



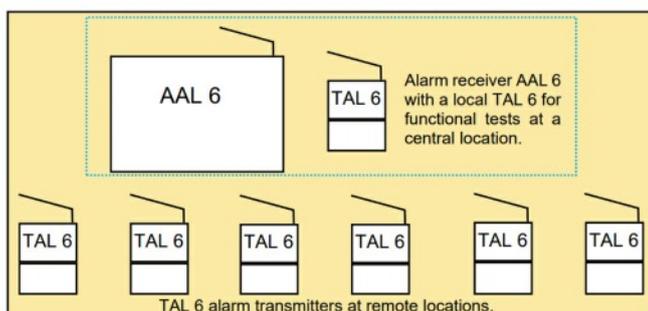
TAL 6 and AAL 6

Country of origin: France

This supplement chapter is a follow up and should be read in conjunction with the 'TAL 6' section in the 'France' chapter of WftW Volume 4 for more information.

Remarks

During the Algerian War, the French army had the task of protecting isolated farms from attacks by Fellahs. To trigger an alarm in the event of an attack, L'Electronique Appliquée developed a system consisting of alarm transmitters called TAL 6 and alarm receivers called AAL 6. These receivers received, identified, and printed a three-letter alarm location on a strip of paper.



The components used in manufacturing were of high quality, and the entire system was tropicalized to operate under extreme temperatures. The alarm signal comprised a repetition of a three-letter call sign in Morse code (For example OKP or GIJ in the transmitters on the photos shown in this chapter) inscribed on the front of the case. The signal lasted approximately two minutes and was repeated after seven minutes of silence. During the two minutes of transmission, the call sign was repeated eight to ten times, followed by a continuous carrier of about twelve seconds. The alarm transmitter TAL 6 and wire aerial were usually hidden in a concealed location. With the signing of the Evian agreements, which put an end to the Algerian War, the system became obsolete. A large number of TAL 6 transmitters were sold later, many of them new and unused (see page 2).

Notes:

- L'Electronique Appliquée, a company headquartered in the Paris region with production facilities in Montrouge, was founded in 1948 by Pierre Farge and run by a small group of former clandestine radio operators. The transmitter was designed by Mr. Tétard, based on the principle of clandestine transmitters used by the Resistance.
- The Evian Agreements were signed on 18 March 1962, in Évian-les-Bains, France, between the French government and the Algerian National Liberation Front (FLN) during the Algerian War of Independence. The agreements brought an end to the conflict and granted Algeria its independence from France.

DATA SUMMARY

- Organisation:** French Army in Algeria.
Design/Manufacturer: L'Electronique Appliquée, Paris.
Year of Introduction: Late 1950s.
Purpose: Wireless alarm system for settlers.
Frequency range: A single crystal controlled frequency in the range of 3-8 MHz.
Alarm transmitter TAL 6:
Circuit features: Single valve crystal oscillator/RF power amplifier. CW only. FT-243 type crystal.
RF output: 4-5W
Valves: EL84 and 3A5 driving auto keyer motor.
Aerial: 10m wire and earth connection.
Alarm receiver AAL 6
Circuit features: Single crystal controlled superhet with BFO. IF 455kHz. CW only.
 Hell Undulator type UR 39 Morse printer.
Power Supply:
TAL 6: Dry batteries: LT 1.5V at 220mA and 6V at 700mA, HT 180V at 25mA and 360V at 40mA.
AAL 6: AC mains 110/220V, external DC/AC converter for emergency use.

Size (cm) and Weight (kg):

	height	length	width	weight
Transmitter TAL 6	17	24	20	4
Battery case (incl. batteries)	15.5	24	20	6.5

References:

- Photographs and information courtesy 'Radioman 33', F1PLT, <http://www.radioman33.com/>
- L'émetteur d'alerte TAL 6, Notice Technique d'utilisation et d'entretien, 3^{ème} édition, Juillet 1961. (User manual).
- Previous correspondence with André Massieye, F5JDG.
- L'émetteur d'alerte TAL 6, André Massieye, F5JDG presentation et utilisation amateur, CHIRP, Nr. 27, Eté 2001.
- The French TAL 6 Alert Transmitter, presentation and amateur use, André Massieye, F5JDG, SRS Bulletin, No. 31, Mar. 2003.

Alarm Transmitter AAL 6

The TAL 6 was a device used to transmit alarm signals and identify the location of the triggered alarm. It consisted of two metal cases, both designed for wall mounting and closed with spring clips.

