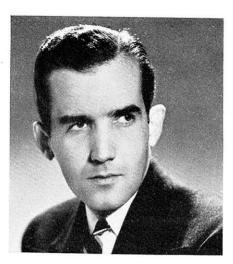


Baukhage, NBC, Berlin.



E. R. Murrow, CBS, London.



Paul Archinard, NBC, Paris.

BROADCASTER'S WAR CODE EXPOSED!

by "Anonymous"

Yankee ingenuity has made this country one of the best informed nations in the World. How we manage to get the latest news right through the censors makes one of the most fascinating chapters of the early stages of the Second World War.

HEN Kaltenborn returned to these shores from London, he is supposed to have said, "I found out more about the European Situation, here in the United States, in one hour, than I was able to discover over there in a week!" How do we do it? How does our press consistently reveal the true situation over there, here in less time than ever before? Some of the most important occurrences have been in print and on the streets days before they were officially released for public consumption in Europe. Some of our information, while over a week old, is still not being "told" over there. How do we get it? How does it get through the censor?



H. V. Kaltenborn, CBS, London-New York.



Max Jordan, NBC, Berlin.



Fulton Lewis, Jr., MBS, Washington.



Fred Bate, NBC, London.



The War in Europe has elevated radio broadcasting and radio communication to an importance never before conceived by the radio industry. Weeks before the guns of warring nations announced the Second World War, radio had performed miraculous feats in keeping the entire world abreast of the events that transpired in Central Europe. In the United States alone, radio listeners heard both sides of all questions, and all diplomatic and political differences were discussed, for the most part, without biased commentaries or censorship. The three broadcasting networks, NBC, CBS and Mutual, scheduled almost hourly broadcasts from all the capitals of Europe during the crisis before the war began. Almost all of the European radio facilities were put at the disposal of the U.S. networks, and all press associations abroad contributed news as well as actual on-the-air reportings from many of the cities. The crisis was "covered" by radio with a



John Steele, MBS, London.

completeness never before realized on such an international basis, and at an enormous cost.

But with the sudden declaration of war, the entire radio and press facilities in Europe were placed under rigid censorship. Co-operation with American broadcasters began to dwindle as the European government turned to more important radio activities within their own countries. Propaganda of a rabid and unprecedented nature soon followed. And by the time the War was but a few days old the two spectres, Censorship and Propaganda, sped hand-in-hand through the maze of European airlanes.

Of the two, Censorship is the most important to governments at war. It prevents the dissemination of information unfavorable to the country at war, it prevents unrestricted espionage activity, and it serves as a convenient check valve for the control of all news matter. But censorship also prevents the neutral listener from being informed of the true progress of the war. The people of the United States are internationally noted for their dislike of any kind of censorship, although we may realize its importance to nations at war. Radio and the press, working together, anticipated this general feel-



John Gunther, NBC, London.

ing in America ever since the Munich crisis in 1938. They felt the present conflict approaching many months ago and made elaborate arrangements for transmitting the actual news out of most of the European countries into the United States. They developed their own means of secret communication—a means that would be unsuspected by even the most suspicious foreign censor.

And as a result of this secret arrangement, the people of the United States have been kept reliably informed on all developments of the war. America knew of the signing of the Russian-German Non-Aggression Pact five hours before the news was released by any European broadcaster. After the declaration of war, with more severe censorship, the United States was constantly advised as to military movements within all warring nations.

News commentators in the United States were better informed concerning *all* foreign events than any of the news analysts and reporters abroad. Max Jordan and Baukhage of NBC, broadcasting from Berlin, could only report on conditions in Germany, and more specifically in Berlin; they knew

(Decode further on page 59)



Sigrid Schultz, MBS, Berlin.



Thomas Grandin, CBS, Paris.



William Shirer, CBS, Berlin.

THE NEW BROWNING FREQUENCY GENERATOR

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Broadcasters' Code

(Continued from page 7)

little of events transpiring in other countries. The same was true for news commentators in London, Warsaw, Paris and other capitals. It was for this reason that many of the high-salaried American analysts were recalled from Europe—some even before hostilities had begun! CBS news-expert H. V. Kaltenborn was on his way back to the United States three days before war was declared. In his New York office Mr. Kaltenborn could keep in touch with every European capital with greater case than he could in any foreign country. NBC's commentator, Baukhage, returned to America within a few weeks after the war began.

These, and other particular news annotators for the American networks were able to give accurate bulletins and summaries on the progress of the war through the prearranged secret communication agreement with the press associations operating abroad.

