

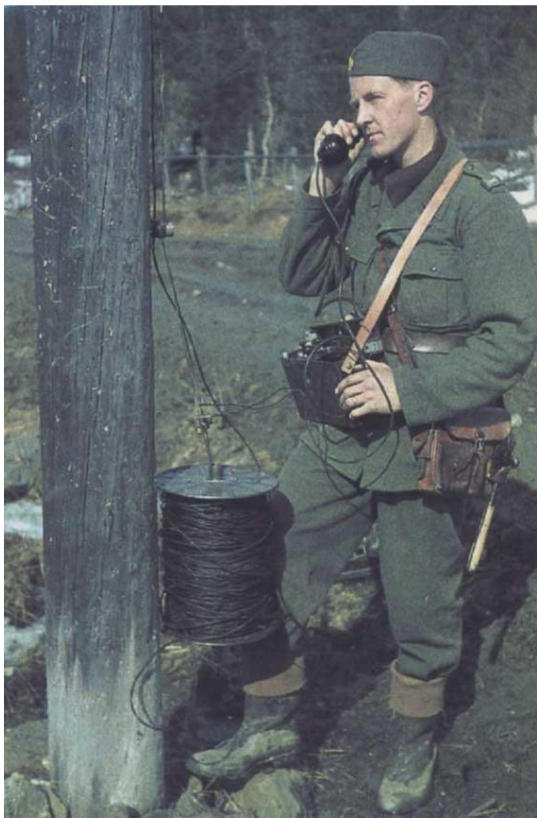
The Danish Brigade in Sweden 1943-1945 - The Signal Service, Part 1

Introduction

The brigade's signal equipment was provided partly through purchases on the free market and partly through deliveries from the Swedish army's stocks.

The practical training in the use of radio equipment was subject to strict restrictions, as only the Swedish answering service and the telegraph service were allowed to use radio traffic. When practicing the application in practice, permission had to be applied for in every single case. The applications were forwarded via the Brigade's Swedish cooperation body in the Department of Social Affairs, Harry Söderman's office.

The training in practical radio service therefore only started very late in the course. Incidentally, the brigadiers' interest in and understandably the importance of the signal service was not particularly high. The general opinion that it was only - with weapons in hand - possible to make an effort! However, an exercise training was carried out as well as a thorough introduction to the function of the material. All signal personnel were also thoroughly trained in the Morse system, which could also give the weaker station types a longer range.



The material

The brigade's signal equipment included:

- light field telephone equipment
- Radio equipment (75 watt, 15 watt, 3 watt, 2 watt and 1.5 watt transmitters and receivers)
- Signal flags, lanterns, guns and rockets.

The otherwise extensive photographic material from the Brigade does not, as far as I have seen so far, unfortunately contain examples of the signal material.

It has therefore been necessary to search elsewhere in order to be able to illustrate my report. I thank Thomas Hörstedt in Sweden and Helge Fylke in Norway for help with pictures of the radio material.

The field telephone equipment

The field telephones are believed to be the Swedish *field telephone m/37*, which was built in large numbers by LM Ericsson & Co.

My sources do not say anything about the amount of field cable or the other equipment that must necessarily have belonged to it.

Swedish soldier tests a telephone connection, 1943. Original color photograph from the [Föreningen Beredskapstid 1939-1945](#). The telephone is a *field telephone m/37*.

The radio material

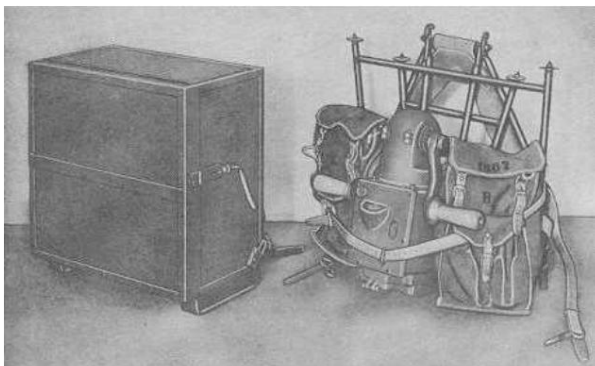
Regarding a possible identification of the material, I have consulted Thomas Hörstedt, website [Grön Radio - A virtual museum about Swedish military radio stations](#) contains a large amount of information about Swedish signal equipment.