The first case contained a valve transmitter and an electromechanical system for automatic transmission of a three-letter Morse code. This code allowed the receiver to determine which location triggered the alarm and take appropriate action.

The second case housed dry high tension and low tension batteries. These batteries were included because the farms where the transmitter was used often experienced power outages, especially in remote desert areas. The two cases were interconnected by a cable mounted on the front panel. The transmitter utilized an EL84 valve as a crystal-controlled power oscillator, providing about 5W RF output. The anode circuit contained a tuning capacitor and a coil with multiple taps for optimal aerial matching.

A System switch on the front panel had three positions: "Reglage" (Tuning/testing), "Auto," and "Manuel" (Manual).

- In the "Reglage" position of the System switch, the transmitter would start, and when the "Test" button was pressed, a 6.3V 300mA bulb indicator light was connected in series with the aerial. By adjusting the aerial taps and tuning controls ("Accord Antenne"), the maxi-

mum brightness of the bulb could be achieved. The brightness of the bulb varied based on the length of the aerial and frequency in use.

- In the "Auto" position of the System switch, the transmitter was started either by a switch on the battery case or by an optional remote alarm switch. An AF oscillator, consisting of a double triode 3A5 valve in a push-pull configuration, operated at a frequency of about 50 to 60Hz. The oscillating circuit of the AF oscillator included capacitor C5 and the winding L4 of the motor. This oscillator powered an asynchronous motor, which drove a gearbox operating a cam with a three-letter designation at approximately 5 RPM. It also drove a second gearbox with another cam. This second cam rotated once every 10 minutes, activating two micro contacts, producing two continuous 12-second transmissions in the alarm signal.

- In the "Manuel" position of the System switch, Morse signals could be manually keyed using a special switch called "Manip" (short for "manipulateur") located on the transmitter's front panel. This switch acted as a Morse key for manual input.

When the System switch was in the "Reglage" or "Manuel" position, the filaments of the 3A5 AF oscillator were switched off, and the asynchronous motor did not run.

Advert from a surplus store in Paris.

TRES BELLE AFFAIRE
EMETTEUR D'ALERTE
 - ELECTRONIQUE APPLIQUEE -
 Type TAL-6HS

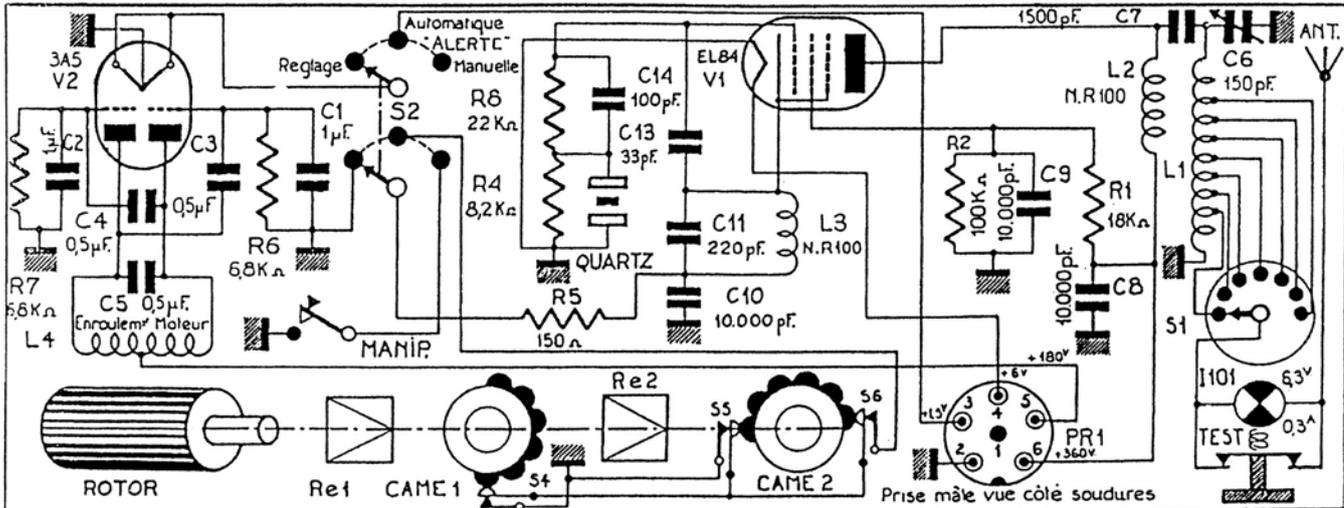
Dans un coffret mét. robuste :
 • 2 lampes (3A5 et EL84) • 1 quartz type FT23, fréquence 2,550 Kcs.
 • 1 moteur 3A501, 110/220 V avec 2 réducteurs, commandés plusieurs modes qui actionnent 3 microswitch (1 came tourne à 2 tours, 1 came fait 1 tour en 12 minutes), 1 CV sur ailette, sans condensateurs, condensateurs, bobines, 1 manipulateur, etc.
 • 1 boîte à aile pour alimentation avec cordon de raccordement.

