



JCRC Flight Line

2019 Volume X, October 2019

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VACANT

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Term

TIM EDWARDS -	2019 - 2019
ED McENTIRE -	2019 - 2019
CRAIG QUILLEN -	2019 - 2020
TERRY BAILEY -	2019 - 2021
ANTHONY HALL (CHAIR) -	2017 - 2022
Skip WELLER -	2019 - 2024

President's Message

Our October club meeting will be held at Harbour House restaurant in Johnson City. Come early if you would like to have dinner before the meeting. We will be in the separate room located to the right rear after you enter the restaurant.

Please remember that we are accepting nominations for club officers and to fill two board member positions. Please get your nominations to me before 1 November so that I can vette the nominees and prepare ballots. Also, if you will need an absentee ballot, please notify the Club Secretary no later than the 1st of November so that he can get them to you in time for you to complete and return them to me no later than 22nd of November.

Dan Jackson

Quotable Quotes

Let your tongue speak what your heart thinks.

— Davy Crockett

If everyone is thinking alike, then somebody isn't thinking.

— George S. Patton

This is as true in life as in battle: we are given one life and the decision is ours whether to wait for circumstances to make up our mind, or to act, and in acting, to live.

— Omar N. Bradley

Editor

Please send your input either by e-mail (rossgtenn@gmail.com) or post -

Glenn Ross, 134 Chock Creek Road, Johnson City, TN 37601-3639 - by the 19th of the month you would like it included. Electronic input should be .jpeg and word documents (.doc or .docx).

THANKS!

Glenn Ross

Next Meeting

Tuesday, 29 October 2019, 6:45 PM at Harbour House Restaurant in Johnson City

Upcoming Activities

Fall Work Day

**10 AM till 3 PM, 19 October
2019 at Odom-Fennell Field**

Officer Elections and 2020 Budget Vote

**6:45 PM, 26 November 2019
at the Harbour House
Restaurant**

Indoor Fly In

**1 PM till 5 PM, 1 February
2020 at Kingsport Civic
Auditorium**

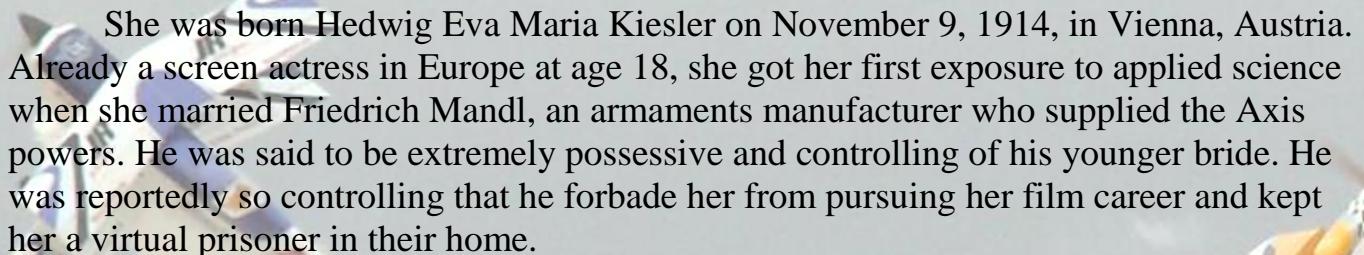
Indoor Fly In

**1 PM till 5 PM, 14 March 2020
at Kingsport Civic Auditorium**

FYI –

Our Perception of Modern Technology and Women.

We have a tendency to think that our modern world has been created by groups of scientist working in an expensive machine filled lab. Here is a story about how one woman helped change the world. Her successes in an age where women were not expected to contribute to engineering works shows what an active, determined mind could accomplish. Our heroine is a reminder to everyone that you don't have to be a tech whiz to change technology.



She was born Hedwig Eva Maria Kiesler on November 9, 1914, in Vienna, Austria. Already a screen actress in Europe at age 18, she got her first exposure to applied science when she married Friedrich Mandl, an armaments manufacturer who supplied the Axis powers. He was said to be extremely possessive and controlling of his younger bride. He was reportedly so controlling that he forbade her from pursuing her film career and kept her a virtual prisoner in their home.

