Communications Electronics, Inc. and Watkins Johnson Accessories and Components Guide

07/30/07
This is an ongoing project. I'm always looking for more information, particularly on the variants denoted by the -x suffixes.

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Contact me at watkins-johnson@teriyo.org

Main web page http://watkins-johnson.terryo.org torryo.

		in tell,
	Model	Description Plug in regainer 20 60MHz AM (EM (CW ent) rediines out
nttr	481Atkins	prug-In receiver, 30-60MHz, AM/FM (CW Opt), requires ext
	482A	of RS-180 receiving system same as 481A except 60-120MHz pilling as 481A except 100-180MHz
	483A	- 0(9)
	484A	same as 481A except 180-300MHz
	485A	same as 481A except 180-300MHz same as 481A except 30-90MHz same as 481A except 80-250MHz same as 481A except 20-80MHz same as 481A except 220-440MHz
	486A	Same as 481A except 80-250MHz
	487A	same as 481A except 20-80MHz
	488A	same as 481A except 220-440MHz
	489A	same as 481A except 250-500MHz
	490A	same as 481A except 300-1000MHz
	AGC-BC	Box car AGC unit, plugs into DM-4
	AGC-PS	Pulse stretching AGC, plugs into DM-4
	ANT-101	antenna, 3.7-4.2GHz, 12dB gain, 25 degree beamwidth, component of TDS-100 system
	APR-101	antenna/preamplifier, ANT-101 and PR-101 in single unit
	AR7-15	antenna, log-periodic, 1-12.4GHz, 8dB gain, 15dB F-to-B
		antenna, log-periodic, 1-1209 GHz, 8dB gain, 15dB F-to-B

- antenna, log-periodic, 0.5-12.4GHz, 8dB gain, 15dB F-to-B AR7-17
- AR12-18 antenna, log-periodic, 30-1100MHz, 8dB gain, 20dB F-to-B
- , log-periodic, 90-1100MHz, 8dB gain, 20dB F-to-B AR12-19 antenna
- antenna, log-periodic, 250-1100MHz, 8dB gain, 20dB F-to-B AR12-20
- AR12+122 antenna, log-periodic, 30-160MHz, 8dB gain,
- antenna, log-periodic, 30-76MHz, 8dB cain, 20dB F-to-B AR12-25
- antenna, log-periodic, 30-300MHz, 8dB gain, 20dB F-to-B AR12-29
- antenna, omnidirectional conical spiral, 1-11GHz, no gain, AR19-5 5w power handling
- antenna, curidirectional conical spiral, 7-11GHz, no gain, AR19-6 5w power handling
- S Cantenna, omnidirectional conical spiral, 150MHz-2GHz, no gain, 5w power handling AR19-8
- gain, 5w power handling antenna, omnidirectional conical spiral, 0.2-1.4GHz, no tt^PAR19-9 gain, 5w power handling
 - antenna, omnidirectional conical spiral, 0.25-1.1GHz, no AR19-10 gain, 5w power handling
 - antenna, loop, 2-30MHz, bi-directional figure eight inhuson.temyo.org antenna, omnidirectional conical spiral, 0.3-1.3GHz, no AR19-11
 - AR23-4

 - AR122-1 antenna, compacted log-periodic, 150MH291GHz, 4.3dB gain, 10w power handling
 - antenna, compacted log-periodic, 20-300MHz, 5dB gain, AR132-1 1kw power handling
 - antenna, dual polarization log-periodic, 1-4GHz, 8dB gain, AR272-1 20dB F-to-B 10w power handling
 - antenna, dual polarization log-periodic, 30MHz-1GHz, 8dB AR274-1 gain, 20dB F-to-B, 25w power handling
 - AR274-2 antenna, dual polarization log-periodic, 30-300MHz, 8dB gain, 20dB F-to-B, 25w power handling
 - antenna, dual polarization log periodic, 250MHz-1GHz, 8dB AR274-3 gain, 20dB F-to-B, 25w power handling

