


Bose® T4S and T8S ToneMatch® Mixers



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SAFETY INFORMATION

Parts that have special safety characteristics are identified by the  symbol on schematics or by special notes on the parts list. Use only replacement parts that have critical characteristics recommended by the manufacturer.

CAUTION: The Bose® ToneMatch T4S and T8S Mixers contain no user-serviceable parts. To prevent warranty infractions, refer servicing to warranty service stations or factory service.

PROPRIETARY INFORMATION

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION OF BOSE CORPORATION WHICH IS BEING FURNISHED ONLY FOR THE PURPOSE OF SERVICING THE IDENTIFIED BOSE PRODUCT BY AN AUTHORIZED BOSE SERVICE CENTER, AND SHALL NOT BE REPRODUCED OR USED FOR ANY OTHER PURPOSE.

WARRANTY

The Bose Warranty for Professional products lasts two years from the date of purchase for electronic products, and accessories

Accessories


Description	Product Code
ToneMatch Power Supply	042533
ToneMatch Cable	042536

Electrostatic Discharge Sensitive (ESDS) Device Handling

This unit contains ESDS devices. We recommend the following precautions when repairing, replacing or transporting ESDS devices:

- Perform work at an electrically grounded work station.
- Wear wrist straps that connect to the station or heel straps that connect to conductive floor mats.
- Avoid touching the leads or contacts of ESDS devices or PC boards even if properly grounded. Handle boards by the edges only.
- Transport or store ESDS devices in ESD protective bags, bins, or totes. Do not insert unprotected devices into materials such as plastic, polystyrene foam, clear plastic bags, bubble wrap or plastic trays.

PART LIST NOTES

1. The individual parts located on the PCBs are listed in the Electrical Part List.
2. This part is referenced for informational purposes only. It is not stocked as a repair part. Refer to the next higher assembly for a replacement part.
3.  This part is critical for safety purposes. Failure to use the Bose® recommended part may result in a safety hazard and may void the regulatory certification.

SPECIFICATIONS



T8S

- 8x Combo XLR-1/4" mic/line inputs
- 2x Aux inputs
- 4x Aux sends
- 1/4" TRS and XLR analog stereo outputs
- Dedicated headphone output
- USB A and B for drive playback or PC
- Front-panel output meters
- Protective magnetic cover
- Universal power supply

214 x 311 x 83 mm (D x W x H)
 8.4" x 12.25" x 3.25"
 1.9 kg | 4.1 lbs

T4S

- 4x Combo XLR-1/4" inputs
- 2x Aux inputs
- 2x Aux sends
- 2x ToneMatch® ports
- 1/4" TRS stereo outputs
- Dedicated headphone output
- USB A and B for playback or PC
- Protective magnetic cover
- ToneMatch cable

214 x 184 x 83 mm (D x W x H)
 8.4" x 7.25" x 3.25"
 1 kg | 2.1 lbs

Dedicated high-quality effects per channel

Compressor, limiter, de-esser, noise gate, chorus, flanger, phaser, tremolo, delay and reverb

PRODUCT DESCRIPTION

Product Overview

Take control of your music with T4S and T8S ToneMatch® mixers, compact 4 and 8 channel interfaces designed for performers. Engineered with powerful DSP engines and intuitive user controls, they offer studio-quality EQ, dynamics and effects processing. Sound great with integrated Bose® ToneMatch processing and zEQ, especially when connected to a Bose L1 or F1 system for full end-to-end tonal control. Play confidently on stage with these rugged ToneMatch mixers using tactile controls, easy-to-read LED displays and scene recall. ToneMatch mixers, the ultimate on-stage companions for performing artists.

Product Features

Powerful Audio Processing

- Updated, studio-quality effects with advanced digital audio processing
- Effects include compressor, limiter, de-esser, noise gate, chorus, flanger, phaser, tremolo, delay, and reverb
- Bose ToneMatch processing for natural-sounding vocals and instruments
- zEQ focuses the sound of ToneMatch presets for effective adjustments on the fly
- Independent ToneMatch, EQ, dynamics and effects per channel
- Dedicated reverb for Aux sends, and a global shared reverb for use across all channels
- Master output EQ helps compensate for venue acoustics
- Full end-to-end tonal optimization when used with Bose L1 and F1 systems

Seamless Live Control

- Tactile controls and indicators designed for live on-stage use by musicians and DJs
- Fast-learning user interface
- Built-in tap tempo delay, chromatic tuner, and recallable scenes
- LED display and illuminated controls are easy to read and use, even on dimly-lit stages

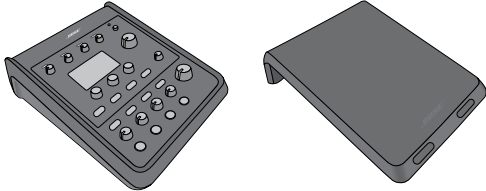

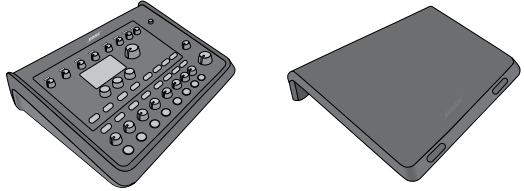
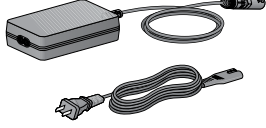
High-Density Connectivity

- Unprecedented connectivity and control in a small digital stereo mixer
- Four (T4S) or eight (T8S) high-quality audio preamps with XLR-combo jacks for microphones or instruments, and switchable phantom power
- Two Aux inputs for additional sources two (T4S) or four (T8S) Aux sends
- USB-A and -B for USB drive playback or PC/Mac interfacing
- ToneMatch outputs for digital audio and power (T4S only)
- Balanced 1/4" TRS and XLR (T8S only) stereo outputs
- Independent headphone output

Convenient Gig-Ready Features

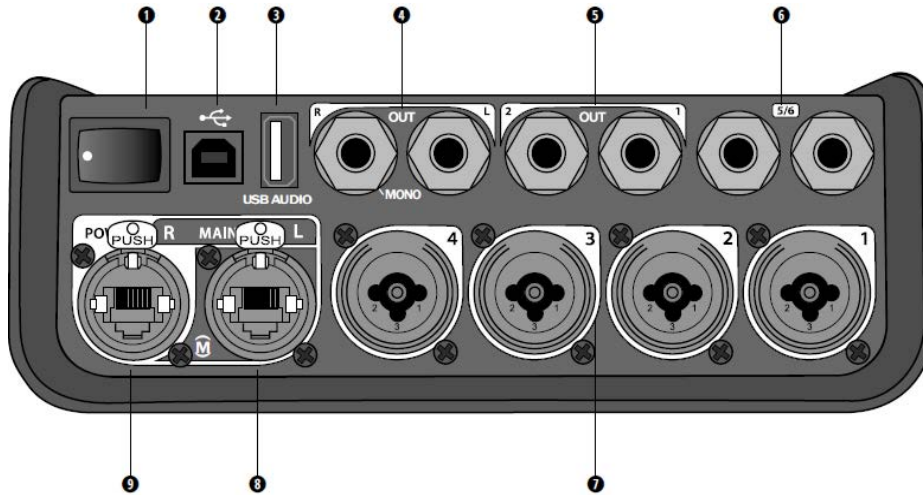
- Rugged enclosure with a protective magnetic cover to protect controls and connectors
- Includes a ToneMatch cable for connecting to a Bose L1 Model II or L1 Model 1S system for digital audio and power (T4S), or includes a universal power supply (T8S)
- Bottom insert allows you to use standard camera accessories to keep your ToneMatch mixer within reach

Carton Contents

T4S	 <p>T4S ToneMatch mixer and cover</p>	 <p>ToneMatch Cable</p>
T8S	 <p>T8S ToneMatch mixer and cover</p>	 <p>ToneMatch power supply</p>

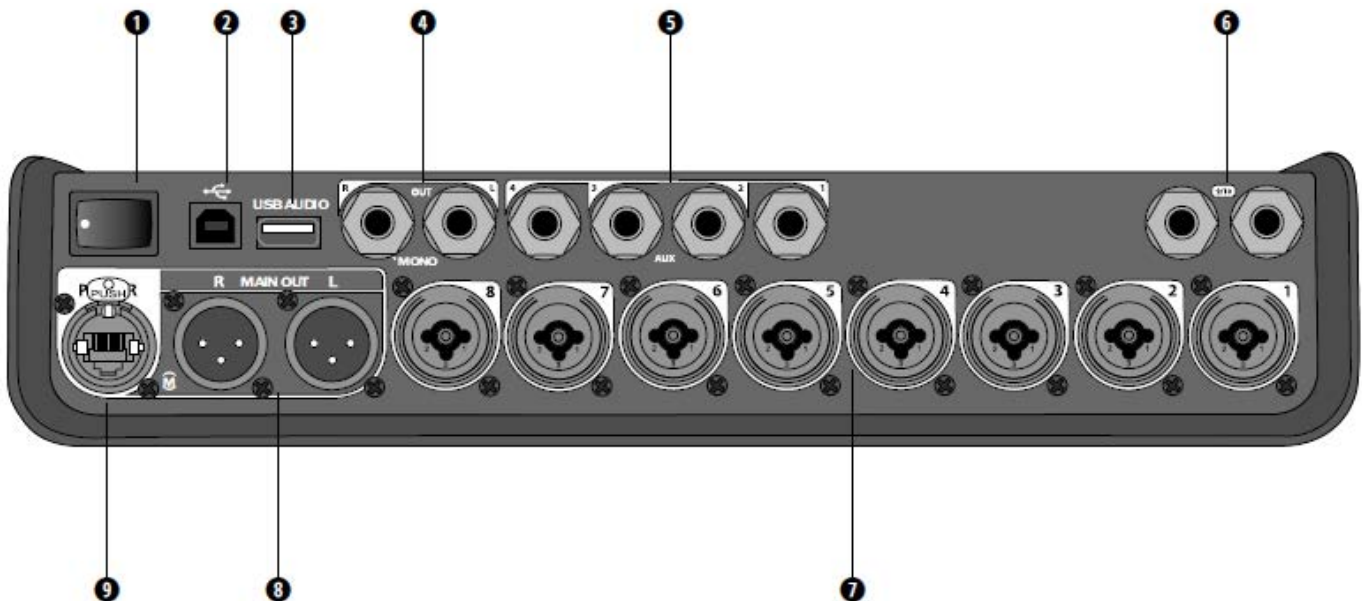
PRODUCT DESCRIPTION

T4S ToneMatch Audio Engine Connector Descriptions



1	Power Switch	6	1/4" TRS Aux Input 5/6
2	USB Type B Connector	7	1/4" TRS/XLR Mic/Line Inputs 1-4
3	USB Type A Connector	8	Ethercon Left Main Digital Output
4	1/4" TRS Main Outputs L and R	9	Ethercon Power/Right Main Digital Output
5	1/4" TRS Aux Output 1-2	10	1/4" Stereo Headphone Output (located on the side of the unit)

