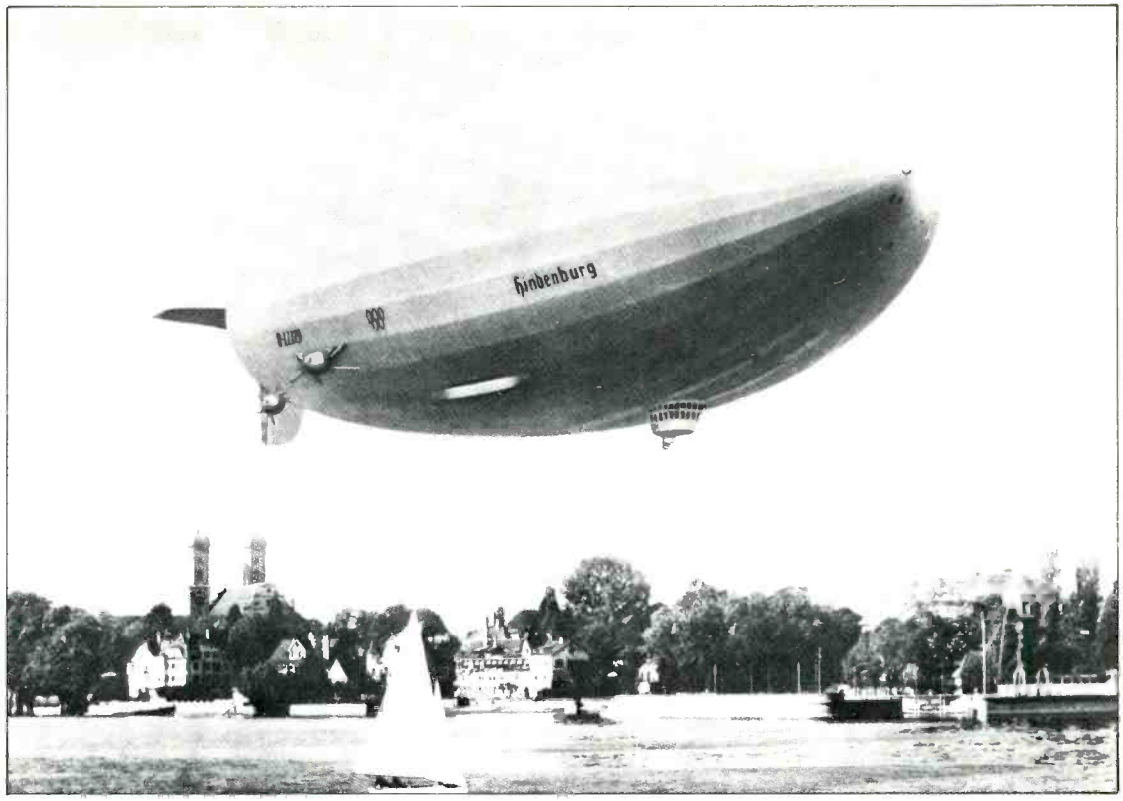


The Hindenburg And Its "Lost" Radio History

Rummaging Through History We Look At Something Investigators Have Ignored

BY TOM KNEITEL, K2AES, EDITOR

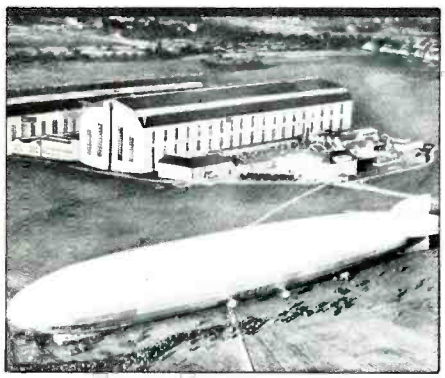
In the late 1920's there was a truly fabulous passenger airship in the world's skies, the *Graf Zeppelin (LZ-127)*. It was more than a humble gas filled balloon with a gondola slung beneath; this was a rigid-frame ship that was outfitted as a transoceanic luxury liner and its 20 passengers were accomodated on a par with the passengers aboard the finest ocean-going luxury vessels. Although it was filled with 3½-million cubic feet of highly explosive hydrogen, it carried the very latest in safety equipment and its German owners had outfitted it with a full complement of state-of-the art communications gear. The station was assigned the German callsign DENNE and its signals were eagerly sought after by listeners throughout the world.

