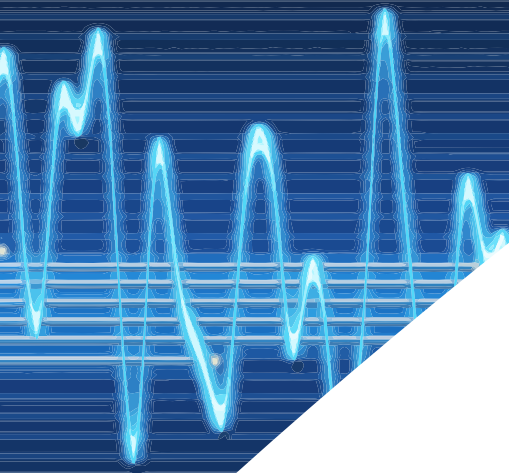


# Signal Classification

Modulation Recognition is in the past.  
Meet Signal Classification.

# STILL USING OUTDATED, LEGACY MODULATION RECOGNITION FROM MORE THAN A DECADE AGO?

Are you finding that results like a long list of 8PSK modems in a given swath of spectrum doesn't really help you narrow down to just the signals you care about?



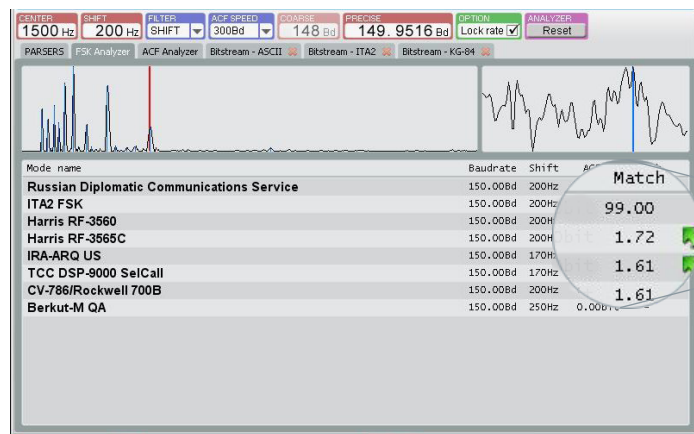
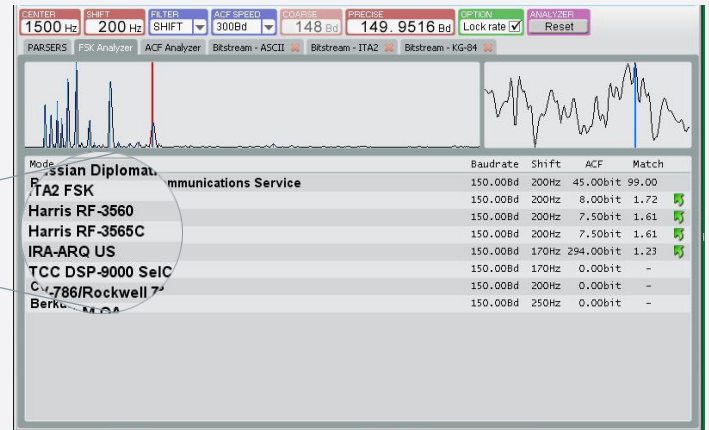
## WE UNDERSTAND YOUR FRUSTRATION.

Our signals classification techniques not only consider modulation, but go much, much further as modern SIGINT/COMINT operations demand:

We identify specific equipment, specific variants and submodes of that equipment - and - specific users.

