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SIGNALS

Rockwell Collins

Monthly Newsletter of the

Amateur Radio Club

Volume 38 Issue 05 **Web Site** http://www.w5rok.us **February 2017**

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RCARC
Membership Meeting

Tuesday 28 February 2017
1700 Social 1730 Meeting
1800 Program

Methodist Richardson Medical Center
At Bush/Renner/Shiloh Intersection
Conference Room A in Hospital Building

Subject:
To Be Announced

Local Club News

Meeting Notice

The program for this month's meeting was still being planned at the time of publication. So come to the meeting on Tuesday, 28 February and expect to be surprised.

RCARC Community Service Activities

Siren Testing Dennis Cobb WA8ZBT, John McFadden K5TIP, Frank Krizan K5HS and Jim Skinner WB0UNI participated in the Richardson emergency siren testing. The testing on 1 February 2017 indicated that some repairs were made due to all the problems that were reported the last two months. The siren testing is performed at 12:00 on the first Wednesday of each month. The sirens are monitored by amateur radio operators and reports made using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz. Siren testing occasionally uses the University of Texas at Dallas (UTD) repeater at 145.430 MHz, which is designated as the backup repeater.

Crime Watch Patrol Jim Skinner WB0UNI participated in Richardson Duck Creek Crime Watch Patrol (CWP). CWP members, after successful completion of Richardson Police Department Training, patrol their neighborhoods and report all suspicious activities to the Police Department.

THE MORSE TELEGRAPH NETWORK

A story written by Vic (Seeberger), W7VSE

I worked about three and a half years at the FAA radio station, KSF, The San Francisco Overseas Station, during the Korean-war period (1950 to 1954). After the war, that FAA station was no longer needed, so my job was abolished, and I was transferred to FAA radio station, SLC, in Salt Lake City, Utah. I was a Watch Supervisor there for almost a year. The FAA was in the process of changing all the CW (Morse code) communications over to voice and Teletype. This hurt my feelings. I had been working and enjoying CW since 1941 and liked it so much I wanted to keep using the code. So, this encouraged me to get a book and learn enough radio theory and regulations to pass the FCC exam for my General Amateur radio license, (W7VSE), in late 1954. I bought a surplus WW2 aircraft transmitter and receiver, from another "Ham," and constructed my own antenna, quite a technical achievement, for me, as I had only known how to be an operator for the previous 13 years.

When I finally got the amateur station ready, I found out how to load the transmitter by hooking it up to a 100-watt light bulb. With the telegraph key closed in the transmit mode, I adjusted until the light bulb got to maximum brightness. Then I stopped adjusting, connected the output to the antenna, and the transmitter was ready to be used -- obviously putting out power enough to make that light bulb bright. I then connected the transmitter to the antenna and, in Morse code, called "CQ", (general call, ready to talk with anyone).

This was a special event in my life and I was secretly hoping that my first contact would be with a distant station in some faraway land. A station did immediately answer me. It was another amateur, of course, but he was only across town a couple of miles in the city limits of Salt Lake City! Oh well, at least it worked, and during the next few months I was on the air quite a bit and made many more contacts.

Then I bid on, and was accepted, (*Continued on page 3*)

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461-290

VE SESSIONS

Dallas tests are held on the fourth Saturday of each month at 1000 hrs. 13350 Floyd Rd. (Old Credit Union) Contact Bob West, WA8YCD 972.917.6362

Irving tests are held on the third Saturday of each month at 0900. Fifth and Main St. Contact Bill Revis, KF5BL 252-8015

McKinney VE test sessions are held at the Heard Museum the first Sunday of the month. The address is 1 Nature Place, McKinney TX. The time of the testing is 1430, ending no later than 1645. ***Note: no tests given on holiday weekends.***

Garland testing is held on the fourth Thursday of each month, excluding November, and begins at 1930 sharp. Location is Freeman Heights Baptist. Church, 1120 N Garland Ave, Garland (between W Walnut and Buckingham Rd). Enter via the north driveway. A HUGE parking lot is located behind the church. Both the parking lot and the Fellowship Hall are located on the east side of the church building, with big signs by the entrance door. Contact Janet Crenshaw, WB9ZPH at 972.302.9992.

