

Volume 2 AMENDMENT No. 5 v 1.01

Date of issue: June 2023.

After the publication of 'Wireless for the Warrior' Volume 2 'Wireless Sets of WW2', a small number of minor (typing) errors and incorrect data was spotted. Corrections, additional photos and newly found items are published in 'Volume 2 Amendments'.



Wireless Set No. 19

Italian Army refurbishment/developments 1

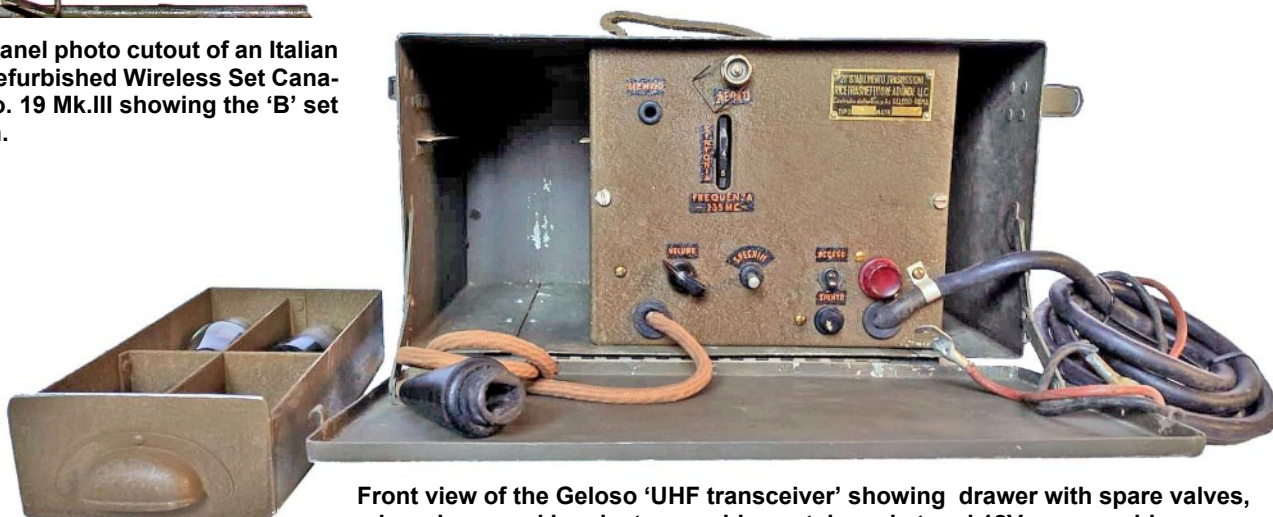


Front panel photo cutout of an Italian Army refurbished Wireless Set Canadian No. 19 Mk.III showing the 'B' set section.

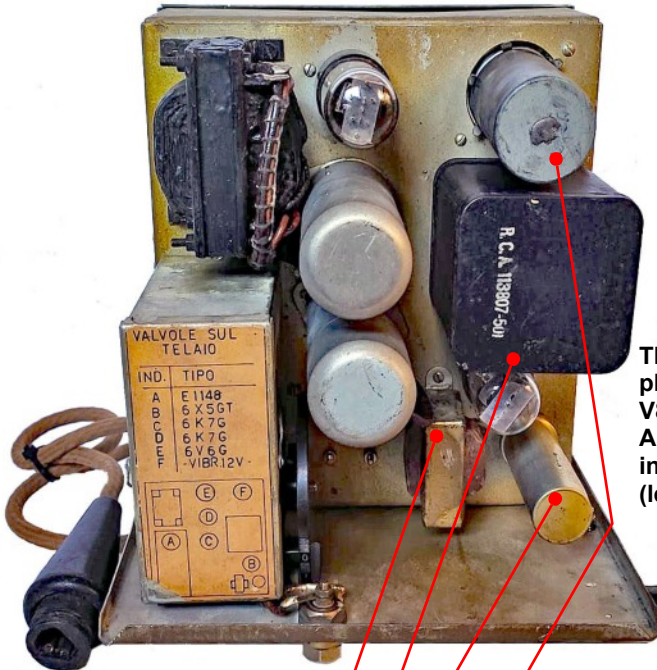
'Ricetrasmittitore ad onde UC' ('UHF transceiver') was a self contained transceiver constructed from Canadian Wireless Set No. 19 Mk.III 'B' set parts, functionally similar to a standard No. 19 'B' set. It was built by Geloso in Rome for the postwar Italian Army.