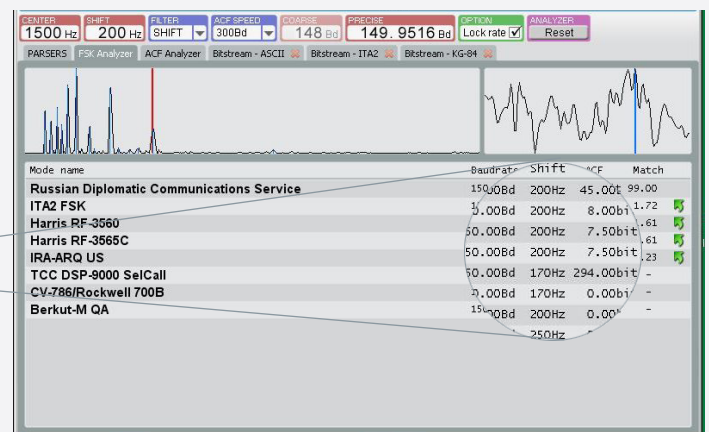
If your modulation recognition doesn't do all of these things, your system is out-of-date!  
[CONTACT US TODAY - WE CAN HELP.](#)

The FSK analyzer shows matching equipment for the tuned signal.



Probability of signal match is displayed and a green arrow links to a decoder.

Precision parameter measurement narrows the field of possibilities.



# A list of specific equipment and users Krypto500 automatically recognizes and classifies:

## OOK (18 combinations of user/waveform)

|             |
|-------------|
| RS10/BRAS-3 |
| TH-200      |
| TH-500      |

## MSK (57 combinations of user & waveform)

|                    |
|--------------------|
| Cimat AutoLink     |
| Drumgrange DDM311  |
| FM HELL            |
| Harris RAU         |
| MTTY               |
| KFF-58             |
| Mil-Std 55529A     |
| MD-522B            |
| Securicor Datatrak |
| Stanag5030         |
| Stanag5031         |
| T-600              |
| TEU-530            |
| Thales TMR6x00     |

## FSK (966 combinations of user & waveform)

|               |             |
|---------------|-------------|
| ACS-C         |             |
| Agat RMV-D    |             |
| Agat RMV-S    |             |
| AKS-782-P 5KE |             |
| Akula         |             |
| AN/GRC-213    | AN/PRC-1xx  |
| AN/PRC-137F   | AN/PRC-138  |
| AN/PRC-150C   | AN/PRC-325  |
| AN/TRC-510    | AN/USC-42v2 |
| AN/VRC-328    | AN/VRC-329  |
| Artek-0.5     | Artek-1HF   |

## FSK (966 combinations of user & waveform)

|                             |                 |
|-----------------------------|-----------------|
| ASCII/ITA5                  | ASCII-ARQ       |
| ASCII-FEC                   |                 |
| Aselsan HF-SARP             |                 |
| BARRETT HF2050              |                 |
| Baudot/ITA2                 |                 |
| Bell 103                    |                 |
| Berkut-M                    | Berkut-M QA     |
| Bozon-2M                    |                 |
| C-NAV RTCM SC104 v1.0       |                 |
| C-NAV RTCM SC104 v2.0       |                 |
| CCIR M.493-4                |                 |
| CEIEC DT-802                |                 |
| Chayka                      |                 |
| Cimat AutoLink              | Codan           |
| Datawell Waverider          |                 |
| Datron DT5200 X-Tor         |                 |
| Datron PRC1099A             | Datron PRC7700H |
| Datron S3                   |                 |
| Datron TransCall/TransAdapt |                 |
| Dicom R-150S F1D            |                 |
| Dicom RS-150T               |                 |
| DPRK-ARQ                    | DPRK-FEC        |
| Drumgrange DDM311           |                 |
| Elmer v.23                  |                 |
| FAF Selcall                 | FSK HELL        |
| G-TOR                       | GMDSS DSC       |
| Goetting HG 57620           |                 |
| GOLIAT RB                   |                 |
| Grintek DT-200              | Grintek TR-250  |
| Grintek TR-250 OrderWire    |                 |
| Hagelin Cryptos HC-6830     |                 |

