



Goxhill Electronic Restoration Search List

Military Aviation Museum

Pungo, Virginia, USA

October 14, 2017

Table of Contents

[Introduction](#)

[Equipment Lists](#)

[Preliminary Equipment List](#)

[ATC Airborne Communications](#)

Introduction

The Goxhill WWII air traffic control tower has been reconstructed in Pungo, Virginia at the [Military Aviation Museum](#) in Pungo, Virginia, USA.



Equipment Lists

Preliminary Equipment List

This list now has provisions for the manufacturer, current availability, and cost of the communications artifacts that may have been found at the Goxhill control tower. The list is organized by the ATC LF/HF and

VHF communications equipment used in ground control and on the aircraft. Associated equipment used in ground communications such as teletype machines, landline communications, telephones, etc are listed separately. Refer to the Table of Contents found at the beginning of this document.

Item: WWII Headphones and Microphone



Control Tower. S/Sgt Bob Reigelman. controlling aircraft



Typical Control Center



Telephone Operators at RAF Section "G" Operations Room

Goxhill Electronic Restoration Search List

Duxford, Cambridgeshire



RAF Snaith (Yorkshire) is also an AM 518/40 tower also built in 1940 to be a bomber base, as was Goxhill. Barring any miraculous find of an actual Goxhill photo during RAF tenure, this may need to be our template.

Note "Doll's Eye" telephone exchange far right, GPO telephones, binoculars, Var-poise lighting, headphones, candlestick microphones, pipe rack, bins for paperwork, Landing Control Board, and what may be rocket flares above the board. Also note plain construct of Blackout curtains, barrel-shaped dining room chairs, and aircraft interior lamps mounted on the desk for accent lighting.

This almost certainly poised photo with ample lighting clearly shows reflections of Control Room staff, even those not visible in the photo frame itself. Steve Atkins has offered to CAD the desk itself for our planning.



Goxhill Electronic Restoration Search List

Tunion British Made WWII Headset



Semans BBC Headset



DLR 5 Headphone



ZA 253232 Headphone



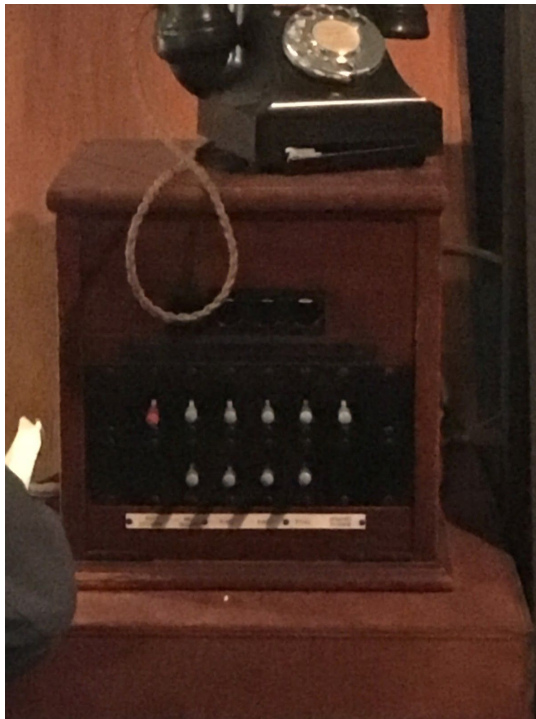
Candle Stick Microphone



Model 232 Telephone



Model 300 Telephone



Dolls Eye Switchboard

Item: **Typical Switchboard (Dolls Eye perhaps)**

Goxhill Electronic Restoration Search List



Manufacturer: Unknown



Unknown Wall Phone



Item: EE-8 Field Phone (Tech Manual 11-333)



Photo Credit: [Olive Drab](http://www.museumoftechnology.org.uk)

Manufacturer: Western Electric

Description: The U.S. Army Field Telephones **EE-8**, **EE-8A**, and **EE-8B** is a portable field telephone designed for use on either local or common battery telephone systems.