Plano testing is on the third Saturday of each month, 1300 hrs at Williams High School, 1717 17th St. East Plano. Check Repeater 147.180+ for announcements.

Richardson The Richardson Wireless Klub (RWK) VE team hold license testing on the third Thursday of each month at St. Barnabas Presbyterian Church, 1220 West Beltline Rd. Testing begins at 1900 hrs in room 12. Enter through the Northern most door on the east side of the church building. For further information contact Dave Russell W2DMR, at 972.690.9894 or E-mail warhog4@tx,rr.com.

President and VP Messages

This space reserved for the President and/or Vice President Messages

See you at the meeting, 73's
Mike Schmit, WA9WCC

Secretary's Report

24 Jan 2017

In the absence of Vice-President Gene Duprey K1GD, the meeting was called to order by Jim Skinner WB0UNI at 1740.

The following were present at the meeting:

Jim Brown	AF5MA
Dennis Cobb	WA8ZBT
Bob Kirby	K3NT
John McFadden	K5TIP
Mike Schmit	WA9WCC
Bill Swan	K5MWC
Joe Wolf	N5UIC

Officers and Committee Reports:

There were no formal reports other than the Secretary's Report, which is contained in this newsletter.

Old Business:

Members commented on the success of the December 2016 Christmas party at Spring Creek Barbeque and thanked Joe Wolf N5IUC for its planning and coordination.

Per Joe Wolf, membership renewals were still required for ten of the 37 members of RCARC. Joe will contact them by email or phone.

Per Bob Kirby K3NT, the recent acquisition of the Elecraft K3 transceiver dictates the need for a second power meter for the ham shack. Purchase of two meters had been previously authorized by the club, so no action is required at this meeting. Bob will purchase the meter.

Election of officers, deferred from a previous meeting, was discussed. Mike Schmit WA9WCC volunteered to serve as President, a slot currently vacant. Bob Kirby moved that the current slate of officers be re-elected to serve for the current year, along with Mike Schmitt as President; Jim Brown AF5MA seconded the motion. This action was approved unanimously by members present. The newly-elected slate of officers is as follows:

Mike Schmit WA9WCC	President
Gene Duprey K1GD	Vice President
Jim Brown AF5MA	Secretary
Mike Montgomery WD5TX	Treasurer

New Business:

Dennis Cobb WA8ZBT reported that the club's newly-established AREDN repeater continues to remain on-air 24/7, and now supports extension of the metroplex network out to Murphy and Parker and beyond.

Bob Kirby proposed purchase of an amateur radio bands repeater directory on CD-ROM from ARRL for about $90. This directory would be loaded to the computer in the W5ROK station for access by club members. Dennis Cobb moved to make the purchase, and Jim Brown seconded. The motion was approved unanimously by members present. Bob will take the action to purchase.

Adjournment:

The meeting was adjourned at 1822, followed by ongoing discussion of the merits of becoming a MARS Affiliate station and the steps required to do so. Bill Swan K5MWC, a current MARS member, guided the discussion and offered advice.

THE MORSE TELEGRAPH NETWORK

(Continued from page 1) for a job with the FAA at the Medford Airport which was a combined Station and Tower. This would give me a chance to break into Air Traffic Control. Also, it meant coming home for my wife and kids. We arrived in Medford around Thanksgiving in 1954.

One of the other watch Supervisors at SLC was named Lloyd Byers and he had been a longtime Ham. His call was W7MY. He had helped me get started. We got along, and had a lot in common. So we made an oral agreement that we would get together on the ham bands when I got set up in Medford. In a couple of months, I put up an antenna, got in touch with him and we began a daily schedule on 40 meters, (I think). We both worked shifts so we were home in the daytime quite a bit and every day at a given time we would call each other. Some days there was no answer, but a majority of the time we had a daily schedule (Sked). After several months of this, we had just about learned all there was to learn about each other. I found out that he had worked a short time using the original Morse Telegraph code, just as I had when I worked for Western Union for almost two years. I suggested that we use the Landline Morse code in our conversations to improve our proficiency in that code. He thought this might be illegal. So, I told him we could identify ourselves, as required, with the International Morse code, to make the FCC happy, and converse in landline code. He agreed this should be OK. We did this on a regular sked, every day, for several years, and it was fun!

