

Hello, this is very long.

Reason:

If you are thinking about this radio, then you should understand about what it is, and the special features it offers. In 20 years of buying and selling radios, for my own use, I have never seen another Mil Spec 1030 (C). I have seen several Mil Spec 1030 (CI). The 1030 (C) is very, very rare.

By the way: This is not a Icom 781 that was retrofitted. This is a factory unit.

I hope you find the information useful

I have included two photos of my Signal One MS 1030C, and a photo of a more commonly found Signal One MS 1030CI. I want to make sure that possible buyers understand the difference

Hello, and thank you for your interest in the ad for the Signal One 1030C.

A little, (lot) of background is necessary to explain this radio. This radio is only one of six ever manufactured, I have never seen or heard of another one like it. There is a good side to that as I point out towards the end. If your truly interested in this level of radio you'll read till the end.

This radio is for the person who:

1. Wants maybe what is the very best transceiver made for amateur radio service.
2. For the collector who wants one of the rarest radios made

This radio is often confused by people with the Signal One 1030CI. So I am going to describe both the 1030C and the CI model. The CI model is the radio that most people are thinking about, when they hear "1030 C_"

All this gets very confusing, since the Signal One also manufactured a model called the 1030 Mil Spec in the late 1980's. That radio has no relation to the 1030C or 1030CI

In the 1990's Signal One developed a Mil Spec Radio based on the Icom 781.

The goal was to take the Icom 781 to the next level, recognized as probably the best radio in the world. Signal Ones reputation was based on creating Mil Spec radios.

Signal One was awarded a contract to create such a radio for the US Military. That radio became the Signal One Mil Spec 1030 (C). The radio was a much modified Icom 781. The radio was improved by using better HP Pin Diodes for RF switching (improving receiver IMD), matched output transistors. Only about six (6) of the Mil Spec 1030C units were ever produced. Only about fifteen, (15) 1030CI models were produced.

After seeing the initial production of the Mil Spec 1030C, the government decided it wanted a rig with more digital (RTTY, Packet, Pactor, etc...), features built in. This radio became the Mil Spec 1030 (CI). That radio was a much modified Icom 781 into

which was placed a separate computer, built in TNC (which happen to be a Kantronics TNC, nothing fancy), and larger case with twin fans. About an inch and a half was added to the Icom 781 face plate (in height), the speaker was moved to the front of the face plate, and several of the Icom 781 control knobs were repositioned to the added inch and a half of the face plate. In addition radio was improved by using the same format as in the Mil Spec 1030C, which was the use of better HP Pin Diodes for RF switching (improving receiver IMD), matched output transistors. Only about 16 (out of an order for about 25) Mil Spec 1030CI's were ever made.

Both of these units are some of the rarest around.

Major differences between the MILSPEC 1030 CI, the Mil Spec 1030C, and the ICOM 781 include:

The Mil Spec 1030CI included the following:

- 1) 1) Military grade chassis, with Hewlett-Packard System 11+ RF enclosure and rack mounting are used for improved visual continuity, form, fit, function along with compliance with EIA and IEC standards in width, height.
- 2) 2) Gold plated connectors and 3M ribbon cable harnessing.
- 3) 3) Attractive exterior color, contemporary design and RF tight Milspec modular enclosure, offered for the ultimate in RX/TX RF communication performance in strong RF environments, ie, contest stations etc.
- 4) 4) Dual, thermostatically controlled Rotron fans for additional temp. stability under keydown /CW/ RTTY conditions.
- 5) 5) Internal shielding in critical areas to reduce spurious signals.
- 6) 6) Higher rated output power, using selected IIFE matched Motorola MRF 422 MP final transistors (160 watts output).
- 7) 7) Ultra low phase noise synthesizer (-128dBc). -23dBm 3rd order intercept.
- 8) 8) Improved receiver IMD performance, using HP 5082-3081 pin diodes for RF switching and the front-end attenuator.
- 9) 9) Mil Std. frequency control stability.
- 10) 10) Correct S-meter calibration, signal strength detection circuitry for improved S-Meter sensitivity (S 1= 1 microvolt, 6dB/S unit).
- 11) 11) Front panel LED Status indicators for computer, TNC, antenna switch, and mark/space indicator.
- 12) 12) Octagon Systems embedded computer to control all unit functions.
- 13) 13) 140 additional computer controlled functions (See computer/software description).

14)14) Integrated antenna control feature.

15)15) Integrated TNC for data communications (Packet/CW/RTTY/G-TOR/Pactor/AMTOR/WEF AX/KISSIKA-NODE/Gateway/PBBS. Dual Channel for added VHF packet monitoring.

