Glossary of Principal Symbols

Equation numbering in Part II does not contain a "II" suffix; when equations from Part II are referred to in Part I, they are so designated, e.g. Eq. (3.5), Part II, etc.

Figure numbering in Part II is similarly indicated by a "II" following the number.

A.	A_o	= peak amplitude of typical input signal
	$A_A, A_B, A_\infty, A_{\infty,A}, A_{\infty,B}$	= Impulsive Indexes, (Class A,B interference)
	A_α	= effective Impulsive Index
	a_A, a_B, a	= normalizing factors
	APD	= a posteriori probability; here 1-Distribution = P_1
	ARI	= combined aperture-IF-IF receiver input stages
	$\mathcal{a}_T, \mathcal{a}_R$	= source, receiver beam patterns
	α	= spatial density-propagation parameter
B.	$B_o, \hat{B}_{oA}, \hat{B}_{oB}$	= generic or typical envelope of waveform from ARI receiver stage
	$b_{1\alpha}, b_{2\alpha}, b_{2\ell+2\|\alpha}$	= weighted moments of the generic envelope B_{oB}
	β	= exponent of moment
C.	c.f.	= characteristic function
D.	D_1	= probability distribution
	δ	= delta (singular) function
E.	E, E_o	= instantaneous envelope
	$e_{o\gamma}$	= limiting receiver voltage
	$\mathcal{E}, \mathcal{E}_o, \mathcal{E}_o', \mathcal{E}_o', \hat{\mathcal{E}}_o$	= normalized (instantaneous) envelopes; $\mathcal{E}_o$=envelope threshold
	$\mathcal{E}_B$	= "bend-over" point (Class B), empirical pt. of inflexion in P_{1-B}

	η	= an exponent
	$\hat{\varepsilon}$	= impulse epoch
	$\varepsilon_o, \varepsilon_d$	= normalized doppler
F.	$\hat{F}_1, F_1$	= characteristic functions
	${}_1F_1$	= confluent hypergeometric function
	$\Delta f_N, \Delta f_{ARI}$	= noise, receiver bandwidths
	f	= frequency
G.	G_o	= a basic waveform
	$g(\lambda)$	= geometrical factor of received waveform
	Γ'_A, Γ'_B	= ratio of (intensity of) gaussian component to that of the "impulsive", or nongaussian component
	$\Gamma(x)$	= gamma function
	γ	= exponent of propagation law, with range
H.		
I.	$\hat{I}_T, \hat{I}_\infty$	= exponent of characteristic function
	I_c	= incomplete Γ-function
	$\hat{i}_R$	= unit vector
J.	J_o, J_1	= Bessel function, 1st-kind, (0,1 order).
	J_Λ	= jacobian
K.	$K_{A,B}$	= conversion factor, for arbitrary normalization
L.	Λ	= domain of integration
	λ	= argument of the c.f.
	$\underset{\sim}{\lambda}$	= (λ, θ, ϕ), coordinates
M.	μ	= exponent of source density law with range
	μ_d	= normalized doppler
N.	n.b.	= narrow-band

O. Ω_{2A}, Ω_{2B} = mean intensity of the nongaussian component

ω, ω_o = angular frequencies (ω_o=carrier angular fr.)

P. P_1 = APD or exceedance probability

pdf = probability density function

Ψ, ϕ = phase of narrow band wave

ϕ_T, ϕ_R = aperture phase

Q.

R. r = c.f. variable

ρ = poisson "density"

S. $\sigma, \sigma_G, \hat{\sigma}, \hat{\sigma}_{mA,B}, \Delta\sigma_G^2, \sigma_\Lambda, \sigma_R^2, \sigma_E^2$ = variances

$\sigma_{S,V}$ = source density

T. $T_s, \bar{T}_{s;A,B}$ = emission duration

$t, t_1, t_2,$ = times

θ, θ' = sets of waveform parameters

U. U, U_{nb} = basic waveforms out of ARI receiver stage

$u_o, u_{oA,B}$ = normalized envelope waveform at output of ARI ARI stages

V.

W. w_1, W_1 = probability density function

X. X = instantaneous amplitude

x_o = a c.f. variable

Y.

Z. z_o = a normalized time