T8S ToneMatch Audio Engine Connector Descriptions



1	Power Switch	6	1/4" TRS Aux Input 9/10
2	USB Type B Connector	7	1/4" TRS/XLR Mic/Line Inputs 1-8
3	USB Type A Connector	8	XLR Balanced Main Outputs L and R
4	1/4" TRS Main Outputs L and R	9	Ethercon Power
5	1/4" TRS Aux Output 1-4	10	1/4" Stereo Headphone Output (located on the right side of the unit)

PACKAGING PART LIST

T4S ToneMatch Audio Engine (see Figure 1)

Item Number	Description	Part Number	Note
1	CARTON, T4S, SVCE	802932-001S	
2	GUIDE, OWNERS, T4S/T8S	801230-0010	
3	ETHERCON INTERCONNECTION CABLE (TO POWER STAND)	042536	
4	FOAM, EPE, LEFT, T4S, SVCE	804152-001S	
5	FOAM, EPE, RIGHT, T4S, SVCE	804153-001S	
6	POLY BAG, EPE, T4S, SVCE	804151-001S	

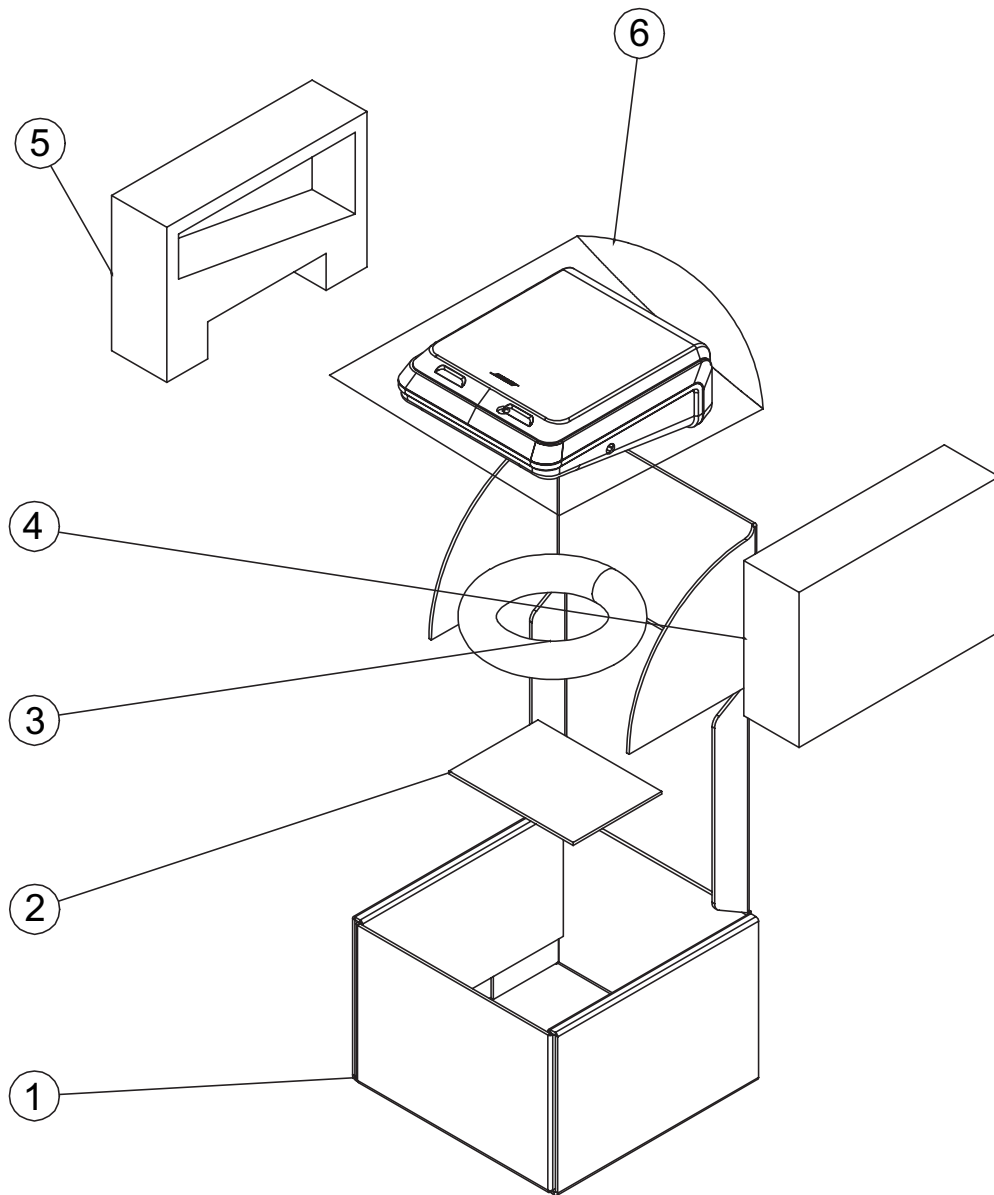


Figure 1. T4S Packing View

PACKAGING PART LIST

T8S ToneMatch Audio Engine (see Figure 2)

Item Number	Description	Part Number	Note
1	CARTON, T8S, SVCE	802933-001S	
2	FOAM, EPE, RIGHT, T8S, SVCE	804148-001S	
3	ETHERCON INTERCONNECTION CABLE (TO POWER STAND)	042536	
4	FOAM, EPE, LEFT, T8S, SVCE	804149-001S	
5	GUIDE, OWNERS, T4S/T8S	801230-0010	
6	BAG, POLY, EPE, T8S, SVCE	804150-001S	
-	T1/T8S TONEMATCH POWER SUPPLY	042533	
-	LINE CORD, 100/120V, US/JP, BLK	262814-1101	3 ⚠
-	LINE CORD, 220V, EUR, BLK	280135-101	
-	LINE CORD, 230V, KOREA, BLK	311668-101	
-	LINE CORD, 230V, UKS, BLK	280138-101	
-	LINE CORD, 240V, AUS, BLK	284243-101	

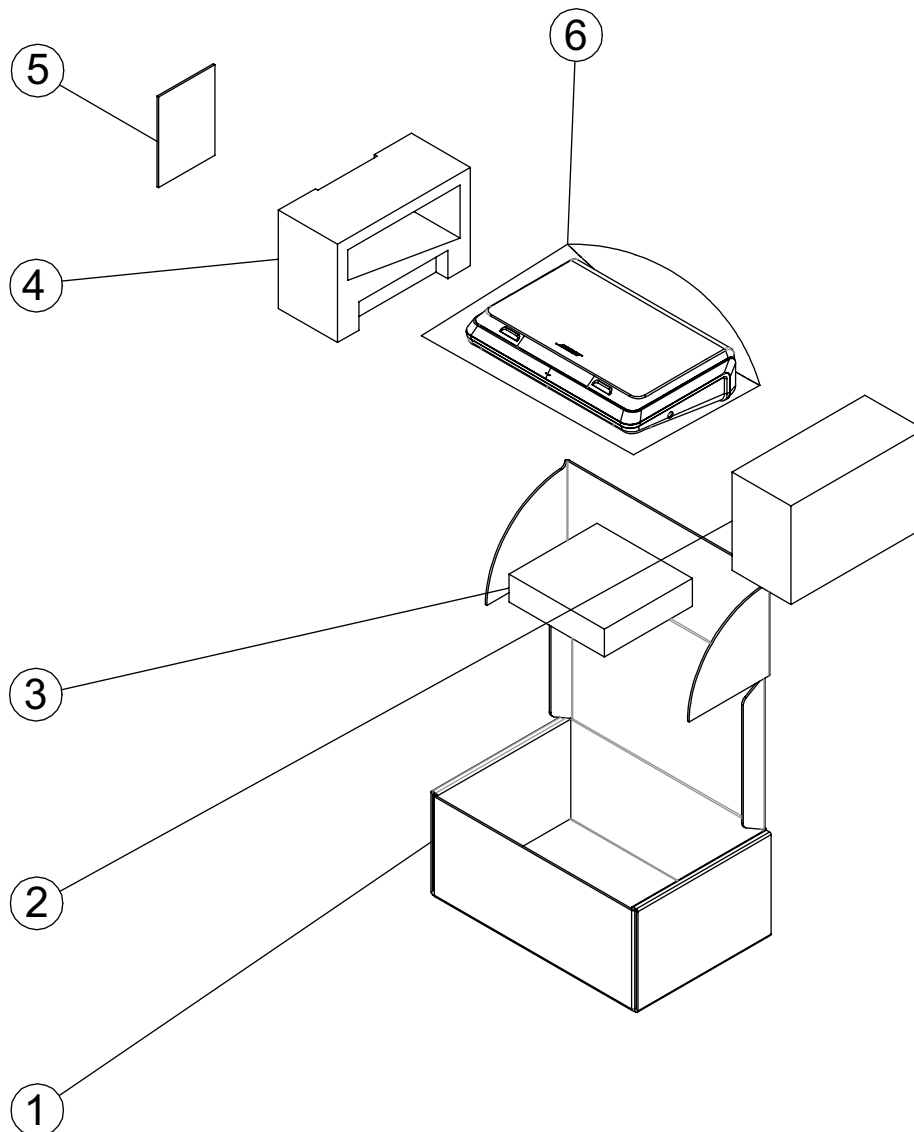


Figure 2. T8S Packing View

MAIN PART LIST

T4S ToneMatch Audio Engine (see Figure 3)

Item Number	Description	Part Number	Qty.	Note
1	COVER ASSY, PROTECTIVE, T4, SVCE (INCLUDES ITEMS 2 AND 3)	797487-011S	1	
2	MAGNET ASSY	-	8	
3	COVER, MAGNET, RUBBER, BLK, SVCE	797586-011S	4	
4	KNOB, LCD, SVCE	792627-011S	3	
5	KNOB, CHANNEL VOLUME, SVCE	792629-011S	5	
6	KNOB, MASTER VOLUME, SVCE	792628-011S	2	
7	T4S PC PANEL TRANSPARENCY, ADHESIVE	-	1	
8	SCREW, T2.0XL8, P0.6, BZN+CED+HT	-	2	
9	T4S AL PANEL, AL1050, BLK ANODIZE	-	1	
10	PANEL ASSY, UI, T4, SVCE (INCLUDES ITEMS 7 AND 9)	797306-011S		
11	EVA E-4308 ADHESIVE, PET, BLACK	-	1	
12	ASSY, LCD DISPLAY, 4CH/8CH, SVCE	797353-001S	1	
13	PUSH BUTTON, SILICONE, SVCE	792631-011S	1	
14	CONDUCTIVE FOAM, ADHESIVE, BLK	-	1	
15	PCB ASSY MAIN, 4CH, SVCE	797348-001S	1	1
16	T4S PET SHT, 40X14X2.0, ADHESIVE	-	1	
17	COVER, BOTTOM, T4, SVCE	792621-011S	1	
18	PRODUCT LABEL, T4S	-	1	
19	KNOB, TRIM, SVCE	792625-011S	4	
20	KNOB, PHANTOM, SVCE	792626-011S	1	
21	NUT, 1/4 JACK, SVCE	797355-011S	6	
22	SCREW, T.30XL12, 1.058P, ZN-NI	-	14	
23	STAND OFF, PCB, SVCE	797414-001S	4	
24	PCB ASSY I/O, 4CH, SVCE	797351-001S	1	1
25	HARNESS, WIRE, IDC, SVCE	797346-001S	2	
26	LIGHT GUIDE, PC+ABS, 94V0, BLACK	-	1	
27	POWER SWITCH, ASSY, SVCE	797347-001S	1	
28	LED HOUSING, NYLON 66, BLACK (INCLUDED WITH ITEM 15)	-	1	
29	SCREW, T3.0XL18, 1.058P, BZN+CED+HT	-	5	
30	PLUG, SCREW, RUBBER, BLK, SVCE	797584-011S	1	
31	FOOT, RUBBER, BLK, SVCE	797587-011S	4	
-	PUSH TAB, XLR, SVCE	797358-011S	2	

