Errata

T. Y. Otoshi, S. R. Stewart, and M. M. Franco have submitted the following errata to "A Portable X-Band Front-End Test Package for Beam-Waveguide Antenna Performance Evaluation—Part I: Design and Ground Tests" that appeared in *The Telecommunications and Data Acquisition Progress Report 42-103*, vol. July–September 1990, pp. 135–150. The last sentence of the third paragraph on page 137 should be replaced with:

The corrected system temperature is obtained by multiplying each point by the corresponding linearity factor shown in Fig. 10(a) [5]. However, it can be seen that the corrected value would be different by about only 1 percent. It should be pointed out that in this article the above term "uncorrected" measured operating system noise temperature was used to refer to the system temperature that had already corrected for gain change, but not corrected for nonlinearity.

Errata

N. R. Mysoor, J. D. Perret, and A. W. Kermode have submitted the following errata to "Design Concepts and Performance of NASA X-Band (7162 MHz/8415 MHz) Transponder for Deep-Space Spacecraft Applications" that appeared in *The Telecommunications and Data Acquisition Progress Report 42-104*, vol. October–December 1990, pp. 247–256. Table 2 and Figure 1 should be replaced with the table and figure on the following pages.

Table 2. Transponder carrier phase tracking loop parameters

Transponder	Signal condition												
	Design			Threshold, $\alpha_0 = 0.0531$			10 dB above threshold, $\alpha_{10} = 0.1665$			Strong signal, 50 dB above threshold, $\alpha_S = 1.0$			
	K_v, sec^{-1}	τ_1, sec	τ_2, sec	ζ_0	ω_{n_0}, rad/sec	$2B_{L_0}$, Hz	ζ_{10}	$\omega_{n_{10}}$, rad/sec	$2B_{L_{10}}$, Hz	ζ_S	ω_{n_S}, rad/sec	$2B_{L_S}$, Hz	$\Delta\omega$, Hz/sec
NST	1.44×10^7	2910	0.0833	0.68	16.2	17.0	1.20	40.3	28.7	2.90	70.3	209.9	394
NST + XSDC	4.88×10^7	2910	0.0833	1.24	29.8	43.1	2.20	52.8	122.3	5.39	129.5	704.5	1334
GLL	1.62×10^7	3732	0.0423	0.32	15.2	16.7	0.57	27.1	26.9	1.42	66.0	105.3	347
GLL + XSDC	5.73×10^7	3732	0.0423	0.73	34.1	36.6	1.30	90.0	60.4	2.66	123.9	341.2	1222
MAG	1.44×10^7	728	0.0208	0.42	40.4	41.0	1.49	118.3	71.5	1.50	126.0	210.0	1263
MAG + XSDC	4.88×10^7	728	0.0208	0.62	59.7	61.6	1.10	105.6	140.1	2.69	258.9	721.2	5335
DST	2.2×10^7	3556	0.0556	0.50	18.0	18.0	0.88	31.9	37.2	2.17	78.1	178.5	550

K_v = DC gain of the PLL, sec^{-1}
τ_1 = Time constant associated with the open-loop pole (phase lag) of the loop filter, sec
τ_2 = Time constant associated with the open-loop zero (phase lead) of the loop filter, sec
α_0, α_{10}, α_S = Limiter suppression factor at threshold, 10 dB above threshold, and strong signal
ζ_0, ζ_{10}, ζ_S = PLL damping factor at threshold, 10 dB above threshold, and strong signal
ω_{n_0}, $\omega_{n_{10}}$, ω_{n_S} = PLL natural frequency at threshold, 10 dB above threshold, and strong signal, rad/sec
$2B_{L_0}$, $2B_{L_{10}}$, $2B_{L_S}$ = PLL noise-equivalent bandwidth at threshold, 10 dB above threshold, and strong signal, Hz
$\Delta\omega$ = PLL acquisition and tracking rate at strong signal, Hz/sec
NST = NASA Standard DST (S-band)
GLL = Galileo transponder (S-band)
MAG = Magellan transponder (S-band)
DST = Deep space transponder (X-band design)
XSDC = External X-band to S-band downconverter

