KRIESLER MOD. 41-24: the radio with the Southern Cross

by Lello Salvatore *

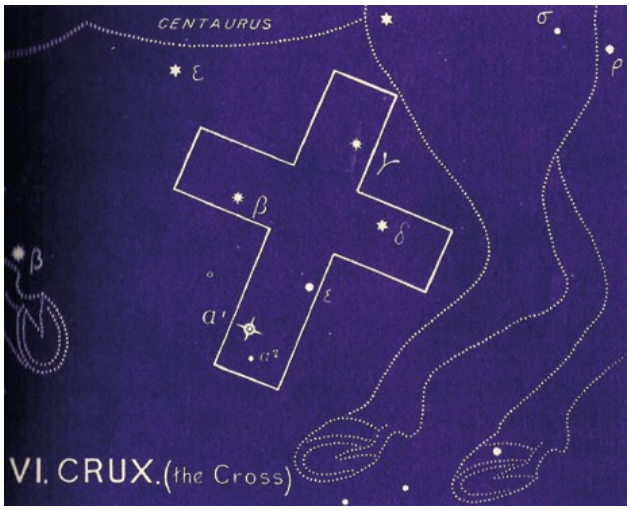
*English translation edited by Robert Davidson***

(Fig.1)

When Alessandro showed me this radio (Fig. 1) in February 2015, I thought at first glance that it was a German radio. In fact the word "KRIESLER", clearly on the front of it, took me in that direction, perhaps also because I've lived a long time and still live in South Tyrol (named Alto Adige from Italians) and I had acquired a certain familiarity with German names. Looking at it more closely, however, I had to change my mind immediately, because the small radio set, on its top face, has a tuning dial (Fig. 2) which is, so to speak, very exotic, in that it is not reflected in the European, Japanese or American vintage radio receivers that most of us collectors know. Along with that, on the right side of it tuning dial there is the lettering "transistor" in italics in which the initial letter "t" is stylized in the shape of "Southern Cross" with four small glass crystals at its ends and a small bead protruding under his right arm. The presence of this cross is not accidental and in fact takes us far away from Europe, to a completely different part of the world that is not the Far East (Japan) nor the West (USA) but in the southern hemisphere -- in Australia, to be exact.

(Fig.2)

The Southern Cross



(Fig.3)

The Southern Cross[1], *Crux* in Latin (Fig. 3), is the smallest of the 88 constellations into which the sky is divided and is one of the most brilliant and characteristic of the southern hemisphere in whose skies it is visible on all nights of the year; thanks to it, it is possible to identify the south celestial pole.

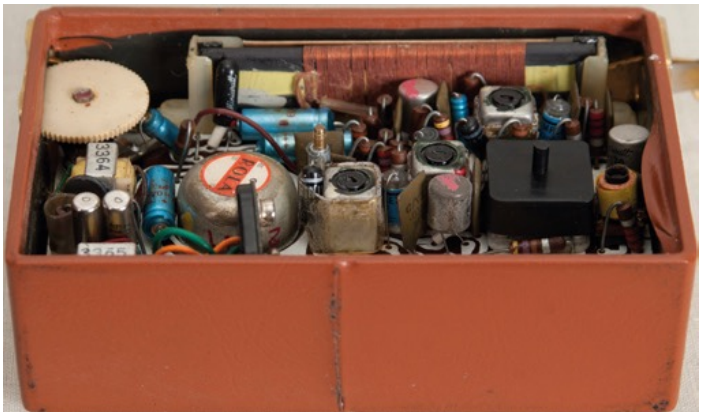
There are five main stars. At the ends of the cross there are: the Acrux or α (Alpha) Crucis[2], the southernmost and brightest star in the constellation; Becrux or β (Beta) Crucis, also called Mimosa; Gacrux or γ (Gamma) Crucis, the northernmost star of the cross and δ (Delta) Crucis, the weakest of the four, at the end of the right arm. Under the right arm of the cross is ε (Epsilon) Crucis which, being on the line of conjunction between α Crucis and δ Crucis, gives the constellation a characteristic appearance. The Southern Cross is located in a very dense and bright part of the Milky Way that highlights the famous dark nebula called Coal Sack.