This separate 'B' set was possibly intended to be used for training purposes and short range communication, but there is doubt if ever used and probably only a small trial batch was produced as there was no serial number on the type number plate. The valve layout and circuit was identical to that of the Canadian No. 19 Mk.III 'B' Set. It was built on a single chassis, which slid into a larger transit case with ample space for a standard No. 19 Set microphone and headgear assembly, a 12V DC power cable and a drawer for spare parts. It was powered from 12 V DC using a vibrator and 6X5GT HT rectifier. Note the use of Italian language decals (similar to the original Canadian set) on the front panel.

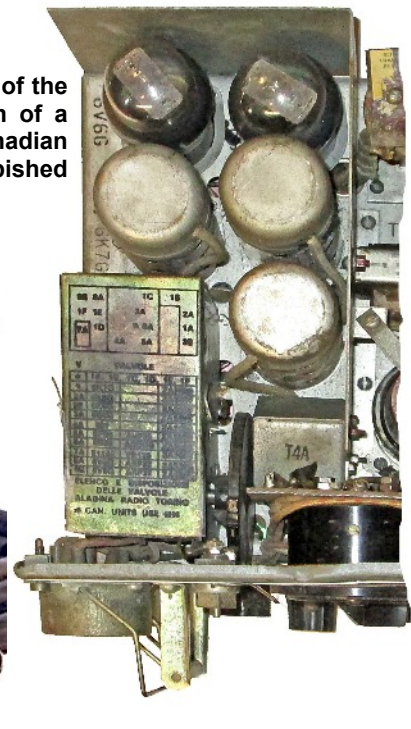
This chapter may be followed by a second part with photos and descriptions of Allied wireless equipment refurbished (or just only the change of decals in Italian language) for use in the Italian Army.



Front view of the Geloso 'UHF transceiver' showing drawer with spare valves, microphone and headset assembly snatch socket and 12V power cable.



Top chassis view of the 19 'B' set section of a Wireless Set Canadian No. 19 Mk.III refurbished in Italy (right).



The place of the IC amplifier valves (V1F and V8B) was taken by the AF output transformer in the 'UHF transceiver' (left).



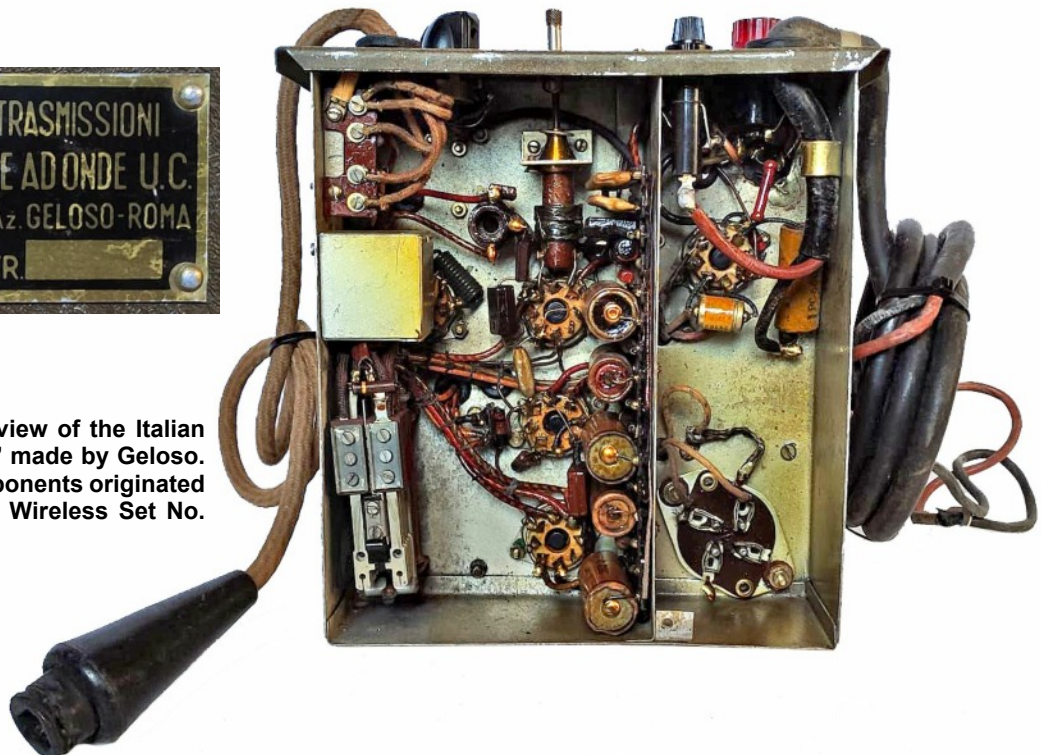
The vibrator transformer, HT1 choke, capacitor and vibrator came from a Canadian Wireless Set No. 19 Supply Unit No. 2 as shown above.

