Lis	t of Figures	xiii
1	Introduction	1
	1. The uses of phonetics	1
	2. The phases of speech	3
	3. The vocal tract	7
	4. The functional components of speech	9
2	Basic Components of Speech	11
	1. Initiation and articulation	11
	2. Fricative and stop articulation	16
	3. Pulmonic pressure and suction initiation	18
	4. Glottalic initiation	22
	5. Velaric initiation	26
	6. Review of initiation types	29
	7. Initiator velocity, and initiator power (stress)	31
3	Phonation: A Third Basic Component	35
	Voiceless and voiced fricatives	35
	2. Voiced and voiceless mn l r	38
	3. Voiced and voiceless vowels	40
	4. The three components: Initiation, articulation, and phonation	40
	5. The production of voiced stops	42
	6. Voiced implosives	47
	7. Principal phonation types	49
	8. Relationship of phonation to initiation	53
	9. Aspiration	55
4	Articulation: Stricture Types	59
	1. Articulation: The 'final shaping' of sounds	59
	<ol> <li>Maintainable stricture types: Stop, fricative, approximant, resonant, trill</li> </ol>	60

I

	3. Essentially momentary stricture types: Tap, flap, semivowel	67
	4. The transverse dimension: Median and lateral articulation	69
-	A-N1-N	77
0	Articulation: Locations	73
	1. The nasal area	73
	2. The oral area: Upper and lower articulators	76
	3. Labial articulations: Bilabial and labiodental	79
	4. Dentalveolar articulations	82
	5. Retroflex and palatal articulations	88
	6. Velar and uvular articulations	92
	7. Pharyngal and glottal articulations	95
6	Co-articulation and Sequences	99
	Co-ordinate, or double, articulation	100
	2. Primary and secondary articulation	101
	3. Homorganic sound sequences: Geminates and affricates	106
	4. Lateral plosion, nasal plosion, and prenasalized stops	108
	5. Heterorganic sequences and contiguous sequences	109
	6. Diphthongs	110
	7. Close and open transition	111
7	Vowels: Introduction	119
	Vowels and consonants: Importance of silent study of vowels	119
	Lip- and tongue-positions for vowels	120
	3. Introduction to Cardinal Vowels	125
3	The Cardinal Vowels (CVs)	133
	General characteristics of CVs: Errors to avoid	133
	2. The front CVs	137
	3. The back CVs	140
	4. Types of lip-rounding	143
	5. Secondary CVs	144
	6. Central vowels and other additions to the CVs	148
	7. The acoustics of vowels: Vowel formants	152
	8. Making the formants audible	156
	9. Additional vowel modifications	161

9	Prosodic Features	163
	1. Initiatory prosodies: Initiator power (= stress)	163
	2. The syllable	168
	3. The foot	171
	4. Phonatory prosodies: Pitch variation (= intonation and tone)	172
	5. Articulatory prosody: Duration of articulation (= length)	174
10	Sound-systems of Languages	177
	Phonology: The utilization of speech-sounds	177
	2. A continuum of vowel-sounds	178
	The vowel continuum differently dissected by English and Spanish	180
	4. Voice-onset-times differently exploited by different languages	181
	5. Phonemes	187
	6. Distinctive features	189
	7. English consonant phonemes	191
	8. Allophones	192
	9. Consonant clusters	195
	10. The English vowels	198
11	Review	205
Fo	or Further Reading	217
Re	eferences	221
In	dex	223