The Southern Cross was already known in the times of the Greeks and Romans and its stars were considered part of the nearby constellation of the Centaur (*Centaurus* in Latin) representing one of the hooves. Today, due to astronomical phenomena that take effect over a very long period of time, such as the precession of the equinoxes and the proper motion of the stars, the Southern Cross is now visible in the low latitudes of the Northern hemisphere (27th parallel). This constellation is a constant symbol of the southern hemisphere and some countries of that part of the planet even have it depicted on their flags, Australia **(Fig. 4),** New Zealand and Brazil among them.

Description of the receiver

The Kriesler radio receiver with the Southern Cross is the one identified by the same manufacturer with the model number 41-24 as shown by the white paper label glued to the inside of the cabinet's back half. It is placed inside a rectangular-shaped plastic cabinet with a horizontal extension and dimensions of approximately 12.5 cm in width, 9 in height and a depth (Fig. 5), of 5 cm, decidedly large for a pocket size set type. The cabinet has a brown leatherette covering and the cabinet's back half (Fig. 6) appears slightly padded. The front face has a large metal perforated grille with a golden frame, and on this grid, near the left edge and parallel to it, there is the Kriesler inscription and a flattened "V" shaped logo surmounted by the letter "K" (Fig. 1). On the right side of the cabinet (Fig. 7) two knobs protrude side by side: the tuning control, at the front, and the ON / OFF-volume at the back, while at the bottom, again on that side, there is the earphone jack for individual listening. Two gold-plated metal inserts are placed at the upper ends and bear the eyelets for attaching the transport strap on which the little pouch for the earphone is also placed. On the top face of the cabinet, as

described in the introduction, the tuning dial features its unusual tuning scale as well as the design of the famous Cross which, in addition to embellishing this radio and making it more interesting, evidently is intended to emphasize its geographical origin. The latter is set forth, almost if it were still needed, by the writing "Kriesler A/Asia[3] Pty. Limited", reported just below the indication of the model number (model 41-24) on the white label (Fig. 8) , bottom right. Said label also reduces the following: the wiring diagram; the scheme with the location on the chassis of the main components used; the type of battery used (the Eveready type 2162 9 Volt) with instructions for replacing it and removing the chassis from the cabinet. The chassis appears with all its components in view (Fig. 9).



(Fig.5)

In it are worthy of note: the speaker cap with the inscription "Rola", an Australian company from Richmond, Victoria; the black hood that covers the variable mica capacitor; the presence of three intermediate-frequency transformers; the use of six Philips germanium transistors, of which only one in a black glass case (an OC75, af.driver) and all the others in a metal case; the lettering "Miniwatt" on the driver transistor and on the converter one (Fig. 5); the use, in addition to the transistors, of other Philips components such as the electrolytic capacitors (blue) and finally, a yellow cardboard label (Fig. 10) riveted on the chassis, where the serial number (serial n. 1215) of this model, the chassis number(chassis No. 89-2) and the model indication 41-24/26.

(Fig.6)