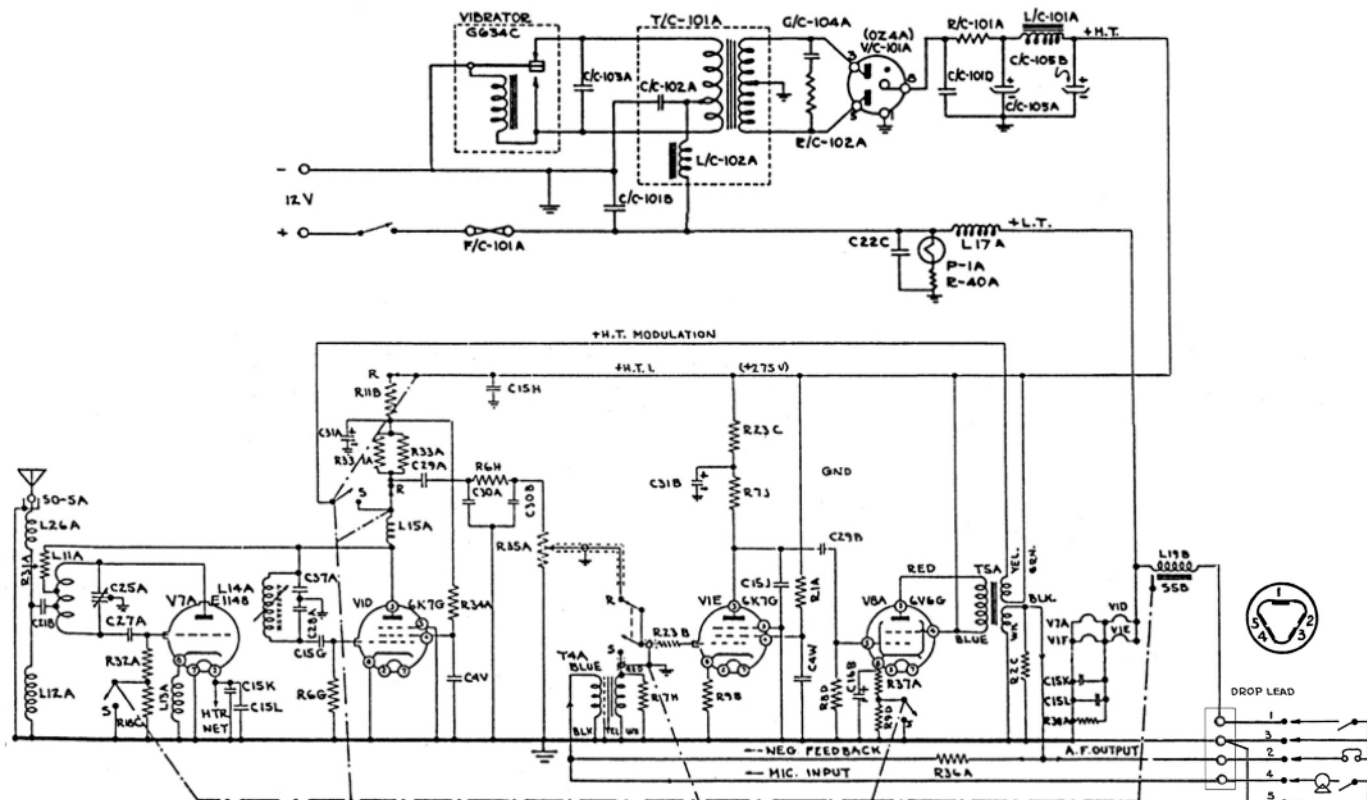
DATA SUMMARY

Design/Manufacturer: Geloso, Rome, Italy.
Year of Introduction: Estimated mid1950's.
Purpose: Believed training and short range communication.
Transmitter-Receiver:
Frequency coverage: 230-240MHz. AM R/T only.
RF output: 400mW.
Receiver Quench frequency: 148-228kHz.
Aerial: 1/2 wave rod and a coaxial feeder of an odd number of half-waves in length.
Size (cm): Height 21, length 22, width 24 (set only)
 Height 22, length 24, width 44 (set in case)
Power Supply: 12 V accumulator.



