

**Table A.3:** Table of parameters for Gabor set G3 (optimized on zifkom German digits). # denotes the filter number as in Figure A.5,  $f_0$  the number of the center frequency channel (on a scale from 1 to 23, low channel number equals low center frequency),  $\omega_f$  and  $\omega_t$  the spectral and temporal radian modulation frequency, respectively,  $\sigma_f$  and  $\sigma_t$  the widths of the Gaussian envelope, and  $\Delta_f$  and  $\Delta_t$  the extends of the support to both sides of the center. 'mode' specifies whether a filter is real with zero phase ('real') or  $\pi/2$  phase ('imag') or complex ('mag'). 'type' highlights whether a filter is purely temporal, spectral or spectro-temporal ('ST'). See Chapter 7 for further description.

#	$f_0$	$\omega_f/2\pi$	$\omega_t/2\pi$	$\sigma_f$	$\sigma_t$	$\Delta_f$	$\Delta_t$	mode	type
		[cycl./chan.]	[100Hz]	[chan]	[10ms]	[chan]	[10ms]		
1	3	0.000	0.021	1.500	24.055	3	48	mag	temporal
2	8	0.068	0.000	7.387	2.300	12	5	mag	spectral
3	12	0.062	-0.041	8.076	12.089	12	24	mag	STup
4	10	0.057	-0.031	8.750	15.945	10	22	mag	STup
5	4	0.293	-0.466	1.705	1.073	2	2	mag	STup
6	12	0.044	0.023	11.401	21.589	13	36	mag	STdown
7	5	0.000	0.143	1.034	3.504	3	5	mag	temporal
8	5	0.000	0.048	0.964	10.466	2	13	mag	temporal
9	11	0.146	0.000	3.418	2.242	5	4	mag	spectral
10	14	0.110	-0.075	4.566	6.683	6	13	mag	STup
11	16	0.201	-0.041	2.488	12.265	5	24	mag	STup
12	13	0.000	0.025	2.643	20.152	4	23	mag	temporal
13	11	0.000	0.043	2.411	11.616	4	22	mag	temporal
14	10	0.104	0.000	4.799	1.620	7	2	mag	spectral
15	4	0.000	0.042	2.248	11.909	4	24	mag	temporal
16	13	0.000	0.041	0.821	12.207	2	24	mag	temporal
17	13	0.051	0.023	9.820	21.555	11	29	mag	STdown
18	16	0.000	0.026	1.201	18.952	3	37	mag	temporal
19	7	0.081	0.000	6.140	2.941	9	4	mag	spectral
20	11	0.058	0.000	8.610	2.550	12	4	mag	spectral
21	8	0.075	0.026	6.645	19.404	11	27	mag	STdown
22	12	0.044	-0.024	11.388	20.612	16	37	mag	STup
23	12	0.092	0.029	5.432	17.285	8	28	mag	STdown
24	14	0.103	0.000	4.859	2.446	10	3	mag	spectral
25	14	0.068	0.000	7.336	1.398	8	3	mag	spectral
26	16	0.267	0.099	1.875	5.047	4	8	mag	STdown
27	10	0.000	0.091	2.838	5.470	4	11	mag	temporal
28	2	0.000	0.054	0.748	9.252	2	15	mag	temporal
29	13	0.000	0.094	0.856	5.305	2	10	mag	temporal
30	7	0.183	0.000	2.737	2.073	6	3	mag	spectral
31	6	0.122	0.043	4.097	11.708	5	23	mag	STdown
32	5	0.000	0.077	0.968	6.498	2	13	mag	temporal
33	5	0.111	-0.049	4.497	10.123	9	12	mag	STup
34	12	0.054	0.000	9.195	0.756	16	2	mag	spectral
35	13	0.050	0.033	10.052	14.997	14	22	mag	STdown
36	9	0.000	0.091	1.165	5.515	2	11	mag	temporal
37	4	0.000	0.175	1.415	2.852	3	6	mag	temporal
38	10	0.082	0.027	6.100	18.262	12	28	mag	STdown
39	11	0.062	0.000	8.049	2.385	9	4	mag	spectral
40	15	0.081	0.021	6.168	23.383	8	39	mag	STdown
41	12	0.109	-0.046	4.592	10.957	8	19	mag	STup
42	13	0.073	-0.079	6.884	6.294	11	10	mag	STup
43	18	0.130	0.052	3.843	9.536	5	15	mag	STdown
44	6	0.166	0.000	3.006	0.773	4	1	mag	spectral
45	15	0.069	0.025	7.286	20.279	12	32	mag	STdown
46	9	0.000	0.021	2.114	23.523	4	31	mag	temporal
47	4	0.000	0.028	2.827	17.635	6	21	mag	temporal
48	22	0.000	0.057	1.590	8.825	3	16	mag	temporal
49	6	0.177	0.063	2.830	7.961	6	16	mag	STdown
50	10	0.095	-0.034	5.254	14.865	9	24	mag	STup
51	14	0.055	-0.033	9.055	14.940	11	21	mag	STup
52	11	0.261	0.090	1.918	5.584	3	11	mag	STdown
53	12	0.147	0.071	3.399	7.018	6	10	mag	STdown
54	11	0.049	0.000	10.184	2.385	21	3	mag	spectral
55	13	0.321	-0.134	1.556	3.744	2	5	mag	STup
56	9	0.303	0.044	1.652	11.268	3	18	mag	STdown
57	10	0.170	0.077	2.938	6.481	4	8	mag	STdown
58	10	0.100	-0.089	5.004	5.626	7	8	mag	STup
59	19	0.308	-0.084	1.623	5.975	4	8	mag	STup
60	3	0.000	0.032	0.554	15.556	1	26	mag	temporal