COM-1019 -> COM-1418 -> COM-1005

Test conditions:

- DSSS modem, back to back
- Noiseless channel
- 19.9 Mchips/s Barker code spreading
- BPSK

COM1418 Direct Sequence Spread-Spectrum D...

Chip rate: 19900000

Spreading factor: 13

Code Type: Barker code

Polynomial G1: 0

Polynomial G2: 0

GPS satellite ID: 0

Nominal center frequency: 0 Hz

☐ Spectrum inversion

AFC enable: Automatic AFC selection

Symbol decoding: BPSK

Code sweep period: 16

☑ Software reset

Output: J8 connector I/Q serialized

[Apply] [Ok] [Advan...] [Cancel]

COM1005 Bit Error Rate Measurement Settings

Registers

🖨 All register values in HEX

Reg 0 [0C]   Reg 2 [00]   Reg 4 [00]

Reg 1 [00]   Reg 3 [00]

Configuration

Configuration option currently loaded: , rev E

[Apply] [Ok] [Cancel]

Observations.

1. Demodulator is locked (status register 5 = 0x03)

COM1418 Direct Sequence ...

All register values in HEX

Status Registers

Register 0 : 30	Register 6 : 78
Register 1 : 02	Register 7 : D6
Register 2 : 00	Register 8 : 06
Register 3 : 00	Register 9 : 58
Register 4 : 00	Register 10: 1A
Register 5 : 03	Register 11: 01

Close
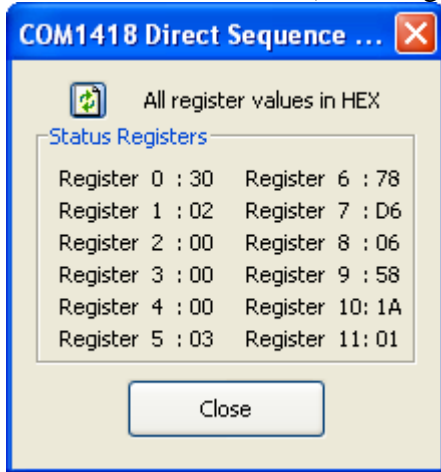
2. Compare received signal with demodulator code replica: both are aligned. Code tracking loop works. [COM-1418 comscope: trace 1 signal 2 .vs. trace 2 signal 2]

ComScope, COM1418 Direct Sequence Spread-Spectrum Demodulator 22 Mchip/s
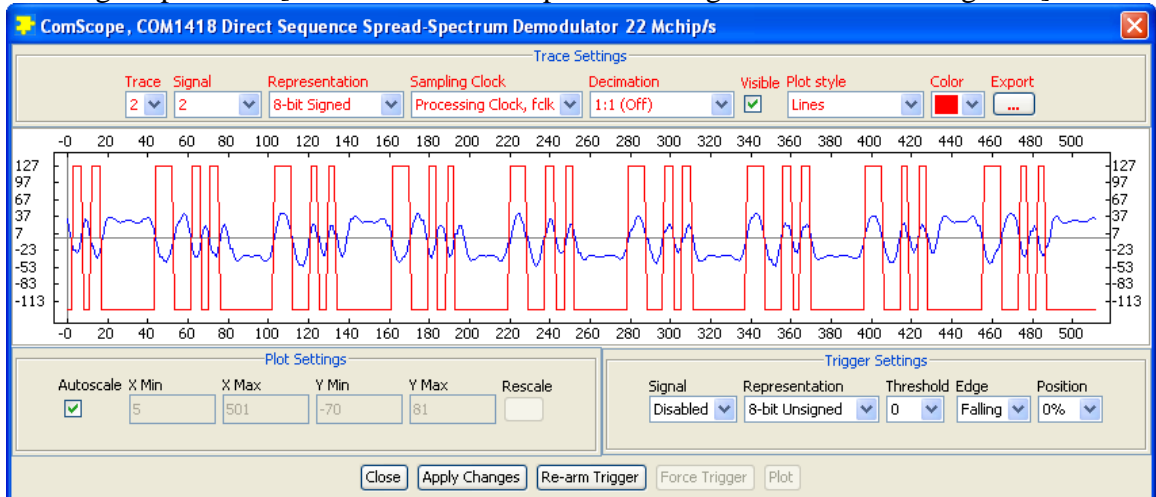
3. Demodulated signal shows near perfect constant amplitude. . [COM-1418 comscope: trace 1 signal 3]

ComScope, COM1418 Direct Sequence Spread-Spectrum Demodulator 22 Mchip/s
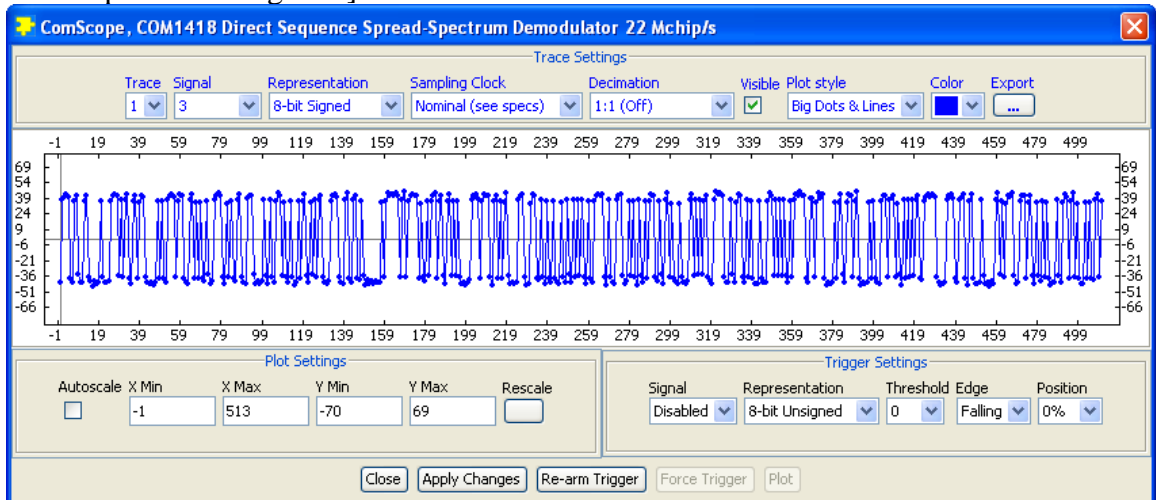
4. BER is zero (status registers 1-4 are null, status register 5 shows BER measurement lock)

COM1005 Bit Error Rate Me... ✕

🔁 All register values in HEX

Status Registers

Register 1 : 00   Register 8 : 00
Register 2 : 00   Register 9 : 00
Register 3 : 00   Register 10: 4C
Register 4 : 00   Register 11: 6F
Register 5 : 01   Register 12: BC
Register 6 : FF   Register 13: 00
Register 7 : 03

[Close]