16)16) Internal speaker

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Computer Specifications: 1030 (CI), model only

17)17) The MILSPEC 1030 CI design incorporates an Octagon Systems 5083 micro-controller/computer (CPU is a Z80181, running at 9.216MHz). The original ICOM 781 computer and control functions are maintained for software compatibility and accessed through the MILSPEC 1030 CI's main computer.

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System computer characteristics include:

- ♦ ♦ All ICOM 781 software functions.
- ♦ ♦ Nearly 200 additional computer commands, including signal strength, power, and SWR readings, dual clock functions, and scanning control.
- ♦ ♦ Control of external antennas via external TTL control lines (front panel status LED's).
- ♦ ♦ Control of internal TNC for data communications (integrated Kantronics KAM Plus).
- ♦ ♦ Single RS-232 port control of unit, antennas, and TNC.
- ♦ ♦ Programmable Digital-Analog (D-A) output line
- ♦ ♦ Overall Software Signal One software consists of a set of integrated programs, written specifically for the Windows 95 operating system and are true 32-bit applications, which allows for background control/monitoring of the radio while using the computer for other tasks. The MILSPEC 1030 CI control, antenna, and data functions are accessed via a single RS-232 port. Many other commercial TNC programs may be used with the MILSPEC 1030 CI's TNC.

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The Mil Spec 1030C included the following: The one I'm selling

- 1) Gold plated connectors and 3M ribbon cable harnessing.
- 2) Attractive exterior color, contemporary design and RF tight Milspec modular enclosure, offered for the ultimate in RX/TX RF communication performance in strong RF environments, ie, contest stations etc.
- 3) Internal shielding in critical areas to reduce spurious signals.
- 4) Higher rated output power, using selected IIFE matched Motorola MRF 422 MP final transistors (160 watts output).
- 5) Ultra low phase noise synthesizer (-128dBc). -23dBm 3rd order intercept.
- 6) Improved receiver IMD performance, using HP 5082-3081 pin diodes for RF switching and the front-end attenuator.
- 7) Mil Std. frequency control stability.
- 8) Correct S-meter calibration, signal strength detection circuitry for improved S-Meter sensitivity (S 1= 1 microvolt, 6dB/S unit).
- 9) Front panel LED Status indicators for computer, TNC, antenna switch, and mark/space indicator.

The above information was scanned directly from the Signal One Mil Spec 1030 (C / CI) brochure.

As you can see, the CI was much more elaborate than the C. The price difference was also more.

Because this radio was also contracted to the Government, the pricing was quite high. The brand new cost to amateur's was therefore the same. Between \$ 12,600 and 14,000, depending what year it was, (yes they went up in price each year).

In the mid 90's Signal One came up with an option for Icom 781 owners. Upgrade your Icom 781 to a Signal One Mil Spec 1030CI. Cost between \$ 4900 - \$ 6100 dollars, depending on the level of upgrade you selected.

Below is a scanned page from a 1996 Signal One 1030CI brochure (25 pages long).

All New MILSPEC 1030 CI \$12,600.00

Upgrade Your ICOM 781: Re manufactured MILSPEC 1030 CI (requires your ICOM 781) plus \$ 4900.00

Computer Option (includes software, cable) \$ 1000.00

TNC Option (includes software) \$ 400.00

Complete Unit with both above options (\$200 discount) \$ 6100.00

CX7A, CXIIA, MS1030C, and ICOM 781 Parts/Service

All Signal One models repaired/upgraded Call for price To order or schedule repairs/upgrades call Don Roehrs @ 602-585-4025 @ Signal One 7359 E. Softwind Drive, Scottsdale, Az. 85255

As you can see, the Mil Spec (MS) 1030C is mentioned on that page, along with other Signal One radios as a separate radio model.

The Story of this Signal One 1030C history:

First off let me say that I have never seen or heard of another 1030C. When I purchased this radio 2 years ago, I called Signal One and spoke to the President Don Roehrs. Since that time the company has apparently folded, and their Web page is no longer up and running. I was told by Mr. Roehrs, that the MS 1030C was a down scaled version of the MS 1030CI. Since the radio was not as elaborate as the MS 1030CI, and was not under Gov't contract, they had hoped to be able to sell it to the amateur community for 3 – 4 grand less than the MS 1030CI. I was also told of the improvements that they preformed to turn a Icom 781 into a MS 1030C. I was then informed that the radio that I owned (now for sale), was the only one of only 6 ever produced. All this leads up to the Signal One 1030C, which is what I have listed for sale:

This radio does have a Signal One ID / Serial Number tag.