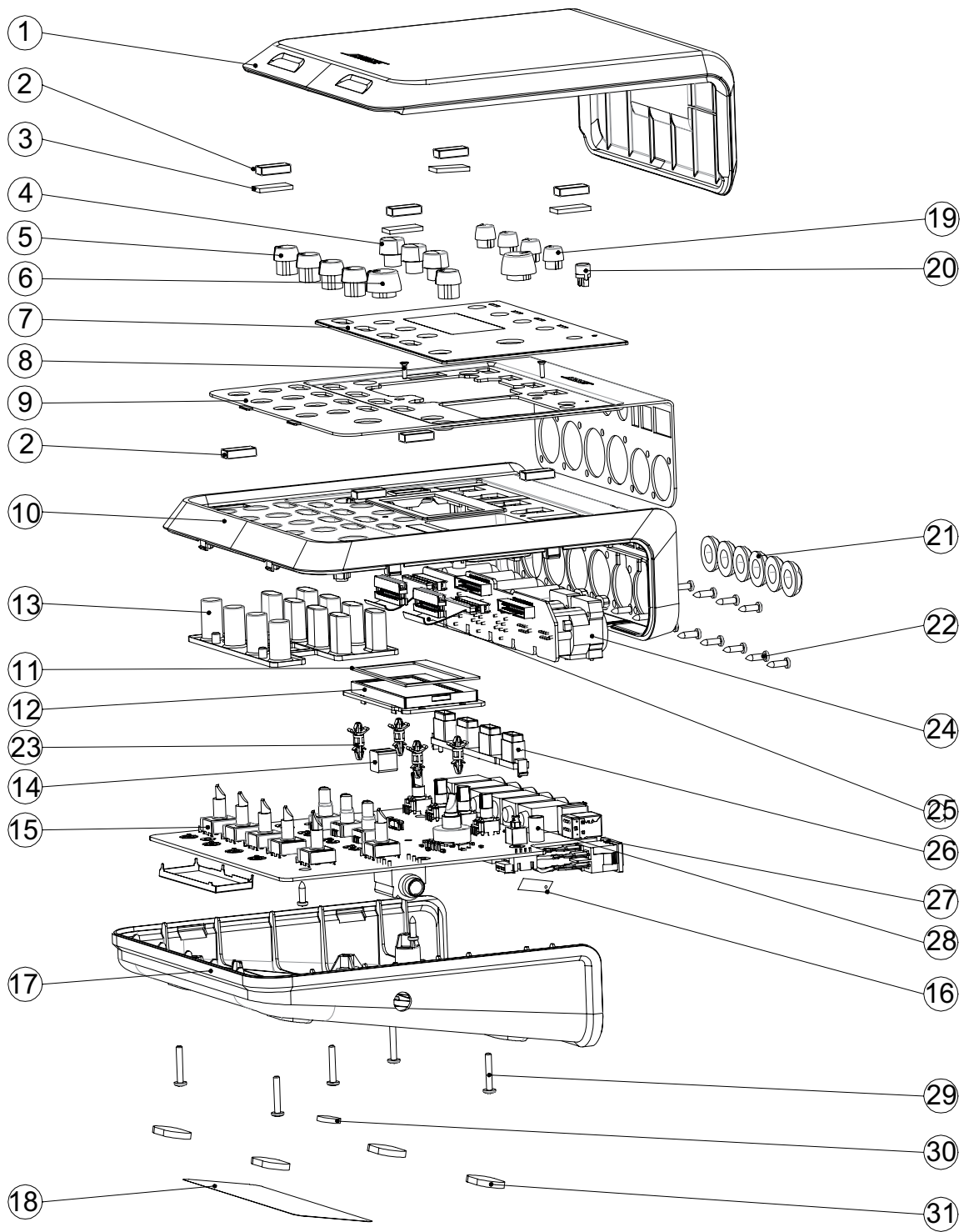


Figure 3. T4S ToneMatch Audio Engine Exploded View

MAIN PART LIST

T8S ToneMatch Audio Engine (see Figure 4)

Item Number	Description	Part Number	Qty.	Note
1	COVER ASSY, PROTECTIVE, T8, SVCE (INCLUDES ITEMS 2 AND 3)	797486-011S	1	
2	MAGNET ASSEMBLY	-	8	
3	COVER, MAGNET, RUBBER, BLK, SVCE	797586-011S	4	
4	KNOB, LCD, SVCE	792627-011S	3	
5	KNOB, CHANNEL VOLUME, SVCE	792629-011S	9	
6	KNOB, MASTER VOLUME, SVCE	792628-011S	2	
7	PC PANEL, TRANSPARENCY, ADHESIVE	-	1	
8	SCREW, T2.0XL8, P0.6, BZN+CED+HT	-	6	
9	AL PANEL, AL 1050, BLK, ANODIZE	-	1	
10	PANEL ASSY, T8, UI, SVCE (INCLUDES ITEMS 7 AND 9)	797307-011S	1	
11	EVA, E-4308, ADHESIVE, PET, BLACK	-	1	
12	ASSY, LED DISPLAY, 4CH/8CH, SVCE	797353-001S	1	
13	PUSH BUTTON, SILICONE, SVCE	792631-011S	2	
14	CONDUCTIVE FOAM, ADHESIVE, 3M9448	-	1	
15	PCB ASSY MAIN, 8CH, SVCE	797349-001S	1	1
16	EVA, E-4308, ADHESIVE, DS11, BLK	-	1	
17	COVER, BOTTOM, T8, SVCE	792632-011S	1	
18	PRODUCT LABEL	-	1	
19	KNOB, TRIM, SVCE	792625-011S	8	
20	KNOB, PHANTOM, SVCE	792626-011S	1	
21	LED BAR, LIGHTPIPE, TAPE, PET, TRANS	-	2	
22	PHANTOM LIGHTPIPE TAPE, PET, TRANS	-	1	
23	PHANTOM LIGHTPIPE, PC 94V0, TRANS	-	1	
24	LED BAR LIGHTPIPE, PC 94V0, TRANS	-	2	
25	PET FILM, TRANSLUCENT, ADHESIVE, 3M	-	2	
26	NUT, 1/4 JACK, SVCE	797355-011S	8	
27	SCREW, T3.0XL12, 1.058P, ZN-NI ALLOY	-	24	
28	PCB ASSY I/O, 8CH, SVCE	797352-001S	1	1
29	HARNESS, WIRE, IDC, SVCE	797346-001S	2	
30	LIGHT GUIDER, PC+ABS, 94V0, BLK	-	2	
31	STAND OFF, PCB, SVCE	797414-001S	4	
32	POWER SWITCH, ASSY, SVCE	797347-001S	1	
33	LED HOUSING, NYLON 66, BLK	-	1	
34	SCREW, T3.0XL18, 1.058P, BZN+CED+HT	-	7	
35	PLUG, SCREW, RUBBER, BLK, SVCE	797584-011S	3	
36	FOOT, RUBBER, BLK, SVCE	797587-011S	4	
37	CONDUCTIVE FOAM, L9XW9XH20, NAT	-	2	
-	PUSH TAB, XLR, SVCE	797358-011S	1	