Although a number of the more important radio commentators returned to the United States, a greater number of lesser figures remained in Europe to broadcast occasional "word pictures" of minor events or subject matter meeting the approval of the strict censorship. In addition to these, regular foreign representatives of American press associations also remained. This would include the United Press, the Associated Press, International News Service, and others. Occasionally these representatives would be heard on a special international broadcast with the United States, but more rarely after the first two weeks of the war. And in every major city in Europe, each of the three American networks retained at least one responsible person—usually an American, or other neutral — to act as their "representative" in transmitting news and other messages to the United States when necessary. The same general type of secret cipher is used by both the radio and press associations, although there are undoubtedly many different codes in use.

Many press messages are sent by radio entirely, using either voice or Morse code. This is due

Many press messages are sent by radio entirely, using either voice or Morse code. This is due to the reliability of radio, and also because other forms of communication is often impossible with many European cities. All cities in Poland, while under siege, were without telephone, telegraph and cable service to the outside world. This condition also existed in other countries from time to time. When the Atlantic cables are open, any messages sent are carefully scrutinized by several censors.

messages sent are carefully scrutinized by several censors.

These conditions led to the use of radio as a more universal means of instant communication. However, censorship is also very strict in radio broadcasting from the European countries. Every sentence and word spoken must be passed and approved by a military censor before it goes on the air. News despatches are often "censored to death"—even the most innocent of messages. A great number of secret codes were devised by American radio and press experts for the purpose of transmitting complete and unbiased reportings. These codes are not used continually, as over-use might entail some suspicion. But during the early weeks of the war they were directly responsible for bringing important information into the United States—through the unknowing hands of military censors. The codes are varied, and almost impossible to detect. Their use is sparingly.

There are two general types of code, or secret gipher. One is the type where sent in the secret cipher.

and almost impossible to detect. Their use is sparingly.

There are two general types of code, or secret cipher. One is the type where every letter (of the word to be coded) is replaced by another letter, numeral or symbol. For example, taking the sentence:

"TROOPS NOW LEAVING PARIS" and substituting other letters [in this case the next letter of the alphabet] the possible coded result would read:

"USPPQT OPX MFBWJOH QBSJT." Such a sentence would, of course, be easily detected if sent by cable, or if sent by Morse code from a radio transmitter. Furthermore, it immediately creates suspicton and curiosity as to actual meaning. Code experts and cryptographers are generally agreed that any code of this type can be detected and easily deciphered. For these reasons such a code is impractical for wartime communication.

The second type of secret code employs the substitution of correlators.

setected and easily deciphered. For these reasons such a code is impractical for wartime communication.

The second type of secret code employs the substitution of complete words for words of the substitution of complete words for words of the sentence to be coded. This type of cipher is very difficult, if not impossible, to detect, and, most important, the coded result does not arouse suspicion of the censor. Taking the same sentence:

"TROOPS NOW LEAVING PARIS" and substituting complete words, nouns for nouns, verbs for verbs, and so on, the possible result might be:

"CIVILIANS SOON BUYING GAS-MASKS."
Such a code is obviously complicated, and would require a coding and decoding dictionary. But it is practically foolproof, and will pass either a radio or cable censor.

This is the type of coding used by broadcasters and press associations for sending messages of a confidential nature. There are many different codes in use. All are prearranged and, in most cases, are somewhat involved. But the successful results compensate the additional work in preparing the messages. That the codes have served their purpose has already been shown by the complete news coverage of Europe that the United States now commands.

A news commentator, in an international rebroadcast from Warsaw, might make the following statement in the course of his censored talk:

"THE CIVILIANS OF WARSAW ARE DETER-MINED TO FIGHT BESIDE THEIR SOLDIERS. ON MY WAY TO THE BROADCASTING STUDIO TONIGHT I SAW POLISH AIRPLANES FLYING WESTWARD. THEY WERE PROBABLY GO-



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ING TO MEET THE INVADING ENEMY NEAR THE BORDER. I ALSO SAW..."

Trained experts in New York—in the employ of the network broadcasting company, or press association—would carefully transcribe the above phrases, and immediately start to decode. By the time the speaker had completed his talk from Warsaw, the news department would be ready to give an instantaneous bulletin on actual conditions in Warsaw. The above message when properly decoded, might read:

"THE CITY OF WARSAW IS DOOMED TO DESTRUCTION WITHIN 24 HOURS. ON MY INSPECTION TOUR TONIGHT I SAW GERMAN MILITIA FLANKING IN THE WEST. THEY WILL SOON COMMENCE FIRING THERE NEAR THE CITY LIMITS."