## FSK (966 combinations of user & waveform)

|                                |                   |
|--------------------------------|-------------------|
| HAL GL-5100                    |                   |
| Harris AutoLink                | Harris CV-786     |
| Harris RAU                     | Harris RF-3560    |
| Harris RF-3565C                | Harris RF-5022    |
| Harris RF-5710A                | Hart SMART        |
| HC-ARQ                         | HELL 80           |
| Huneed AN/VSC-870K MEROD       |                   |
| IEI Codan                      | IN Codan          |
| Intracom TRC-36xx              |                   |
| Jenal SC51 NMEA-0183           |                   |
| Jenal/Schuemperlin SC2         |                   |
| Jenal/Schuemperlin SC3         |                   |
| KAN X.25                       |                   |
| Kintek R-163-10K               | Kintex R-55/R-55P |
| KL-43                          |                   |
| LEP                            |                   |
| M150                           | MD-522WB          |
| MEL/Philips CLANSMAN           |                   |
| MEL/Philips CLANSMAN/Pritchell |                   |
| MF-TTY                         |                   |
| Mil-Std 55529A                 |                   |
| Mil-Std 188-110B FSK           |                   |
| NAVTEX                         | Necode 321ARX     |
| Necode 322ARX                  | Nokia 8520/M90    |
| P-394KM                        | Pactor-I          |
| Pactor-I FEC                   | PIRS APRD         |
| POL-ARQ                        |                   |
| Q-Mac QM4014/9056              |                   |

**FSK (966 combinations of user & waveform)**

|                             |                  |
|-----------------------------|------------------|
| Q-Mac QM9080                |                  |
| R-105B                      | R-140            |
| R-168                       | R&S ALIS v10     |
| R&S ALIS v30                | R&S ALIS v40     |
| R&S ALIS v50H               | R&S ALIS v50A+H  |
| R&S ALIS-2000               | R&S GM856C1      |
| R&S GM856C2                 | Racal MA-4420    |
| Racal MA-4450               | RAO-UES          |
| RN Bikini Type 1            | RN Bikini Type 2 |
| Rockwell 700B               | Rockwell MD-2002 |
| Rockwell-Collins AN/URG-III |                  |
| Rockwell-Collins CP-2024A   |                  |
| RosHydroMet                 | RU M.491-1x      |
| Schuemperlin Pactor         |                  |
| Securicor Datatrak          |                  |
| Selex H7                    | SGC-2020         |
| Siemens CHP-200             | Siemens Fec-100  |

**FSK (966 combinations of user & waveform)**

|                    |                   |
|--------------------|-------------------|
| Siemens Fec-1000   | Sitor-A           |
| Spectratek SR3     | Stanag4481        |
| Stanag5030         | Stanag5031        |
| Stanag5065         | Stanag5501 Link-1 |
| Stanag5514 Link-14 |                   |
| Stanag5514 Link-Z  |                   |
| Stanag5514 SATIR   |                   |
| SVR Hybrid8        | SVR ITA2          |
| SwissCom Pactor    |                   |
| T-2xx              | T-206             |
| T-206 MT           | T-206 2MT         |
| T-206 3M           | T-206 3M1         |
| T-208              | T-310             |
| T-310/50 ARGON     | T-310/50 ADRIA    |
| T-310/51 SAGA      | T-352 DUDEK       |
| T-353 DUDEK        | T-600             |

**FSK (966 combinations of user & waveform)**

|                                 |              |
|---------------------------------|--------------|
| T1F2                            |              |
| Tadiran GRC-6400/-6600 FLASH    |              |
| Tadiran HF-2000/-6000 OrderWire |              |
| Tadiran SuperNeT ST2300         |              |
| TC-535                          |              |
| TCC DSP-9000 Type 1             |              |
| TCC DSP-9000 Type 2             |              |
| TgS-1                           | TH-200       |
| TH-500                          | Thales HF950 |
| Thales PRM4790 Syncal2000       |              |
| Thales Skymaster ALM            |              |
| TMS-430                         | TST-4043     |
| Veripos                         | VISEL        |
| WA2                             | X.25         |
| XMP-A                           | XMP-B        |
| Yaesu/Vertex Standard           |              |