The *Graf Zeppelin* travelled the globe, going to the Mediterranean, South America, Africa, Russia, and even the North Pole. It had racked up a 1-million mile perfect safety record, having made 590 flights, 144 ocean crossings, carried 13,110 passengers and more than a quarter million pounds of mail and freight. Moreover, it was a mighty propaganda tool of the new Nazi regime in Germany that came into power in 1933. Nevertheless, despite the many things the *Graf Zeppelin* had going for it, in 1937 the airship was locked in a giant shed and was never again seen the air.

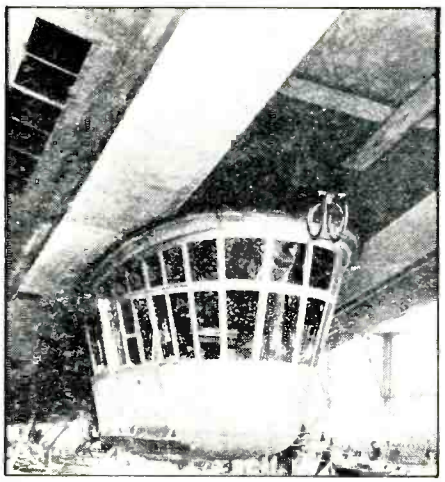
"The" Airship

What led to the sudden and untimely end to the career of the *Graf Zeppelin* was actually a greater technological triumph than the *LZ-127*; it was the *Hindenburg (LZ-129)*. Built in 1936, this 803 ft. long rigid airship held twice the amount of hydrogen and was double the size of the *LZ-127*. It was the pride of the Third Reich and was designed to carry 50 passengers in its lavishly fitted staterooms. Put into transatlantic service in 1936, the *Hindenburg* and the *Graf Zeppelin* made headlines wherever they went. Ultimately, however, the *Hindenberg* proved far more newsworthy when, on May 6, 1937, after its first crossing of the '37 season, it blew up while attempting to land at Lakehurst NAS in New Jersey and was completely destroyed along with a loss of 36 lives. Second perhaps to the loss of the *SS TITANIC*, the *Hindenburg* disaster remains one of the most talked about incidents in commercial transportation history. Although many theories have been advanced to speculate upon the reason for the *Hindenburg* disaster, the exact cause has never been proven. Some investigators hold to a time bomb theory, others ascribe the explosion to a discharge of static electricity in the vicinity of a hydrogen leak. Upon the loss of the *Hindenburg*, the German government decided that—at least for the time be-