APPAREIL NON TESTE
 Il est impossible de donner adresse recommandée. Ceci pour que nous ne soyons pas accusés de fraude. Dimensions de l'appareil : larg. 250, long. 300, hauteur 120 mm. Boîte d'alimentation : mêmes dimensions. Poids : 2,5 kg.
PRIX DENSOIR 55 F

GRANDE AFFAIRE A PROFITER
RECEPTEUR-ENREGISTREUR AUTOMATIQUE D'ALERTE
AAL6-HS
 - ELECTRONIQUE APPLIQUEE -

Superbe appareil perfectionné, neuf, comprenant le matériel électronique :
 • 15 lampes (6 x 6X6, 2 x 6BE6, 4x6X4, 1x6X5, 1x6X6, 1x6X7, 1x6X8, 1x6X9)
 • 2 transformateurs d'alimentation de 100/220 V et 100/250 V
 • 1 transistor de sortie • 9 microswitch
 • 2 câbles de liaison de 7 mètre divers
 • 1 Système de 5,5 à 50 mètres • Un système microswitch de 10 pièces divers
 avec l'émetteur "TALA" ci-dessus. Il reçoit les signaux, les enregistre, les retransmet avec l'antenne incorporée sur le face avant, sur bande étroite, P.S. - Cet appareil est facilement transformable en récepteur de trafic professionnel.
 Coffret 10x, métallique.
APPAREIL NON TESTE
 Long. 300, larg. 270, haut. 280 mm. Poids 40 kg.
Prix 250 F

PRIX SPECIAUX PAR QUANTITE
 Nous consulter

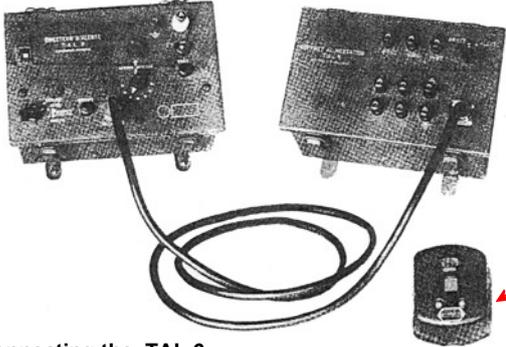


POUR L'ADAPTATION DE L'ANTENNE.
 a. Mettre le contacteur S3 du coffret alimentation sur "ALERTE"
 b. " " " S2 " " émission sur "REGLAGE"
 c. Appuyer sur le bouton "TEST"
 d. Chercher au moyen du contacteur S1 et du cond. variable C6 (bouton "Accord Antenne") le maximum d'éclat du voyant I 01

e. Relâcher le bouton "TEST"
 f. Remettre S3 sur "ARRÊT"
 g. " " S2 " "ALERTE AUTOMATIQUE"
 -L'appareil est alors prêt à être mis en route par S3.

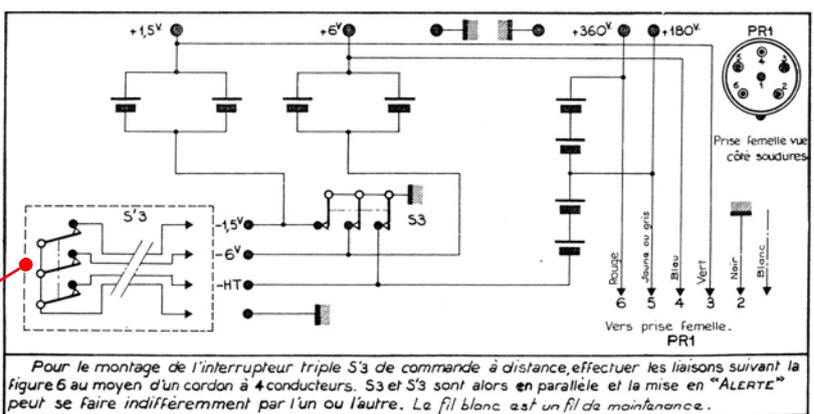
ATTENTION!
 Après toute mise en marche de l'émetteur ne l'arrêter que lorsqu'il trait ceptre apparaîtra dans la fenêtre pratiquée sur le panneau de commande du coffret émetteur.