http://watkins-jol

- tuner switching unit, works with 205, 205-2 or 215 Pan-Man CSU-160 receivers, manual or sequential scan of tuners, holds up to 7 tuners, part of ORS-160, see RS-160 for details
- video distribution amplifier, 91ohms or high impedance, DA-11.5vrms out, 6 video, 1 oscilloscope & 2 audio out, 91bs, cost \$1200 (1964)
- audio distribution amplifier, 10kohm in, 150/600ohm out, 150 Hz-10 kHz response, five outputs, cost \$595 (1966)
- demodulator, 21.4 MHz input, accepts 4 plug-ins, 6 MHz DM-4bandwidth, BFO, squelch, tuning and signal strength meters, 3 audio outputs: 100mw into 600 ohm, built-in speaker, 3 video outputs: analysis, recorder & tracking
- demodulator, 20.4 MHz input, AM only, BW=1.5 MHz DM-22A
- DM-112 demodulator, 160 MHz input, 100 kHz/2/4/10/20 MHz BWs, AM/FM/ The solution of the solution o pulse, built in SDU, AFC and AGC outputs (to tuner),
- nttPDM-160 demodulator, 160 MHz input, AM/FM/pulse, BW=0.35/1.5/4 MHz
 - INS demodulator, 160 MHz input, AM/FM/pulse, BW=1/5/10/20 MHz DM-161
 - demodulator, 160 MHz input, AM/FM/pulse, BW=10/20 MHz DM-212
 - demodulator, 160 MHz input, AM/FM/pulse, BW=30/50 MHz DM-235
 - tunable demodulator, 1-1600 kHz, 5 digit Nixie readout, AM/FM/SSB/CW/MCW/FSK, IF BWs in two ranges: SSB 2.440. DMS-105 mount 5.25" high
 - DMS-105A same as DMS-105 except SSB BWs= 2.4/4/8 kHz and has translated IF predetection outputs at 15/50/100 kHz
 - DMS-105R EMC version of DMS-105A, also has predetection IF outputs of 10/50/100 kHz
 - tunable demodulator, 0.1-10 MHz, filmstrip dial, IF BWs: DMS-107 20/50/100/3007500 kHz/1/2/3 MHz, DAFC w/DRO-302 or DRO-320, carrier and center tune meters
 - DMS-107-1 same as DMS-107 except BW= 20/50/100/300/500 kHz/1/3/5.5 MHz
 - tunable demodulator, 5 kHz-1 MHz, 5 digit Nixie display, DMS-109 USB/LSB, BW=2.8 kHz, DAFC
 - tunable demodulator, 0.5-10 MHz CW/FSK, BW=1/3kHz DMS-201
 - digital frequency display, 0.54-54 MHz, for use with 455kHz DRO-50

- IF receivers, 6 digit Nixie display, included kit for modifying SP-600, cost \$2500 (1967) (variants were available for 500kHz, 3.9MHz and 21.4MHz IFs)
- digital frequncy display, 20-80 MHz, for use with 10MHz IF DRO-270 pro-280A direceivers, 5 digit Nixie readout, DAFC for up to twelve receivers, part of RS-158 receiving system, rack mount
- digital frequency display, 20-1000 MHz, 6 digit LED display, DAFC, provides control of 12 receivers in 15 msec intervals, 12 position switch for selecting receiver whose frequency is to displayed, part of RS-180 receiving system
- digital frequency display, 20-90MHz, for use with 10MHz IF DRO-290 receivers like CEI 519 and 521A, DAFC, 6 digit Nixie display, rack mount 1.75" high, 10lbs, cost \$3100 (1967)
- DRO-290B Similar to DRO-290 except with LED display
- digital frequency display, 30-300MHz, for use with 21.4MHz IF receivers, 6 digit Nixie display http.pkgatkn IF receivers, 6 digit Nixie display, variants avail for 455/500kHz and 3.9MHz IFs, cost \$2800 (1967)
 - digital frequency display, 30-300 MHz, for use with DRO-302A 21.4MHz IF receivers 6 digit Nixie display, DAFC output, 1/2 rack width, cost \$3200 (1968)
 - nson terryo org DRO-302A-2 digital frequency counter, same specs as DRO-302A except with BCD outputs
 - DRO-302B Naigital frequency display, 0.1-500MHz, 6 digit LED readout, 21.4 & 60MHz IF presets (modifiable to any IF oreset in increments of 0.1 MHz), solid-state, DAFG Whalf rack width (have manual)
 - digital frequency display 30-300MHz, 6 digit Nixie DRO-307 readout, 21.4MHz IF preset, DAFC control of four rcvrs w/ last two digits independently selectable for each rcvr, BCD outputs for Call four receivers
 - DRO-307-1 digital Mrequency display, 0.5-30MHz, 65MHz IF preset, otherwise similar to DRO-307, used w/232 tunable filters
 - DRO-308 digital frequency display, 2-300MHz, 21.4MHz offset, 6 digit Nixie display, DAFC, component of RS-160 Pan-Man receiving system, mounts in SM-7301 frame 5.25" high
 - DRO-309A digital frequency display, 0.1,1060MHz, same specs as DRO-302B (have manual)