Thomas Hörstedt has suggested the following Swedish radio equipment as the possible types:

Swedish designation	Remark
75 Watt portable radio station w/43 (75 W Tp m/43)	Built in Sweden
15 Watt portable radio station w/39 (15 W br m/39)	Of German origin; also used in the German army under the designation 15 WSE (S = <i>Sender</i> ; E = <i>Emfänger</i>)
3 Watt portable radio station w/39 (3 W br m/39)	Of German origin; should resemble the 15 W station in appearance
2 Watt portable radio station w/40-42 (2 W Br m/40-42)	Built in Sweden
1.5 Watt portable radio station w/42 (1,5 W Br m/42)	Built in Sweden

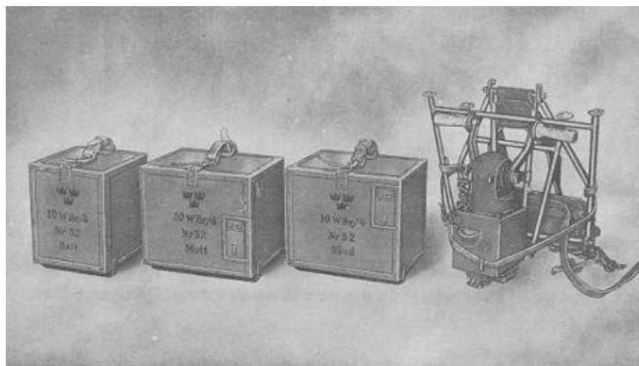
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Until better pictures of the most powerful radio stations appear, I have chosen to bring pictures of the Swedish 10 Watt portable radio station m/39 (10 W br m/39). The following four images come from [Grön Radio](#).



10 W br m/39.

The material was packed in two packages: transmitter, receiver and battery as well as hand generator and accessory bags



10 W br/4 m/39-43.

In the 1943 edition, the large unwieldy instrument box was divided into three separate boxes.



10 W br m/39, and funktion.

A single image of the possible Danish radio equipment can be found in a catalog from a Swedish surplus warehouse, from 1960/61:

D 4437 1,5 watts sändare och mottagare för våglängdsområdet 30—32,5 Mc. Stationen är lätt omtrimningsbar för 10-meters amatörbandet. Stationen är batteridrivna och fordrar 120 volts anodspänning och 2x 1,5 volts glödspänning. Mottagaren är en 7-rörs superheterodyn med högfrekvenssteg mellanfrekvenssteg 3 Mc. Sändaren består av 5 rör och är variabel över hela frekvensområdet. Apparaten kan sända och ta emot på 25 olika kanaler men kan dessutom avstämmas manuellt. Instrument för mätning av alla spänningar och antennström finns monterat på frontpanelen. Till apparaten följer låda för reservbatterier, antenn och mikrotelefonuttag. Sändarens räckvidd upp till 2,5 mil. För stationär drift kan apparaten förses med en enkel likriktare. En mycket god telefonisändare med utmärkt ljudkvalitet. Pris pr styck 112.00

