

The W5CZ Heavy Metal Museum

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My dictionary defines a museum this way: *“A building, place, or institution devoted to the acquisition, conservation, study, exhibition, and educational interpretation of objects having scientific, historical, or artistic value.”* This boring academic statement is uninspiring; it does not describe The W5CZ Heavy Metal Museum, which is mostly a lot of fun.

It all began with WØTUS, Bob in Backus, MN, who in 1958 had the biggest AM signal you could imagine on 75 meters. If I would have owned an S meter, I am certain it would have been ruined. As it was, I was starting out in ham radio as a teenager in rural northern Minnesota, with a Knight-Kit Ocean Hopper and a Heathkit DX-20. The possibility of my getting a Globe King 500 like that of WØTUS was unthinkable.

Until about 5 years ago. Still possessing the desire, I managed to buy a Globe King 500B, which I promptly put in storage because I didn't have room in my shack for it. This unfortunate situation bothered me greatly, and the only possible solution was to build an addition onto my house for it; thus the W5CZ Heavy Metal Museum was born.

The objective of the W5CZ Heavy Metal Museum is to collect, restore, share and enjoy vintage amateur radio equipment.

The focus is on AM tube-type equipment, but there are important exceptions to this rule. The goal is to create about 40 fully operational amateur radio stations that are representative of important aspects of amateur radio history. It is a relatively new creation; the facility was completed in July 2005. It is located in the foothills of the Colorado Rocky Mountains, at an elevation of about 7400' about 25 miles SW of Denver.



Globe King 500B at W5CZ

The museum consists of two parts, the operating room and the workshop. The operating room is a 625 sf room of contemporary mountain architecture. It is located on the 2nd level, and is connected by an outdoor 2nd level bridge/deck to the workshop, which is located on the 2nd floor of an also newly constructed 3-car garage.

The operating room was built with the museum in mind. The floor is similar to a raised computer floor that allows RF, power, and other cables to be routed underneath to several selected locations within the room, thereby minimizing the inevitable wiring rat's nest.

The operating room has an entry vault for antenna cables, with a coaxial switch array to route antenna feed lines under the floor or to the workshop. Hard line, RG-8, CAT-5 and other cables route to the workshop allowing the workshop access to all antennas and other data.



View of operating room from the workshop



View of the workshop from the operating room

The equipment is loosely organized into several groups.

The Novice level is the first group. It includes an Ocean Hopper, Hallicrafters S-19R, Sky Buddy, Eico, Johnson and the Heathkit line from the AT1 to the DX-60. This level emphasizes

equipment that was inexpensive, not sophisticated, but still a lot of fun.



Coaxial cable entry and switching array



RF and power cable entry underneath the floor

The second group includes the popular AM/CW equipment used by thousands of amateurs, manufactured by Hallicrafters, National, E.F. Johnson, Heathkit, Hammarlund, RME, Barker

and Williamson, World Radio Laboratories, and many others.

There is also an SSB group, with equipment made by those same manufacturers, but including some others, such as Drake and Signal One.

The mobile group includes equipment made by Elmac, Gonset, Morrow, Johnson, etc.



The novice corner



Some of the popular AM group

Finally, there is the equipment that represents the very best of amateur radio. Examples include several Collins pieces (30H, 30J, 30K-1, S-Line, 75A-4, 75A-3, 75A-2, 32V-2, KWM-1, KWM-2A, 30-L1, R-390A, etc.). Other favorites include a BC610 paired with an

SX-28, and the notorious Globe King 500B paired with a 75A-4. A 1920's spark station is also included.



Hallicrafters HT32, HT33A, SX 115/117



Hallicrafters BC-610 and SX-28

The real eye-catcher in the operating room is the 1937 Western Electric 353 broadcast transmitter that has been converted to 160 m. This transmitter has been presented previously in ER when it was owned by W6THW and more

recently by WA9MZU (now K6GLH). It exhibits exceptional mechanical and electrical engineering design, as well as a stunningly stylish exterior.



Western Electric 353, circa 1937



Collins 30K-1

The most exciting occurrence so far in the life of the museum was the recent acquisition of a portion of the collection of Gary Halverson, K6GLH, who lives near Sacramento. Gary advertised some of his collection in ER, and over a period

of several months and a trip to Sacramento, Gary and I reached a purchase agreement.

I rented a 17' U-Haul truck to carry the loot back home. At his QTH, Gary arranged for an exceptional crew of local amateurs and non-ham neighbors plus a forklift to load the truck. The forklift was absolutely essential to load the floor model transmitters (each WE rack was ~600 lbs). Everybody had a great time because Gary had bribed everyone with food, door prizes, and the comradeship of heavy metal.



Collins 30J and 30H in the workshop

The trip back to Colorado went surprisingly fast. I left K6GLH on a Sunday morning at 09:00 MDT, and arrived home in Indian Hills, a distance of 1300 miles, at 15:00 MDT on Monday afternoon, just at the beginning of a spring snowstorm. It is amazing

how quickly one can drive across Nevada and Utah on I-80.

After one day of rest, I organized a crew of 4 persons plus a crane and operator to get the equipment into the museum and workshop. The process went well except for the WE 353, which because of its size and weight, presented special problems, such as knocking out a portion of the new deck surrounding the museum.

An opening bash barbecue is planned for approximately the end of July or first week of August 2006. Door prizes, a swap table, and Special Speakers are planned. Details will be in the July issue of ER, or else contact W5CZ.

In 1958, neither WØTUS nor I could ever have imagined that his big signal would propagate into the 21st century, but its echoes are now to be found in Indian Hills. This is part of the mystery of *Amateur Radio*, which has empowered the imagination of many young men, including this one. It challenged me to pursue a career in electromagnetics and, after 45 years, to finally purchase a Globe King 500B and build a special place for it and its colleagues. There are many other items yet to be added to this place and put on the air. The fun is in the process of learning about the equipment, repairing it, operating it, and most of all celebrating the bygone era with friends of like mind. This is what the Heavy Metal Museum is for!



Spark gap transmitter made by K6GLH from period components



The heavy metal loading party, left to right: WB6GEF, WG6K, WA6AHL (now K6JCA), K6GLH, W5CZ, K6JEK, WØLJV, Jon Kramer. Not shown: W6THW, KØIJ, K6HLO, KS6H, and Nanette and Neville Piper



The Collins 30K-1 in flight



**The WE 353 gets through the
operating room door**