- DRO-309B same specs as 309A, newer IC counter circuitry
- DRO-310 digital frequency display, 0.1-300MHz (4GHz w/plug-in mixers), 6 digit, 21.4MHz presets, multiple inputs, (mil CP-943 GLA-21), has accessory slot for mixers, SDU, ACL tubing heads.
- DRO-311 Widigital frequency display, 20-500MHz, automatic IF offset when used with 565 or WJ-8730 series, time-shares control of four receivers, drives up to four RD-105 remote displays
- DRO-312 digital frequency display, 0.01-1000MHz
- digital frequency display 0.1-500MHz, identical to DRO-315 DRO-302B except full mack width, 1-3/4" high (have manual)
- digital frequency display, 0.1-1060MHz, identical to DRO-333 DRO-309A except full rack width, 1-3/4" high (have manual)
- same as DRO-333 except with ICs instead of discrete components in the counter section

 frequency extender for DRO-308, 300-1000MHz, rack mount DRO-333A Kins Components in the counter section
- 1.75" high
 - frequency extender for DRO-3000 and DRO-302 counters, DRX-1000 235-1000MHz, also extends DAFC operation, half rack width
 - test module for DM-1 demodulator, test DM-4 by plugging DTF-101 into any of the four module slots, cost \$225 (1965)
 - extender cable for DM-4 module, allows for testing of IFDerivo. EC-101
 - equipment frame, single unit rack mount for 1/2 rack width units with front panels 3.25 h x 8 0 miles
 - EF-158 equipment frame for RS-158 receiving system, contains an RF multicoupler for 12 receivers w/ 50 ohm and 5dB max noise figure and an RF test signal generator te11)
 - cabinet for RS-160 Pan-Man receiving system EF-160
 - EF-201 equipment frame, dual unit rack mount for 1/2 rack width units with front panels 3.25"h X 8.0"w
 - equipment frame, single unit rack mount for 1/3 rack EF-301 width units with front panels 5.0"h X 4.5"w
 - EF-302 equipment frame, dual unit rack mount for 1/3 rack width units with front panels 5.0"h X 4.5"w
 - equipment frame, triple unit rack mount for 1/3 rack EF-303 width units with front panels 5.0"h X 4.5"w

	EF-401	equipment frame, single unit rack mount for 1/4 rack width units with front panels 6.75"h X 3.75"w
	EF-402	equipment frame; dual unit rack mount for 1/4 rack width units with front panels 6.75"h X 3.75"w
	EF-403	equipment frame, triple unit rack mount for 1/4 rack width units with front panels 6.75"h X 3.75"w
	EF 9404	equipment frame, quad unit rack mount for 1/4 rack width units with front panels 6.75 h 3.75 w
	EF-501	equipment frame, single unit rack mount for 1/5 rack width units with front panels 5.0"h X 3.0"w
	EF-502	equipment frame, dual unit rack mount for 1/5 rack width units with front panels 5.0"h X 3.0"w
	EF-503	equipment frame, triple unit rack mount for 1/5 rack width units with front panels 5.0"h X 3.0"w
1-440	EF-504175-1	equipment frame, quad unit rack mount for 1/5 rack width units with front panels 5.0"h X 3.00%
1100	EF-505	equipment frame, five unit rack mount for 1/5 rack width units with front panels 5.0 h X 3.0 w
	EF-506B	equipment frame, rack mount for 440 series receivers
	EF-602	equipment frame for RS-112 receiving system
	EF-602 FC-103	equipment frame for RS-112 receiving system 3 ch. stal controlled converter
		equipment frame for RS-112 receiving system 3 ch. real controlled converter 2F to tape converter, 21.4MHz input, 750kHz centerolled output, 61bs
	FC-103 FT-101A	3 ch. ktal controlled converter With to tape converter, 21.4MHz input, 750kHz centerohnson.
	FC-103 FT-101A	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder
	FC-103 FT-101A	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder IF-tape converter, 21.4MHz input, 1.075MHz output, data bandwidth of 150kHz-2MHz, half rack width
	FT-101A http://w FT-201A FT-207	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder IF-tape converter, 21.4MHz input, 1.075MHz output, data bandwidth of 150kHz-2MHz, half rack width same as FT-210 except has equalizer for min group delay
	FC-103 FT-101A NTO FT-201A FT-207 FT-210	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder IF-tape converter, 21.4MHz input, 1.075MHz output, data bandwidth of 150kHz-2MHz, half rack width
	FC-103 FT-101A NTO FT-201A FT-207 FT-210 FT-210E	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder IF-tape converter, 21.4MHz input, 1.075MHz output, data bandwidth of 150kHz-2MHz, half rack width same as FT-210 except has equalizer for min group delay narrowband IF to tape converter, 21.4MHz input, 20 or 200kHz center frequency output, 500kHz BW frequency translator, 455kHz input, staggers the IF outputs of up to six receivers between 580Khz and 1330kHz, 50kHz BW, cost \$2900 (1965)
	FC-103 FT-101A NTO FT-201A FT-207 FT-210 FT-210E FT-222	wideband IF to tape converter 21.4MHz input, 2.15MHz center output, 300kHz or 4MHz BW output to recorder IF-tape converter, 21.4MHz input, 1.075MHz output, data bandwidth of 150kHz-2MHz, half rack width same as FT-210 except has equalizer for min group delay narrowband IF to tape converter, 21.4MHz input, 20 or 200kHz center frequency output, 500kHz BW frequency translator, 455kHz input, staggers the IF