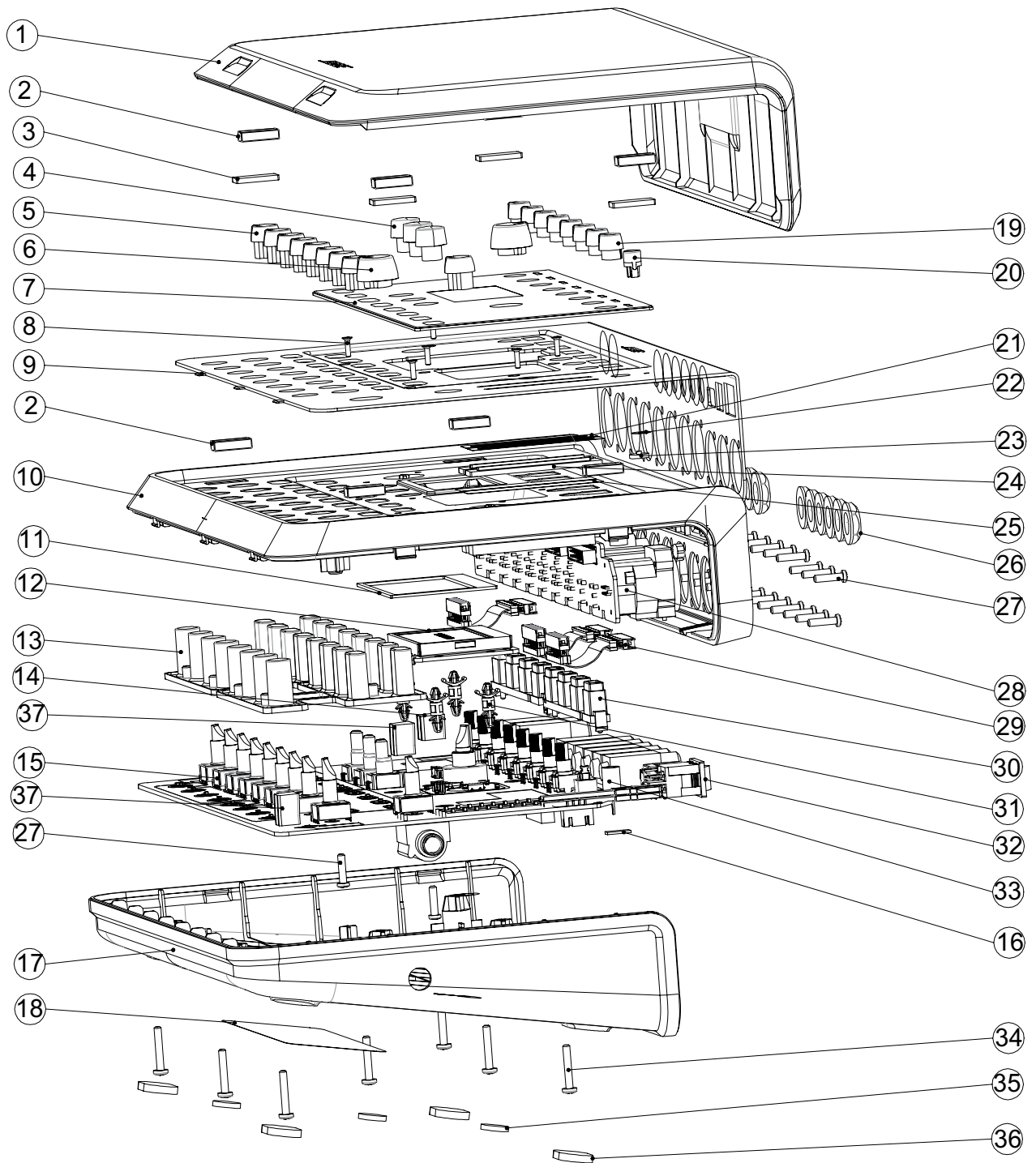


Figure 4. T8S ToneMatch Audio Engine Exploded View

ELECTRICAL PART LIST

T4S Main PCB Assembly

Resistors

Reference Designator	Description	Vendor Part Number	Note
R1	CHIP, 402K OHM, 100PPM, +-1%, 0603, WALSIN, WR06X4023FTL	T502402302399	
R2, R19, R29, R30, R31, R32, R33, R34, R36, R61, R62, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R205, R206, R207, R209, R212, R214, R215, R218, R219, R220, R223, R224, R225, R229, R262, R263, R264, R275, R276, R277, R18	CHIP, 10K OHM, 100PPM, +-1%, 0603, WALSIN	T502100202399	
R3, R21, R297, R304, R305, R328, R335, R359, R366, R391, R398, R28	CHIP, 100K OHM, 100PPM, +-1%, 0603, WALSIN	T502100302399	
R4, R14	CHIP, 41.2K, 100PPM+-1%, 0402, WALS, WR04X4122FTL	T502412201399	
R5, R37, R38, R39, R40, R41, R42, R43, R48, R49, R51, R53, R54, R55, R56, R57, R58, R59, R60, R140, R196, R216, R217, R222, R226, R227, R228, R233, R234, R235, R236, R237, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R265, R278, R279	CHIP, 68.1 OHM, 100PPM, +-1%, 0603, WALSIN, WR06X68R1FTL	T502681A02399	
R6	CHIP, 374K OHM, 100PPM, +-1%, 0402, WALSIN, WR04X3743FTL	T502374301399	
R7, R99	CHIP, 3.3K OHM, 100PPM, +-1%, 0805, WALSIN	T502330103399	
R9, R10, R11, R17, R105, R106, R107, R108, R117, R118, R119, R120, R121, R141, R154, R156, R157, R158, R159, R172, R173, R174, R175, R188, R189, R190, R191, R266, R752, R753, R754	CHIP, 200 OHM, 100PPM, +-1%, 0603, WALSIN	T502200002399	
R12	CHIP, 4.7K OHM, 100PPM, +-1%, 0603, WALSIN, WR06X4701FTL	T502470102399	
R13	CHIP, 210K OHM, 100PPM, +-1%, 0603, WALSIN	T502210302399	
R15, R95, R96, R97, R98, R103, R104, R291, R306, R322, R337, R353, R368, R385, R400, R535, R537, R547, R554, R562, R571, R572, R586, R595, R596, R617, R618, R635, R636, R657, R658	CHIP, 100 OHM, 100PPM, +-1%, 0603, WALSIN	T502100002399	
R16	CHIP, 1.3 OHM, 100PPM, +-1%, 0603, WALSIN, WR06W1R30FTL	T502130B02399	
R23	CHIP, 49.9K OHM, 100PPM, +-1%, 0603, WALSIN	T502499202399	
R24	CHIP, 13.7K, OHM, 100PPM, +-1%, 0603, WALSIN, WR06X1372FTL	T502137202399	
R25, R27, R311	CHIP, 511K OHM, 100PPM, +-1%, 0603, WALSIN	T502511302399	
R35, R542, R551, R577, R582	CHIP, 12K OHM, 100PPM, +-1%, 0603, WALSIN	T502120202399	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Resistors (continued)

Reference Designator	Description	Vendor Part Number	Note
R44, R45, R46, R47, R230, R231, R232	CHIP, 33 OHM, 100PPM, +-1%, 0603, WALSIN	T502330A02399	
R50, R52, R238, R239, R336, R376, R412, R452, R540, R546, R553, R556, R565, R570, R578, R580	CHIP, 22 OHM, 100PPM, +-1%, 0603, WALSIN	T502220A02399	
R86, R295, R348, R374, R388, R411, R426, R451, R468, R532, R543, R561, R579, R20, R26, R113	CHIP, 1K OHM, 100PPM, +-1%, 0603, WALSIN, WR06X1001FTL	T502100102399	
R87, R88, R89, R90, R213, R589, R590, R603, R604, R609, R610, R623, R624, R629, R630, R643, R644, R649, R650, R663, R664	CHIP, 47 OHM, 100PPM, +-1%, 0603, WALSIN	T502470A02399	
R91, R92, R93, R94, R566, R573, R601, R602, R611, R612, R641, R642, R651, R652, R22	CHIP, 47K OHM, 100PPM, +-1%, 0603, WALSIN	T502470202399	
R100, R101, R102	CHIP, 105K OHM, 100PPM, +-1%, 0603, WALSIN, WR06X1053FTL	T502105302399	
R109, R110, R111, R112	CHIP, 24 OHM, 100PPM, +-1%, 0603, WALSIN	T502240A02399	
R114, R115	CHIP, 0 OHM, 0603, WALSIN, WR06X000PTL	T502000002009	
R122, R123, R124, R125	CHIP, 309 OHM, 100PPM, +-1%, 0603, WALSIN, WR06X309FTL	T502309002399	
R139, R293, R307, R324, R338, R355, R369, R387, R401	CHIP, 10 OHM, 200PPM, +-1%, 0603, WALSIN, WR06X10R0FTL	T502100A02399	
R211, R284, R286, R288, R294, R315, R319, R343, R345, R346, R350, R356, R367, R378, R380, R382, R384, R395, R407, R419, R423, R436, R444, R458, R462, R533, R549, R557, R558, R559, R575, R584, R585	CHIP, 1M OHM, 100PPM, +-1%, 0603, WALSIN	T502100402399	
R221	CHIP, 68 OHM, 100PPM, +-1%, 0402, WALSIN	T502680A01399	
R267, R299, R330, R361, R393	CHIP, 220 OHM, 100PPM, +-1%, 0603, WALSIN WR06X2200FTL	T502220002399	
R268	CHIP, 113 OHM, 100PPM+-1%, 0603, WALSIN, WR06X1130FTL	T502113002399	
R273	CHIP, 340 OHM, 100PPM+-1%, 0603, WALS, WR06X3400FTL	T502340002399	
R274	CHIP, 95.3 OHM, 100PPM, +-1%, 0603, WALSIN, WR06X95R3FTL	T502953A02399	
R285, R289, R316, R320, R347, R351, R379, R383	CHIP, 10M OHM, 100PPM, +-1%, 0603, WALSIN	T502100502399	
R292, R308, R323, R339, R354, R370, R386, R402, R534, R552, R567, R583	CHIP, 91 OHM, 100PPM+-1%, 0603, WALSIN	T502910A02399	
R296, R303, R327, R333, R334, R358, R365, R373, R390, R397, R408, R447	CHIP, 6.8K OHM, 100PPM, +-1%, 0603, WALSIN, WR06X6801FTL	T502680102399	
R298	CHIP, 60.4K, 100PPM, +-1%, 0603, WALSIN, WR06X6042FTL	T502604202399	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Resistors (continued)

Reference Designator	Description	Vendor Part Number	Note
R309, R310, R340, R341, R371, R372, R403, R404, R164, R165, R166, R167, R180, R181, R182, R183, R197, R198, R199, R200	CHIP, 2K, OHM, 100PPM, +-1%, 0603, WALSIN	T502200102399	
R317	CHIP, 22.1K OHM, 100PPM, +-1%, 0603, WALSIN	T502221202399	
R318, R329, R349, R363, R389, R405, R427, R440	CHIP, 3.3K OHM, 100PPM, +-1%, 0603, WALSIN	T502330102399	
R321, R342, R352, R377, R392, R415, R430, R455, R538, R544, R563, R568	CHIP, 3K OHM, 100PPM, +-1%, 0603, WALSIN	T502300102399	
R325, R357, R396, R437	CHIP, 820 OHM, 100PPM, +-1%, 0603, WALSIN	T502820002399	
R326, R344, R360, R381, R399, R420, R439, R459, R539, R545, R564, R569	CHIP, 330 OHM, 100PPM, +-1%, 0603, WALSIN, WR06X3300FTL	T502330002399	
R332, R364, R406, R443, R541, R550, R576, R581, R744, R745, R746, R747	CHIP, 56K OHM, 100PPM, +-1%, 0603, WALSIN	T502560202399	
R375, R555	CHIP, 1K OHM, 100PPM, +-1%, 0402, WALSIN	T502100101399	
R536, R548, R560, R574, R591, R593, R597, R599, R613, R615, R619, R621, R631, R633, R637, R639, R653, R655, R659, R661, R667, R668, R669, R670, R671, R672, R673, R674	CHIP, 6.2K OHM, 100PPM, +-1%, 0603, WALSIN	T502620102399	
R587, R588, R605, R606, R607, R608, R625, R626	CHIP, 7.5K OHM, 100PPM, +-1%, 0603, WALSIN	T502750102399	
R627, R628, R645, R646, R647, R648, R665, R666	CHIP, 15K OHM, 100PPM, +-1%, 0603, WALSIN	T502150202399	
R632, R634, R638, R640, R654, R656, R660, R662, R592, R594, R598, R600, R614, R616, R620, R622	CHIP, 180 OHM, 100PPM, +-1%, 0603, WALSIN	T502180002399	
RN1, RN2, RN3, RN4, RN5, RN6, RN7, RN8	RES NET, B, 68 OHM, 0402, 8P4R, 5%, WA04X680, JTL	T521068000108	

Capacitors

Reference Designator	Description	Vendor Part Number	Note
C1, C2, C3, C7, C8, C9	EL, 470UF, 25V, +-20%, 10*10, CE1E471MDJANG	T551471445000	
C4, C5, C6, C12, C21, C22, C23, C24, C26, C27, C28, C45, C46, C49, C50, C61, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C83, C84, C113, C115, C118, C119, C120, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C175, C177, C178, C180, C181, C183, C184, C185, C187, C188, C189, C190, C192, C193, C197, C205, C207, C234	CAP, X7R, .10UF, 25V, +-10%, 0402, WALSIN	T542011047408	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Capacitors (continued)