For obvious reasons official codes and translations can not be given here. Most of these codes are very involved, and would require a large book to hold a complete listing of all words, and their combinations, used. However, by judicial use of information which was discovered by this investigator, some of the combinations which might have been used are herewith appended.

It was 48 hours before the story of the raid was verified. Not all the information forwarded by the correspondents is authentic . . . unless they themselves saw it . . but a great deal of it, pieced together, can and does give a good background picture of what exactly is going on.

There are undoubtedly many types and variations of this fundamental code in use by radio broadcasters and press associations. For only such a method could account for many recent advance or "scoop" news bulletins which were broadcast by both the broadcasting companies a few minutes after their respective representatives had spoken from the city that "date-lined" the flash bulletin!

By actual comparison between the NBC and

had spoken from the city that "date-lined" the flash bulletin!

By actual comparison between the NBC and CBS American networks, and the BBC [British Broadcasting Co. of London], the two American networks had news releases and bulletins on the air between three and eight hours in advance of the British stations! It is a true fact that many radio listeners in Europe depend on American short-wave stations (since the Munich crisis of 1938) for the most complete and unbiased news coverage of events that are often in their own country! Such a condition as this is due en-

(Read across) Words Spoken From Paris

From Paris
"All Paris is quiet tonight . . ."

"The moon sheds its glorious light here as in

"The moon sheds its glorious ignitude as at the States."
"Behind thickly covered doors, the entertainment continues as before."
"There seems little to tell that there is a war on, if you are to judge by the scene here."
"Music cannot be heard through the doors which are covered by four thicknesses."
"Many of the actors are using their old costumes such as we saw before the World War.."
"From London
"Nothing much seems to disturb this determined people."
"Chamberlain is standing firm on his statement.."

"In the suburbs, children are taking up their new residences with their usual casualness."
"Postal cards and letters from the children indicate that they are not only enjoying their country stay, but are healthy and well."
"The latest styles in gas masks are as follows."

"The Bobbies here are wearing their blue hel-

"The Poles are standing firm ."
"In spite of stories to the contrary, the Poles are not disorganized ."
"The Air-raids do not seem to bother the populace which takes them in their stride . .."
"We have not heard from Berlin today . ."

"In Berlin tonight, nothing has disturbed the placid beer-halls ."." I saw some soldiers moving to the East . . ."

"People are taking the war very calmly

"The Chancellory was quiet, a few people gathered around to see if they could see the heads of the government . . ."

Approximate Meaning

"Troops are consolidating their advances on the Western Front . . ."
"An advance is planned for the morrow . . ."

A meeting of the heads of the Government is

"A meeting of the Association of the Market May to ."
"An aerial raid on German centers has been unofficially rumored . ."
"An attempted enemy air raid was repulsed about 40 miles (400 mi.) from Paris . ."
"Colonial troops are being places in the lines ."

"The air raid precautions are thoroughly manned and ready for a reported air attack . . ." "British Airmen dropped pamphlets to try and win over the German people to overthrow Hitler

ler British

sert . ."
"Naval reconnaissance has been undertaken to

locate enemy subs . .

"No air-raid on Berlin is expected tonight..."
"An air-raid will be (has been) undertaken
over Berlin ..."
"The original plans have been adhered to ..."

"We have been given to understand that the Polish mission over Berlin was successful . . ."

"Enemy air-raiders have been over the city

"Large numbers of troops moved through the city to the fronts . . ."

Riots have been rumored in certain sections

"The feeling against Hitler is mounting stead-ily. Steps are being taken to suppress the sit-

These are only a few of the expressions which might mean that we get the news first, and generally before anyone even has an inkling of what has happened. Not only are the actual broadcasts used for this purpose, but there is the possibility that the "Cue" channels which are used to arrange the commentaries are filled with code words giving an accurate word picture of what is going on. The talk over the "cue" channels must of necessity be restricted to such conversation which has to do with the technical details of the coming broadcast. The speech is supposed to be non-rehearsed and have no news significance. It has been filled, at times, with valuable information of a news character. Of course military secrets are not within the power of the commentators to get. They do NOT report military news... only news which is of value to newspapers and the like. This is therefore restricted to what they can see, and what they hear. Nevertheless, the information is surprisingly complete. One of the outstanding examples of how accurate it really is, is when the French had taken the forest outside of the Saar, we had the information over 48 hours before the official communique verified our "hunch." The same thing happened with the first Warsaw-German air-raids.

tirely to the strict censorship imposed by most European governments.