Circuit diagram of the TAL 6 alarm transmitter with aerial tuning procedure.

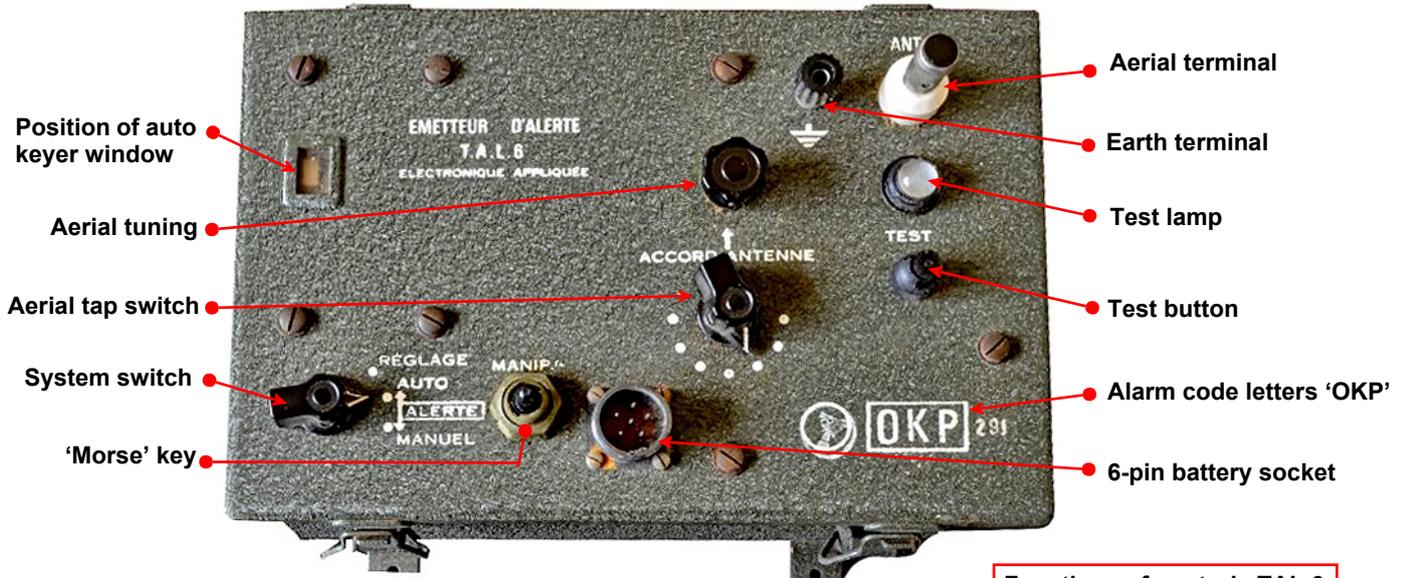


Connecting the TAL 6 with the battery case.

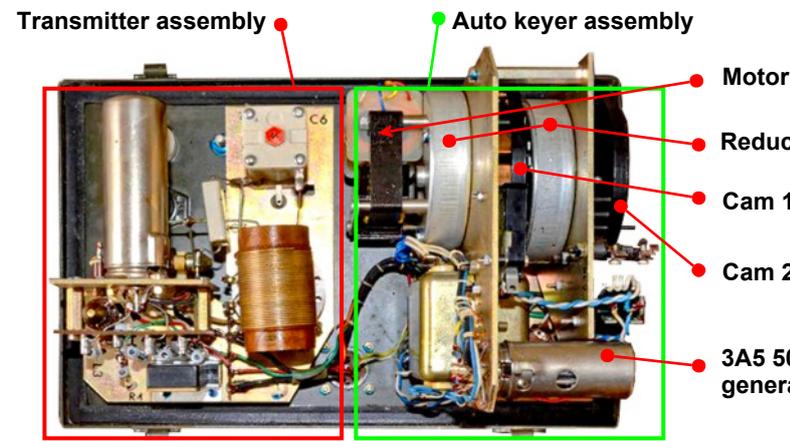
Optional remote alarm switch (S'3).