At this point, I'd like to point out that back before radio or telephone was invented, Morse telegraph was the "only kid in town". Everything was handled by Morse telegraphy. There were thousands of active Morse operators handling messages over telegraph wires that covered the whole continent. Newspaper copy, Stock Market reports, and a multitude of other information were sent by hand over those copper wires.

It was a momentous improvement in communications. Before the Morse code, all communications were handled by Stagecoach, and briefly by Pony Express, which was still using horses to move information around. The Morse

code was probably a bigger advancement in communications then, than the recent invention of the computer, is today. (I bet someone would want to argue that point.)

President Lincoln communicated with the generals and others in command of the armies during the Civil war (1860s era). Morse code possibly shortened the Civil War and saved many lives.

Those telegraph company's poles and wires, which covered the continent, would provide leased-wire space for the new-fangled telephone companies that came along after the telephone was invented. Later on, the telegraph was forgotten and we started calling them "telephone" poles.

Some weeks or months after W7MY and I started using the landline Morse on the air, someone broke in on us, using the same code, and asked us what was going on. It was a ham that had earned his living at one time using the original Morse code. We welcomed him and told him we were trying to improve out skill at the telegraph code and invited him to come back on our sked. He taught us a lot, and I think he spread the word, because other ex-telegraphers started showing up. Soon it got so crowded Lloyd and I, and some others, would need to move off to different frequencies in order to talk to each other. It became a regular net and had some assigned Net Controls. The net met in the mornings and again in the evenings.

These old guys sure knew how to organize. They formed a club, elected a President and a Secretary and they named it, "The "Western Amateur Radio Morse Code Network". The secretary, Linda, WB6ZSE, mailed a newsletter, in November 1974, and listed all of us. There were FORTY-FIVE active members at that time, and 6 "Silent Keys" (Deceased hams). (I have a list of members, available on request). One of the members was W6FZZ, his name was Samuel F. B. Morse III, and he was a direct descendant of the man that invented the Morse code, back in 1844. I talked with "Frank" quite often. He was a very skilled operator in either telegraphy, or International Morse code. Once I talked to him on phone. He lived in Southern California at the time. But when I heard him speak, it was like a letter from home. He had a distinct Texas drawl, and of course, I was born in Texas, and we all had that same drawl.

I learned more about using Morse telegraphy in just a few months on that net, than I had ever learned while I worked a wire for almost two years at Western Union. I don't know how long the club lasted. I became interested in working traffic, chasing foreign countries, working all states, trying to work all 3036 counties, etc., on the Ham bands, and didn't go to the net very often. I finally quit altogether. I retired from the FAA, after 30 years service, in 1977.

I would imagine that all, or most of, those old Morse telegraph operators have gone to the Great Telegraph Station in the sky by now. But I know we all had fun while it lasted. And I am proud to say that Lloyd Byers and I were the "cause of it all!" I feel honored to have been a part of the club, and to have known so many of those Grand old Morse Telegraph Operators.

The Early Days of Communications

By Phil Ashler, N4IPH

Have you ever thought of what the early days of communication were like (before cellphones, HD TV, satellite and cable television?) Many members of our club have lived through the changes and probably could spend hours telling you about the "good ole days." If you wanted to talk to someone on the telephone you had to first pick up the receiver and turn the crank on the side of the large wooden box on the wall. In a short period of time a voice came over the receiver saying *"This is Central… How may I help you?"* You may have replied*, "Could you please connect me with Sally Smith on Elm Street."* The operator would sometimes say*, "Sally Smith isn't home, she is at her daughters house for the weekend… do you want me to try and ring her up?"* How many of us as children listened in on conversations on the party line? How many of us remember watching black and white TV shows on Friday night and trying to tune in the station better by adjusting the "rabbit ears" antenna. Things have changed a lot over the years in the world of communications.