International rebroadcasts were quite common during the crisis, and during the early days of the actual war. NBC relayed over 150 foreign broadcasts from Europe, CBS had over 100, and Mutual had over 75. But with the enforcement of censorship these special broadcasts rapidly fell off. By the time the war was a week old there was seicom more than two or three international relays made on any network in a day.

Propaganda

Propaganda

Propaganda has crept into most of the international broadcasts because the speakers consciously feel the pressure of the government behind them. They are not allowed to divulge any military movements or official news, and there is little left for them to talk about. Descriptions of life in the various capitals behind the front lines occupy most of the broadcast programs. But these will be continued, because it is through such contacts that much secret information can be innocently despatched to the United Statesunder the very eyes and ears of the military censors.

A country at war must bolster the morale of

under the very eyes and ears of the military censors.

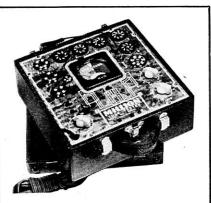
A country at war must bolster the morale of its own people. It must continually sing the hymns of self-glory, and publicize only its great victories—never its defeats. And so propaganda has become a mighty weapon in the hands of the governments of Europe.

Disseminating short-wave propaganda has long been a government monopoly in Germany. They take many devious means of providing ballyhoo for their political ideals and accomplishments. Often they take indirect methods—merely for the psychological effect on foreign listeners. One station, near Zeesen, operating on about 15 mega-cycles, broadcasts accurate news reports on the progress of the war, even referring openly to German losses and casualties! This would lead listeners to believe that the German government was not afraid to tell its people the truth. But it should be noted that the German people are unable to tune to that frequency, and if they were able to, it would be a criminal offense!

Radio operators and technicians lead a hazardous life during wartime. The objects of enemy



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bombers are not only the studios of the radio companies, but the radio transmitters as well—generally outside the cities and towns. Destruction of enemy radio equipment is almost as important as the destruction of railway terminals, bridges, and other land objectives.

In this respect it is interesting to note that European stations which are located near the front, or those which do not have adequate camouflaging from aerial attack, seldom transmit for periods longer than about an hour at any one time. This has been noted particularly among the French stations, and a few German military stations along the Rhine River. The precaution is taken to prevent enemy aircraft from taking directional bearings on the radio transmitters and thus accurately locate the stations' transmitting antenna and towers for their bombs. All of the large British and German bombers are equipped with commercial radio direction-finding equipment, much in the same manner as American transport planes. If a radio station operates for a sufficient length of time the bomber can plot and locate the station with an accuracy of less than one-half percent!

The general location of all of the larger radio transmitters are known approximately, and have been known for some time, to all the major powers with adequate espionage systems. But it is very difficult to locate accurately a comparatively small geographical point on the earth from a bomber flying at the great height necessary for safety over enemy territory.

For this reason most of the European radio stations will probably last through the war with little or no damage due to aerial bombardment. The real danger to such equipment is more eminent when the station is in the line of fire or cross-fire from advancing or retreating land forces.

Within Earshot

(Continued from page 4)

in comparison with such-and-such a unit or gadget.

The words or titles given to many units now on the market end with the phrase "analyst" in various forms. This all seems very mysterious and we actually feel that our testers are not able to accomplish desired results in analyzing things unless they are an 'analyst" of some sort. Many a serviceman who never heard of this word has been able to give accurate diagnosis on a set, with but simple meters, a good pair of eyes, a keen sense of smell, and a sense of alertness to the fact that most all radio and electronic troubles can be centered to a definite portion of the unit under observation.

We do not imply that these new testers with some form of the word "analyst" tacked on the end are not in keeping with modern service procedure. We do say and believe that the older testers can be used to a greater extent than most fellows apply them.

Most "analyzers" are made up from a combination of circuits that can be connected to perform the same functions as if separate, independent units were used. We would like to see the manufacturer state exactly how many instruments are available in their "analysts." The big advantage of the "analyst" is the compactness and ease of operation compared to setting up a group of testers over, under, behind, in front of, and around the bench.

Remember that an "analyst" cannot of itself "analyze" anything. If it did, we would order one for our laboratory c.o.d., air-express, special delivery. It is for us to do the "analyzing" and the instrument to do the indicating for us to observe.

WHAT about all these dressed up rigs that appear under different titles each month in other pubs? Is (Continued on page 65)

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