It was during this time that Mandl demanded Hedwig accompanying him to meetings with business associates where military technologies were discussed. Mandl had close social and business ties to the Italian government, selling munitions to the country, and had ties to the Nazi regime of Germany. She wrote in her autobiography, that both Mussolini and Hitler attended lavish parties at the Mandl home. From them she learned of the difficulty inherent in controlling a torpedo with radio signals after it had been launched, and how the signals could be intercepted or overpowered by the enemy. It seemed clear to her that these problems could be surmounted by varying the frequency at which the signals were transmitted.

Hedwig (a mathematically inclined Jewish woman) fled from her abusive, Nazi-sympathizing husband in 1933. She not only rescued herself, but also her mother from who-knows-what fate in Germany, fleeing to Paris and then eventually moving to Hollywood, USA. For reference, Hitler established the first concentration camp at Dachau, Germany in March of 1933. In 1937 she divorced her husband, Mandl and proceeded to become one of the biggest stars of MGM's Golden Age.

She was invariably cast as the archetypal glamorous seductress of exotic origins in some of the most successful movies of the forties. Hedwig played opposite the era's most popular leading men; Clark Gable, Spencer Tracy, and John Garfield (completing 18 films from 1940 to 1949). Her biggest success was her portrayal of Delilah in Cecil B. DeMille's classic biblical movie, Samson and Delilah, (the highest-grossing film of 1949).

At the beginning world war II, the war department told her that she could better help the war effort by using her celebrity status to sell War Bonds, which she did with great success. But she wanted to do more, particularly by using her interest in science to aid in the defeat of Nazism. This desire only intensified as Hitler continued his relentless attacks

on Europe. When German submarines began torpedoing passenger liners, she said at one point, "I've got to invent something that will put a stop to that." This desire would give rise to the invention for which she would become famous many years later.

It was during this time at a Hollywood dinner, Hedwig met George Antheil, a composer, author and inventor. The topic of their conversations soon turned to radio-controlled torpedoes, a key WWII weapon that could be easily detected and jammed by broadcasting radio interference. Harnessing the torpedo knowledge she acquired from the meetings she attended with her former husband, Hedwig began collaborating with Antheil on frequency hopping, a method for rapidly switching among random synchronized frequencies. The pair's plan was to use a piano roll to randomly switch the signal sent from the control center to the torpedo in short bursts among 88 frequencies, much like the 88 keys on a piano's keyboard. The pair's "Secret Communications System" was granted US Patent No. 2,292,387 in 1942, but the technique was never adopted by the military during WWII.

The idea was implemented by the U.S. military after the patent had expired, when it was used by U.S. military ships during a blockade of Cuba (1962). These (and todays) torpedoes trail a thin wire which allows a small radio signal to control the torpedo while prevent enemy jamming from stopping the weapons course corrections.

This patent resurfaced in the 1950s and is the basis for spread-spectrum communication technology (or, related technologies) one of the foundational ideas that supports Bluetooth devices, Wi-Fi, and the new generation of radio control radio equipment.

Just who was this beautiful and intelligent woman? Hedwig is better known for her screen name, Hedy Lamarr (1914~2000), the screen superstar of early cinema. Proving she was much more than just another pretty face, Lamarr shattered stereotypes and earned a place among the 20th century's most important women inventors. She truly was a visionary whose technological acumen was far ahead of its time. Lamarr's inventing didn't stop with weapons; she also came up with "bouillon" cubes to turn water into a Coke-like drink, and a "skin-tautening technique based on the principles of the accordion".