**MFSK (221 combinations of user & waveform)**

|                        |                |
|------------------------|----------------|
| Alcatel 801H           | ALE400         |
| AN/USC-11 TE-204       |                |
| ARQ-FAE                |                |
| Baudot F7B             | BROS           |
| CONTESTIA              | Coquelet Mk I  |
| Coquelet Mk II         |                |
| Coquelet Mk II FEC     |                |
| DIPLO11                | DOMINO EX4     |
| DOMINO EX5             | DOMINO EX8     |
| DOMINO EX11            | DOMINO EX16    |
| DOMINO EX22            |                |
| FLDigi                 |                |
| GJB 2077-94 2G         | Grintek MHF-50 |
| Hull-Lancaster         |                |
| JT44                   | JT65A          |
| JT65C                  |                |
| Hagelin Cryptos HC-265 |                |
| Harris ANW2 3G         |                |
| KTH/Giles              |                |

**MFSK (221 combinations of user & waveform)**

|                            |                  |
|----------------------------|------------------|
| Mazielka                   | MFSK8            |
| MFSK16                     | MFSK32           |
| Mil-Std 188-141A           |                  |
| Mil-Std 188-141A LP        |                  |
| Mil-Std 188-141A HC LP     |                  |
| Mil-Std 188-141B 2G        |                  |
| Mil-Std 188-141B LP        |                  |
| Molodezhnaya               |                  |
| OLIVIA Average             | OLIVIA Fast      |
| OLIVIA Normal              | OLIVIA Slow      |
| OLIVIA Standard            |                  |
| Panda 41F00                | Panda 4812       |
| PAX                        | PAX2             |
| Racal-Kaynard Piccolo Mk1  |                  |
| Racal-Kaynard Piccolo Mk6  |                  |
| Racal-Kaynard Piccolo Mk12 |                  |
| Racal SkyFax               | Rockwell SelScan |
| ROS-3                      | RosModem         |
| RosNavigatsiya             |                  |
| Serdolik Carnelian Sarah   |                  |

**MFSK (221 combinations of user & waveform)**

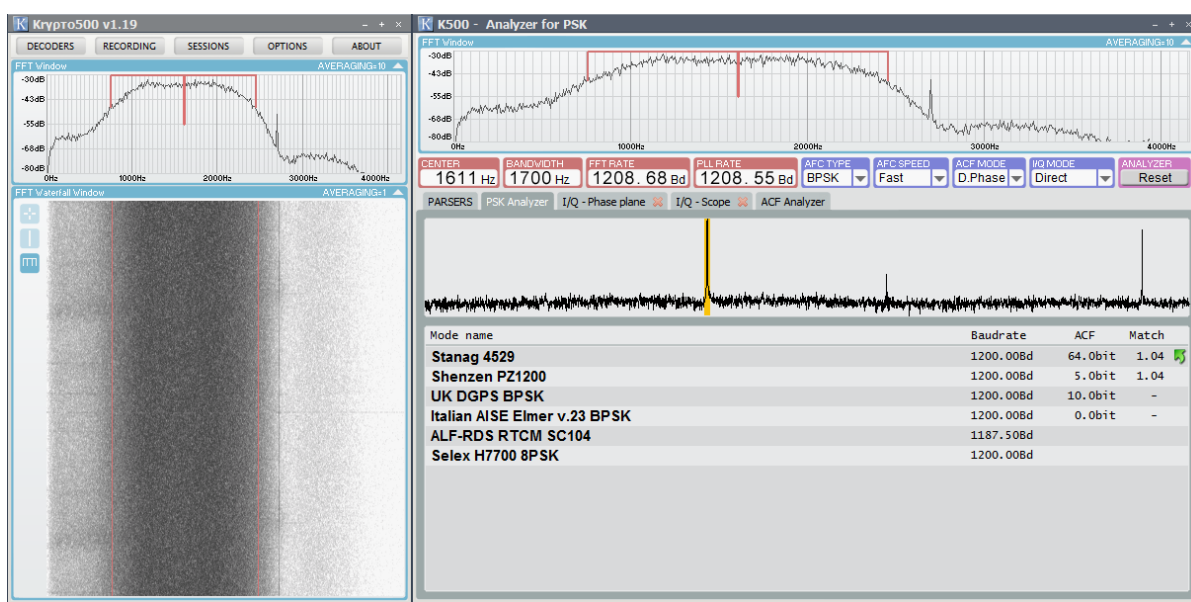
|                                |            |
|--------------------------------|------------|
| Serdolik Carnelian Sur-2       |            |
| Skysweep SkyBoost              |            |
| SVR Hybrid8                    |            |
| SVR MFSK13 Type A              |            |
| SVR MFSK13 Type B              |            |
| SVR MFSK14 Type A              |            |
| SVR MFSK16 Type A              |            |
| SVR MFSK16 Type B              |            |
| SVR MFSK16 Type C              |            |
| SVR MFSK20                     |            |
| Tadiran HF-2000/-6000 AutoCall |            |
| Thales Skymaster ALM           |            |
| Thales TRC-1752                |            |
| Thales TRC-1753                |            |
| THOR4 FEC                      | THOR5 FEC  |
| THOR8 FEC                      | THOR11 FEC |
| THOR16 FEC                     | THOR22 FEC |
| Thrane & Thrane 1585           |            |
| THROB                          | THROBX     |
| WinMOR                         | WSPR       |