One of my favorite shows on TV is the series **Mysteries at the Museum** which is currently on the Travel Channel Thursday evenings and on Netflix I can watch several hours of their very interesting segments detailing some of the items and stories found in museums around the

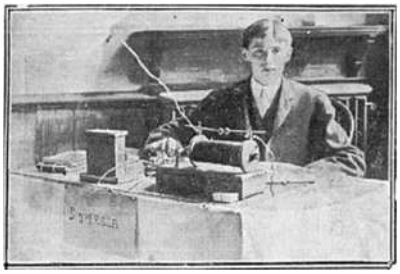
world. Last Thursday evening they had a segment on the "Hot Line" and "Red Phone" between Washington and Moscow during the 1963 Cuban Missile Crisis. Many of us can remember the movie "Dr. Strangelove," when the conversation between Washington and Moscow on the "Red Phone" became one of the highlights of the movie. Surprisingly, there was never a "Red Phone," but in reality the direct line of communication was a set of teletype machines linked by a long cable! In the **Mysteries of the Museum** segment, the **Vintage Radio and Communications Museum of Connecticut** has a display showing the type of "Hot Line" using the teletype setup that was probably used during this period of time. I couldn't find that particular exhibit on their website but did notice that there is an interesting YouTube video on the history of the **Victor Talking Machine Company**. If you view this video, there are a number of other suggested videos linked dealing with other "Early Stereo Systems." In addition to the exhibits they have an active Amateur Radio Station, **W1VCM**, with a number of vintage radios on display.

One of the links on the museum's webpage shows a rough timeline of early communication systems beginning with the telegraph, telephone, recording devices and motion pictures in the 1800's. As we move into the 1900's we see the development of wireless (radio,) vacuum tubes, crystal radios and the Tesla coil. Many of us that were in the Boy Scouts in the 1950's are familiar with the crystal radio, winding a coil on a toilet paper tube and using a "cat's whisker" to tune in local AM stations. If you have a young child or grandchild, this is a great project to help them become interested in your Amateur Radio hobby. There are many websites that have directions/videos on building a simple crystal from scratch or from one of the many inexpensive kits.

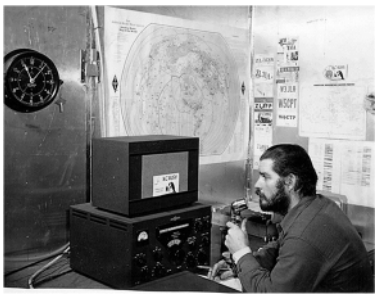
In the 1920's and 30's we see the development of battery-powered radios, large radios as furniture, car radios, radio/phonograph combinations and the teletype. How many of us remember the news broadcast in the 1950's, 60's and 70's leading in with the sound of the teletype machine in the background? I can remember seeing pictures taken in the 1940's of families sitting around an old console radio in a living room listening to soap operas and other weekly shows.

Moving into the late 1960's and 70's we see transistors replacing vacuum tubes in most of our radios and TVs and the establishment of FM radio as the preferred entertainment band. Businesses started to communicate by two-way radio, AM at first then FM later on. With FM we were able to hear concerts and music in stereo, all without the static and poor audio quality that was found in the AM band. Transistor radios were portable which meant we could carry our music, news, stock reports and latest ads with us no matter where we went. Just remember to have extra batteries on hand.

As I was researching information for this article, I came across a very good one in the January 2000 edition of QST Magazine written by Jim Maxwell, W6CF. The ARRL has the article available in PDF format on their website if you would like to read about the "First 100 Years of Ham Radio." Jim covers the history of Amateur Radio, advances in electrical theory and what we know today as radio over the years and breaks down the information by decades starting with Clinton B. Desoto's book "200 Meters and Down" published in 1936. We have all used the terms Hertz, Ohm, Ampere, Henry and Faraday in our hobby, but do you know who these people really were? Jim gives a brief history of work done by James Clark Maxwell developing his theory of electromagnetism and follows the advances of radio through the 20th century. Beginning with the Guglielmo Marconi transmission across a distance of 2 miles in 1896 during a demonstration in England, Jim takes us through a journey into the 20th century highlighting the advances in communication, licensing structure and the Amateur Radio hobby.



Many Amateurs today are probably not familiar with the contributions of early radio operators during the first and second World Wars and the hardships they dealt with. There were several times when Amateurs were not allowed to operate (or even possess equipment in) their stations due to wartime government regulations. The ARRL has been a voice and advocate for our hobby since 1914 and has continued to represent Amateurs through the years. How many newly licensed Amateurs know anything about "The Old Man" in the early days of the ARRL?