Reference Designator	Description	Vendor Part Number	Note
C235, C238, C239, C262, C263, C266, C267, C290, C291, C294, C295, C319, C320, C323, C324, C455, C456, C461, C462, C544, C545, C546, C547, C550, C551, C552, C553, C62, C63, C42, C43, C44, C47, C114, C116, C117, C121, C199	CAP, X7R, .10UF, 25V, +-10%, 0402, WALSIN	T542011047408	
C10, C15, C86, C87, C88, C90, C91, C92, C93, C94, C95, C97, C98, C99, C100, C101, C102, C103, C104, C105, C111, C112	CAP, X7R, .01UF, 50V+-10%, 0603, WALSIN	T542021037508	
C13, C248, C275, C304, C332, C478, C479, C486, C487, C488, C489, C496, C497	CAP, NPO, 220PF, 50V+-5%, 0603, WALSIN	T541022216508	
C14, C443, C450, C458, C470	CAP, NPO, 330PF, 50V+-5%, 0603, WALSIN	T541023316508	
C17	EL, 100UF, 63V, +-20%, 10X10, VZH101M1JTR-1010	T551101475020	
C18	CAP, X7R, .01UF, 100V, +-10%, 0805, WALSIN	T542031037608	
C19	CAP, X7R, .10UF, 100V, +-10%, 0603, WALSIN	T542021047608	
C20	CAP, X7R, .47UF, 16V, +-10%, 0603, WALSIN	T542024747308	
C25, C33, C54	CAP, X7R, 10UF, 25V, +-10%, 1206, WALSIN	T542041067408	
C29, C209, C217, C229, C245, C257, C273, C285, C302, C314, C498, C499, C506, C507, C508, C509, C516, C517	CAP, NPO, 100PF, 50V, +-5%, 0603, WALSIN	T541021016508	
C30	CAP, NPO, 82PF, 50V, +-5%, 0603, WALSIN, L0603N820J500CT	T541028206508	
C31, C32, C34, C35, C36, C37, C38, C57, C58	CAP, X5R, 22UF, 16V, +-20%, 0805, WALSIN	T545032268308	
C39	EL, 470UF, 16V, +-20%, 8*10.5, CK-1C471M-CRF10	T551471434010	
C48, C51, C52, C59, C60, C206, C11	EL, 100UF, 25V, +-20%, 6.3*7, DV-101M025E077ETR	T551101445010	
C56	CAP, NPO, 56PF, 50V, +-5%, 0603, WALSIN	T541025606508	
C40	CAP, NPO, 22PF, 50V, +-5%, 0402, WALSIN, 0402N220J500CT	T541012206508	
C81, C82, C157, C158	CAP, NPO, 18PF, 50V, +-5%, 0603, WALSIN	T541021806508	
C85, C89	CAP, X7R, 2.2UF, 6.3V, +-10%, 0603, WALSIN	T542022257108	
C96	CAP, X7R, .33UF, 25V+-10%, 0603, WALSIN	T542023347408	
C106	CAP, NPO, 12PF, 50V, +-5%, 0402, WALSIN	T541011206508	
C107, C108, C109	CAP, NPO, 22PF, 50V, +-5%, 0603, WALSIN	T541022206508	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Capacitors (continued)

Reference Designator	Description	Vendor Part Number	Note
C110	CAP, X7R, 1000P, 1KV, +-10%, 1206, WALSIN	T542041027H08	
C122, C123, C124, C159, C174, C176, C179, C182, C186, C191, C198, C201, C219, C541, C41	CAP, 10UF, 6.3V, +, -20%, 0603X5R, WALSIN	T540000002118	
C194	EL, 220UF, 6.3V, +-20%, 6.3*5, CK-0J221M-CRE54	T551221414000	
C195, C196	CAP, X7R, 1.0UF, 16V, +-10%, 0603, WALSIN	T542021057308	
C208	CAP, X7R, 4.7UF, 6.3V, +-10%, 0603, WALSIN	T542024757108	
C210	CAP, X7R, .047U, 50V, +-10%, 0603, WALSIN, 0603B473K500CT	T542024737508	
C215, C221, C223, C237, C243, C249, C251, C265, C271, C277, C279, C293, C300, C306, C308, C322, C441, C449, C453, C459, C460, C473, C474, C477	CAP, NPO, .10UF, 50V, +-5%, 1206, MURATA	T541041046505	
C216, C218, C222, C233, C244, C246, C250, C261, C272, C274, C278, C289, C301, C303, C307, C318	EL, 22UF, 63V, +-20%, 6.3X7, VZH220M1JTR-0607	T551220475010	
C225, C241, C253, C269, C281, C297, C310, C326	CAP, X7R, .10UF, 25V, +-10%, 0603, WALSIN	T542021047408	
C226, C242, C254, C270, C282, C298, C311, C327, C542, C543	CAP, X7R, 1.0UF, 25V, +-10%, 0603, WALSIN	T542021057408	
C227, C276, C305, C333, C444, C446, C447, C464, C466, C469	CAP, NPO, 2700PF, 50V, +-5%, 0603, WALSIN	T541022726508	
C228, C256, C284, C313, C445, C451, C465, C468, C471, C475, C484, C485, C490, C491, C504, C505, C510, C511	CAP, NPO, 470PF, 50V, +-5%, 0603, WALSIN	T541024716508	
C230, C231, C258, C259, C286, C287, C315, C316	CAP, X7R, 2.2UF, 100V, +-10%, 1206, SAMSUNG	T54204225760E	
C232, C252, C255, C280, C283, C309, C312, C337	CAP, NPO, 270PF, 50V, +-5%, 0603, WALSIN, 0603N271J500CT	T541022716508	
C236, C240, C264, C268, C292, C296, C321, C325, C457, C463, C548, C549	CAP, X5R, 10UF, 25V, +-10%, 0805, WALSIN, 0805X106K250CT	T545031067408	
C247, C260, C288, C317	EL, 1000U, 10V, +-20%, 10X10, HV102M010G105ETR	T551102425010	
C299, C454	CAP, X5R, 4.7UF, 6.3V, +-10%, 0402, WALSIN	T545014757108	
C442, C452, C467, C476, C480, C481, C492, C493, C500, C501, C512, C513	EL, 22UF, 16V, +-20%, 4X5.4M, CK-1C220M-CRC54	T551220434010	
C448, C472	CAP, NPO, 47PF, 50V, +-5%, 0603, WALSIN	T541024706508	
C502, C503, C514, C515, C482, C483, C494, C495	CAP, NPO, 1200P, 50V, +-5%, 0603, WALSIN, 0603N122J500CT	T541021226508	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Inductors

Reference Designator	Description	Vendor Part Number	Note
L1, L2, L4, L5	CHIP, BEAD, 120 OHM, 5A, 25%, 0805, 100MHZ, FBMA-11-201209-121A50T	T710500001600	
L3	220UH, 370MA, 5.6M, SMD, COIL CR, LPS6235-224MRB	T621000033800	
L6	15UH, 3A, 100K, SMD, SGTE, GPSR0640-150M	T621000003700	
L7	3.3UH, 2.5A, 100K, SMD, GANTON, GPSR0420-3R3M	T621000023900	
L9, L8	IND, 10UH, 2.6A, 100K, SMD, TSA, SDS0635, SDS0635M-100NT	T621000037200	
L10, L11, L12, L13	BEAD, FBMA-11-160808-601A10T, 600 OHM, 10	T710500000900	
L17	4.7UH, 1.8A, 100K, SMD, COILCR, LPS4018-472MRC	T621000039500	

Diodes

Reference Designator	Description	Vendor Part Number	Note
D1	SWITCH, 100V, 1A, S100W, PAN	T572005252110	
D2, D3, D4, D5, D6, D7, D10, D11, D12, D13, D14, D15, D18, D19, D20, D21, D22, D23, D26, D27, D28, D29, D30, D31, D68, D72	SWITCH, 75V, 150MA, BAV99W, PAN	T572005801210	
D8, D9, D16, D17, D24, D25, D32, D33	LED, RED, 0805, INH-S2012CHR20TP-B, MINGSHOU	T575009480258	
D34, D35	DIODE, 40V, 1A, SS14L, TSC	T571000130604	
D66, D67, D71, D73, D74, D75, D76, D77, D78, D79, D80, D81	DIODE, VR, AVR1005C120MTAAB, TDK	T710500020400	
D86	SWITCH, 40V, 250MA, NSR0240HT1G, ON SEMI	T572005830222	
LED1, LED2, LED3, LED4	LED, 615, 1.6X1, EVERLIGHT, K19-226R6GHC-D05\2T	T575011450202	
LED5, LED6, LED7, LED9, LED36, LED37, LED38, LED39, LED40, LED41, LED42, LED43, LED44, LED45, LED50, LED52, LED53, LED54, LED55, LED60, LED61, LED62, LED63, LED68, LED69, LED70, LED71	LED, WHI, 0603, 19-217-T1D-A, EVERLIGHT, 19-217-T1D-AQRHY-3T	T575006150202	
LED77	LED, RED, 5.4X3, KH-3R4SD-40, MINGSHOU	T575011140158	
ZD1, ZD2, ZD3, ZD4, ZD5, ZD6, ZD7, ZD8	DIODE, ZENER, 5.6V, 250MW, 5%, SOT-23, NXP	T573003610415	

ELECTRICAL PART LIST

T4S Main PCB Assembly

Transistors

Reference Designator	Description	Vendor Part Number	Note
Q1	NMOS, 60V, AO6420, TSOP, AOS	T586003042546	
Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25	PNP, -40V, MMBT4403, SOT23, FAIR-CHILD	T582002690404	
Q26	PMOS, 30V, AO3401A, SOT23, AOS	T585001940446	
Q27	NPN, 40V, LM3904LT1G, SOT23, LRC	T581003460437	

Integrated Circuits


Reference Designator	Description	Vendor Part Number	Note
U1	A/D, NCP303LSN29T1G, SOT23-5, ON SEMI	T611100025425	
U10	IC, SP, TPS2051BDBVR, SOT-23	T610000054204	
U11	IC, MCU, LPC1837JBD144E, 144-LQFP, NXP	T610300092808	
U12, U13	IC, SP, TPD4S012DRYR, SON(6), TI	T610000053904	
U14	MEMORY, SST26VF016B-104ISM, 8-SOIJ, MICROCHIP	T610100071701	
U15	IC, PHOTO, 5V, EL817S1(C)(TA)-F, DIP, EVERLIGHT	T58A000491533	
U16, U18, U21, U22, U23	IC, LOGIC, NPIC6C596ADJ, 16-SO, NXP	T612000037503	
U17, U19, U20, U34, U44	IC, TVS, 5.78~, RSB6.8SM, SMD, ROHM	T593000194100	
U2	DC-DC CONVERTER, LM3486MMX, VSSOP, TI	T611700034922	
U24	MCU, ADSP-21489BSWZ-4B, 176-LQFP, ADI	T610300092778	
U25	IC, MEMORY, M12L128168A-6TG2N, TSOP54, ESMT,	T610100037642	
U26	IC, SN74LVC125APW, TSSOP, TI	T60A200125401	
U27	IC, SP, MAX3283EAUT+T, 6, SOT23, MAXIM	T610000057770	
U29	IC, SN74LVC1G17DCKR, SOT-25, TI	T60A201G17501	
U3, U4, U5	DC-DC CONVERTER, TP-S54202HDD, SOT-23, TI	T611700039022	
U31	SP, DIT4096IPW, 28-TSSOP, TI	T610000054104	
U32	IC, A/D-D/A, CS42528, LQFP, 64, CIRRUS	T611500003506	
U33	A/D, CS5364, LQFP-48P, CIRRUS	T611100023905	
U35, U37, U39, U42	OP-AMP, TL074C, SO-14, ST	T610500023802	
U36, U38, U40, U41, U43, U52, U53, U54, U55, U57, U58, U59, U60, U61, U62, U63	IC, OP-AMP, NJM4580, SOP-8, JRC	T610500010706	
U56	IC, OP-AMP, TL072CDT, SO8, ST	T610500028202	
U6	REG, CJ7815, TO-252-2, JCET, CJ7815	T610600099668	