1,5 W SÄNDARE och MOTTAGARE

1.5 Watt portable radio station w/42.

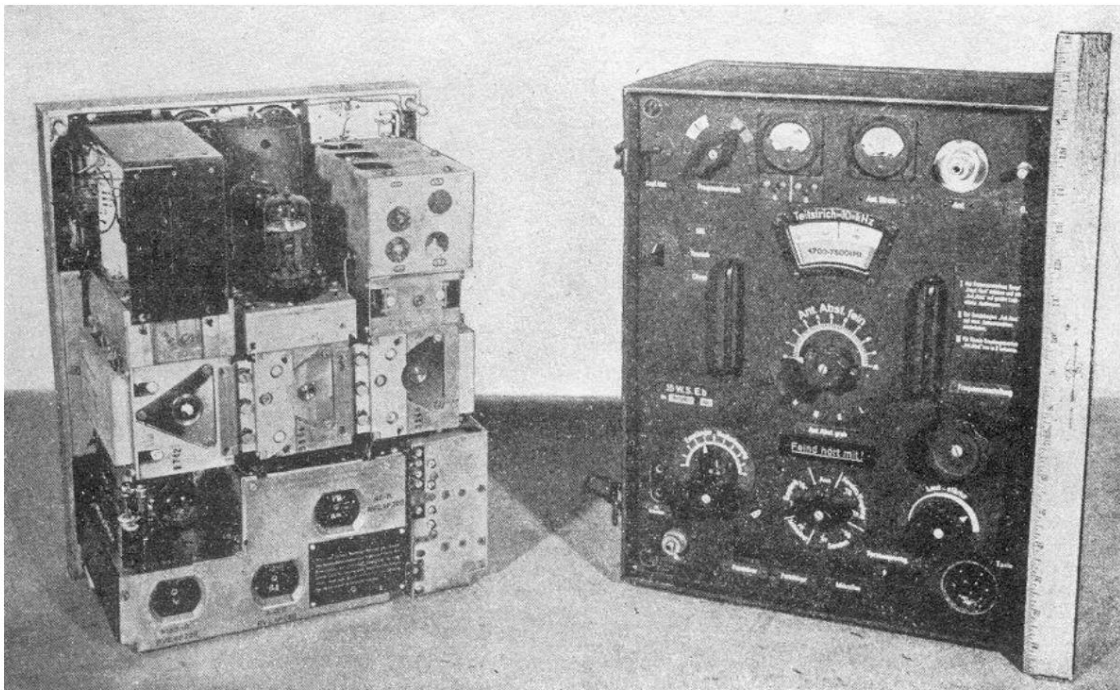
A Norwegian collector of signal equipment, Gerd Staaland, has in his collection a 3 Watt portable radio station m/39, which was brought to Norway by the corresponding Norwegian police troops:

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3 Watt portable radio station w/ 39 (3 W br w/ 39).

The pictures can be found on the Norwegian radio collector Helge Fylke's website LAGNCA.



German radio station type 15 WSE (b); on the left, the radio is seen from behind, with the cabinet removed. From Source 5.

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Scout School

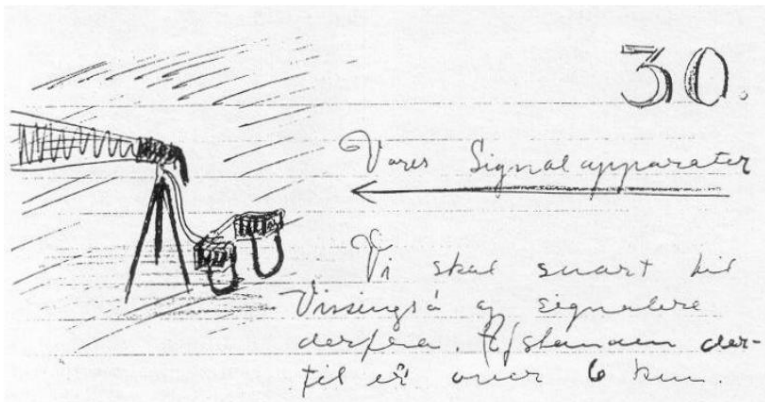
The mention of the equipment and the signal service at the Brigade also touches on an organization that I have not previously mentioned, namely the *Scout School*. The Swedish word for scout is *scout*, and we are talking about a small organization - a boarding school - that was set up to take care of big boys who had come to Sweden but were still too young to sign up for Brigadier. The Danish refugee organizations wanted to make sure that the boys did not get into trouble.

The school was inaugurated on 4 April 1944 and the teaching included regular school subjects and scout disciplines, including signal service. Source 5 mentions 50 names of scouts who were students at the school for a shorter or longer time.

