IID FONE CO., LTD.
FCC ID : PJ4ID-900TR
JOB # : 284YK
EXHIBIT # : 10A

# 1.Processing Gain

THE TEST SETUPS:

This section provides measurement guidelines for Direct Sequence Spread Spectrum serial port from a computer to the DCT UUT is needed to force selection of output power level and channel.
Section 15,247(0):Processing Gain.
The processing gain may be measured using the CW jamming margin method. Figure 1 shows the test configuration. The test consists of stepping a signal generator in 50 KHz increments across the pass band of the system (up to 960 KHz away in Rl's DCT). At each point, the generator level required to produce the recommended Bit Error Rate(BER) (Set at BER=$10^{-3}$) is recorded. This level is the jamming level. The output power of the transmitting unit is measured at the same point. The jammer to Signal (J/S) ratio is then calculated.
Discard the worst 20% of the J/S data point. The lowest remaining J/S ratio is used to calculate the processing gain. The maximum implementation loss a system can claim in calculating processing gain is 2dB. The equation to calculate the processing gain (Gp) is the following.

Gp = (S/N)o + Mj + Lsys

Where Lsys = system implementation loss = 2dB.
Mj= jamming margin (J/S) in dB.
(S/N)o = signal to noise ratio required for a DBPSK system with BER of $10^{-3}$ = 8.0dB

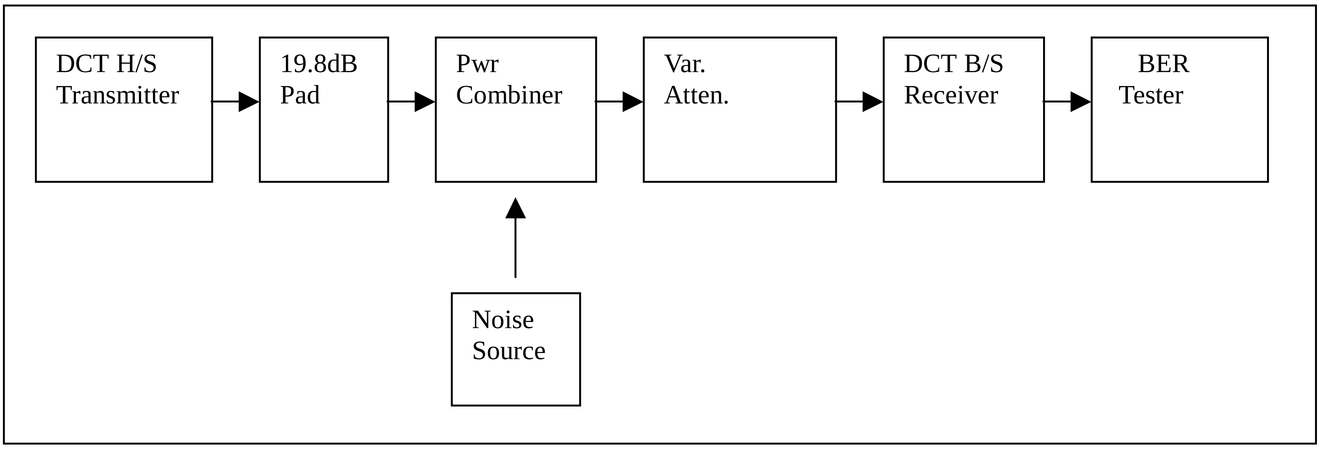


Figure 1 : Jamming Test Setup

MODEL : HD -950
S = Signal Power - Attn - Comb loss - cable Loss
= 4.0 - 19.8 - 3.6 - 0.5
= -27.9 dB
J = Sig Gen O/P[v](N) -cal factor - Comb Loss
= N - 0.3 - 3.6 dB

PROCESSING GAIN CONT.'D
EXHIBIT # : 10B

| Jammer Freq(MHz) | Signal Ly dB | CW Noise N dB | Mj J/S dB | Proc.Gain dB |
|---|---|---|---|---|
| 915.6 | -27.9 | -15.1 | 8.8 | 19 |
| 915.65 | -27.9 | -15 | 8.9 | 19.1 |
| 915.7 | -27.9 | -22.9 | 1 | 11.2 |
| 915.75 | -27.9 | -19.9 | 4 | 14.2 |
| 915.8 | -27.9 | -19.6 | 4.3 | 14.5 |
| 915.85 | -27.9 | -20.3 | 3.6 | 13.8 |
| 915.9 | -27.9 | -21.3 | 2.6 | 12.8 |
| 915.95 | -27.9 | -19.3 | 4.6 | 14.8 |
| 916 | -27.9 | -21 | 2.9 | 13.1 |
| 916.05 | -27.9 | -11.8 | 12.1 | 22.3 |
| 916.1 | -27.9 | -19.5 | 4.4 | 14.6 |
| 916.15 | -27.9 | -11.8 | 12.1 | 22.3 |
| 916.2 | -27.9 | -17 | 6.9 | 17.1 |
| 916.25 | -27.9 | -14.2 | 9.7 | 19.9 |
| 916.3 | -27.9 | -12.5 | 11.4 | 21.6 |
| 916.35 | -27.9 | -10 | 13.9 | 24.1 |
| 916.4 | -27.9 | -6 | 19.9 | 28.1 |
| 916.45 | -27.9 | -4 | 22.7 | 30.1 |
| 916.5 | -27.9 | -1.2 | 22.1 | 32.9 |
| 916.55 | -27.9 | -1.8 | | 32.3 |

## 2.Data Rate

80 Kb/s Time Division Duplex (TDD)
32K Transmit + 32K Receive + Overhead

## 3.Chip Rate

960 Kchips/s (12 chips per bit) DSSS

## 4.Sampling Rate

1.92 Msamples/s (2 samples/chip)