

PA6WSJ

Amateur radio station at the 18th World Jamboree



Unit 4.72.01

Evaluation

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1. Purpose of the station:

- The station offered a program to scouts about radio and radio techniques and allowed them to actively participate in the radio contacts.
- The amateur radio station was the voice of the Jamboree on the airwaves. It connected distant scout groups to the atmosphere of the Jamboree, presented the activities to them and allowed foreign contingents at the Jamboree to relay news to the scouts back home.

2. Activities for Scouts.

On a daily basis 100 Scouts and several visitors were received at the radio station. They were subdivided into 3 groups of about 33 scouts. Each group rotated through the amateur radio programme area: a visit to the telecom-today activity area, the scoutronics kitbuilding workshop and the amateur radio station. The following activities were offered at the station:

- Taking part in the radio contacts.
Instructors explained the amateur radio jargon to those scouts wanting to speak themselves via amateur radio. Scouts could actively take part in contacts made on five different amateur radio bands. Each band had a separate operating position, with room for about 7 scouts. Each scout had a separate pair of headphones available. Audio was only distributed to these headphones and to an external speaker that could be switched on or off. This limited the "background noise" considerably.
In total 3104 contacts were made with other (scout) amateur radio stations in 136 different countries.
- Plot chart.
A very large map on which scouts could pin-point each station they've spoken to and mark it with a small flag. This map was the visual display of the accomplishments of the station. It was very helpful to explain to visitors and the press what the main activities were of the station.
- Calculate the time differences with a given country.
A "Bolivian Wheel" was available with which scouts can calculate the time difference between The Netherlands and any given country.
- Look up details of a given country.

With the help of a computer scouts could look up details of a contacted country. The system was an electronic encyclopedia on CD-ROM. This proved a popular activity.

- Logbook.

All contact data were entered into the station's logbook computer. This proved difficult for the scouts. In order to maintain a correct database, the station operators entered the data themselves. During quiet hours of the night shift a backlog could be brought up-to-date.

- Amateur television.

An amateur television (ATV) link connected the radio station with the Jamboree Tower. A radio-controlled camera was mounted on top of the tower and allowed scouts to look at the "view from above".

- A slow-scan amateur television system (SSTV) allowed scouts to exchange TV pictures with their counterparts world-wide. During pre-arranged schedules pictures of the Jamboree were sent to scouts at amateur radio stations world-wide. SSTV was only used occasionally, since the operators were kept quite busy with phone contacts.

- Your own receiver.

Three short-wave receivers with visual operator instructions enabled scouts to listen in to world-wide radio traffic. Not only can they monitor the ongoing contacts in the radio station, but also the contacts between ships, aircraft, mobile and fixed installations and listen to foreign broadcast stations. A separate antenna was installed, away from the transmitting antennas. Frequency list of interesting stations helped to find them. Support staff help was needed to assist scouts in finding the right buttons on the radios.

- Digital communications.

Communicating via a computer connected to a radio transmitter; packet-radio is the most modern form of amateur radio. Scouts operated in a conversation mode that facilitated direct interactive contacts world-wide. This was quite popular.

The same packet-radio system offered a message handling capability too. All scouts at the Jamboree could send and receive messages to and from anywhere in the world. Incoming messages were delivered to the subcamp staff of the addressee as an official "PA6WSJ Radio Telegram".

- Antenna creativity.

Create your own antenna using a prefabricated HB9CV antenna kit. If correctly assembled, a radio contact with it was the reward. Support staff explained the principles of an antenna.

- Morse code competition.

Who is the fastest to read the morse code letters generated by a computer? A daily competition with a small prize for the winner.

- Build your own key.

A small workshop to build your own Morse-code key from simple materials. A sounder circuit was hooked up to try the result. Participants could train their ability to communicate with this self-made instrument.



Dick, PA3FJY, operating the 20 m station.

All activities had a high-tech profile, where *simplicity and visuality* were the two key-factors. The support staff at the station accompanied the participants and provided for adequate assistance with each activity where needed.

3 Daily schedule of operations:

time	activity
08.00 - 08.30	station closed for clean-up; staff breakfast; day crew present at 08.00
08.30 - 09.00	unit meeting for all staff
09.00 - 09.30	final preparations for programme; welcome participants
09.30 - 11.00	programme group 1
11.00 - 11.15	shift groups and spare time
11.15 - 12.45	programme group 2
12.45 - 13.30	lunch; scouts & staff remain in the amateur radio area
13.30 - 15.00	programme group 3
15.00 - 15.45	presentation of certificates, jamboree rubber stamps, question time.
15.45 - 17.00	staff clean-up, skeds, visitor programme and prepare for evening
17.00 - 19.00	staff dinner, in turns. evening crew arrives at 18.00
19.00 - 23.00	evening programme with skeds and other radio operations
23.00 - 08.00	night programme with skeds; night crew present at 24.00

4. Station description

4.1 Antennas and masts.

Antennas were:

- one mast with a 9 element 20 meter-band / 15 meter-band beam;
- one mast with a 13 element 2 meter-band antenna;
- one mast with a 3 element multi-band beam for the 20/15/10 meter-band and a 70 cm-band antenna;
- two masts with dipole antennas for the 80 and 40 meter bands.