Defense scouts

Among the oldest students there quickly arose a desire to make a contribution to Denmark's liberation and in August 1944 permission was given for a number of scouts to receive weapons training at the Brigade's location in Sofielund.

The scouts had to wear their (Swedish) scout uniform and steel helmet; a special badge with the inscription Försvarsscout¹ was to be worn on the uniform. The scouts were to be deployed in the signal service and, among other things, function as orderlies - on foot, on a bicycle and even on a motorcycle - truly a direct link back to the scouting movement's roots in Mafeking.



Before it got that far, however, the scouts first had to be trained in signal service and they received 4 flashing lantern sets, which they eagerly set about using.

It is thus also in Source 5 that you can find an illustration of this part of the Brigade's equipment.

The drawing comes from a diary that the school's first assistant (scout leader) Bent Gild kept during his stay (from April to October 1944).

The school now changed character from scout school to military pre-school and quartermaster Svend-Aage Egegaard Sørensen took over the management of the school, with two brigade soldiers as closest assistants. The training in signal service continued and the scouts became quite firm in their new craft - unlike the real brigadiers, they took up this task with heart and soul.

Liaison Division II In

February 1945, the scouts were told that those who wished could join the Brigade. Big cheer. Only two scouts, who were somewhat younger than the others (the youngest of which was only 16 years old), and if their parents did not give permission, could not come along. On 21 February 1945, 21 scouts turned up at the Håttunaholm camp, where they were admitted, dressed and out formed on an equal footing with other brigadiers.

The now former scouts were recruited into Liaison Division II and attached to the brigade staff; the staff's liaison division - Liaison Division I - was already in the camp and the divisions now began a close collaboration. They soon learned to lay out telephone cables, Morse using the Morse key, radio operation and much more. They also took part in the field training, and learned to shoot with rifles and submachine guns.

Liaison Division II accompanied the Brigade to the tent camp at Häckeberga and on to Denmark. In Copenhagen, the division was quartered together with the brigade staff at Frederiksberg Castle, where they, together with the staff division, connecting sixth division I and a motor ordnance division (from the Motor Vehicle Company) formed Kompagni Jensen, which was under the leadership of the commander in headquarters, then master of the horse and later colonel, Karl Jensen.

¹ However, this badge did not materialize and when 8 scouts met at the end of November 1944 for training in operating a switchboard (*fältväxler*) and shooting training, they wore a black fabric badge on which, in white letters, was *Scoutskolen Gränna*.

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Brigade Staff Liaison Platoon (Liaison Platoon I)

The communication division consisted

of: • Driver with helpers (4), Radio group of 3 SMO teams (sending and receiving teams) of 5 men (15), Signal group of 2 teams of 3 men (6), Telephone group of 4 teams of 2-8 men (14), carrier pigeon teams (4) and motor vehicle drivers (7).

Unfortunately, it is not known whether the carrier pigeon team was equipped with Swedish carrier pigeons or whether the team intended to take over Danish carrier pigeons - otherwise it sounds like quite an interesting story...

Furthermore, a liaison platoon (78 men) was included in the Regimental Staff; the detailed organization is not known.

Sources

1. *1½ years with the Danish Brigade* by lieutenant colonel PAF Norup (the brigade's chief of staff), Militær Tidsskrift 1947, page 271-308 and 353-406.
2. *Scandinavian Middle Arrow* by Harry Söderman, Catalog and Magazine Printing, Stockholm 1945.
3. *The Danish Brigade* edited by Niels Grunnet and Bent Demer, H. Hirschsprungs Forlag, Copenhagen 1945.
4. *From scout to soldier in the Danish Brigade in Sweden 1944-1945* by Ib Jersing, published by The Danish Brigadeforlag, Copenhagen 1994, ISBN 87-982509-2-2.
5. *Handbook on German Military Forces, 15 March 1945*, US War Department Technical Manual TM-E 30-451, republished in 1970 by The Military Press, Maryland, USA.