ELECTRICAL PART LIST

T4S Main PCB Assembly
Integrated Circuits (continued)

Reference Designator	Description	Vendor Part Number	Note
U7	REG, CJ7915, TO-252-2, JCET	T610600099768	
U8	IC, DRIVER, TPS61169DCKR, SOT(5), TI	T610900023502	
U9	IC, SP, ADUM4160BRWZ, SOIC-16, ADI	T610000059036	
VR1, VR2, VR3, VR4	VR, CA, 10K, C, 20X9.8MM, RV09ACF-40-20F-10C10K-0068	T531230000119	
VR17	VR, CA, 10K, B, 15.4X14X26, XV014112YGPV26.4FR1B10K	T531220000216	
VR9, VR10, VR11, VR12, VR18	VR, CA, 10K, B, 15.4X14X24, XV014112YGPV24FR1B10K	T531220000116	

Miscellaneous

Reference Designator	Description	Vendor Part Number	Note
F1, F2	FUSE, 30V, 200MA, 1206, 0ZCJ0, 0ZCJ0020FF2E	T690100003000	
J1, J2, J3, J4, J7, J8	6.35MM STEREO JACK, NRJ6HF	T710200009700	
J10	USB, TYPE B319BF-K-C2-M-BN, 4P	T710200009500	
J11	6.35MM STEREO JACK WITH HALF THREADED, NMJ6HHD2	T710200009800	
J12	CONN, CF2014, .5MM, HLD 1, CF20141V0R0-NH	T690300062300	
J14	HEADER, SMT, 2*5PIN, 1.27-2X5SW-5.5B, 90	T690300079300	
J15	HEAD, DUAL PIN, 14P, P2.54, 180, GOLD, CCP254010-0714	T690300022200	
J9	USB, SOCKET TYPE A, USB-A-M6+4P-5W-O, 4PI	T710200009400	
P1, P3	24P, P=2.0MM, 180, CH74242M100-0P	T690300104100	
P2	GP, CONNECTOR, B4B-XH-A, 4-PIN, L, CCN250000-0104	T690300029000	
SW1	PUSHBUTTON SWITCH, PB-22E80-S-E	T670100001700	
SW2, SW3, SW4	ENCODER, RE12CF-41-20F-24P, 180-K	T670500001900	
SW5	ENCODER, SDB161EPVB16.7FR-1-4-12-12PC	T670500002000	
T1	TRANSFORMER, 6.6V, 3.3V, 4PI, MURATA, 78604\9C	T622000010300	
T2, T3	TRANSFORMER, 3.3V, 3.3V, 4PI, MURATA, DA101C	T622000008300	
Y1	CRYSTAL, 12MHZ, 20, SMD, TXC, 7M1200, K7M12000039	T690900008100	
Y2	CRYSTAL, 12.288MHZ, SMD, SIWARD, XTL571, K, XTL571200-M13-105, SX-322	T690900008000	
Y3	OSC, 11.28960 MHZ, SMD, TXC, 7X1120, K7X11200002	T690900008400	

ELECTRICAL PART LIST

T4S I/O PCB Assembly

Resistors

Reference Designator	Description	Vendor Part Number	Note
R3	CHIP, 75, OHM, 100PPM, +1%, 0603, WALSIN	T502750A02399	
R4, R5, R8, R9, R10, R11, R14, R15	CHIP, 100 OHM, 100PPM, +1%, 0402, WALSIN, WR04X1000FTL	T502100001399	
R6, R7, R12, R13	CHIP, 0 OHM, 0603, WALSIN, WR06X000PTL	T502000002009	
R16, R17, R18, R19, R20, R21, R22, R23	CHIP, 0 OHM, 200PPM, +5%, 0402, WALSIN	T5020000014A9	


Capacitors

Reference Designator	Description	Vendor Part Number	Note
C1	CAP, X7R, .22UF, 50V, +10%, 0603, WALSIN	T542022247508	
C3, C4, C5, C8, C9, C40, C41, C42, C43, C52, C53, C54, C55, C58, C59	CAP, NPO, 100PF, 50V, +5%, 0603, WALSIN	T541021016508	
C35, C37, C38, C39, C47, C49, C50, C51	CAP, NPO, 470PF, 50V, +5%, 0603, WALSIN	T541024716508	


Inductors

Reference Designator	Description	Vendor Part Number	Note
L1, L2, L3	2.2KOH, 200MA, 100M, SMD, MURATA, DLW31SN222SQ2L	T621000039300	
L4, L5, L10, L11, L12, L13	BEAD, FBMA-11-160808-601A10T, 600, OHM, 10	T710500000900	

Diodes

Reference Designator	Description	Vendor Part Number	Note
D17, D18, D21, D22, D25, D26, D29, D30	VR, AVR1005C120MTAAB, TDK	T710500020400	
D19, D20, D23, D24, D27, D28, D31, D32	TVS, 58V, SMAJ58CA, SMD, LITTELFUSE	T593000226100	 3

Miscellaneous

Reference Designator	Description	Vendor Part Number	Note
J1, J2	RJ45 RECEPTACLE, NE8FAV-C5, LATCH LOCK	T710200009600	
J4, J14	24P, P=2.0MM, 180, CH74242M100-0P	T690300104100	
J9, J10, J11, J12	COMBO JACK, RCJ9FI-V-0	T710200010000	
RT1, RT2	FUSE, PTC, 24V, 0.75A, 1210, 0ZCH0075AF2E	T690100003700	 3

ELECTRICAL PART LIST

T8S Main PCB Assembly

Resistors

Reference Designator	Description	Vendor Part Number	Note
R1	CHIP, 402K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X4023FTL	T502402302399	
R2, R29, R30, R31, R32, R33, R34, R36, R61, R62, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R205, R206, R207, R209, R212, R214, R215, R218, R219, R220, R223, R224, R225, R229, R262, R263, R264, R19, R11	CHIP, 10K OHM, 100PPM, +/-1%, 0603, WALSIN	T502100202399	
R3, R20, R23, R297_A, R297_B, R297_C, R297_D, R297_E, R297_F, R297_G, R297_H, R304_A, R304_B, R304_C, R304_D, R304_E, R304_F, R304_G, R304_H, R273	CHIP, 100K OHM, 100PPM, +/-1%, 0603, WALS, L	T502100302399	
R5, R9, R10, R105, R106, R107, R108, R109, R110, R111, R112, R115, R116, R117, R118, R119, R120, R121, R130, R131, R132, R133, R134, R135, R136, R137, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R156, R157, R158, R159, R160, R161, R162, R163, R172, R173, R174, R175, R176, R177, R178, R179, R188, R189, R190, R191, R192, R193, R194, R195, R266, R752, R753, R754	CHIP, 200 OHM, 100PPM, +/-1%, 0603, WALSIN	T502200002399	
R6	CHIP, 374K OHM, 100PPM, +/-1%, 0402, WALSIN, WR04X3743FTL	T502374301399	
R7, R274	CHIP, 3.3K OHM, 100PPM, +/-1%, 0805, WALSIN	T502330103399	
R12	CHIP, 4.7K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X4701FTL	T502470102399	
R13	CHIP, 210K OHM, 100PPM, +/-1%, 0603, WALSIN	T502210302399	
R14, R4	CHIP, 41.2K OHM, 100PPM, +/-1%, 0402, WALSIN, WR04X4122FTL	T502412201399	
R15, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R291_A, R291_B, R291_C, R291_D, R291_E, R291_F, R291_G, R291_H, R306_A, R306_B, R306_C, R306_D, R306_E, R306_F, R306_G, R306_H, R535, R537, R547, R554, R562, R571, R572, R586, R595, R596, R617, R618, R635, R636, R657, R658, R673, R676, R695, R698	CHIP, 100 OHM, 100PPM, +/-1%, 0603, WALSIN	T502100002399	
R16	CHIP, 0.82 OHM, 100PPM, +/-1%, 0603, WALSIN, WW06XR820FTL	T502820C02399	
R21	CHIP, 49.9K OHM, 100PPM, +/-1%, 0603, WALSIN	T502499202399	
R22, R24, R25	CHIP, 511K OHM, 100PPM, +/-1%, 0603, WALSIN	T502511302399	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Resistors (continued)

Reference Designator	Description	Vendor Part Number	Note
R26	CHIP, 13.7K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X1372FTL	T502137202399	
R27	CHIP, 60.4K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X6042FTL	T502604202399	
R28	CHIP, 22.1K OHM, 100PPM, +/-1%, 0603, WALSIN,	T502221202399	
R35, R542, R551, R577, R582	CHIP, 12K OHM, 100PPM, +/-1%, 0603, WALSIN	T502120202399	
R37, R38, R39, R40, R41, R42, R43, R48, R49, R51, R53, R54, R55, R56, R57, R58, R59, R60, R140, R196, R216, R217, R222, R226, R227, R228, R233, R234, R235, R236, R237, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R265, R278, R279, R281	CHIP, 68.1 OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X68R1FTL	T502681A02399	
R44, R45, R46, R47, R230, R231, R232	CHIP, 33 OHM, 100PPM, +/-1%, 0603, WALSIN	T502330A02399	
R50, R52, R238, R239, R336_A, R336_B, R336_C, R336_D, R336_E, R336_F, R336_G, R336_H, R540, R546, R553, R556, R565, R570, R578, R580	CHIP, 22 OHM, 100PPM, +/-1%, 0603, WALSIN	T502220A02399	
R86, R295_A, R295_B, R295_C, R295_D, R295_E, R295_F, R295_G, R295_H, R348_A, R348_B, R348_C, R348_D, R348_E, R348_F, R348_G, R348_H, R532, R543, R561, R579, R17, R261, R298	CHIP, 1K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X1001FTL	T502100102399	
R87, R88, R89, R90, R213, R589, R590, R603, R604, R609, R610, R623, R624, R629, R630, R643, R644, R649, R650, R663, R664, R669, R670, R683, R684, R689, R691, R701, R704	CHIP, 47, OHM, 100PPM, +/-1%, 0603, WALSIN	T502470A02399	
R91, R92, R93, R94, R566, R573, R601, R602, R611, R612, R641, R642, R651, R652, R681, R682, R690, R692, R18	CHIP, 47K OHM, 100PPM, +/-1%, 0603, WALSIN	T502470202399	
R113, R114, R122, R123, R124, R125, R126, R127, R128, R129	CHIP, 309 OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X309FTL	T502309002399	
R139, R293_A, R293_B, R293_C, R293_D, R293_E, R293_F, R293_G, R293_H, R307_A, R307_B, R307_C, R307_D, R307_E, R307_F, R307_G, R307_H	CHIP, 10 OHM, 200PPM, +/-1%, 0603, WALSIN, WR06X10R0FTL	T502100A02399	
R155, R301	CHIP, 0 OHM, 0603, WALSIN, WR06X000PTL	T502000002009	
R211, R284_A, R284_B, R284_C, R284_D, R284_E, R284_F, R284_G, R284_H, R286_A, R286_B, R286_C, R286_D, R286_E, R286_F, R286_G, R286_H, R288_A, R288_B, R288_C, R288_D, R288_E, R288_F, R288_G, R288_H, R294_A, R294_B, R294_C, R294_D	CHIP, 1M OHM, 100PPM, +/-1%, 0603, WALSIN	T502100402399	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Resistors (continued)