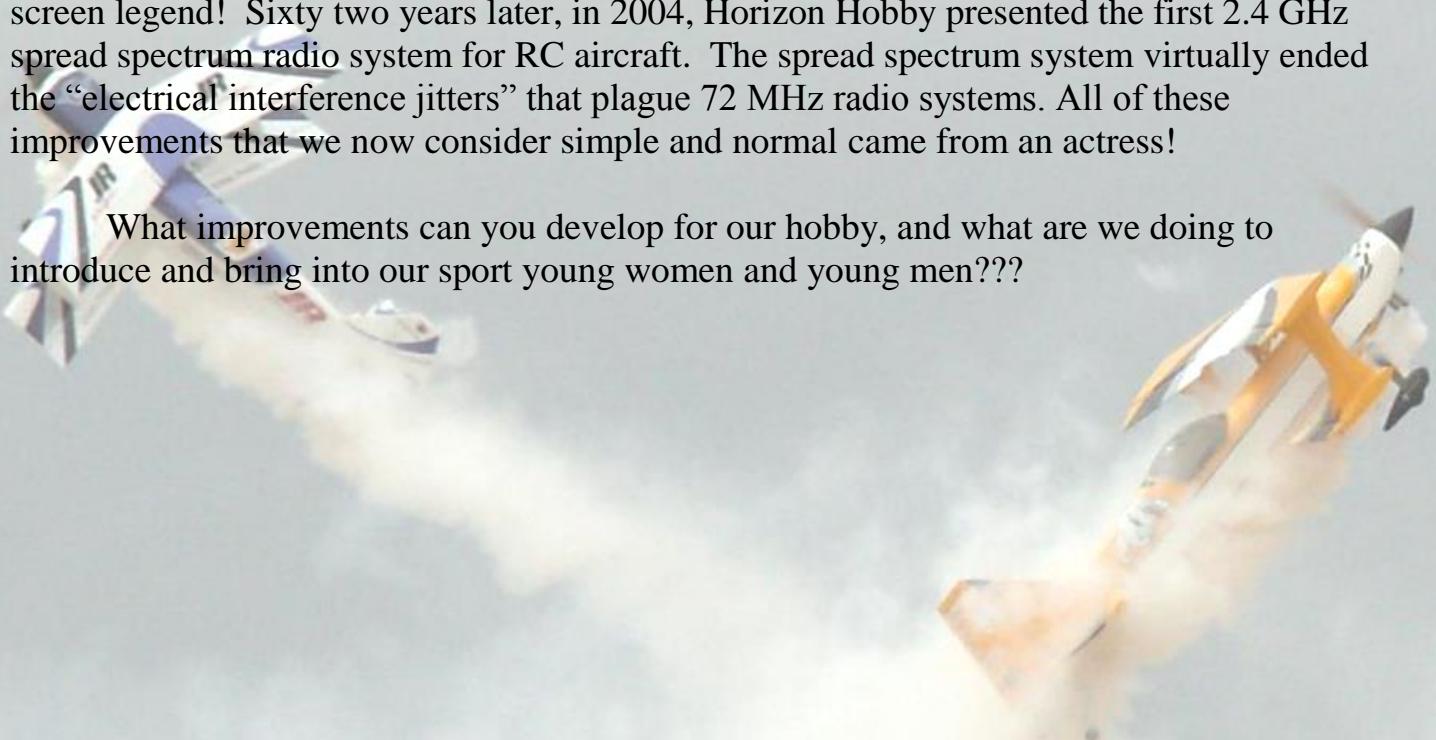
"The world isn't getting any easier. With all these new inventions I believe that people are hurried more and pushed more... The hurried way is not the right way; you need time for everything - time to work, time to play, and time to rest."

- quote from Hedy Lamarr.

As is the case with many of the famous women inventors, Lamarr received very little recognition of her innovative talent at the time, but recently she has been showered with praise for her groundbreaking invention. In 1997, she and George Antheil were honored with the Electronic Frontier Foundation (EFF) Pioneer Award. And later in the same year, Lamarr became the first female recipient of the BULBIETM Gnass Spirit of Achievement Award, a prestigious lifetime accomplishment prize for inventors that is dubbed "*The Oscar*™ of Inventing."

Just think about how much our hobby has benefited from the mind of a Hollywood screen legend! Sixty two years later, in 2004, Horizon Hobby presented the first 2.4 GHz spread spectrum radio system for RC aircraft. The spread spectrum system virtually ended the "electrical interference jitters" that plague 72 MHz radio systems. All of these improvements that we now consider simple and normal came from an actress!

What improvements can you develop for our hobby, and what are we doing to introduce and bring into our sport young women and young men???



JCRC Sponsors

Hobby Town USA

Located at 3515 Bristol Highway in Johnson City, Hobby Town offers a full range of hobby needs, from model rail roading, to automotive modeling and aviation modeling. A strong sponsor of JCRC, they offer JCRC club members a 10% discount. Phone: (423) 610-1010.



Benedict's Ace Hardware Store



Due to the sale of *Great Planes model parts and accessories*, Benedict's Ace Hardware is discontinuing their aircraft parts sales. Once the current inventory, shown in the picture below, is gone, they will be out of this product line with no plans to restock. Get stuff while you can. They are at 3607 North Roan Street in Johnson City; (423) 282-1950.