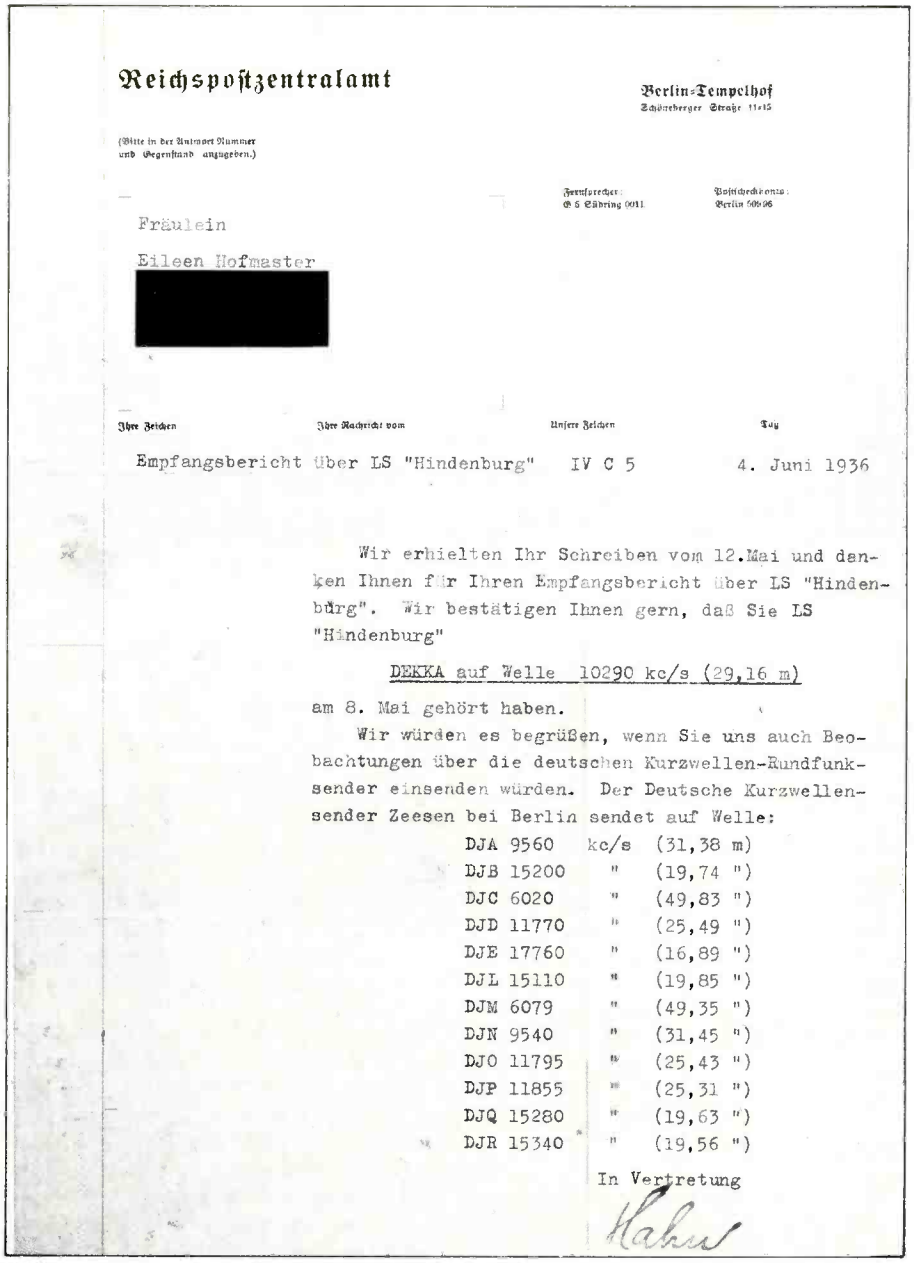
The Graf Zeppelin *(callsign DENNE) was actually quite a successful airship but its career ended early because of the* Hindenburg.



Think the Graf Zeppelin *(shown here) was huge? The* Hindenburg *was twice its size!*



The gondola of the Hindenburg *showing the direction finding loop.*



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Fräulein

Eileen Hofmaster

[redacted]

Ihre Zeichen	Ihre Nachricht vom	Unsere Zeichen	Tag
Empfangsbericht über LS "Hindenburg"		IV C 5	4. Juni 1936

Wir erhielten Ihr Schreiben vom 12.Mai und danken Ihnen für Ihren Empfangsbericht über LS "Hindenburg". Wir bestätigen Ihnen gern, daß Sie LS "Hindenburg"

DEKKA auf Welle 10290 kc/s (29,16 m)

am 8. Mai gehört haben.

Wir würden es begrüßen, wenn Sie uns auch Beobachtungen über die deutschen Kurzwellen-Rundfunksender einsenden würden. Der Deutsche Kurzwellensender Zeesen bei Berlin sendet auf Welle:

DJA 9560	kc/s	(31,38 m)
DJB 15200	"	(19,74 ")
DJC 6020	"	(49,83 ")
DJD 11770	"	(25,49 ")
DJE 17760	"	(16,89 ")
DJL 15110	"	(19,85 ")
DJM 6079	"	(49,35 ")
DJN 9540	"	(31,45 ")
DJO 11795	"	(25,43 ")
DJP 11855	"	(25,31 ")
DJQ 15280	"	(19,63 ")
DJR 15340	"	(19,56 ")