outputs, 10dB maximum noise figure, 8dB gain, quick change connector outputs on rear (like RCA video patch bays), 8lbs, cost \$400 (1964)

- HFM-8-1 same specs as HFM-8 except connectors on front panel
- same specs as HFM-8 except BNC on front panel HFM-8-2
- same specs as HFM-8 except BNC on rear panely 0.000HFM-\8\\3 httP
- tuning head, 2-30MHz, for use with 205 series and 215 HH-11Pan-Man receivers, low intermod design, dual conversion, 67.8 and 21.4MHz IFs, max noise figure 15dB
- HH-11-1 tuning head, 0.9-30MHz Wotherwise identical to HH-11
- high pass filter accessory for HPM-8 series, attenuates HPF-2 below 2MHz O
- frequency converter, 160MHz IF input, 21.4MHz output IFC-162 ohnson.terry
- IFD4-300 dual wideband 21.4MHz IF demodulators
- demodulator plug-in for DM-4, AM/FM/CWS 5kHz bandwidth KYIFD-5
 - demodulator plug-in for DM-4, $\Delta M/FM/CW$, 15kHz bandwidth IFD-15
 - demodulator plug-in for DM-4, AM/FM/CW, 50kHz bandwidth IFD-50
 - demodulator plug-in for DM-4, AM/FM/CW, 100kHz bandwidth IFD-100
 - demodulator, 21.4MHz input, BW=10/50/100/300MHz, provides (NO) AM and FM output and predetection TF output IFD-103
 - demodulator plug-in for DM-4, AM/FM/CW, 200kHz bandwidth
 - demodulator, 21.4MHz input, BW=10/50/300/1000kHz, provides IFD-201 AM and FM output and predetection IF output for recording, iterryo.org half rack width
 - demodulator, 160MHz Onput, FM, BW=10/22MHz (8.5MHz video), IFD-210 component of TDS 100 system
 - IFD-500 demodulator plug-in for DM-4, AM/FM/CW, 500kHz bandwidth
 - demodulator plug-in for DM-4, AM/FM/CW, 1MHz bandwidth IFD-1000
 - demodulator plug-in for DM-4, AM/FM/CW, 2MHz bandwidth IFD-2000
 - demodulator plug-in for DM-4, AM/FM/CW, IFD-4000 4MHz bandwidth
 - IFD-8000

demodulator plug-in for DMTGOAM/FM/CW, 8MHz bandwidth

- LIF-107 Log IF demodulator, component of RS-112 receiving system
- master control, component of RS-112 receiving system MC-103
- autoscan motor tuning drive, adapts single tuner units MD-50to automatic tuning
- MD-100 at MSame specs as MD-50 except designed for dual tuner units
- MD^{-104} same specs as MD-50 except designed for four tuner RS-111
- microwave tuner frame, accepts two TH- series tuning heads, MTF-100A 160 and 21.4MHz outputs, AFC AGC and DAFC inputs
- MTF-101 microwave tuner frame Tave to MTF-100A, adds space for two additional TH- series tuning heads
- MTF-102A microwave tuner frame, accepts one TH- series tuning head, 160 and 21.4MHz outputs, AFC, AGC and DAFC inputs
- carrier level meter panel, read peak or average 21 4MHz MP-101 IF input, contains IF strip and AM detector deviation and tuning meter panel, 21 4012 IF input,
- 102 ntiVMP-102 contains IF strip and FM detectorn
 - microwave pan preselector, contains four YIG preselectors MPP-101 for each of 1-2/2-4/8/8-12GHz, requires PS-103, component of RS-112 receiving system
 - pre-AND BW, 15kHz overall BW, 2.75lbs, cost \$800 (1965)