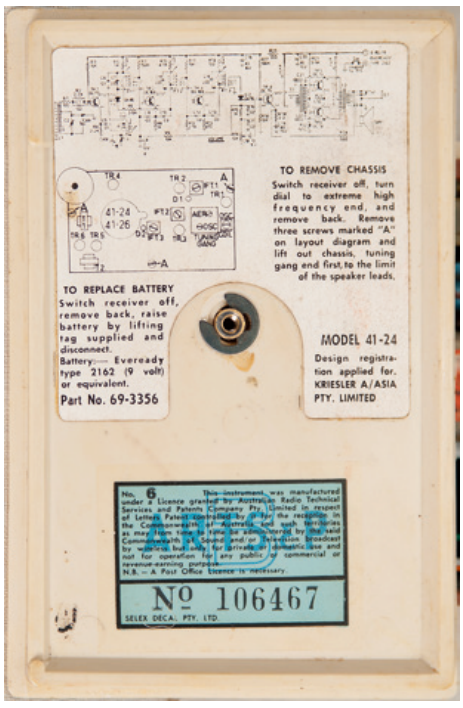
This last writing could lead to misunderstanding due to the presence of the number 26 but looking at the diagram on the white label of the back (the one with the layout of the components) and the enlarged and easily legible version of the wiring diagram shown in figure 11[4], it is clear that we are in the presence of a single chassis no. 89-2 (to which the diagram refers) used in two distinct models of radio equipment: 41-24 (ours) and 41-26. The wiring diagram of this chassis, in the lower right corner, as well as some signatures (designer, controller, verifier) is dated March 5, 1961 and shows a classic superheterodyne circuit of a radio receiver for medium waves with six transistors, all of the pnp type, with an OC170 (TR1) in the converter stage and two OC 169 (TR2 and TR3) amplifiers of the IF (intermediate frequency) of 455 kHz. There is also the diode OA80 (D1), called a stabilizer diode or damping diode, connected between the input of the primary of the first IF transformer and the primary socket of the second IF transformer: this diode serves to attenuate the strong radio signals with great efficiency thus avoiding overloading the transistors keeping them within normal working conditions. They are followed, after the indispensable detector diode OA79 (D2) from which the AVC circuit is branched, the driver transistor (TR4) and the audio power amplifier.

This last stage is so to speak, of the first generation, that is realized, as in the vast majority of the first (except exceptions) pocket radio receivers, with two audio transformers, one at the entrance and the other at the output of the equal matched transistors, OC74 (TR5 and TR6) connected to work in B-class (push-pull). Note in the audio stage, the presence of the R24 counter-reaction resistance which

improves the sound quality. So far I have said a lot about our radio, the 41-24 model, but some readers may be wondering: how is this distinguished from the 41-26 model? Well, apart from the identical chassis and attached components, including the electrical circuit, on the Radiomuseum[5] website, rich in information and always useful to consult, at

(Fig.7)

http://www.radiomuseum.org/r/kriesler_41_26.html, it appears right the 41-26 model in a cabinet of almost equal dimensions, but covered with a black vinyl fabric (instead of synthetic



leather), with a circular front grille surrounded by a protruding stud and, partially, with the lettering ALL TRANSISTOR.