| Vocoders & Speech Encipherment (173 combinations of user & waveform) |                    |
|--|--------------------|
| 30Group SEC-35   |                    |
| Albrecht SEU-8201  |                    |
| Albrecht SEU-8210  |                    |
| Albrecht SEU-8220  |                    |
| AOR ARD9800  | AOR ARD9900        |
| Aselsan 5810   |                    |
| Associated AN/GRC-106A   |                    |
| AT Crypt-One MACH2   |                    |
| Barrett BCA20031   | Barrett BCA20054   |
| Barrett BCA20055   | Barrett SecureCall |
| BEL SSS  |                    |
| Codan 3590   | COdan 3591         |
| COdan NGT SAFE   |                    |
| Commercial Comm. Assoc. TR178B                                       |                    |
| Cyclon-500   |                    |
| Daxon D600   |                    |
| Dicom R-150S   |                    |
| E-9y   | E-11H              |
| E-11N  | E-11S              |
| EADS CHX400  | EADS HRM7000       |
| EADS HRM7400   | ECIL EC4480        |
| ECIL TR2400  |                    |
| Elektrosignal R-168MV  |                    |
| FDMDV  |                    |
| Fed-Std 1015 LPC-10-52E  |                    |
| Golos-1  | GRANIT-RM          |
| Grintek TR178B   |                    |
| Grintek TR2400 Phoenix   |                    |
| Hagelin Cryptos HC-230   |                    |
| Hagelin Cryptos HC-265   |                    |
| Hagelin Cryptos HC-2650  |                    |

| Vocoders & Speech Encipherment (173 combinations of user & waveform) |                 |
|--|-----------------|
| Harris AN/PRC-150 Citadel  |                 |
| Harris RF-5800H-MP   |                 |
| Kintex P-174TM   | Kintex SH3000   |
| KVARTZ-N   | KY-100 AIRTERM  |
| KY-57 VINSON SAVILLE   |                 |
| KY-65 PARKHILL   | KY-65 ROK       |
| KY-99 TACTERM  | KY-99a MINITERM |
| LEN IS COP-100   | LINCOMPEX       |
| Marconi Scimitar-H Mk2   |                 |
| Micom MD4800   | Midian VS-1200  |
| Mil-Std 188-110A LPC-10e   |                 |
| Mil-Std 188-110A App B ANDVT   |                 |
| Mil-Std 188-110A KY-100  |                 |
| Mil-Std 188-110A KY-99A  |                 |
| Mil-Std 188-110A KYV-5   |                 |
| Mil-Std 3005   |                 |
| Mobat-Micom FRN8497  |                 |
| Motorola-Micom FRN8528   |                 |
| Nabishi NHF-256b   |                 |
| Nabishi NHF-256m   |                 |
| Omnisec 205  |                 |
| Panda RF-7001  | Prima-400       |
| Prima-KV   | Pritchel TDM    |
| Q-Mac QM4091M  |                 |
| R&S GN2130   | R-023           |
| R-168MA(5)E  | R-168MVE        |
| Racal M-4014B  | Racal MA-4204   |
| Racal MA-4224  | Racal MA-4258B  |
| Racal MA-4418  |                 |
| Racal MA-4437 COugar Covert  |                 |
| Racal MA-4448  | Racal MA-4463   |