Reference Designator	Description	Vendor Part Number	Note
R294_E, R294_F, R294_G, R294_H, R343_A, R343_B, R343_C, R343_D, R343_E, R343_F, R343_G, R343_H, R345_A, R345_B, R345_C, R345_D, R345_E, R345_F, R345_G, R345_H, R533, R549, R557, R558, R559, R575, R584, R585	CHIP, 1M OHM, 100PPM, +/-1%, 0603, WALSIN	T502100402399	
R221	CHIP, 68 OHM, 100PPM, +/-1%, 0402, WALSIN	T502680A01399	
R267, R299_A, R299_B, R299_C, R299_D, R299_E, R299_F, R299_G, R299_H	CHIP, 220 OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X2200FTL	T502220002399	
R268	CHIP, 113 OHM, 100PPM, +/-1%, 0603, WALS, L, WR06X1130FTL	T502113002399	
R275, R276, R277	CHIP, 105K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X1053FTL	T502105302399	
R282, R283, R287, R290	CHIP, 24 OHM, 100PPM, +/-1%, 0603, WALSIN	T502240A02399	
R285_A, R285_B, R285_C, R285_D, R285_E, R285_F, R285_G, R285_H, R289_A, R289_B, R289_C, R289_D, R289_E, R289_F, R289_G, R289_H	CHIP, 10M OHM, 100PPM, +/-1%, 0603, WALSIN	T502100502399	
R292_A, R292_B, R292_C, R292_D, R292_E, R292_F, R292_G, R292_H, R308_A, R308_B, R308_C, R308_D, R308_E, R308_F, R308_G, R308_H, R534, R552, R567, R583	CHIP, 91 OHM, 100PPM, +/-1%, 0603, WALSIN	T502910A02399	
R296_A, R296_B, R296_C, R296_D, R296_E, R296_F, R296_G, R296_H, R303_A, R303_B, R303_C, R303_D, R303_E, R303_F, R303_G, R303_H, R333_A, R333_B, R333_C, R333_D, R333_E, R333_F, R333_G, R333_H	CHIP, 6.8K OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X6801FTL	T502680102399	
R309_A, R309_B, R309_C, R309_D, R309_E, R309_F, R309_G, R309_H, R310_A, R310_B, R310_C, R310_D, R310_E, R310_F, R310_G, R310_H, R164, R165, R166, R167, R168, R169, R170, R171, R180, R181, R182, R183, R184, R185, R186, R187, R197, R198, R199, R200, R201, R202, R203, R204	CHIP, 2K OHM, 100PPM, +/-1%, 0603, WALSIN	T502200102399	
R318_A, R318_B, R318_C, R318_D, R318_E, R318_F, R318_G, R318_H, R329_A, R329_B, R329_C, R329_D, R329_E, R329_F, R329_G, R329_H	CHIP, 3.3K OHM, 100PPM, +/-1%, 0603, WALSIN,	T502330102399	
R321_A, R321_B, R321_C, R321_D, R321_E, R321_F, R321_G, R321_H, R342_A, R342_B, R342_C, R342_D, R342_E, R342_F, R342_G, R342_H, R538, R544, R563, R568	CHIP, 3K OHM, 100PPM, +/-1%, 0603, WALSIN	T502300102399	
R325_A, R325_B, R325_C, R325_D, R325_E, R325_F, R325_G, R325_H	CHIP, 820 OHM, 100PPM, +/-1%, 0603, WALSIN	T502820002399	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Resistors (continued)

Reference Designator	Description	Vendor Part Number	Note
R326_A, R326_B, R326_C, R326_D, R326_E, R326_F, R326_G, R326_H, R344_A, R344_B, R344_C, R344_D, R344_E, R344_F, R344_G, R344_H, R539, R545, R564, R569	CHIP, 330 OHM, 100PPM, +/-1%, 0603, WALSIN, WR06X3300FTL	T502330002399	
R332_A, R332_B, R332_C, R332_D, R332_E, R332_F, R332_G, R332_H, R541, R550, R576, R581, R744_A, R744_B, R744_C, R744_D, R744_E, R744_F, R744_G, R744_H	CHIP, 56K OHM, 100PPM, +/-1%, 0603, WALSIN	T502560202399	
R375, R438, R555	CHIP, 1K OHM, 100PPM, +/-1%, 0402, WALSIN	T502100101399	
R536, R548, R560, R574, R591, R593, R597, R599, R613, R615, R619, R621, R631, R633, R637, R639, R653, R655, R659, R661, R671, R674, R677, R679, R693, R696, R699, R702	CHIP, 6.2K OHM, 100PPM, +/-1%, 0603, WALSIN	T502620102399	
R587, R588, R605, R606, R607, R608, R625, R626, R627, R628, R645, R646, R647, R648, R665, R666, R667, R668, R685, R686, R687, R688, R705, R706	CHIP, 15K OHM, 100PPM, +/-1%, 0603, WALSIN	T502150202399	
R592, R594, R598, R600, R614, R616, R620, R622, R632, R634, R638, R640, R654, R656, R660, R662, R672, R675, R678, R680, R694, R697, R700, R703	CHIP, 180 OHM, 100PPM, +/-1%, 0603, WALSIN	T502180002399	
RN1, RN2, RN3, RN4, RN5, RN6, RN7, RN8	RES NET, B, 68 OHM, 0402, 8P4R, 5%, WA04X680, JTL	T521068000108	

Capacitors

Reference Designator	Description	Vendor Part Number	Note
C1, C2, C3, C7, C8, C9	EL, 470UF, 25V, +/-20%, 10*10, CE1E471MDJANG	T551471445000	
C4, C5, C6, C12, C24, C25, C26, C45, C46, C49, C50, C61, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C83, C84, C110, C113, C114, C115, C116, C117, C118, C119, C120, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C180, C181, C183, C184, C185, C187, C188, C189, C190, C192, C193, C197, C199, C200, C202, C203, C204, C205, C207, C214, C234_A, C234_B, C234_C, C234_D, C234_E, C234_F, C234_G, C234_H, C235_A, C235_B, C235_C, C235_D	CAP, X7R, .10UF, 25V, +/-10%, 0402, WALSIN	T542011047408	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Capacitors (continued)

Reference Designator	Description	Vendor Part Number	Note
C235_E, C235_F, C235_G, C235_H, C238_A, C238_B, C238_C, C238_D, C238_E, C238_F, C238_G, C238_H, C239_A, C239_B, C239_C, C239_D, C239_E, C239_F, C239_G, C239_H, C455, C456, C461, C462, C544, C545, C546, C547, C550, C551, C552, C553, C554, C555, C556, C557, C178, C182, C186, C47, C53, C55, C56, C177, C243, C244, C245, C246, C249, C250, C251	CAP, X7R, .10UF, 25V, +/-10%, 0402, WALSIN	T542011047408	
C10, C15, C86, C87, C88, C90, C91, C92, C93, C94, C95, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C111, C112	CAP, X7R, .01UF, 50V, +/-10%, 0603, WALSIN	T542021037508	
C13, C248_A, C248_B, C248_C, C248_D, C248_E, C248_F, C248_G, C248_H	CAP, NPO, 220PF, 50V, +/-5%, 0603, WALSIN	T541022216508	
C14, C443, C450, C458, C470	CAP, NPO, 330PF, 50V, +/-5%, 0603, WALSIN	T541023316508	
C17	EL, 100UF, 63V, +/-20%, 10X10, VZH101M1JTR-1010	T551101475020	
C18	CAP, X7R, .01UF, 100V, +/-10%, 0805, WALSIN	T542031037608	
C19	CAP, X7R, .10UF, 100V, +/-10%, 0603, WALSIN	T542021047608	
C20	CAP, X7R, .47UF, 16V, +/-10%, 0603, WALSIN	T542024747308	
C21, C22, C23, C31	CAP, X7R, .10UF, 50V, +/-10%, 0402, WALSIN	T542011047508	
C27	EL, 470UF, 16V, +/-20%, 8*10.5, CK-1C471M-CRF10	T551471434010	
C28	CAP, NPO, 82PF, 50V, +/-5%, 0603, WALSIN, 0603N820J500CT	T541028206508	
C29, C30, C33, C34, C35, C36, C37, C600, C40	CAP, X5R, 22UF, 16V, +/-20%, 0805, WALSIN	T545032268308	
C32, C209, C217_A, C217_B, C217_C, C217_D, C217_E, C217_F, C217_G, C217_H, C229_A, C229_B, C229_C, C229_D, C229_E, C229_F, C229_G, C229_H, C478, C479, C486, C487, C488, C489, C496, C497, C498, C499, C506, C507, C508, C509, C516, C517, C518, C519, C526, C527, C528, C530, C536, C537	CAP, NPO, 100PF, 50V, +/-5%, 0603, WALSIN	T541021016508	
C38	CAP, NPO, 56PF, 50V, +/-5%, 0603, WALSIN	T541025606508	
C39	CAP, NPO, 22PF, 50V, +/-5%, 0402, WALSIN, 0402N220J500CT	T541012206508	
C41, C42, C43,	CAP, X7R, 10UF, 25V, +/-10%, 1206, WALSIN	T542041067408	
C48, C51, C52, C59, C60, C206, C11	EL, 100UF, 25V, +/-20%, 6.3*7, DV-101M025E077ETR	T551101445010	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Capacitors (continued)

