Member	K0BAT	Art Thayer	303-340-2657	artthayer@comcast.net
Board Member	W0JMC	Jack McComb	303-885-9098	W0JMC@arrl.net
Board Member	N3PQ	Frank Ortega	303-452-0283	n3pq@hotmail.com

DRC STAFF AND VOLUNTEERS

Trustee	WW0LF	Orlen Wolf	303-279-6264	owolf@mines.edu
Net Control	K0TOR	Jim Beall	303-798-2351	k0tor@arrl.net
EmComm Coordinator	W0JMC	Jack McComb	303-885-9098	W0JMC@arrl.net
TSA Coordinator	KA0BBQ	Barry Wilson	Check Roster	ka0bbq@arrl.net
Membership	KC0CZ	Bob Willson	303-659-0517	kc0cz@comcast.net
Club Librarian	WG0N	Dave Baysinger	303-987-0246	wg0n@arrl.net
VE Team	KC2CAG	Tom Kocalski	720-284-1911	kc2cag@arrl.net
Swapfest Manager	KB0A	Bryan Steinberg	Check Roster	drcfest@w0tx.org
Field Day	AC0UA	Jason Smallwood	Check Roster	sjason67@msn.com
Tech. Committee Chair	W6OAV	Bill Rinker	Check Roster	
Benevolent		Carolyn Wolf	303-330-0721	
RT Editor	AG0S	George McCray	303-751-7246	ag0s@arrl.net
RT Assoc. Editor	W6OAV	Bill Rinker	Check Roster	
Education	AA0JK	Fred Hart	303-420-3536	elmer@w0tx.org
Web Master	N0LAJ	Bill Hester	Check Roster	

DRC REPEATERS

BAND	Freq / Shift / PL Tone	Additional Information
6m	53.090MHz (-1MHz) 107.2Hz PL	
Packet	145.05MHz<>14.105MHz	
2m	145.490MHz (-) 100Hz PL	Linked to the 70cm - 448.625MHz machine.
2m	147.330MHz (+) 100Hz PL	Local Area, Members Auto-Patch Does Not TX a PL!
2m	147.330MHz (+) 131.8Hz PL	Not in service at this time!
1.25m	224.380MHz (-) 100Hz PL	
70cm	447.825MHz (-) DCS-073; NB 12.5; +/- 2.5	Saint Anthony's Note: This is a narrow band repeater requiring DCS.
70cm	448.625MHz (-) 100Hz PL	Linked to the 2m - 145.490MHz machine.
70cm	449.350MHz (-) 100Hz PL	Wide area coverage with Echolink Node # 4140.
70cm	446.7875MHz (-)	MotoTRBO Repeater Slot 1 – DMR-MARC WW, Slot 2 – Local

EDITOR'S NOTE

© 2007 - 2014 Denver Radio Club; All Rights Reserved; Articles in the RT may be reprinted with permission for non-commercial or educational use.

DRC members - this is your newsletter. If there is something which is club or amateur radio related that you'd like to see as a regular feature, email suggestions to the editor. Members are the heart of The Denver Radio Club, if you have an expertise or an interest in a particular segment of ham radio that you'd like to write about, you may email your submissions to AG0S@arrl.net. Submission deadline is the 25th of the Month. **Editor**

NEW MEETING LOCATION DENVER RADIO CLUB

Where: Jefferson County Administration & Courts Bldg., Hearing Room #2

Also Called: The Taj Mahal (after the expensive royal palace in India opened in yr. 1648)

Address: 100 Jefferson County Parkway, Golden

Coordinates: N 39.727962– W -105.201500

Come to the main entrance (facing east). Enter and keep left, walking west on the main floor, down a large hallway. You pass Hearing Room #1 and then arrive at Hearing Room #2 (our meeting room).

Note: The security, residents and guides also know Hearing Room #2 as the "Small Hearing Room."

Security: Best to have a Driver's License and a DRC badge for admission until they get to know us.

Note: *The building is a county building NO weapons are allowed in the building.*

Parking: Over 500 Free spaces in the east lots in front of the main entrance.

RTD Lite Rail? Train arrivals every 7-10 minutes at the south edge of the parking lot. Check with RTD for exact service times and prices. The Jeffco Admin Bldg. is the end of the tracks for the "W" line from downtown. From the train ramp, simply walk 50 yards to the main entrance under the glass dome.

Access: Wheelchair friendly from parking lot or train ramp to meeting room?

Wi-Fi: "Guest" access for 30 minute sessions in building. More time by Ethernet plug-in.

Rules: NO food or drink in the meeting room. OK in the hallway outside the room. Leave room clean and chair setting as we find them.

TRAVEL DIRECTIONS

From westbound I-70

Take Exit 262 to Colfax Ave. then westbound .9 miles to U.S. 6, Sign: "Golden, Central City right lane."

Take U.S. 6 to the right .5 miles to traffic light.

Turn right then take turn lane to the left, to traffic circle into parking lots. You're there!

From eastbound I-70

Take Exit 260 to W. 6th avenue. Ramp splits, keep left. Take long ramp .65 miles to 6th Avenue exit. At traffic light continue straight, take left turn lane, and turn left to traffic circle and parking lots. You're there!

From westbound C-470

Pass Alameda exit, then see Sign: West to U.S. 6 to Boulder LEFT LANE. Take exit and travel 1 mile to 6th avenue Exit. Take exit to traffic light. Continue straight across U.S. 6th, use left turn lane, and turn left to traffic circle and parking lots. You're there!



Hamfest SEMINARS

9 AM – WINLINK – How it works and why important.

Presenter: Bill, W6OAV

10 AM – High Altitude Ballooning for Mere Mortals.

Presenter: David, KI6YMZ

10 AM – VE Testing.

DRC VE Team

11 AM – Q & A session for newer hams.

Presenter: Gary, KD0SQA

The seminars and VE testing will be held in the conference rooms on the north lower level. Access is via the stairs at the north east corner of the building. Follow the arrows.