 Portable equipment case, holds one 440 or 441 recently battery operation. NS-101
 - PEC-401 Portable equipment case, holds one 440 or 441 receiver, battery operation w/ built-in nicad charger, built-in otto:Ilwai speaker and whip antenna
 - preamplifier, 23dB gain, 4.5dB noise figure, component of PR-101 TDS-100 system
 - power supply, component of RS-112 receiving system PS-103
 - pan tuner module, contains mixers, LO and IF preamps, PTM-101 component of RS-112 receiving system
 - remote frequency display, for use with DRO-311 RD-105
 - S-9203A speaker panel, half rack version of S-9903D
 - S-9901A speaker panel, 2.5"x10" speaker, 600ohm headphone
 - same as S-9901A except with Son temporal selector switch cost \$100 (1965) S-9902A

- S-9903D amplified speaker panel, 2.5"x10" speaker, 5 watt audio amp, 10k input impedance, 7 input selector switch, headphone jack, cost \$160 (1965)
- S-9908B same specs as S-9903D except with eighth input position for microphone and BNC monitor output, cost \$225 (1965)
- SFM-1 Standard frequency multiplier, 1MHz standard input, 50/100/500/1000MHz output, 1vrms output
- signal operated relay, controls up to two devices with SOR-1A contact closure on voice, positive going or negativegoing DC, self-contained 6"w X 3.5"h X 7.75"d
- SP-101 storage panel for modules used with DM-4, cost \$125 (1965)
- RF/IF switch panel, 3 inputs, 4 outputs, used in RS-125 SWP-101
- SWP-104 RF/IF switch panel, 4 inputs, 4 outputs, used in RS-125
- switch panel, 6 position, used with SDU to monitor veral receivers, 1/2 rack width unit several receivers, 1/2 rack width unit
- demodulator, 60-108kHz, SSB, twelve outputs 300-3500Hz, nttPTDM-101 component of TDS-100
 - demodulator, 12-60kHz, SSB, twelve outputs 300-3500Hz, TDM-102 component of TDS-100
 - demodulator, ten 50-108kHz inputs, SSB, ten outputs 300-TDM-110
 - Tape to IF converter, converts tape recorder output son terryo organization of the similar to TF-101 except with adjustable putput frequence tape to IF converter. TF-101 Wentered at 750kHz into standard 21.4MHz
 - TF-102
 - TF-103 4MHz range to 21.4MHz IF output, companion to IFD-103
 - half rack unit of TF-10011 TF-201
 - half rack version of TF-102 TF-202
 - tape to Tr converter, 1.075MHz input center frequency, TF-210 21 AMHz output, digital thumbwheel frequency control
 - converter, 60kHz-4MHz input, twelve outputs in 312-552kHz TFC-101 range (CCITT supergroups 1-10), component of TDS-100 system
 - converter, 2548-4028kHz input, six butputs in 312-552kHz TFC-105 range (CCITT supergroups 11-16), component of TDS-100 system

- converter, 312-552kHz input, five 60-108kHz outputs, TFC-212 component of TDS-100 system
- 1-2GHz drop-inotuner for 112 receiver and MTF-series TH-120 microwave tuning frames, filmstrip dial, 11dB max noise figures four section YIG preselector, 160MHz IF out, $BW \div 22MHz @ -3dB$, 3.15"h x 7.75"w x 14.9"d, 8lbs
- TH-120R-5 wideband version of TH-120, 50MHz @ -3dB, otherwise same
- 1-4.5GHz, 16dB noise figure, 4 digit LED readout, TH-145R electronically tuned, otherwise same as TH-120
- 2-4GHz, 18dB max noise figure, otherwise same as TH-120 TH-240
- 2-4.5GHz, 20dB max noise figure, otherwise same as TH-120 TH-245
- TH-245R-5 wideband wersion of TH-245, 50MHz @ -3dB, otherwise same
- TH-480
- wideband version of TH-480, 50MHz @ -3dB, otherwise same 8-12GHz, otherwise same as The sa TH-480R-5
- YTH-812
- TH-812 8-12GHz, otherwise same as TH-240
 TH-812R-5 wideband version of TH-812, 50MHz @ -3dB, otherwise same
 - 12-18GHz, BW=50MHz $@_{10}$ 3dB, otherwise same as TH-240 TH-1218R
 - tuner switching unit, works with 205, 205-2 or 215 Pan-Man receivers, manual selection of tuners, holds up to 3 tuners, part of RS-160, see RS-160 for details