| Vocoders & Speech Encipherment (173 combinations of user & waveform) |                |
|--|----------------|
| Racal MA-4470  |                |
| Racal Milgo Phoneplex 24   |                |
| RI-5000  |                |
| Rockwell Dark VP-116   |                |
| Rockwell DVP-200   |                |
| Sailor CRY-2001  | Selex CM107E   |
| Shoghi SCL-HRE   | SignalLogic    |
| Sirrix HandSetCrypt  |                |
| Stanag4197   | Stanag4198     |
| Stanag4479   | Stanag4591     |
| SYNCOMPEX  | SyT X03-02     |
| T-219 YAKHTA   |                |
| T-230-1A MAKHOVIK  |                |
| T-817 YAKHTA   |                |
| Tadiran HF-2000/-6000  |                |
| Tadiran SEC-13   | Tadiran SEC-15 |
| TCC DSP-9000   |                |
| TCC DSP-9000 Type 1  |                |
| TCC DSP-9000 Type 2  |                |
| TCC DSP-9000HS   | TCC TRU-9000   |
| Telsy TCH01c   | Telsy 500      |
| Thales HSX   |                |
| Thales PRM4790 Syncal2000  |                |
| Thales-Racal MA4798  |                |
| Thales Stanag4591  |                |
| Thales TRC3000   |                |
| Transcrypt SC20-400  |                |
| Transcrypt SC20-455  |                |
| TST 7595   | TST 7698-3     |
| TST 7698-6   |                |

**COMPREHENSIVE, RELEVANT, END-TO-END SOLUTIONS. EXPERTISE WELL BEYOND HF.**



PSK Analyzer in action

| PSK & OFDM (1,000 user & waveform combinations) |                    |
|---|--------------------|
| Alcatel   |                    |
| ALF-RDS RTCM SC104 v1.0                         |                    |
| ALF-RDS RTCM SC104 v2.0                         |                    |
| AN/PRC-137F                                     | ARINC635           |
| ARINC753-3                                      | Artek-0.5          |
| AT-3004D  | AT-3104D           |
| AT-3104D EXP                                    | AT-HSDM            |
| AVIC/CEIEC Datalink                             |                    |
| Barrett HF-2020                                 | Barrett HF-2023    |
| Barrett HF-2024                                 | BC-PSK             |
| Behsad Adaptive                                 | Beijing Poly PBC-2 |
| BES Systems FDLU                                | BPSK31             |
| Brakemeier FEC                                  |                    |
| CHIP64  | CHIP128            |
| Clark/Cook                                      | Clover-II          |
| Clover-2000                                     | Clover-2500        |
| Codan 3012                                      | Codan 3212         |
| Codan 9001                                      | Codan 9002         |
| Codan ChirpCall                                 | Cook               |
| DAB DRM Mode I                                  | DAB DRM Mode II    |
| DAB DRM Mode III                                | DAB DRM Mode IV    |
| Dassault  |                    |
| Datron DT5300 X-Tor                             |                    |
| DGA Turbo                                       | DIGTRX RDFT        |