Per Finsted

10 W. Bärbar Radiostation m/39

<p>Sändningsanslag: Telegrafi A 1 Telefoni A 3 Antenneffekt: c:a 10 W vid telegrafi c:a 6 W vid telefoni Räckvidd med normalantenn: Telegrafi 50 km. Telefoni 20 km. Frekvensområde: Sändare 2500—500 kp/s Mottagare 1300—5100 kp/s</p>	<p>Strömkällor: Ackumulatorer, 2 st. Nife- celler för glödspänning 4,8 volt till mottagaren. Anodbatteri c:a 126 volt till mottagaren. Handgenerator som lämnar anodspänning 350 volt, glöd- spänning 8 volt för sändaren. Vikt: Apparatlåda 23,3 kg. Handgenerator 18,7 kg.</p>	<p>Funktion: Sändaren är självstyrd och har tre steg: styrsteg, effekt- steg och modulator. Mottagaren är en super med fyra steg och mellanfrekvens 1200 kp/s. Handgeneratoren alstrar den erforderliga likströmsenergien för sändning. Anodspänning 350 volt 60 ma Glödspänning 8,2 volt 1,5 ma.</p>
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Stationen levereras i befintligt skick och består av förutom sändare, mottagare och handgenerator, två packfickor med bl. a. antenner, bröstmikrotelefon, handmikrotelefon, hörtelefon samt en hel mängd användbara detaljer. Vad som ej medföljer är ackumulatorer och anodbatteri samt rörbestyckning. Dessa rör är av vanliga typer som finns att få i varje välsorterade radioaffär.

Rörbestyckning: Sändare: 2 styck AL1, 2 styck KL4. Mottagare: 3 styck KK2, 1 styck KL4.

Beställningsnummer D 2967	Pris komplett	145.00
D 3930	Komplett rörsats till D 2967. Pris pr sats	57.50

This mention in a catalog from a Swedish surplus warehouse, 1957/58, gives an impression of the data of the radio equipment. From [Green Radio](#).

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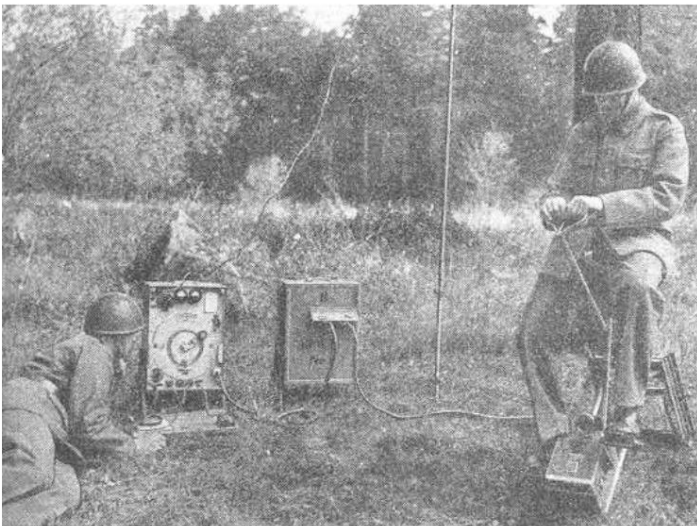
Introduction

Part 2 can now be added to the history of the Brigade's signal equipment, as Thomas Hörstedt in Sweden has been kind enough to publish pictures of some of the radio types that the Brigade probably used:

- 15 Watt portable radio station w/39 3 Watt
- portable radio station w/39 • 2 Watt
- portable radio station w/40-42.

There is now just one picture of the type 75 Watt portable radio station w/43 (75 W Tp w/43) before all types are shown, not to mention pictures of brigadiers operating the equipment...

The radio material



Swedish designation: *15 Watt portable radio station m/39 (15 W br m/39)*.

The material is similar in its structure to the corresponding 10 Watt portable radio station m/39 (10 W br m/39) (shown in Part 1), and consists of:

- the radio itself (transmitter and receiver),
- battery case (with accessories, including hand microphone, throat microphone, 2 sets of headphones and a telegraph key),
- power supply unit (pedal-driven generator).