In Vertretung

Kahn

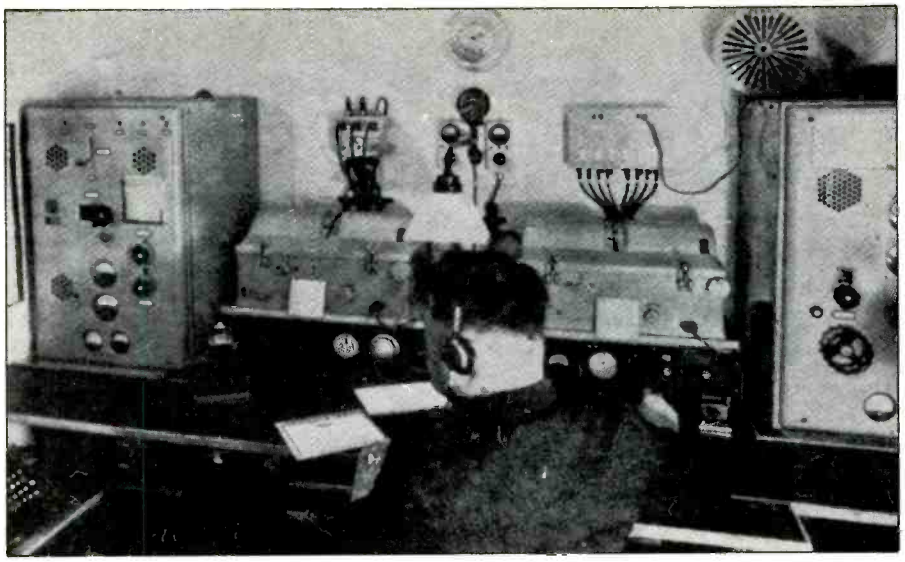
Rarest of the rare — one of the very few QSLs ever issued by the Hindenburg. *(QSL courtesy of Eileen Hofmaster)*

ing—the age of the giant passenger carrying airship had ended. Hence the grounding of the *Graf Zeppelin*. In September, 1938 the Germans built a slightly modified sister ship of the *Hindenburg* and dubbed it the *Graf Zeppelin II (LZ-130)*, but the craft did little more than make a few exhibition and test flights over Germany. In April of 1940, the *LZ-130*, the older *Graf Zeppelin (LZ-127)*, and the main Zeppelin operating terminal in Frankfurt were dismantled so their steel and duralumin could be used for the German war effort.

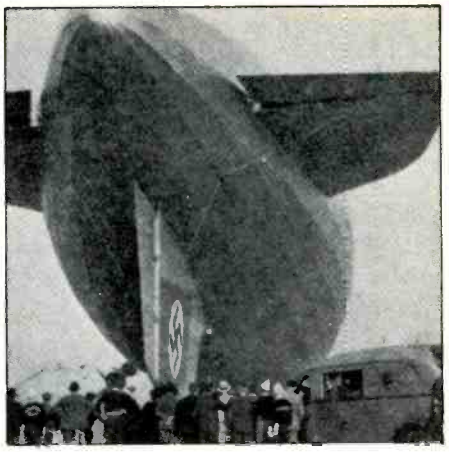
Many books have been written about the *Hindenburg* and practically every aspect of its conception, construction, career, and spectacular death. Seldom touched upon even slightly in the most detailed studies of the craft is information relating to the radio communications equipment installed aboard the *LZ-129*. To persons interested in communications, the *Hindenburg's* radio operations and equipment have always remained somewhat of a "lost" factor in this otherwise well known and closely studied airship and the events surrounding its colorful existence. And yet the radio room and its activities were no less noteworthy than most other things surrounding the airship.

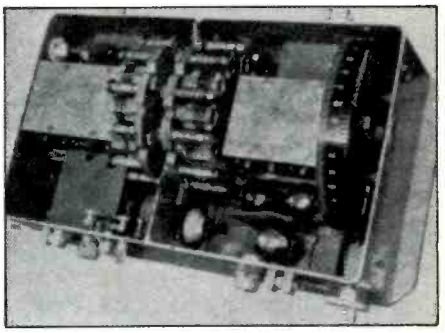
A Modern Station

The radio operations aboard the *Hindenburg* were conducted under the German callsign DEKKA and were noted by listeners on the following frequencies: 5280, 10290, 10335, 10500, 11040, and 12550 kHz. Although licensed as a non-broadcast aeronautical station, DEKKA was actually quite free-wheeling in its operation. Indeed, it was monitored on its maiden flight testing with commercial shortwave stations and also broadcasting musical programs consisting of recorded songs and live piano selections.