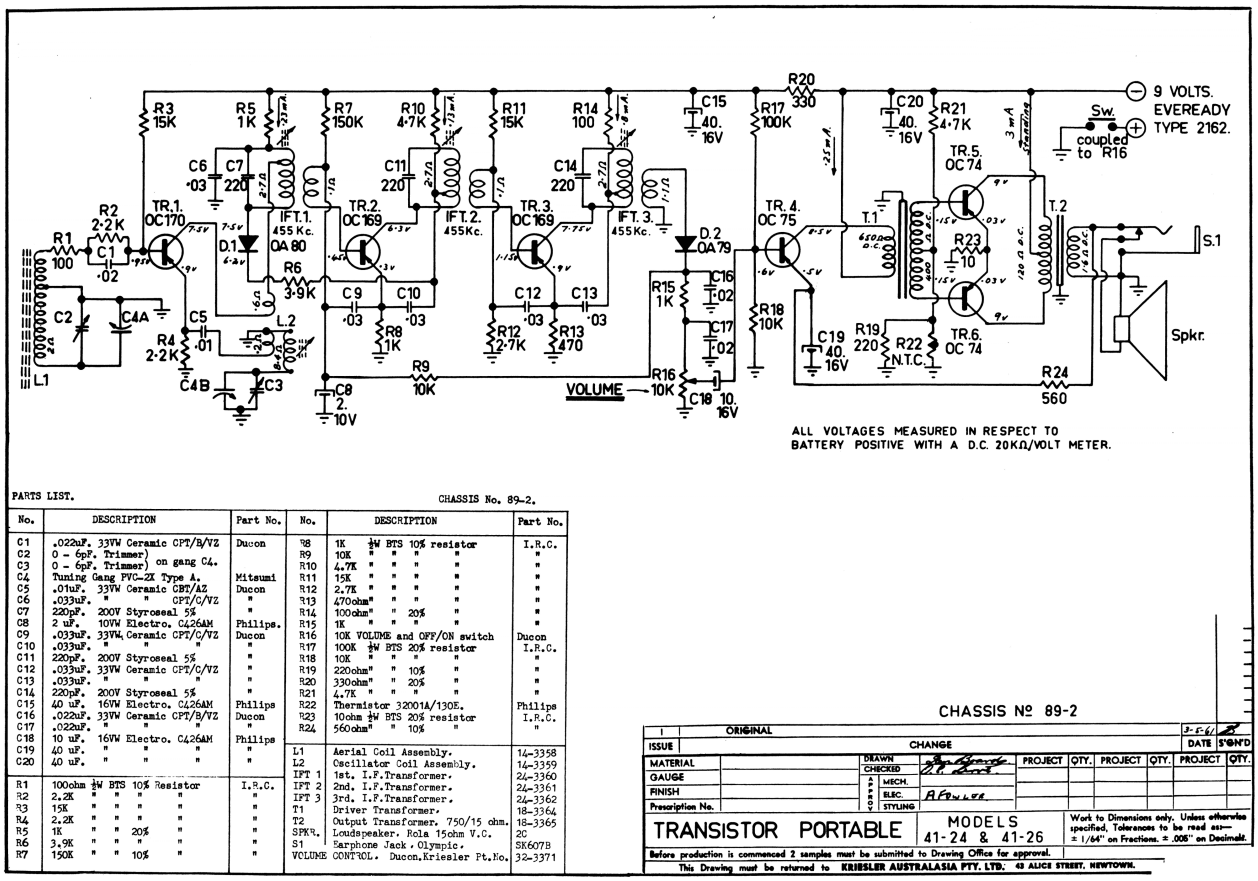
Here too the KRIESLER logo and inscription are present, but placed horizontally near the lower left edge of the front side. The top face of this model lacks the beautiful Southern Cross: instead of the cross it features eleven small glass crystals. The weight indicated for the 41-26 model is about 400 g and 480 g for the 41-24. Finally, it should be noted that Radiomuseum shows our 41-24 with a faux red leather cover (http: // www.radiomuseum.org/r/kriesler_41_24.html) and calls it Playway while 41-26 is called Playboy. In the first year since its launch, our Playway cost AUD 54.60 and slightly less than the Playboy sold for AUD 52.5 (Australian dollars).

(on the left Fig.8; bottom right, Fig.9)


3364
3365
P. No. 69-3354
MODEL 41-24/26


P. No. 69-3354
MODEL 41-24/26
SERIAL
No 1215
Chassis No. 89-2

(Fig.10)



PARTS LIST. CHASSIS No. 89-2.