Item: Teletype Machines

Goxhill Electronic Restoration Search List



WACs assigned to the Eighth Air Force in England operate tele-type machines. (DOD photograph)



Photo From Wright Patterson AFB Museum

Photo Credit: Peter Kienle
Manufacturer: Unknown
Description: These are US made TTYs and may be a **KSR-15** (Keyboard Send and Receive)
Manufacturer: Unknown

Item: **Mode 7B Creed Teleprinters**

Goxhill Electronic Restoration Search List



Photo Credit: [The Signals Museum RAF Henlow](#)

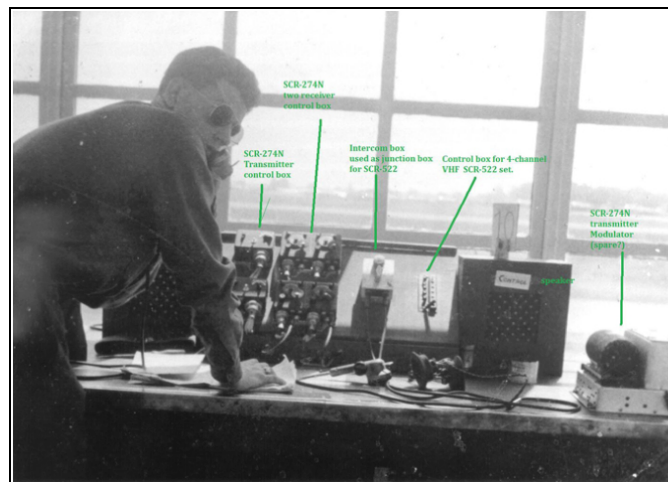
Manufacturer: Creed, England





ATC Airborne Communications

Items:	SCR-274-N	Two Receiver Control Box
	SCR-274-N	Transmitter Control Box
	SCR-274-N	Transmitter Modulator
	SCR-522	VHF Set Control Box for 4-channels
	SCR-522	Intercom Box (used as junction box)



WWII ATC Desk

Description: K series radio systems described here: [Army Radio Sales Company](#) .
A review of the Military Command Sets is found [here](#) .

Item: **SCR-274-N Receiver and Transmitter Accessories**



SCR-274-N Receiver and Transmitter Accessories

Photo Credits: [Wikipedia](#)

Manufacturer: Western Electric

Production: 1938

Tuning: N/A

Modulation: N/A

Description: SCR-274-N Accessories: Receiver Control: **BC-450-A**, Transmitter Control: **BC-451-A**, Modulator: **BC-456-B**, and Antenna Relay: **BC-442-A**

Cost Estimate: **BC-450-A (\$58)**
BC-451-A (\$50)
BC-456-B (\$150)
BC-442-A (\$50)

Vendor(s): [BC-450-A Receiver Control Box](#)
[BC-451-A Transmitter Control Box](#)
[BC-456-B Modulator](#)
[BC-442-A Antenna Relay](#)

Item: SCR-274-N HF Receiver Rack



SCR-274-N Receiver Rack

Photo Credits: [Wikipedia](#)

Manufacturer: Western Electric

Production: 1938

Tuning: 190 kHz - 550 kHz, 3 MHz - 6 MHz, and 6 MHz - 9 MHz

Modulation: AM modulation

Description: **SCR-274-N** components: Three HF receivers: **BC-454-B**, **BC-453-B**, **BC-455-B** contained in rack **FT-220-A**. The power supply dynamo unit is type **234A** and the control unit is **Type 3A**..

Cost Estimate: \$1,000 (receivers, rack, and dynamo)

Vendor(s): [eBay](#)

Item: SCR-274-N HF Transmitters



SCR-274-N Transmitter Rack

Photo Credits: [Wikipedia](#)

Manufacturer: Western Electric

Production: 1938

Tuning: 4 MHz - 5.3 MHz, 7 MHz - 9.1 MHz

Modulation: AM modulation

Description: SCR-274-N Components: Transmitters: BC-457-A, BC-459-A in rack FT-226-A.

Cost Estimate: BC-457-A (\$50)
BC-459-A (\$80)
FT-226-A Rack (\$?)