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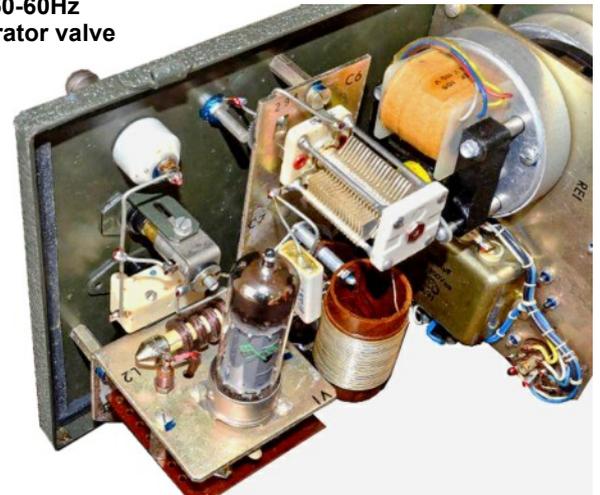
Functions of controls TAL 6 alarm transmitter.



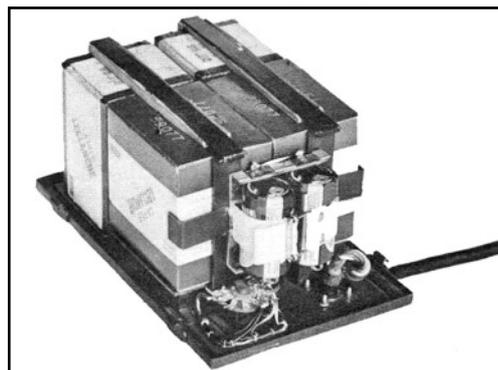
Internal view of an TAL 6 showing the transmitter assembly (left, red outlined) and auto keyer assembly (right, green outlined).



Internal view of TAL 6 seen from bottom showing crystal, RF output coil and parts of the auto keyer assembly.



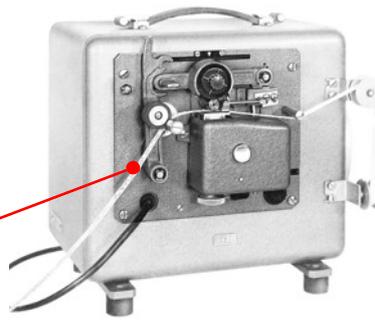
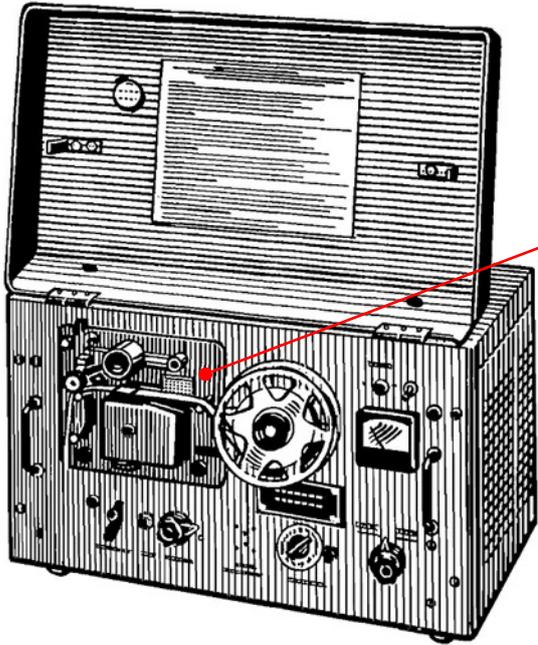
Top view of transmitter assembly with EL84 valve (screen can removed), aerial tuning and asynchronous motor of the auto keyer.



Internal view of the TAL 6 batteries box which held two 6V, four 90V and two 1.5V dry batteries.



Alarm Receiver AAL 6



The Undulator Morse printer used with the AAL 6 was the printer mechanism of a German 'Hell' type UR 39.

The AAL 6 alarm receiver comprised a receiver assembly, an Undulator printer and control electronics, all built into a stout metal case. The receiver assembly was a crystal-controlled 'AME' HF chassis, which was the section within the red dotted lines in the circuit diagram. When an alarm signal was received, a three-letter Morse code was printed on a strip of paper using the mechanism of a German Hell type UR 39 Undulator printing system. This printing system was fitted on the AAL 6 front panel, along with a spool of 9.5mm wide paper. In case of an AC mains power outage, the AAL 6 alarm receiver was equipped with an external DC/AC inverter. This inverter, powered by a large battery, would automatically start to provide power to the device during the power outage, ensuring its continued functionality.