No.	DESCRIPTION	Part No.
C1	.022uF. 33VW Ceramic CPT/B/VZ	Ducon
C2	0 - 6pF. Trimmer) on gang C4.	
C3	0 - 6pF. Trimmer)	
C4	Tuning Gang PVC-2X Type A.	Mitsumi
C5	.01uF. 33VW Ceramic CPT/AZ	Ducon
C6	.033uF. " " CPT/C/VZ	"
C7	220pF. 200V Styroseal 5%	"
C8	2 uF. 10VW Electro. C426AM	Philips.
C9	.033uF. 33VW. Ceramic CPT/C/VZ	Ducon
C10	.033uF. " " "	"
C11	220pF. 200V Styroseal 5%	"
C12	.033uF. 33VW Ceramic CPT/C/VZ	"
C13	.033uF. " " "	"
C14	220pF. 200V Styroseal 5%	"
C15	40 uF. 16VW Electro. C426AM	Philips
C16	.022uF. 33VW Ceramic CPT/B/VZ	Ducon
C17	.022uF. " " "	"
C18	10 uF. 16VW Electro. C426AM	Philips
C19	40 uF. " " "	"
C20	40 uF. " " "	"
R1	100ohm ½W BTS 10% Resistor	I.R.C.
R2	2.2K " " " "	"
R3	15K " " " "	"
R4	2.2K " " " "	"
R5	1K " " 20% "	"
R6	3.9K " " " "	"
R7	150K " " 10% "	"
R8	1K " " " "	I.R.C.
R9	10K " " " "	"
R10	4.7K " " " "	"
R11	15K " " " "	"
R12	2.7K " " " "	"
R13	470ohm " " "	"
R14	100ohm " " 20% "	"
R15	1K " " " "	"
R16	10K VOLUME and OFF/ON switch	Ducon
R17	100K ½W BTS 20% resistor	I.R.C.
R18	10K " " " "	"
R19	220ohm " " 10% "	"
R20	330ohm " " 20% "	"
R21	4.7K " " " "	"
R22	Thermistor 32001A/130E.	Philips
R23	10ohm ½W BTS 20% resistor	I.R.C.
R24	560ohm " " 10% "	"
L1	Aerial Coil Assembly.	14-3358
L2	Oscillator Coil Assembly.	14-3359
IFT 1	1st. I.F.Transformer.	24-3360
IFT 2	2nd. I.F.Transformer.	24-3361
IFT 3	3rd. I.F.Transformer.	24-3362
T1	Driver Transformer.	18-3364
T2	Output Transformer. 750/15 ohm.	18-3365
SPKR.	Loudspeaker. Rola 15ohm V.C.	2C
S1	Earphone Jack . Olympic.	SK607B
VOLUME	CONTROL. Ducon,Kriesler Pt.No.	32-3371

(Fig.11)

A bit of history

Kevin Chan, a collector of tube radio receivers from Western Australia was helpful to me in finding out about the manufacturer of this radio as well as the peculiarity of the tuning scale of its rectangular slid-rule dial.

The Kriesler Radio Company[6] was founded in 1928 by brothers Alec, Leo and Rae Weingott (an unmistakably German surname!) in Sidney (New South Wales, Australia) and was located for many years in a then degraded part of the city, in Alice Street n. 43, Newtown. In the early 1930s it was among the 243 Australian companies radio manufacturers and before the advent of television in Australia (1956) was ranked third among radio producers in that country. Around 1950 the company was sold by the Weingott to the Dutch giant Philips who kept the brand. The first television produced in 1956, the 121-1 model, although based on Philips circuits, was a completely Australian design and construction. During the 1950s and 1960s, Kriesler, as a division of Philips, continued to be a leading producer of radio and TV. In 1966 he launched the pocket radio receiver 41-47 (obviously with transistors) that he used for the first time in the world in the consumer electronics sector, a polypropylene plastic container (Italian readers of a certain ages remember the famous Moplen, ie isotactic polypropylene[7], advertised in the 1960s in Carosello by the likeable Italian actor Gino Bramieri?) and to Harry Marcel Widmer, then director of Kriesler who designed it, was awarded the prestigious FH award Edwards Laurel. After a long decline that began in the mid-1970s, due also to the massive importation of quality Asian consumer electronics products and sold at low prices,