| PSK & OFDM (1,000 user & waveform combinations) |                 |
|---|-----------------|
| DPRK-ARQ  | DRM             |
| DRM Mode B                                      | DSP-QUIC-II     |
| DSP-QUIC-II FEC                                 |                 |
| E-9   |                 |
| Echotel ETM-1800m FARCOS                        |                 |
| Echotel ETM-1810m FARCOS                        |                 |
| Echotel ETM-1810m HF3000 SkyF@st                |                 |
| Echotel ETM-1820m MAHRS                         |                 |
| Efir-HV   | Elmer v.23      |
| FERRITE   |                 |
| GEC Marconi ARM-9401                            |                 |
| Hagenunk MDM3000E                               |                 |
| HAL GL-5100                                     | Harris AHFDS    |
| Harris AN/PRC-152                               | Harris RF-3466A |
| IEI Adaptive                                    | IMP             |
| Invelco MD-571-A                                |                 |
| Jorgenson                                       |                 |
| Kintex R-51                                     | Kotlowski NATO  |
| Link-22 TADIL-J                                 | Link-W Datalink |
| Link-22 FH                                      |                 |
| Magnavox MD-1061                                |                 |
| Magnavox MD-1238                                |                 |
| Magnavox MD-1239                                |                 |
| Magnavox MD-1268                                |                 |

| PSK & OFDM (1,000 user & waveform combinations) |                  |
|---|------------------|
| Marconi Scimitar-H                              |                  |
| MD-KB   | MDP-2.1          |
| Micom FDN6124                                   | Mil-Std 188-110A |
| Mil-Std 188-110A App A                          |                  |
| Mil-Std 188-110A App B                          |                  |
| Mil-Std 188-110B                                |                  |
| Mil-Std 188-110B App A                          |                  |
| Mil-Std 188-110B App B                          |                  |
| Mil-Std 188-110B App C                          |                  |
| Mil-Std 188-110B App D                          |                  |
| Mil-Std 188-110B App                            |                  |
| Mil-Std 188-141B 3G                             |                  |
| Mil-Std 188-148A                                | Mil-Std 188-148B |
| Mil-Std 188-203-1 TADIL-A                       |                  |
| Mil-Std 188-203-1A SLEW                         |                  |
| Mil-Std 188-203A CLEW                           |                  |
| Mil-Std 6016C Link-22                           |                  |
| MT63  |                  |
| NATO Link-Y                                     |                  |
| Neptune AWS-1-CM                                |                  |
| Neptune AWS-2-CM                                |                  |
| Neptunw AWS-3-CM                                |                  |
| Nexion NX1230                                   | Nilson/Timothy   |
| N-UCAS  |                  |

**PSK & OFDM (1,000 user & waveform combinations)**

|                  |               |
|------------------|---------------|
| Omsk MDM-9.6     |               |
| P-394KM          | Pactor-II     |
| Pactor-II FEC    | Pactor-III    |
| Pactor-IV        | Paktel CP-100 |
| Panda RF-41A61   | Panda RF-7001 |
| PIRS APRD        | PSK HELL      |
| PSK125           | PSK125F       |
| PSK220F          | PSK250        |
| PSK31            | PSK31F        |
| PSK500           | PSK63         |
| PSK63F           | PSKAM10       |
| PSKAM31          | PSKAM50       |
| Q15X25           | Q-Mac QM4091M |
| R&S GM2100       | R&S GM2100S   |
| R&S GM2200       | R&S SECOM-H   |
| Racal SkyFax     | Racal/Hoult   |
| RCA TT-568/AGC-6 |               |
| RFSM2000         | RFSM2400      |
| RFSM3000         | RFSM6400      |
| RFSM8000         | RN-DRM        |

