Table S1. Summary of Recorded Cells and All Statistical Tests in This Study, Related to Table 1

A

cluster	driver	female	male
aSP-f	fru^{Gal4}	0	7
	JK1029	29	11
	JK56	8	20
aSP-g	fru^{Gal4}	0	0
	JK1029	16	17
	JK56	0	0
aSP-h	fru^{Gal4}	0	0
	JK1029	8	14
	JK56	0	0

B

cluster	genotype	female	male
aSP-f	*wt*	38	37
	$Or67d^{-/-}$	1	20
	$DA1^{(1)}$	1	11
	fru^{F}	0	14
	fru^{M}	18	0
	tra^{1}	14	0
aSP-g	*wt*	16	17
	$Or67d^{-/-}$	10	0
	$DA1^{(1)}$	9	8
	fru^{F}	0	0
	fru^{M}	17	0
	tra^{1}	9	0
aSP-h	*wt*	8	21
	$Or67d^{-/-}$	0	0
	$DA1^{(1)}$	2	0
	fru^{F}	0	0
	fru^{M}	9	0
	tra^{1}	8	0

C

Sex-specific pheromone responses in *fru*+ LHNs	**Cluster**	**Group 1**	**Group 2**	**Figure**	**Test**	**Hypothesis**	**Statistic**	**p**	**n**
Proportion cVA-responsive	aSP-f	female	male	1M	χ^2		χ^2=22.22	2.4e-06 ***	71
	aSP-g	female	male	1N	χ^2		χ^2=15.47	8.4e-05 ***	32
	aSP-h	female	male	1O	χ^2		χ^2=8.10	0.0044 **	22
Magnitude cVA response	aSP-f	female	male	1M	One way (permutation)	$\mu_1 \neq \mu_2$	Z=-4.02	5.7e-05 ***	71
	aSP-g	female	male	1N	One way (permutation)	$\mu_1 \neq \mu_2$	Z=3.79	0.00015 ***	32
	aSP-h	female	male	1O	One way (permutation)	$\mu_1 \neq \mu_2$	Z=-2.24	0.025 *	22
Compare Magnitude (cVA-responsive only)	aSP-f,aSP-g	aSP-g female	aSP-f male	1M–O	One way (permutation)	$\mu_1 \neq \mu_2$	Z=-2.20	0.028 *	33
Compare Sparseness (cVA-responsive only)	aSP-f,aSP-g	aSP-g female	aSP-f male	2G	Wilcoxon	$\mu_1 \neq \mu_2$	Z=3.62	3e-04 ***	45
Proportion cVA-responsive (unilateral vs bilateral)	aSP-f	aSP-f uni male	aSP-f bilat male	2H	χ^2		χ^2=7.94	0.0048 **	37
Compare Magnitude (unilateral vs bilateral)	aSP-f	aSP-f uni male	aSP-f bilat male	2H	One way (permutation)	$\mu_1 \neq \mu_2$	Z=3.93	8.3e-05 ***	37
cVA responses in *fru*+ LHNs depend on a common input									
Proportion cVA-responsive	aSP-f	wt male	*Or67d*$^{-/-}$ male	3C	χ^2		χ^2=8.44	0.0037 **	30
	aSP-g	wt female	*Or67d*$^{-/-}$ female	3C	χ^2		χ^2=13.10	3e-04 ***	25
Magnitude cVA response	aSP-f	wt male	*Or67d*$^{-/-}$ male	3C	One way (permutation)	$\mu_1 > \mu_2$	Z=3.12	0.00089 ***	30
	aSP-g	wt female	*Or67d*$^{-/-}$ female	3C	One way (permutation)	$\mu_1 > \mu_2$	Z=3.07	0.0011 **	25
Fru^M is necessary for the male form of the switch									
Magnitude cVA response	aSP-f	wt male	*fru*$^{-/-}$ male	4C	One way (permutation)	$\mu_1 > \mu_2$	Z=1.73	0.041 *	34
Compare Sparseness (cVA-responsive only)	aSP-f	wt male	*fru*$^{-/-}$ male	4D	Wilcoxon	$\mu_1 \neq \mu_2$	Z=1.84	0.066 .	11
Fru^M specifies the male form of the circuit switch									
Proportion cVA-responsive	aSP-f	wt female	*fru*^{M} female	5H	χ^2		χ^2=10.78	0.001 **	44
	aSP-g	wt female	*fru*^{M} female	5H	χ^2		χ^2=19.00	1.3e-05 ***	32
	aSP-h	wt female	*fru*^{M} female	S5C	χ^2		χ^2=0.70	0.4	17
Magnitude cVA response	aSP-f	wt female	*fru*^{M} female	5H	One way (permutation)	$\mu_1 < \mu_2$	Z=-2.97	0.0015 **	44
	aSP-g	wt female	*fru*^{M} female	5H	One way (permutation)	$\mu_1 > \mu_2$	Z=3.87	5.4e-05 ***	32
	aSP-h	wt female	*fru*^{M} female	S5C	One way (permutation)	$\mu_1 < \mu_2$	Z=-0.43	0.33	17
Selectively masculinising *fru*+ LHNs can flip the switch									
Proportion cVA-responsive	aSP-f	wt female	*tra*^{1} female	6H	χ^2		χ^2=9.74	0.0018 **	48
	aSP-g	wt female	*tra*^{1} female	6H	χ^2		χ^2=12.18	0.00048 ***	24
	aSP-h	wt female	*tra*^{1} female	S5G	χ^2		χ^2=4	0.046 *	16
Magnitude cVA response	aSP-f	wt female	*tra*^{1} female	6H	One way (permutation)	$\mu_1 < \mu_2$	Z=-2.51	0.0061 **	48
	aSP-g	wt female	*tra*^{1} female	6H	One way (permutation)	$\mu_1 > \mu_2$	Z=3.03	0.0012 **	24
	aSP-h	wt female	*tra*^{1} female	S5G	One way (permutation)	$\mu_1 < \mu_2$	Z=-2.06	0.02 *	16