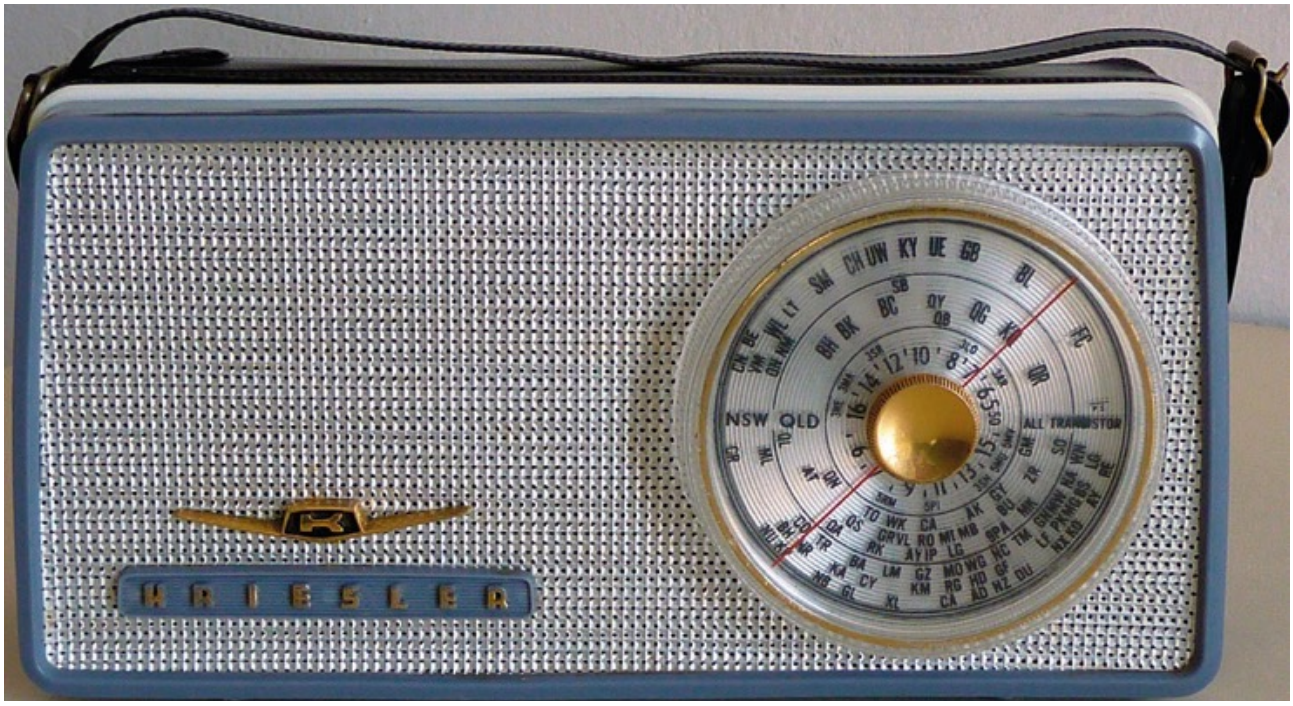
thanks also to the reduction in import tariffs, the name Kriesler disappeared from the Australian market at the end of 1983 when the company was officially closed.

Radio tuning dials in Australia

(Fig.12)

Before the Kriesler 41-24 I had never seen or even considered a radio from Australia so I didn't know anything about the Australian radio tuning dials. With reference to figure 2 on the tuning dial of this model, neither the numbers that almost always indicate the frequency of a given radio station but sometimes also its wavelength, nor the names of the most famous broadcaster are seen. Broadcasters were normally found, considering only transistor sets here, only on the tuning dials of larger models. The three letters that are seen at the left end of the dial, those arranged vertically and written in capital letters and in bold type and separated by two dots, indicate one of the six federal states **(Fig. 12)** or one of the two territories into which it is divided Australia. In our case they are **N · S · W** and indicate the state of New South Wales. The other letters are arranged along the entire dial scale in pairs to indicate that they are radio stations operating in the medium wave range, therefore in amplitude modulation. The larger pairs of letters, the ones in bold, refer to radio stations located in the capital city (Sidney for this state) while the smaller pairs of letters indicate the stations that serve other areas of that state outside the capital. Thus we identify for Sidney the radio stations with the following names (signs) of identification (callsigns or call names