 TSU-160 Cuner switching unit, works with 205, 205-2 or 215 Pan-Man receivers manual selection of tuners. TSU-103B
 - receivers, manual selection of tuners, holds with 7 tuners, part of RS-160, see RS-160 for details
 - plug-in tuner, 250-500MHz, for 205, 205-2 or 215 receivers UH-11
 - 0.5-1GHz, 205-2 or 215 receivers UH-12 plug-in tuner,
 - plug-in tuner, 220-440MHz, for 205, 205-2 or 215 receivers UH-13
 - plug-in tuner for 565 series receivers, 235-500MHz UH-101
 - plug in tuner for 565 series receivers, 500-1000MHz UH-102
 - UH-104 plug-in tuner for 565 series receivers, 490-1000MHz
 - plug-in tuner, 30-60MHz, for 205, 205-2 or 215 receivers VDA-4 video distribution amplifier, four outputs, up to 20dB
 - VH-11

- plug-in tuner, 60-120MHz, for 205, 205-2 or 215 receivers VH-12
- VH-13 plug-in tuner, 1000-180MHz, for 205, 205-2 or 215 receivers
- turer, 180-300MHz, for 205, 205-2 or 215 receivers VH-14
- plug-in tuner, 20-40MHz, for 205, 205-2 or 215 receivers VH-15
- VH-16Watk plug-in tuner, 40-80MHz, for 205, 205-2 or 215 receivers
- plug-in tuner, 50-100MHz, for 205, 20502 or 215 receivers VH-17
- plug-in tuner for 565 series receivers, 20-90MHz VH-101
- plug-in tuner for 565 series receivers, 90-260MHz VH-103
- plug-in tuner for 565 series receivers, 200-425MHz VH-105
- plug-in cuner for 565 series receivers, 100-400MHz VH-107
- VOR-1A
- voice operated relay, twelve channel unit, half resch COR detection, recorder interface for end of tape indication, rack mount 5.25" high modular
 - voice operated relay, 6 channel unit, individual delay VOR-6 and threshold controls, 20lbs, cost \$815 (1964)
 - System interface unit, multi-functional, microprocessor-WJ-1234 structure, 48 programmable scan strategies, 3000 emitter mode library file, 500MHz instantaneous bandwidth
 - Multiple receiver system control hub, up to Preceivers WJ-8610A-1 and a variety of surveillance equipment, software programmable, can be remote controlled by computer
 - WJ-8610A-5 Similar to WJ-8610A-1 but adds ability to control tape recorders and other equipment
 - WJ-8610A-7 Similar to WJ-8610A-1 but designed to control demodulators like the WJ-9470 instead of receivers
 - WJ-8610A-10 Differences from WJ-8610A-1 unknown
 - DF processor, interfaces with 21.4MHz wideband IF output, WJ-8971A usable with receivers from 20MHz to 1GHz, pseudo-doppler operation using synchronised antenna commutation and signal handling circuitry, LED compass posette and three digit LED bearing readout, IEEE-488 controllable, 3 degree accuracy, selectable integration times, requires special antenna: WJ-9872A, WJ-9880(-3), WJ-9871A or WJ-9873, rack mount 5.25" high

- WJ-8971A mobile DF antenna for use with WJ-8971A or WJ-8975A, 20-235MHz and 150-1000MHz
- WJ-8971A-5 DF processor same as WJ-8971A except with multiple IF BWs, bearing offset correction and remote control of IF BWs and integration times
- DF processor, same as WJ-8971A-5 except all functions WJ-8971A are remote controllable through an IEEE-488 interface
- WJ-8971A-7 DF processor, same as WJ-8971A except with IEEE-488 remote control interface
- for alignment of WJ-8971A system WJ-8971/AS DF antenna simulator,
- fixed site DF antenna for use with WJ-8971A or WJ-8975A, WJ-8972A 20-150MHz and 150-1000MHz
- 10. ruggidized DF antenna for use with WJ-8971A or WJ-8975A WJ-8973 20-235MHz and 150-1000MHz
- manpack DF processor, line of bearing information for http://wg signals in the 20-500MHz range, LED compass rosette and three digit LED bearing readout, battery powered (internal 10 D cell or magnesium BA-4386 pack) or vehicular supply, used with WJ8640-1 receiver (mil C-11495/PRD-11)
 - WJ-8986/AU-3 DF antenna system, consists of 3,4 or 5 vertically polarized 15' monopoles spaced 14' apart, 2-30MHz, can be used with WJ-8986 with WJ-8986/AAU-1 option
 - Hees w/WJ-8990
 730 serie WJ-8986/AU-5 triple interferometer DF antenna bay, 20-1200MHz, ruggedized, 12.7'h, 75lbs
 - UHF psuedo doppler DF antenna, 500-1000MHz,
 - tuning head, drop-in, 20-90MHz, used in QWJ-8730 series WJ-9061
 - WJ-9062 tuning head, drop-in, 90-300MHz, used in WJ-8730 series
 - tuning head, drop-in, 200-425MHz, used in WJ-8730 series WJ-9063
 - tuning head, drop-in, WJ-9064 250-500MHz, used in WJ-8730 series
 - WJ-9066 tuning head, drop-in, 30-90MHz, used in WJ-8730 series
 - tuning head, drop-in, 490-1000MHz, used in WJ-8730 series WJ-9068
 - tuner series, five units covering 1-18GHz, for use with the WJ-9150
 - speaker panel, 7 audio inputs, hegh-Z in, 5W output, half rack 3.5" high WJ-9203A