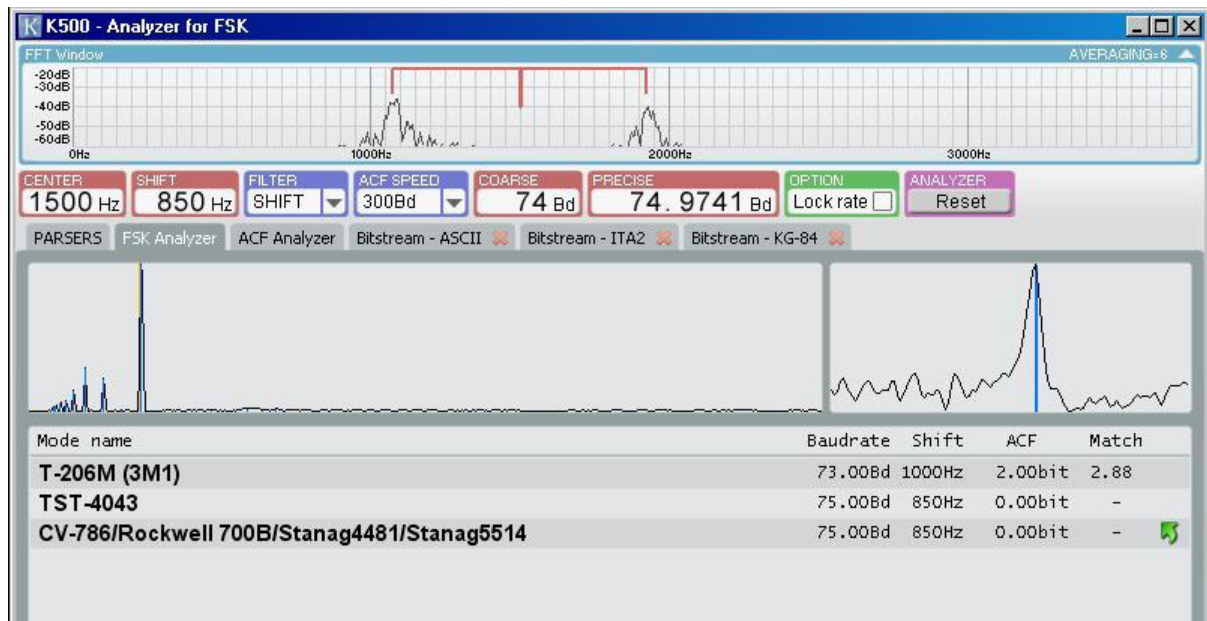
**PSK & OFDM (1,000 user & waveform combinations)**

|                          |               |
|--------------------------|---------------|
| Rockwell HF-9500         |               |
| Rockwell Q960x           |               |
| Rockwell TE-233P-6       |               |
| Rockwell TE-233P-7       |               |
| Rockwell TE-233P-8       |               |
| Selex CM107E             | Selex H700    |
| Selex H7700              |               |
| Schuemperlin Pactor-II   |               |
| Schuemperlin Pactor-III  |               |
| SCS RPR                  | Selex SP-295R |
| Serdolik Carnelian Sur-2 |               |
| Shenzen PZ1200           |               |
| Shenzen RF-41A00         |               |
| Siemens ARINC 714-6 Mk3  |               |
| Skysweep SkyOFDM         |               |
| Stanag4197               | Stanag4285    |
| Stanag4415               | Stanag4444    |
| Stanag4481               | Stanag4538    |
| Stanag4539               | Stanag4539    |
| Stanag4415               | Stanag5030    |

**PSK & OFDM (1,000 user & waveform combinations)**

|                         |                  |
|-------------------------|------------------|
| Stanag5066              |                  |
| Stanag5511 Link-Y       |                  |
| Stanag5511 Link-11 CLEW |                  |
| Stanag5511 Link-11 SLEW |                  |
| Stanag5511 Link-22      |                  |
| SVR Hybrid8             |                  |
| TANDEME                 | TCM-16           |
| TCM-52                  | Telefunken ALM   |
| Thales DeltaFix         |                  |
| Thales HF3000 SkyF@st   |                  |
| Thales MSN8100H         |                  |
| THales Skymaster ALM    |                  |
| Thales Starcom TR8000   |                  |
| Thales TMR-3301         | Thales TMR-3302  |
| Thales TRC-1752         | Thales TRC-1753  |
| Thales TRC-3600         | Thales TRC-9710A |
| TST 4045                |                  |
| Veripos                 |                  |
| WinDRM Mode A           | WinDRM Mode B    |
| WinMOR                  | WOLF             |

FSK Analyzer in action





## NEED HELP OR ADVICE?



We are here to help. And the best thing of all - we will give you an honest and responsible answer to your questions. Contact us today at [info@comintconsulting.com](mailto:info@comintconsulting.com)!

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