It is very important to the future of our hobby for the Amateurs of today to be aware of the contributions of the past. There are numerous articles and videos online on the history of our hobby which are all just a simple Google or YouTube search away! One of the best videos available on YouTube is the Ken Burns documentary "Empire of the Air – The Men Who Made Radio." There have been many more advances even since Jim's article was written in 2000. What will the next 100 years bring the world in the methods of communication? How will our hobby play a part?

Originally published in The Printed Circuit, February 2017: https://k4tlh.net/tars-newsletter/.

(Contributed by Frank Krizan K5HS)

Presentations for Monthly RCARC Meetings

RCARC has an urgent need for presenters to present a short topic on Ham Radio at our monthly club meetings. 45-60 minute presentations may include, but are not limited to:

- Set-up, Building or Modifying Station Equipment (Antennas, Audio, Dummy Loads, Desks, Lights, ...)
- Operating a Radio Station (Listening & Transmission tips, Ham Logo decrypted, Popular Frequencies, ...)
- My Radio Broke (Possible Alternatives before using the Sledge Hammer, ...)
- Different types of Digital Operation (APRS, Packet, PSK 31-64, RTTY, ...)
- Software Defined Radios (Commercial, Kits, Remote, Internet, ...)
- Software used for Ham Radios (WSPR, PSK-31, ...)
- Emergency Radio Equipment (Go Kits, Batteries, Solar power, Easy-Up Antennas, ...)
- Ham Radio Activities (MARS, RACES, MARC, Contests, Satellites, Mobile, Portable, Remote, Field Day, SWL, ...)
- Radio Reference (On-line manuals, theory, how to books & Videos, ...
- Social Mingle (With light snacks? Ham and cheese crackers? ...)

If you would like more information on a particular topic, and would like someone to do a presentation on it, you may suggest it as a topic. Please email Bob Kirby K3NT, Jim Skinner WB0UNI or Gene Duprey K1GD to present a topic or to suggest a topic for presentation.

Get Your Iridium Fix Before It's Too Late!

From AMSAT News Bulletin ANS-029 dated 1/28/2017:

The shock and dazzle of Iridium flares will soon be a thing of the past. Here's how to make the most of seeing them before a new generation of spacecraft replaces the Iridium satellites.

Each of the approximately 66 Iridiums in orbit have three door-sized aluminum antennae treated with highly reflective, silver-coated Teflon for temperature control.

When the angle between observer and satellite is just right, sunlight reflecting off an antenna can cause the satellite to surge from invisibility up to magnitude –8.5 in a matter of seconds. If you've never seen one, the searing brilliance may make you recoil instinctively. On rare occasions, flares can reach magnitude –9.5. That's 100 times brighter than Venus!

Sadly, that era will soon draw to a close. On January 14th, SpaceX's Falcon 9 delivered the first 10 of a new generation of Iridium NEXT satellites to low-Earth orbit, starting the process to replace the older units in a maneuver called slot-swapping. While the new birds will provide faster data rates and enhanced global communications, their antenna design is completely different and not expected to produce significant flares.

Heavens Above is one of the easiest sites to get you looking in the right place at the right time. The Heavens Above website allows for easy figuring and finding of Iridium flares.

Just sign in and give it your location, then click the Iridium Flares link under the Satellites heading on the left side of the homepage. A table will pop open with a week's worth of passes that includes pertinent information like brightness, altitude, and magnitude of the flare at flare center, the brightest possible magnitude for a particular pass. Clicking on the date will produce a map showing the flare's path and ground track where the flare will appear

brightest. When that path passes near or over your location, you'll see a –8 dazzler. If not, you can use the map to drive to the sweet spot and await the display.

The transition to the Iridium NEXT generation will be gradual but certain, so make the most of the opportunities that remain. If you're a teacher, do your homework and plan an outing to show a daytime flare to your science class. Anything that gets people talking more about the sky is a good thing, and I guarantee those kids will never forget the sight.

[ANS thanks Bob King, and Sky and Telescope for the above information]

(Contributed by Steve Phillips K6JT)

Upcoming Events

MARCH

4 **15th Annual Irving ARC HamFest** 2420 W Irving Blvd, Irving TX 75061. www.irvingarc.org. See flyer in this newsletter.