The Hindenburg's radio shack. At the extreme left is the shortwave transmitter with its associated receiver alongside. At the far right is the longwave transmitter with its companion receiver.





Previously unpublished photo showing the bandswitching arrangement of the Hindenburg's receiver.

NBC announcer Max Jordan standing in the Hindenburg's radio shack, which can be seen to the right of the photo.

Comments from the passengers regarding the airship and the trip were also sent out to the world.

One of the American listeners who was lucky enough to pick up this historic broadcast was *POP'COMM* reader Eileen Hofmaster of Ohio. In fact, Eileen was also fortunate enough to have been able to acquire a QSL letter from DEKKA verifying her reception of 8 May 1936! Pictured here, this unusual verification may well be one of the rarest and most historic of any and all QSLs still in existence. I'm most indebted to Ms. Hofmaster for permitting me to share it with my readers.

The Radio Shack On The LZ-129

Successful communications from the *Hindenburg* with commercial stations were easily accomplished from the airship. The German shortwave stations at Zeesen, operating on twelve different frequencies between 6 and 17 MHz, assured that contact could be made at any hour of the day or night. Communcations to the United States were usually handled by coastal station WCC at Cape Cod, Massachusetts.

The *Hindenburg* had two transmitters, one for low frequencies and the other for shortwave. Two receivers were installed as well as no less than three radio direction finders.

The low frequency transmitter could be tuned up on any frequency between 111 and 525 kHz. Using plate modulation, the power to the antenna was 200 watts while using CW and 125 watts during 'fone transmissions. The antenna for this transmitter was a 2-wire system 393 ft. 8 inches in length. This antenna could be unreeled by a motor winch. The low frequency receiver used the same antenna and was set up with a VOX-like automatic relay so that if the transmitter was not keyed or modulated for more than half a second, the receiver was switched into the antenna circuit.

The shortwave transmitter had the same power output as the low freqency unit and could operate on any desired frequency between 4280 and 17700 kHz. The range was covered by the equipment in two overlapping bands. The shortwave antenna was a quarter-wave trailing wire reeled out to the optimum length for the frequency in use during a particular transmission. It had a maximum length of 60 feet.

The receivers used were designed around 4-tube tuned RF circuits and had the ability to tune from 15 to 20000 kHz, subdivided into 10 bands. Unlike many similar receivers of the era, the *Hindenburg's* equipment did not utilize clumsy plug-in coils for each band. Instead, switching from one band to the other was accomplished quickly because all of the coils were mounted on a drum that could be rotated by hand. Receiver power was supplied by a bank of storage batteries which provided both A and B voltages. The batteries could be recharged in flight.

Recharge power and also power to operate the transmitters, ship's lighting, and the heating current for the all-electric galley were provided by a gasoline driven generator. The filament and plate supplies (A and B power) were obtained by means of transformers with filters placed in the lines to eliminate interference.

The three direction finder (DF) receivers aided the navigation of the *Hindenburg*. The main DF receiver could tune from 175 to 1000 kHz which covered the beacon bands and also the frequencies used by high powered AM broadcast stations on both sides of the Atlantic. The other two DF receivers were intended as backup equipment and for use during landings. A large loop antenna was coupled to two DF receivers by a transformer. The third DF receiver was coupled to its own smaller loop antenna. The output of the three DF receivers was fed to two indicating instruments, each having three pointers and controlled by one of the three receivers. During landings, the ground crew at the air station operated three radio transmitters which, in addition to providing an accurate position "fix," also gave complete directions for grounding the airship, releasing the grab-lines, etc.

This, then, consists of information that has been overlooked or ignored by *Hindenburg* researchers and historians—including the never-before-seen-by-the-public historic *Hindenburg* verification letter. It doesn't, however, solve the mystery of what caused this majestic behemoth of the skies to become the focal point of one of modern history's most notorious disasters, one which is still being studied 47 years after it took place.