- WJ-9222 1.75" high version of FT-210
- WJ-9222E 1.75" high version of FT-210E
- upconverter demodulator for WJ-8640 (GRR-8), converts 0.5-30 WJ-9230 MHz to $100.5^{\circ}130$ MHz, built into extra tall cover for the receiver
- MJ-9|240 1.75" high version of IFC-162
- iterryo.org microwave block downconverter, extends WJ-8609A-1 WJ-9290 miniceptor to microwave range, taillored to specific communication bands, 10-14VDCV 4W, 0.75"h x 3.5"w x 6.0"d, 15oz
- antenna multicoupler, twelve outputs, 20-1000MHz, 2dB gain, WJ-9310 noise figure: (5.5dB (20-300MHz; 8.5dB (300-1000MHz), used inRS-180 system
- antenna multicoupler, twelve outputs, 0.5-30MHz, 2dB gain, WJ-9311 Kins-Max noise figure 7dB antenna multicoupler, four outputs, 20-1100MHz
- http://wwgtkii
 - antenna multicoupler, twelve outpucs, 20-1100MHz, multiple WJ-9315 antenna inputs
 - WJ-9395 tunable demod, 1-900kHz, AM/FM/SSB, five digit LED readout, DAFC, BWs: 2/4/8/16RHz (AM/FM); 1/2/4/6kHz (USB/LSB), portable packaging 10"w x 12"d x 4"h
 - voice grade channel demodulator, up to 30 demods in single No. WJ-9424 signals, upgradeable through firmware, 3.5"h x 8.25 w x 22"d, 20lbs

 9450 demodulator/control unit, 160MHz IF input, AM/FM/pulse,
 - WJ-9450 5 digit LED frequency display 3 independent IFDs w/ 6 BWs per IFD, AFC, works with WJ-9150 series tuners
 - FSK/OOK demod system handoff version of WJ-9472 WJ-9470
 - WJ-9471 VFT FSK demodulator system, up to 24 independent demods, 200Hz-9.999kHz, phase-locked-loop demodulation, built-in diversity operation
 - two channel FSK demodulator system, FSK or OOK, digital WJ-9472 control to 1Hz of mark and space frequencies from 200-9999 kHz, multipole matched baud rate filters for 10-4000 baud
 - precision tunable demodulator, AM/FM/SSB, 0.001-30MHz, 10Hz steps, provision for 9 BW filters (3kHz to 5MHz), microprocessor controlled WJ-9477

- WJ-9477G tunable demodulator, AM/FM (SSB opt), 0-31MHz, 10Hz steps, provision for 9 BW filters (3.2kHz-6MHz), microprocessor controlled, 3.5 % 8.5 % x 21 % d, 20 lbs
- tunable demodulator system, consists of 2 units; tuner/IF WJ-9480 is 5.25"h x 19"w x 22"d, tuner: 44lbs. demodiation amp and demod, 0.1-30MHz, 100Hz steps, simultaneous AM/FM/PM detection, 13 IF BWs (3kHz-20MHz), IEEE-488 remote,
- tunable demodulator, 0-90MHz or 160MHz IF, 1Hz steps, WJ-9497 AM/FM/SSB, programmable bandwidth from 100Hz-20MHz, BITE, 3.5"h x 8.5"w x 21"d, 20lbs
- FDM demodulator, six independent SSB demodulators tunable WJ-9518A from 0-15MHz, local or IEEE-488 control, preprogrammed tuning for standard CCITT 960 or 2700 channels, scanning available increments of 1kHz to 1MHz or discrete frequency tuning. Single control and readout for all six tumers. Rack mount 3U high (5-1/4")
- WJ-9518AE same as WJ-9518A except with delay equalized demodulators
- FDM demodulator, six independent SSB demodulators tunable WJ-9518B from 0-15MHz, local or IEEE-488 control, preprogrammed tuning for standard CCITT 960 or 2700 channels, scanning available in increments of 1kHz to 1MHz or discrete frequency tuning. Individual control and readout for each tuner. Rack mount 20 high (3-1/2")