4-5 **International DX—Phone** Objective: To encourage W/VE stations to expand knowledge of DX propagation on the HF and MF bands, improve operating skills, and improve station capability by creating a competition in which DX stations may only contact W/VE stations.
W/VE amateurs: Work as many DX stations in as many DXCC entities as possible on the 160, 80, 40, 20, 15, and 10 meter bands.
DX stations: Work as many W/VE stations in as many of the 48 contiguous states and provinces as possible.
The event runs 48 hours, from 0000 UTC Saturday through 2359 UTC Sunday. Details at http://www.arrl.org/arrl-dx.

24-25 **Greater Houston Hamfest and ARRL Texas State Convention** Ft Bend County Fairgrounds, Rosenberg TX. www.houstonhamfest.org. See flyer in this newsletter.

APRIL

16 **Rookie Roundup—Phone** Mission: To encourage newly-licensed operators ("Rookies") in North America (including territories and possessions) to operate on the HF bands and experience competitive Amateur Radio operating. Experienced operators ("Non-Rookies") are strongly encouraged to participate and help new operators – either on the air or in person.

Objective: Rookies exchange information with as many other stations as possible on the 80, 40, 20, 15, and 10 meter HF bands. Rookie entrants are encouraged to read "HF Contesting – *Good Practices, Interpretations and Suggestions*."

The event runs from 1800 UTC through 2359 UTC. Details at http://www.arrl.org/rookie-roundup.

REGULAR ACTIVITIES

Daily DFW Early Traffic Net (NTS) at 6:30pm 146.88 – PL 110.9Hz

Daily DFW Late Traffic Net (NTS) at 10:30pm 146.72 – PL 110.9Hz

Daily Texas CW Traffic Net at 7:00pm on 3541 KHz and at 10pm on 3541 KHz www.k6jt.com

1st Wednesday Richardson Emergency Siren Test. At noon using the Richardson Wireless Klub (RWK) repeater at 147.120 MHz.

2nd Wednesday ARES North Texas HF Net Every month—3860 KHz at 8:30 pm—9:30pm

INDOOR HAMFEST IN MARCH

HOURLY DOOR PRIZES

GRAND PRIZE KENWOOD TH-D74A

ADMISSION: $5 *(UNDER 12 FREE)*

TABLES: $10

VE TESTING

TALK-IN: 146.720 – PL 110.9

IRVING ARC HAMFEST

Save the date – March 4th, 2017!

Mark your calendar for the *Friendliest Hamfest* in the area! The weather outside may be frightful, but the deals inside are delightful! We have hourly door prize drawings, the Grand Prize is one of the new **Kenwood TH-D74a Tri-band D-Star Handhelds**. In addition to over 70 tables of deals, we will have VE Testing and a full-service snack bar.

BETCHA BINGO
2420 W Irving Blvd
Irving, TX 75061
www.irvingarc.org
March 4th, 2017
8:00 am – 2:00 pm

Greater Houston Hamfest
ARRL Texas State Convention
March 24 and 25
Ft. Bend County Fairgrounds
Rosenberg, Tx

Free Friday!
Build One of These!
Reserve your spot now!
www.houstonhamfest.org
DEADLINE FOR RESERVATIONS
March 11, 2017

Tuna Tin 2-40 Meter Transmitter
Just bring your own Tuna Fish Can!
Hosted by Joe Eisenberg, K0NEB, CQ Mag Kit Editor.
Reserve your kit today!
Cost $30.00
-.-. - -.-

Digital Hotspot for DSTAR or DMR Radio
Hosted by Hal Fuglaar, N5BXP and Grapevine Amateur Radio
Watch the Website for details
-.-. - -.-

Rockwell-Collins

Amateur Radio Club

Mail Station 461-290

P.O. Box 833807

Richardson, TX 75083-3807

TO:

CLUB STATIONS
(972) 705-1349

W5ROK REPEATER
441.875 MHz +5 MHz Input
131.8 Hz PL - RX and TX

W5ROK-1 PACKET BBS ROK Node
145.05 MHz

W5ROK-N1, W5ROK-N2 & W5ROK-N3 HSMM-MESHNET Nodes 2.4 GHz

Tuesday 28 February 2017

1700 Social 1730 Meeting

Methodist Richardson Medical Ctr
At Bush/Renner/Shiloh Intersection

Conference Room A in Hospital Building

NEXT SIGNALS INPUTS DEADLINE:
➔➔➔ 17 March 2017 ➔➔➔