The antenna was a 9 m long, two-piece antenna mast that was held to the ground by 2 double antenna lines.

Swedish soldiers with radio 15 W br m/39. From [Grön Radio](#).



As previously mentioned, the *15 W br m/39* was also used by the German army. At the beginning of the war, German signal equipment was among the best, both in terms of construction, durability and function¹. It was therefore quite natural that the Swedish army chose to buy its radio material in Germany.

The fact that the equipment was also used by Brigadier, whose signal equipment was either bought on the free market or delivered from the Swedish army's stocks, must be considered a technical curiosity on a par with the story of Field Binoculars M.40 - see Note 4 in *Den danske Brigade in Sweden 1943-1945 - 1st - 4th Battalion (Part 2)*.

Billedet2 er en gengivelse af en annonce fra Telefunken, hvoraf det fremgår, at *Telefunken supplies all systems, devices, tubes and accessories required for wireless telegraphy and telephony traffic, for radio navigation, electroacoustics, radio and television*. Billed for viser 15 W radioen i tysk udgave (*15 WSE*).

¹ *Handbook on German Military Forces, 15 March 1945*, US War Department Technical Manual TM-E 30-451, genudgivet i 1970 af The Military Press, Maryland, USA.

² *Portable radios of the Wehrmacht* af Helmut Krause, Waffen-Arsenal, bind 184, Podzun-Pallas-Verlag, Wölfersheim-Berstadt, 2000, ISBN 3-7909-0703-?.

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Swedish name: *3 Watt portable radio station m/39 (3 W br m/39)*.

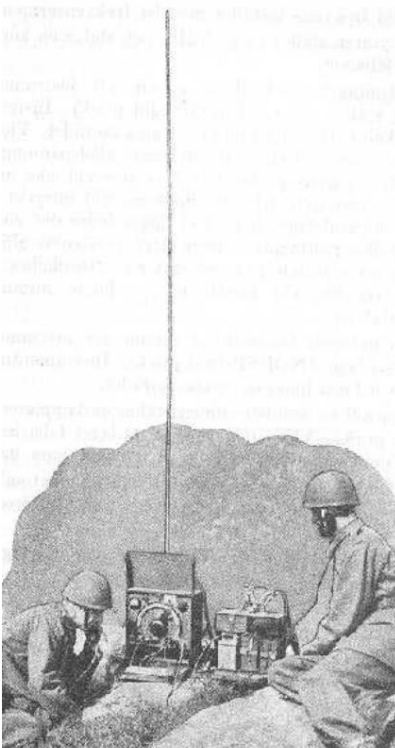
This radio is also of German origin, but I cannot immediately identify which type it is. It resembles some of the types which in the German army bore the designation *Tornisterfunkgerät* - i.e. light (relatively), portable radios.

The material consists of:

- the radio itself (transmitter and receiver),
- battery case (with accessories, e.g. hand microphone, throat microphone, headphones and a telegraph key).

The antenna was a stick antenna (composed of 2, 3, 4 or 5 parts, plus antenna head). This included a 9 m long antenna cable.

Swedish soldiers with radio 3 W br m/39. From [Grön Radio](#).



Swedish designation: *2 Watt portable radio station w/40-42 (2 W Br w/40-42)*.

This radio is, as far as is known, of Swedish origin.

The material consists of:

- the radio itself (transmitter, receiver and accessories),
- battery box.

During the march, a two-part rod antenna was used, which could be replaced by a four-part rod antenna in a fixed installation.

All the radio equipment could be used for normal radio traffic (voice transmission) or telegraphy (which significantly extended the range of the radios).

Swedish soldiers with radio 2 W br m/40-42. From [Grön Radio](#).

Conclusion I

thank Thomas Hörstedt and encourage everyone interested to visit his website [Grön Radio - A virtual museum about Swedish military radio stations](#).

Per Finsted