 - WJ-9546 Wigital FDM demultiplexer, 6 channel tunable LSB/USB demods in a single half rack case. channels the control of the co in 1Hz steps, 2 analog baseband inputs, RSM232 remote control, 3.5"h x 8.25"w x 20"d
 - WJ-9548 digital FDM demultiplexer, up to 24 tunable FDM channel demods in a single half rack case, channels tune 0-20MHz in 1Hz steps, 4 analog baseband inputs, 8 line by 40 char LCD display, 3.5"h < 0.25"w x 20"d, 20lbs
 - WJ-9605 receiver front panel, provides local control for 1 or 2 WJ-8607 miniceptors, or remote control of WJ-8700 receiver, $3.5 \% \times 8.3 \% \times 3.1 \%, 2.2 lbs$
 - WJ-9607 multi-receiver front panel, provides for local control of up to 29 HPIL interfaced WJ-8607s, WJ-8609s or WJ-8809s, 3.5"h x 8.3"w x 4.4"d, 3.0lbs
 - WJ-9644A receiver controller, can operate up to 32 WJ-8718 receivers through RS-232 interface http://watkins-johns

- WJ-9773-1 voice operated relay, two channels, rack mount 1.75" high
- WJ-9773-2 voice operated relay, four channels, rack mount 1.75" high
- DF antenna Manpack, for use with WJ-8971A or WJ-8975A, WJ-9880 20-175MHz
- WJ-9880-1 DF antenna, manpack, for use with WJ-8971A or WJ-8975A, nson.ter 20-175MHz and 150-850MHz
- DF antenna, 20-512MHz, used w/WJ-8990 system WJ-9881
- WJ-9886-1 DF antenna, 20-1000MHz, 2 Days of vertically polarized elements, used w/WJ-89% system
- WJ-9886-DF antenna, 2002000MHz, 3 bays of vertically polarized elements used w/WJ-8986 system 1A
- WJ-9886-2 DF antenna, 20-1200MHz, similar to WJ-9886-1 except in O smaller package, used w/WJ-8986 system
- equipment frame, houses 1 or 2 WJ-8706 or WJ-8609A miniceptors, intergral AC supply, option 1 can be fitted with "" http.Whagtkii miniceptors, intergral AC supply, optional host interface, can be fitted with WJ-9605 front panel, 3.5"h x 8.5"w x 20"d, 101bs
 - WJ-9903E speaker panel, 7 audio inputs, high-Z in, 5W output, full rack 3.5" high
 - miniceptors, integral AC supply, optional host interface (No. 19 w x 21 d, 201bs WJ-9908
 - 75 h x 19 w x 21 d, 20lbs

 IF amplifier w/ 10kHz BW and limiter discriminator, used WJ - 9930 - 10http://wai in WJ-9028, WJ-8730 series and 565A
 - same as WJ-9930-10 except 20kHz BW WJ-9930-20
 - same as WJ-9930-10 except 50kHz BW W_{1} - 9930 - 50
 - same as WJ-9930-40 except 100kHz BW WJ-9930-100
 - WJ-9930-200 same as WJ-9930-10 except 200kHz BW

IMIS

- WJ-9930-300 same as WJ-9930-10 except 300kHz BW
- WJ-9930-500 same as WJ-9930-10 except 500kHz BW
- WJ-9930-1M same as WJ-9930-10 except 1MHz BW
- same as WJ-9930-10 except 2MH2 BW WJ-9930-2M same as WJ-9930-10 except 3MHz BW
- WJ-9930-3M

WJ-9948 blower module, for cooling a rack, 3,6 or 9 blowers, rack mount 1.75" high

speaker panel ofive input, 1 watt output, half rack WJ-9949

speakes panel, on/off switch, unamplified WJ-9950

WJ-9951 Wiequipment frame, similar to EF-201

Additions, corrections, suggestions to kins-johnson.ternyo.org

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