

Aisin A650E 5 Speed

Wire Colors		Firmware		Mercury2 Input / Outputs				Firmware		Wire Colors	
		Priority2	Priority1					Priority1	Priority2		
MTSX01/2	MTWX01/2			P1 - 12 Way Input						MTWX01/2	MTSX01/2
Green	Green		Low Range	Water Temp	7	1	Air Temp	Oil Temp 10K		Yellow	Yellow
Blue	Blue		Shifter Switch	Lambda	8	2	TPS	TPS		Yellow	Blue
Red	Red			+.5 Volt Out	9	3	MAP			Blue	Blue
Orange	Orange			+.12 Volt Ign	10	4	GND			N/C	Black
Blue	Blue		Speed	TDC Sensor	11	5	Cam2 Sensor			N/C	N/C
Blue	Green		RPM	Crank Sensor	12	6	Cam1 Sensor			N/C	N/C
MTSX01/2	MTWX01/2			P2 - 10 Way Output						MTWX01/2	MTSX01/2
Red/Yellow	Red/Yellow		Shift 2	P2 12 Volt	6	1	P1 12 Volt	Shift 1		Red/White	Red/White
Red/Green	Red/Green		Shift 4	P4 12 Volt	7	2	P3 12 Volt	Shift 3		Red/Orange	Red/Orange
Red/Black	Red/Black		Overdrive LED	P6 12 Volt	8	3	P5 12 Volt	2nd Start LED		Red/Blue	Red/Blue
N/C	N/C			Electronic Relay	9	4	Relay Out			Blue/Red	Blue/Red
Red	Red			+.12 Volt In	10	5	+.12 Volt In			Red	Red
MTSX01/2	MTWX01/2			P3 - 8 Way Output						MTWX01/2	MTSX01/2
Black/Red	Black/Red		Tiptronic LED	N6 Ground	5	1	N5 Ground	Lockup LED		Black/Purple	Black/Purple
Black/Brown	Black/Brown		Retard	N4 Ground	6	2	N3 Ground	SLN Shift Press		Black/Orange	Black/Orange
Black/Yellow	Black/Yellow		SLU Lockup Press	N2 Ground	7	3	N1 Ground	SLT Line Press		Black/White	Black/White
Green	Green			RPM Out	8	4	GP1 Out	GP1		Blue/Orange	Blue/Orange
MTSX01/2	MTWX01/2			P4 - 6 Way In/Output						MTWX01/2	MTSX01/2
Blue	Blue		4 Map Switch	Fuel Sensor	4	1	GP2 Out	GP2		Blue/White	Blue/White
Red	Red	Up Switch	Overdrive	POT	5	2	Altitude	Second Start	Down Switch	Blue	Blue
Red	Red			+.5 Volt Out	6	3	GND			Black	Black
MTSX01/2	MTWX01/2			P5 - 4 Way Output						MTWX01/2	MTSX01/2
Blue	Blue			N8 Ground	3	1	N7 Ground	Starter Lockout		White	White
Green	Green		Reverse Lights	P8 12 Volt	4	2	P7 12 Volt	Low Range LED		Yellow	Yellow
USB	USB			Comms - 6 Way USB/Firm						USB	USB
N/C	N/C			Programmer 2	4	1	Programmer 1			N/C	N/C
Yellow	Yellow			Receive	5	2	Transmit			Green	Green
Red	Red			+.5 Volt Out	6	3	GND			Blue	Blue

Firmware Program

Mercury2 TCU Intermediate 02 Lexus A650E Ver 3.3A

Firmware Class Intermediate

2 GP output available.

Only 10K oil temperature sensor selection is allowed.

When overdrive or second start is selected then the tiptronic buttons will be disabled and there functions changed to these functions.

Low range, Overdrive and Second Start could be used with different map selections without connections to the tranny or buttons.

Shifter	Gear allowed	Engine Break
P	1	
R	1	
N	1	
D	1,2,3,4,5	3,4,5
2	1,2,3	2,3
1	1,2	1,2

Note that engine break in 2nd depends of pressure setting of the Sol 2 Yellow graph