or call letters or simply call, in the language of Albion) introduced since 1920: **SM** (on 1.269 kHz), **KY** (1.017 kHz), **GB** (873 kHz) and **BL** (702 kHz). For other areas of the state of New South Wales we have, for example, at the top end of the range, the station with the QN identification name that serves the Deniliquin area and is received at 1,521 kHz while at the bottom end of the range, on the 549 kHz you receive the radio station with callsign CR which serves the Cumnock area. Our radio therefore bears the call signs valid only for a state of Australia but, generally, also other Australian transistor radios operating only in AM, reported the identifications of the radio stations (call signs) for one or two states only[8]. It happened then that many radio sets, mostly well-built ones, were fitted with a set of tuning dials to be easily replaced by the purchaser, the radio listener, depending on the state in which he lived. To be precise, in Australia at every broadcasting station, with some exceptions, an identifier is assigned by the ACMA[9] (Australian Communications and Media Authority) which always has a number, from 1 to 8, followed by two letters (as in our case) if it is an AM radio station, and three letters if it is a radio station that broadcasts in FM. The number is that of the state or territory where the radio station operates. Thus the number 1 refers to the territory of the Australian Capital Territory (ACT) where Canberra is located, capital of the nation and seat of the government; the 2nd to the state of New South Wales (NSW), the oldest and most populous of Australia, with its capital Sidney, the largest in the nation; the 3 al Victoria (VIC), the smallest state with capital Melbourne; the number 4 in Queensland (QLD), the second state by size, located in the north-eastern part of the country; the 5 to the state of South Australia (SA), in the central southern position in the country, with the most arid areas and capital Adelaide; 6 to Western Australia (WA), the largest by extension and capital of Perth; the 7 to the state of Tasmania (TAS), capital Hobart, which is also the smallest Australian state and finally the number 8 refers to the Northern Territory (NT), at the upper end of Australia, with the capital Darwin placed on the coast Northern. It should be noted that in the past, stations on the territory of the Australian capital (ACT) had the prefix number 2 (for example: 2CA, 2CN)[10] and that the number 1 was introduced around 1989. Regarding the letters used for identification of a given transmitting station it would be sufficient to say that they can also be chosen completely at random if they are not chosen in another way, such as, for example, with reference to the geographic area served or to the name of the property. The first radio station in Australia was 2SB Sidney11 (NSW) which began broadcasting on November 13th 1923 followed, on December 5th of the same year, by another radio station, the 2FC which took its name from the proprietary company, Farmer & Co. Ltd, from which the two initial letters F and C. The 2SB station was developed by Ernest Fisk of AWA (Amalgamated Wireless Australasia), a radio company that had begun conducting the first transmission experiments in 1920. In 1924, the name of the 2SB changed to 2BL and changed again to 702 ABC Sidney[11] (NSW) which began broadcasting on November 13th 1923 followed, on December 5th of the same year, by another radio station, the 2FC which took its name from the proprietary company, Farmer & Co. Ltd, from which the two initial letters F and C. The 2SB station was developed by Ernest Fisk of AWA (Amalgamated Wireless Australasia), a radio company that had begun conducting the first transmission experiments in 1920. In 1924, the 2SB name changed to 2BL and changed again to 702 ABC Sidney only in the year 2000. The 2FC, also of Sidney, transmitted with national diffusion in amplitude modulation on the 576 kHz and changed its name to 2RN in 1991. Both 2BL and 2FC are marked in bold on the tuning dial of our Kriesler. To complete and benefit the readers, figure 13 shows the large tuning dial (courtesy of Angelo Franzè) of the transistor radio receiver, which can also work only in AM, the Krieseler 41-23 which, as you can see, bears call signs for four federation states. Dear readers of Antique Radio Magazine, at this point I believe I have said everything on our radio, and not only. I hope to have done something pleasant and useful to those of one day you will find in your hands a radio set from that time in that far and fascinating country that is the land of kangaroos.



(Fig.13)

Post Scriptum - Our small radio receiver was purchased by Signor (Mr.) Riva Pierino in one of the many flea markets that take place at the end of the week in our towns and cities. We do not know the exact origin but it can easily be assumed that it belonged to one of our compatriots who emigrated to those distant lands and returned to Italy.

We thank Mr. Pierino Riva for having kindly made available the Kriesler model 41-24 radio set and all the friends who provided useful information and suggestions for the realization of this article, including Kevin Chan, Wolfgang Gebert, Angelo Franzè and lastly but not least, "Ale" who wanted it and took care of the photo shoot and layout.