Bottom chassis view of the Italian 'UHF transceiver' made by Geloso. Most of the components originated from a Canadian Wireless Set No. 19 Mk.III.





Circuit diagram of Italian Ricetrasmittitore ad onde UC (UHF Transceiver). NOT an original, but composed from original circuit diagrams taken from Working Instructions Wireless Set (Can) No. 19 MkIII.

CIRCUIT REF.	VALUE	TOLERANCE	RATING
C4V	.1 μ F., paper (oil-filled)	$\pm 20\%$	500 V.
C4W	.1 μ F., paper (oil-filled)	$\pm 20\%$	500 V.
C15G	.0005 μ F., mica	$\pm 20\%$	500 V.
C15H	.0005 μ F., mica	$\pm 20\%$	500 V.
C15J	.0005 μ F., mica	$\pm 20\%$	500 V.
C15K	.0005 μ F., mica	$\pm 20\%$	500 V.
C15L	.0005 μ F., mica	$\pm 20\%$	500 V.
C16B	12.0 μ F., electrolytic	-0; +100%	50 V.
C21B	.000007 μ F., mica	$\pm 10\%$	500 V.
C25A	3.4—6.8 μ F. per section, variable air		
C27A	.00002 μ F., ceramic	$\pm 10\%$	500 V.
C28A	.0007 μ F., mica	$\pm 5\%$	500 V.
C29A	.01 μ F., mica	+20%; -60%	600 V.
C29B	.01 μ F., mica	+20%; -60%	600 V.
C30A	.001 μ F., mica	$\pm 15\%$	500 V.
C30B	.001 μ F., mica	$\pm 15\%$	500 V.
C31A	2.0 μ F., electrolytic	-0; +100%	400 V.
C31B	2.0 μ F., electrolytic	-0; +100%	400 V.
C37A	.0005 μ F., mica	$\pm 2\%$	500 V.
R1A	470,000 ohms	$\pm 20\%$	$\frac{1}{4}$ W.
R2C	220 ohms	$\pm 10\%$	$\frac{1}{2}$ W.
R6G	47,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R6H	47,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R7H	100,000 ohms	$\pm 20\%$	$\frac{1}{4}$ W.
R7J	100,000 ohms	$\pm 20\%$	$\frac{1}{2}$ W.
R8D	1 megohm	$\pm 20\%$	$\frac{1}{4}$ W.
R9B	1000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R9D	1000 ohms	$\pm 10\%$	$\frac{1}{2}$ W.

CIRCUIT REF.	VALUE	TOLERANCE	RATING
R11B	3,300 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R18C	270,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R23B	22,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R23C	22,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R31A	2,200 ohms	$\pm 10\%$	$\frac{1}{2}$ W.
R32A	15,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R33A	27,000 ohms	$\pm 10\%$	$\frac{1}{2}$ W.
R33.1A	47,000 ohms	$\pm 10\%$	$\frac{1}{2}$ W.
R34A	47,000 ohms	$\pm 10\%$	1.0 W.
R35A	100,000 ohms, pot.		
R36A	39,000 ohms	$\pm 10\%$	$\frac{1}{4}$ W.
R37A	390 ohms	$\pm 10\%$	1.0 W.
R38A	56 ohms	$\pm 5\%$	1.0 W.
L11A	V.H.F. Oscillator Coil		
L12A	V.H.F. Choke		
L13A	V.H.F. Choke		
L14A	Quench Oscillator Coil		
L15A	Quench Choke		
L19B	"B" Set Send-Rec. Relay Coil		
L26A	V.H.F. Aerial Loading Inductance		
S5B	"B" Set Send-Rec. Relay Switch		
T4A	"B" Microphone Input Transformer		
T5A	"B" A.F. Output Transformer		
SO-5A	"B" Aerial Feeder Socket		

List of components Italian UHF Transceiver.

References:

- Many thanks to Gabriele Tucci, IK5VLS, Italy, for permission of the use of photographs taken from his Geloso 'UHF transceiver'.
Website: www.ik5vls.it
- Working Instructions, Wireless Set (Canadian) No. 19 Mark III, Ref. No. RCA 113923-1, n.d., WO Code 18996.
- Operating and installation instructions, Wireless Set No. 19, Supply Unit No. 2 (ZA 10572), RCA 113920, May 1943.
- Wireless for the Warrior, Volume 2 'Standard sets of WW2', Louis Meulstee, Wimborne, 1998, ISBN 1898805 10 5.