Vendor(s): [BC-457-A Transmitter](#)
[BC-459-A Transmitter](#)
FT-226-A Rack ?

Goxhill Electronic Restoration Search List

Item: SCR-274-N Components: BC-946-B Broadcast Band Receiver and AN/ARR-1 Homing Receiver



BC-946-B Broadcast Receiver and AN/ARR-1 Homing Receiver

Photo Credits: [Wikipedia](#)

Manufacturer: Colonial Radio, Buffalo, NY

Production: 1938

Tuning: 520 kHz - 1.5 MHz, 34 to 58?

Modulation: AM modulation

Description: SCR-274-N Components: Broadcast Band Receiver **BC-946-B**, Homing Adapter R-1/ARR-1

Cost Estimate: BC-946-B (\$75)
R-1/ARR-1 (\$?)

Vendor(s): [BC-946-B Broadcast Receiver](#)
R-1/ARR-1 Homing Adapter ?

Note: The **AN/ARC-5** radios are updated versions of the **SCR-274-N** radios. There were used by the US Navy for the latter part of World War II and were the main aircraft communication radio.

Reference: [Ray Robinson \(VK2ILV\)](#)

Item: **AN/ARC-5 and AN/ARR-2 Receiver and Transmitter Accessories**



AN/ARC-5 and AN/ARR-2 Accessories

Photo Credits: [Wikipedia](#)

Manufacturer: USA

Production: 1939

Tuning: N/A

Modulation: N/A

Description: **AN/ARC-5 and AN/ARR-2:** Receiver Control **C-38/ARC-5**, Transmitter Control **C-30A/ARC-5**, Audio Jack Box **J-22/ARC-5**, Modulator **MD-7/ARC-5**, Antenna Relay **RE-2/ARC-5**, DC Power Filter **F-5/AR**.

Cost Estimate: **C-38/ARC-5** (\$?)
C-30A/ARC-5 (\$?)
J-22/ARC-5 (\$?)
MD-7/ARC-5 (\$?)
RE-2/ARC-5 (\$?)
F-5/AR (\$?)

Vendor(s): **C-38/ARC-5** Receiver Control
C-30A/ARC-5 Transmitter Control
J-22/ARC-5 Audio Jack Box
MD-7/ARC-5 Modulator
RE-2/ARC-5 Antenna Relay
F-5/AR DC Power Filter

Goxhill Electronic Restoration Search List



Item: BC-348 LF/MF/HF Radio Receiver



Photo Credit: <https://en.m.wikipedia.org/wiki/BC-348>

Manufacturer: Belmont Radio, Wells-Gardner, RCA, and Stromberg-Carlson.

Production: Late 1930's - 1970

Tuning: 1.5-18 MHz in six bands.

Detection: CW (BFO) and AM modulation

Description: Designated as the **BC-224-A**, **-B**, **-C**, and **-D**, and the **BC-348-B**, and **-C**. Typically paired with the **ART-13** transmitter.

Note: The Signal Corps had the receiver design modified to add a **200-500 kHz band** and compress the 1.5-18 MHz coverage into the remaining five bands. This modified design became the **BC-224-E** and the **BC-348-E**. The 200-500 kHz and 1.5-18 MHz tuning range remained constant for subsequent production of all models.[3]

Cost Estimate: \$100 - \$250

Goxhill Electronic Restoration Search List

Vendor(s): [Ebay](#)

Item: ART-13 LF/MF/HF Radio Transmitter



Photo Credit: <https://en.m.wikipedia.org/wiki/AN/ART-13>

Manufacturer: [Collins](#)

Production: Late 1930's - 1970

Tuning: 1.5-18 MHz in six bands.

Modulation: CW (BFO) and AM modulation

Description: Designated as the Typically paired with the **ABC-348** receiver.

The **AN/ART-13** had ten auto tuned VFO tuned channels that could be preset. Power output was approximately **100 watts** using an 813 vacuum tube as the final amplifier.

Cost Estimate: \$500

Vendor(s): [Ebay](#)