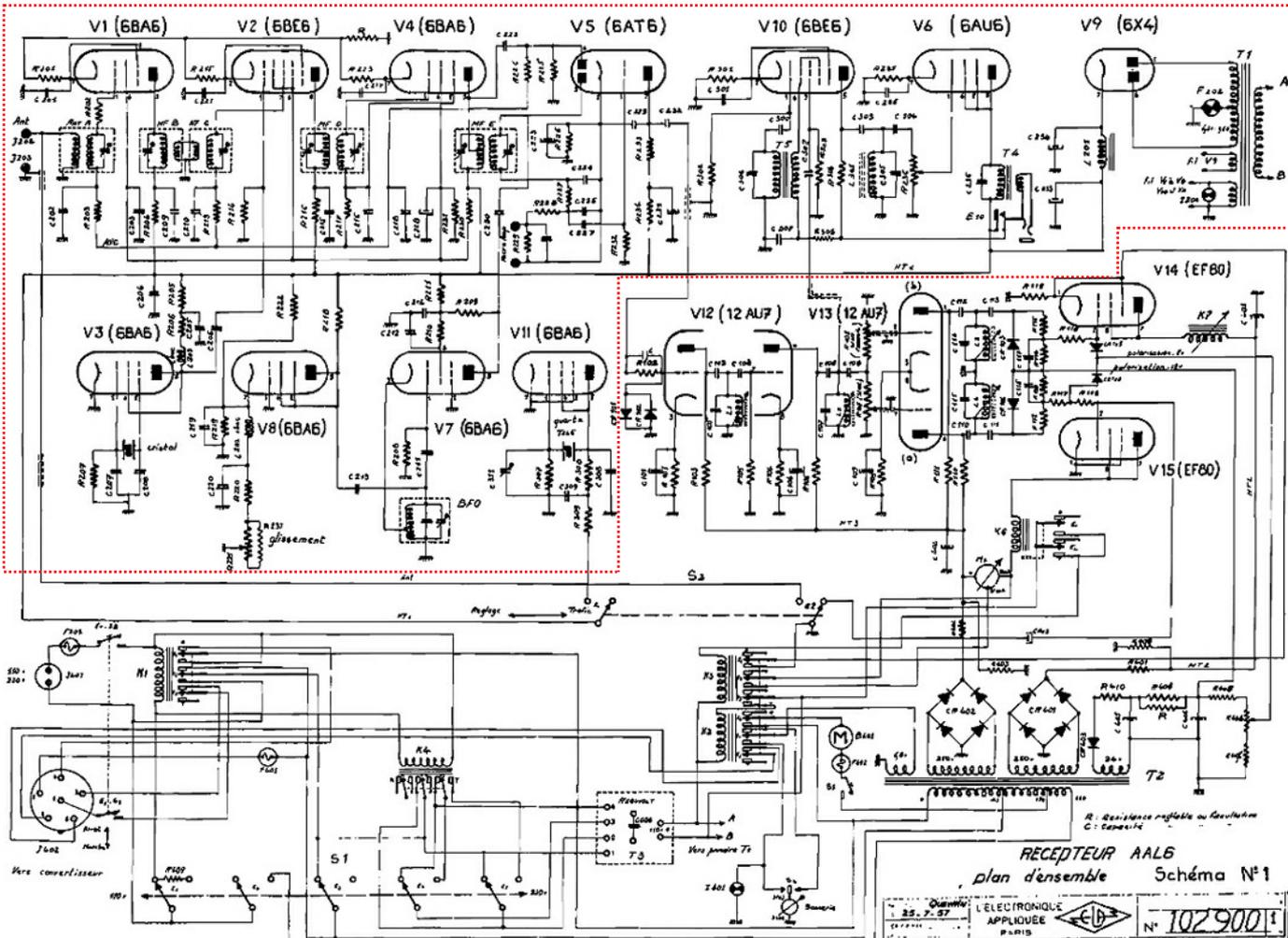
An interesting feature was the test/alignment capability that used a plug-in crystal, oscillating on the receiving frequency, which provided a test signal. This feature allowed a quick overall test and could be used for aligning the receiver.

Alarm receiver AAL 6. At the time of publishing this chapter only this drawing was found.

This is an example of part of an alarm message received by an AAL 6 and printed on an Undulator paper strip, transmitted from an alarm transmitter type TAL-6 with 3 letter code 'SPA'.

Sample Undulator paper tape.

S P A S P A



Circuit diagram of the AAL 6 alarm receiver.

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