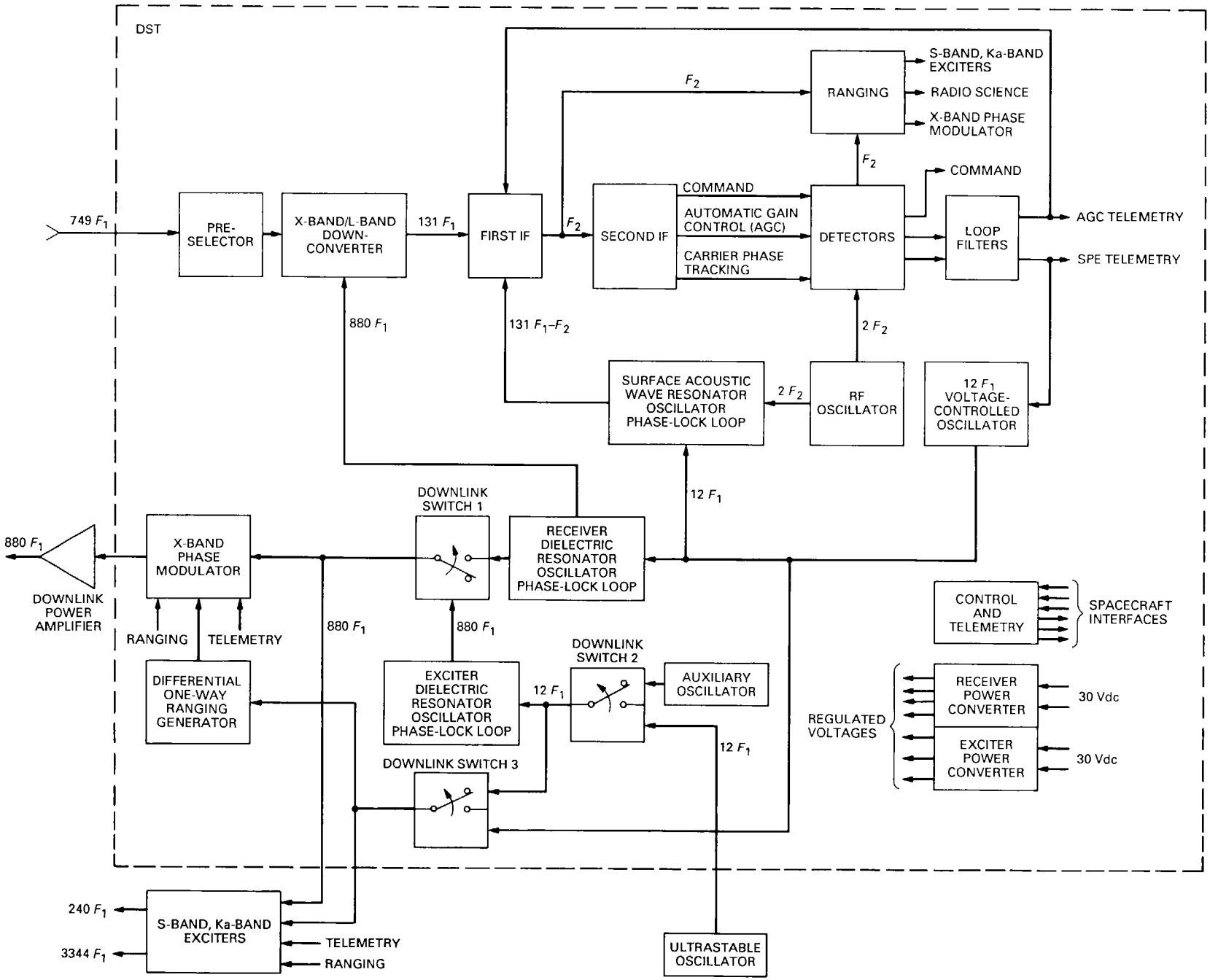

Fig. 1. Deep-space transponder.