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1 Information from the astronomer Pierluigi Panunzi, taken from the very interesting website www.astronomia.com at the address: http: // www.astronomia.com/2011/07/22/la-costellazione-della-croce-del-sud/, as well as from the wikipedia site, the free encyclopedia, at: http://it.wikipedia.org/ wiki / Croce_del_Sud and from the site http: //www.ac-il sestante.it/SAGGISTICA/archivio/Nomi_Stelle/nomi_stelle_01.html.
Figure 3 comes from the web page: http://zodiactruth.com/crux/

2 In 1603 the German astronomer Johann Bayer (1572-1625) published at Augusta Uranometria, the first complete star atlas in where the brightest stars of the constellations then known were indicated, for the first time, with the letters of the alphabet Greek. It should be noted that, many years before Bayer, Alessandro Piccolomini, in his book "De le stelle" fixed had marked the stars based on their brightness with the letters of the Latin alphabet. According to the nomenclature, still in use, of Bayer, the brighter star in the constellation receives the name of Alpha (α), the second brighter than Beta (β) and so on. To the Greek letter then follows the Latin genitive of the name of the constellation, sometimes reduced to the first three letters. Thus for the Southern Cross one has Acrux or α crucis (abbreviated in cru), where crucis is the Latin genitive of crux and α the name of the brightest star.

3 A / ASIA stands for Australasia, a term sometimes used to indicate Australia and New Zealand together. It was coined in 1756 by Charles des Brosses and includes, in addition to Australia and New Zealand also the neighboring islands of the Pacific Ocean.

[4] The wiring diagram was downloaded from the Australian collector Kevin Chan's website at http: //www.kevinchant. com / kriesler3.html, and published with the author's permission.

[5] Sandor Selyem-Tóth, is the Hungarian collector, partner of Radiomuseum, who published this information on Kriesler models presented by us

[6] Translation and adaptation from: http://www.milesago.com/Radio/kriesler.htm

[7] The discovery of isotactic polypropylene is due to the genius of the Italian scientist Giulio Natta, thanks also to the work done
by his close collaborator Piero Pino and the research conducted by the German scientist Karl Ziegler. In 1963 Natta and Ziegler
they were jointly awarded with the Nobel Prize for their discoveries in the field of Chemistry and polymer technology. Read the story told by Vincenzo Villani at: http://www.chimicare.org/curiosita/la-chimica-nella-vita-domestica/insiemepolipropilene-rivoluzione-plastica-firma-italiana-compie-60-anni/

[8] Also this collector confirms when already referred to me by Kevin about the replacement of the tuning scales in some transistor radio models. Please read the following web page: http://transistor.bigpondhosting.com/index.html

[9] At the address http://www.acma.gov.au/Industry/Broadcast/Spectrum-for-broadcasting/Radio-and-television-transmitters/radio-tvbroadcasting-
stations-book-spectrum-for-broadcasters-acma it is possible to download in pdf format, the Radio and Television Broadcasting
Stations Book, published by ACMA and containing a complete and updated list of identification names (callsigns), as well as frequencies and other general information on radio and television broadcasting stations in Australia.

[10] For a more complete explanation of the names of identification of the telecommunication stations, see the following web pages: 1) http://www.adonline.id.au/radio/australian-callsigns/; 2) http://en.wikipedia.org/wiki/List_of_radio_station_callsigns_in_
New South Wales

[11] For more information on the start of radio broadcasts in Australia, consult the following sites: 1) http: // alldownunder.com / australian-entertainment / radio stations.htm; 2) http://www.abc.net.au/sydney/about/; 3) http://www.oldradio.com/archives/international/austral.htm; 4) http://en.wikipedia.org/wiki/History_of_broadcasting

Salorno (BZ) Italy, April 20 2019

~ A special thanks to Bob for his proofreading work of my translation from Italian into English ~

Lello Salvatore

Please note: - The Italian edition of this article was published in the issue N°128 (November-December 2015) of the Italian bimonthly journal for vintage radios, Antique Radio Magazine. You can find the Italian-language issue at: http://www.antiqueradio.it/ARM/index.php?page=shop.product_details&flypage=flypage.tpl&product_id=278&category_id=13&option=com_virtuemart&Itemid=62

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