The Mil Spec 1030C has the following upgrades added to a stock Icom 781:

- ◆ ◆ Gold plated connectors and 3M ribbon cable harnessing.
- ◆ ◆ Attractive exterior color. Standard Signal One Color's and knobs. Really looks much nicer than the Icom 781 colors.
- ◆ ◆ Higher rated output power, using selected IIFE matched Motorola MRF 422 MP final transistors (160 watts output).
- ◆ ◆ Ultra low phase noise synthesizer (-128dBc). -23dBm 3rd order intercept.
- ◆ ◆ Improved receiver IMD performance, using HP 5082-3081 pin diodes for RF switching and the front-end attenuator.
- ◆ ◆ Mil Std. frequency control stability.
- ◆ ◆ Correct S-meter calibration, signal strength detection circuitry for improved S-Meter sensitivity (S 1= 1 microvolt, 6dB/S unit).

The above was related to me from The Signal One Company in 2001.

This radio does have one option that I have never seen on any other Signal One. I have never seen it on the Gov't MS 1030CI, nor any other radio. The pictures in the factory brochure for the MS 1030CI (the Govt \$ 14,000 dollar model), do not even show this option. Five private owners of MS 1030CI model have told me they didn't have this option, described below.

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Read Carefully:

In the late 1990's, Signal One listed as an option for the MS 1030 C, CI, and Amateur upgrades of Icom 781's, a special filter board. The board had a pair of cascaded Collins Mechanical Filters, with special matching networks, buffers, and dual preamp's to compensate for insertion loss. These boards were offered for sale, for the price of \$ 800 plus dollars. I had never seen one or know of anyone owning this filter board, until I owned this radio.

The board is copy wried 1996 / 1997. It is about 4 x 4, and all the components are surface mounted technology, with the pair of Collins filters mounted on the reverse side. It was obviously made to for this special purpose, and not recycled from earlier radios. The radio I am selling has this board. The only one that may really exist.

Advantages of the MS 1030C as opposed to the MS 1030CI.

Everyone wants a 1030CI.

It was a fantastic radio (at \$ 14,000 it should be), today it has one big problem. Service. The manner in which all the special computer functions were created, using the The MILSPEC 1030 CI Octagon Systems 5083 micro-controller/computer (CPU is a Z80181, running at 9.216MHz). The original ICOM 781 computer and control functions are maintained for software compatibility and accessed through the MILSPEC 1030 CI's main computer.

There in lies the problem.

I have spoke to several MS 1030CI owners who's radios were no longer able to function, because they had lost the special Signal One Octagon computer chip, and programming. Plus the no one seems to has ever seen a MS 1030CI owners or service manual.

The MS 1030C (the one I'm selling), is a Icom 781 with upgrades that are standard, and are being done on Icom 781's today, for between \$ 800 – 1200 dollars, by specialist in Icom service. The only item which can not be installed today, is the special Collins filter board (you can't find or buy one). The upgrades listed above, did not alter the functions, layout, or design of the 781. JUST improved it. Which was the goal of Signal One in creating the MS 1030C. For that reason, service on the MS 1030C is the same as service on a Icom 781.

The Sale:

The radio that is for sale comes with the following:

- ♦ ♦ Signal One MS 1030C.
- ♦ ♦ Signal One Collins filter board (pair of cascaded 2.1 Collins Mechanical Filters). These filters are only used in the Narrow filter position, and only in the receive mode.
- ♦ ♦ All Original Icom 781 filters, including AM filter.
- ♦ ♦ Owners manual.
- ♦ ♦ Service manual.
- ♦ ♦ Spare (new) CRT display. The CRT that is in the radio is working fine, and shows no signs of trace lines.
- ♦ ♦ Spare front panel.
- ♦ ♦ Spare set of machined, chrome, knobs.
- ♦ ♦ Rack handles.
- ♦ ♦ Icom Voice board.

ALL STANDARD ICOM FILTERS ARE STILL INSTALLED.

All this typing was not intended to bore you, but rather to clear up any possible confusion. I do not want people would think that I was selling the MS 1030CI. Hardly anyone knows about the MS 1030C. **It does get very confusing.**

On a scale of 1 – 10, the radio is a 9 or better, physical condition. There are some very small marks on the top of the radio. The face is 100 % as new.

The radio puts out full power, and all functions work 100 % as they should.

The radio has no smell of smoke. My shack is smoke free, and the radio did not smell of smoke when I received it.

I have lots of pictures, of the radio, and the filter board. I will send in one big file, or break up into many small emails, depending on the speed of your service, and how many MB your ISP will allow your mail box to store. Pse let me know how you want them sent. All the pics total 4.5 meg in file size.

If anyone can provide me with other information about this radio, please email me your phone number. I will call you on my nickel. I will correct any gaps that I may have in the history of this radio.

The radio is guaranteed to work 100% and be as described. No surprises, or jack in the box.

Thank you, for your interest.

Lance L k4wh