4.2 Radio equipment.

Contacts were made in normal voice (phone), Morse code (CW), packet-radio (PR) and television (SSTV).

Five separate operating positions were set up:

- HF, 20 m band, voice, CW;
- HF, 10 and 15 m band, voice, CW, SSTV;
- HF, 40 and 80 m band, voice;
- VHF, 2 m band, voice;
- UHF, 70 cm band, attached to packet-radio.

Additionally, one 10 GHz station transmitted live ATV pictures from a video camera mounted on top of the Jamboree Record Tower, 63 m high. The receiver was placed in the radio station, along with a TV set. From here one could watch the "view from above". The camera could be remote controlled via a DTMF pad on a 2 metre VHF transceiver.



Morse-code competition on a computer.

Each station was equipped with a separate band-pass filter to eliminate interference. In addition, 220 V mains filters were installed to prevent RF signals from spreading via the power network. Antenna cables were laid down on the floor, whilst mains power cables were hung from the ceiling. No notable interference occurred between the various stations and the computers.

4.3 The lay-out plan.

The lay-out plan of the station is as follows:

(not available in the on-line version)

4.4 The QSL card.

A special QSL card has been designed. These cards are sent to all stations with whom a contact was established. The printing of the cards was done in Japan by Yaesu, a large amateur radio equipment manufacturer.

5 Reception and information desk.

A reception desk was set up. Here participants and visitors could pose general questions. This worked very well and was appreciated by many.

6 Guest licences for foreign operators.

The Hoofddirectie Telecommunicatie en Post (HDTP) agreed to a simple procedure to apply for guest licences for operators of PA6WSJ. Upon arrival at the Jamboree site, they registered with the station manager. A passport and the amateur radio licence from the country of origin needed to be presented. The station manager entered the data into a list that was sent to the HDTP afterwards. Operators were issued an operators identity card that served as a radio licence to operate PA6WSJ while at the Jamboree.



The reception desk with programme descriptions in 8 different languages and tulips!!

7. Third-party agreement.

A third-party message agreement is normally **not** part of the Netherlands amateur radio licence. However, the Hoofddirectie Telecommunicatie en Post (HDTP) issued a licence to the Jamboree station that allowed Scouts to take part themselves in the radio traffic. The following rules applied:

- **a station can only be operated by an operator licenced for the particular band;**
- **the licenced operator is the one calling CQ;**
- **the licenced operator opens any contact and fills out the log;**
- **during the contact a non-licenced scout or guide may speak directly into the microphone or use the keyboard;**
- **the licenced operator is responsible for the contents of the transmissions and correct use of the equipment at any time;**
- **the licenced operator closes each contact and enters the data into the logbook computer.**

8. Crew.

The station operates under responsibility of the station manager: there is always 1 manager on duty. The staff shifts were as follows:

Shift	support staff	radio operators	station manager
day time, 08.00 - 18.00	3	4	1
evening, 18.00 - 24.00	1	2	1
night, 24.00 - 08.00	0	1	1

The support staff was tasked with explaining the operations to Scouts and host the visitors. They also lead the activities for the Scouts, assisted by one or two of the operators. The radio operators ran the ongoing and scheduled radio contacts and took care of all technical matters. The station manager co-ordinated the activities and assisted where needed.

9. Visitors programme

The Jamboree amateur radio station offered excellent possibilities for visitors, jamboree participants as well as outsiders, to participate in the activities. A self-guided tour was available in English, French, Dutch, German, Spanish, Russian, Norwegian and Japanese that gave visitors a short tour of the station or guided them through some of the activities of their choice. This did not interfere with the regular programme for the jamboree participants.



Many visitors took part in the activities or just came in to taste the atmosphere. One evening the station crew invited all international scout radio amateurs at the Jamboree

WOSM Secretary General Jacques Moreillon (right) visits the station. Team manager Pieter Kramer, PA3BIV, (left) and station manager Richard Middelkoop, PA3BAR, (middle) explain the programme, while Johan Vlaming, PA2VVG, (front) concentrates on his packet radio contact.

for an exciting programme and eye-ball QSO. Some 84 scout radio amateurs came together and exchanged views on techniques and programme ideas.
A glimpse of the guest book:

(not available in this on-line version)

Staff list unit 4.72.01

Unit management:

station manager:
Richard Middelkoop, PA3BAR

dept. station manager:
Rick Rabouw, PA3CJL

dept. station manager:
Paul Prinz, PA3DVB

Operator staff:

Ferdinand Kroon, PA3CMI

Johan Vlaming, PA2VLG

Henk Roodhorst, PA3DHU

Bas Mastebroek, PE1OOV

Jelle-Jan Visser, PE1MBV

Dick van der Knaap, PA3FJY

Support staff:

Pieter Segaar, PE1NXA

Arend Koorling

Sylvia Sterkenburg

International Service Staff:

Tormod Nordeng, LA8RU

Matthias Komp, DL7AMK

Ralph Jenkins, VE3RJE

Hannu Rättö (Banda), OH2BXB



The PA6WSJ crew (from left to right):

rear: PA2VLG, PE1NXA, VE3RJE, PA3FJY, PA3DVB, PA3CMI, OH2BXB,
PA3DHU, PA3BAR.

front: PA3CJL, LA8RU, PE1MBV, DL7AMK, Sylvia.