Reference Designator	Description	Vendor Part Number	Note
C58	CAP, NPO, 12PF, 50V, +/-5%, 0402, WALSIN	T541011206508	
C62, C63, C121	CAP, NPO, 22PF, 50V, +/-5%, 0603, WALSIN	T541022206508	
C81, C82, C157, C158	CAP, NPO, 18PF, 50V, +/-5%, 0603, WALSIN	T541021806508	
C85, C89	CAP, X7R, 2.2UF, 6.3V, +/-10%, 0603, WALSIN	T542022257108	
C96	CAP, X7R, .33UF, 25V, +/-10%, 0603, WALSIN	T542023347408	
C122, C123, C124, C159, C174, C176, C179, C191, C198, C201, C219, C220, C224, C541, C44	CAP, 10UF, 6.3V, +/-20%, 0603X5R, WALSIN	T540000002118	
C175	CAP, X7R, 1000PF, 1KV, +/-10%, 1206, WALSIN	T542041027H08	
C194, C211	EL, 220UF, 6.3V, +/-20%, 6.3*5, CK-0J221M-CRE54	T551221414000	
C195, C196, C212, C213	CAP, X7R, 1.0UF, 16V, +/-10%, 0603, WALSIN	T542021057308	
C208	CAP, X7R, 4.7UF, 6.3V, +/-10%, 0603, WALSIN	T542024757108	
C210	CAP, X7R, .047U, 50V, +/-10%, 0603, WALSIN, 0603B473K500CT	T542024737508	
C215_A, C215_B, C215_C, C215_D, C215_E, C215_F, C215_G, C215_H, C221_A, C221_B, C221_C, C221_D, C221_E, C221_F, C221_G, C221_H, C223_A, C223_B, C223_C, C223_D, C223_E, C223_F, C223_G, C223_H, C237_A, C237_B, C237_C, C237_D, C237_E, C237_F, C237_G, C237_H, C441, C449, C453, C459, C460, C473, C474, C477	CAP, NPO, .10UF, 50V, +/-5%, 1206, MURATA	T541041046505	
C216_A, C216_B, C216_C, C216_D, C216_E, C216_F, C216_G, C216_H, C218_A, C218_B, C218_C, C218_D, C218_E, C218_F, C218_G, C218_H, C222_A, C222_B, C222_C, C222_D, C222_E, C222_F, C222_G, C222_H, C233_A, C233_B, C233_C, C233_D, C233_E, C233_F, C233_G, C233_H	EL, 22UF, 63V, +/-20%, 6.3X7, VZH220M1JTR-0607	T551220475010	
C225_A, C225_B, C225_C, C225_D, C225_E, C225_F, C225_G, C225_H, C241_A, C241_B, C241_C, C241_D, C241_E, C241_F, C241_G, C241_H	CAP, X7R, .10UF, 25V, +/-10%, 0603, WALSIN	T542021047408	
C226_A, C226_B, C226_C, C226_D, C226_E, C226_F, C226_G, C226_H, C242_A, C242_B, C242_C, C242_D, C242_E, C242_F, C242_G, C242_H, C542, C543	CAP, X7R, 1.0UF, 25V, +/-10%, 0603, WALSIN	T542021057408	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Capacitors (continued)

Reference Designator	Description	Vendor Part Number	Note
C227_A, C227_B, C227_C, C227_D, C227_E, C227_F, C227_G, C227_H, C444, C446, C447, C464, C466, C469	CAP, NPO, 2700P, 50V, +/-5%, 0603, WALSIN	T541022726508	
C228_A, C228_B, C228_C, C228_D, C228_E, C228_F, C228_G, C228_H, C445, C451, C465, C468, C471, C475, C484, C485, C490, C491, C504, C505, C510, C511, C524, C525, C529, C531	CAP, NPO, 470PF, 50V, +/-5%, 0603, WALSIN	T541024716508	
C230_A, C230_B, C230_C, C230_D, C230_E, C230_F, C230_G, C230_H, C231_A, C231_B, C231_C, C231_D, C231_E, C231_F, C231_G, C231_H	CAP, X7R, 2.2UF, 100V, +/-10%, 1206, SAMSUNG	T54204225760E	
C232_A, C232_B, C232_C, C232_D, C232_E, C232_F, C232_G, C232_H, C252_A, C252_B, C252_C, C252_D, C252_E, C252_F, C252_G, C252_H	CAP, NPO, 270PF, 50V, +/-5%, 0603, WALSIN, 0603N271J500CT	T541022716508	
C236_A, C236_B, C236_C, C236_D, C236_E, C236_F, C236_G, C236_H, C240_A, C240_B, C240_C, C240_D, C240_E, C240_F, C240_G, C240_H, C457, C463, C548, C549, C558, C559	CAP, X5R, 10UF, 25V, +/-10%, 0805, WALSIN, 0805X106K250CT	T545031067408	
C247_A, C247_B, C247_C, C247_D, C247_E, C247_F, C247_G, C247_H	EL, 1000UF, 10V, +/-20%, 10X10, HV102M010G105ETR	T551102425010	
C299, C356, C454	CAP, X5R, 4.7UF, 6.3V, +/-10%, 0402, WALSIN	T545014757108	
C442, C452, C467, C476, C480, C481, C492, C493, C500, C501, C512, C513, C520, C521, C532, C533	EL, 22UF, 16V, +/-20%, 4X5.4M, CK-1C220M-CRC54	T551220434010	
C448, C472	CAP, NPO, 47PF, 50V, +/-5%, 0603, WALSIN	T541024706508	
C482, C483, C494, C495, C502, C503, C514, C515, C522, C523, C534, C535	CAP, NPO, 1200P, 50V, +/-5%, 0603, WALSIN, 0603N122J500CT	T541021226508	

Inductors

Reference Designator	Description	Vendor Part Number	Note
L1, L2, L4, L5	CHIP, BEAD, 120 OHM, 5A, 25%, 0805, 100MHZ, FBMA-11-201209-121A50T	T710500001600	
L3	220UH, 370MA, 5.6M, SMD, COILCR, LPS6235-224MRB	T621000033800	
L6	15UH, 3A, 100K, SMD, SGTE, GPSR0640-150M	T621000003700	
L7	3.3UH, 2.5A, 100K, SMD, GANTON, GPSR0420-3R3M	T621000023900	
L9, L8	10UH, 2.6A, 100K, SMD, TSA, SDS0635M-100NT	T621000037200	
L10, L11, L12, L13	BEAD, FBMA-11-160808-601A10T, 600 OHM, 10	T710500000900	
L17	4.7UH, 1.8A, 100K, SMD, COILCR, LPS4018, LPS4018-472MRC	T621000039500	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Diodes

Reference Designator	Description	Vendor Part Number	Note
D1	SWITCH, 100V, 1A, S100W, PAN	T572005252110	
D2_A, D2_B, D2_C, D2_D, D2_E, D2_F, D2_G, D2_H, D3_A, D3_B, D3_C, D3_D, D3_E, D3_F, D3_G, D3_H, D4_A, D4_B, D4_C, D4_D, D4_E, D4_F, D4_G, D4_H, D5_A, D5_B, D5_C, D5_D, D5_E, D5_F, D5_G, D5_H, D6_A, D6_B, D6_C, D6_D, D6_E, D6_F, D6_G, D6_H, D7_A, D7_B, D7_C, D7_D, D7_E, D7_F, D7_G, D7_H, D68, D72	SWITCH, 70V, 215MA, BAV99LT1G, ON-SEMI	T572003550122	
D8_A, D8_B, D8_C, D8_D, D8_E, D8_F, D8_G, D8_H, D9_A, D9_B, D9_C, D9_D, D9_E, D9_F, D9_G, D9_H	LED, RED, 0805, INH-S2012CHR20TP-B, MINGSHOU	T575009480258	
D10, D11	DIODE, 40V, 1A, SS14L, TSC	T571000130604	
D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22	TVS, 5.78, RSB6.8SM, SMD, ROHM	T593000194100	
D66, D67, D71, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85	VR, AVR1005C120MTAAB, TDK	T710500020400	
D86	SWITCH, 40V, 250MA, NSR0240HT1G, ON-SEMI	T572005830222	
LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8	LED, 615, 1.6X1, 19-226\R6GHC-D05\2T, EVERLIGHT	T575011450202	
LED10, LED11, LED12, LED9, LED18, LED19, LED20, LED21, LED22, LED23, LED24, LED25, LED26, LED28, LED29, LED30, LED31, LED32, LED33, LED34, LED35, LED36, LED37, LED38, LED39, LED40, LED41, LED42, LED43, LED44, LED45, LED46, LED47, LED48, LED49, LED50, LED52, LED53, LED54, LED55, LED56, LED57, LED58, LED59, LED60, LED61, LED62, LED63, LED64, LED65, LED66, LED67, LED68, LED69, LED70, LED71, LED72, LED73, LED74, LED75	LED, WHITE, 0603, 19-217-T1D-AQ-RHY-3T, EVERLIGHT	T575006150202	
LED17, LED27	LED, RED, 19-213\R6SC-AR2S2B\3T, EVERLIGHT	T575011460202	
LED77	LED, RED, 5.4X3., KH-3R4SD-40, MINGSHOU	T575011140158	
ZD1_A, ZD2_A, ZD1_B, ZD2_B, ZD1_C, ZD2_C, ZD1_D, ZD2_D, ZD1_E, ZD2_E, ZD1_F, ZD2_F, ZD1_G, ZD2_G, ZD1_H, ZD2_H	ZD, 5.6V, 250MW, 5%, SOT-23, NXP	T573003610415	

Transistors

Reference Designator	Description	Vendor Part Number	Note
Q1	NMOS, 60V, AO6420, TSOP, AOS	T586003042546	
Q2_A, Q2_B, Q2_C, Q2_D, Q2_E, Q2_F, Q2_G, Q2_H, Q3_A, Q3_B, Q3_C, Q3_D, Q3_E, Q3_F, Q3_G, Q3_H, Q4_A, Q4_B, Q4_C, Q4_D, Q4_E, Q4_F, Q4_G, Q4_H	PNP, -40V, MMBT4403, SOT23, FAIRCHILD	T582002690404	

ELECTRICAL PART LIST

T8S Main PCB Assembly

Diodes

Reference Designator	Description	Vendor Part Number	Note
Q5_A, Q5_B, Q5_C, Q5_D, Q5_E, Q5_F, Q5_G, Q5_H, Q6_A, Q6_B, Q6_C, Q6_D, Q6_E, Q6_F, Q6_G, Q6_H, Q7_A, Q7_B, Q7_C, Q7_D, Q7_E, Q7_F, Q7_G, Q7_H	PNP, -40V, MMBT4403, SOT23, FAIRCHILD	T582002690404	
Q8	PMOS, 30V, AO3401A, SOT23, AOS	T585001940446	
Q9	NPN, 40V, LMBT3904LT1G, SOT23, LRC	T581003460437	

Integrated Circuits


Reference Designator	Description	Vendor Part Number	Note
U1	A/D, NCP303LSN29T1G, SOT23-5, ONSEMI	T611100025425	
U2	DC-DC CONVERTER, LM3486MMX, VSSOP, TI	T611700034922	
U3, U4, U5	DC-DC, CONVERTER, TPS54202HD-DCR, SOT-2, TI	T611700039022	
U6	IC, REG, CJ7815, TO-252-2, JCET	T610600099668	
U7	IC, REG, CJ7915, TO-252-2, JCET	T610600099768	
U8	IC, DRIVER, TPS61169DCKR, SOT(5), TI	T610900023502	
U9	IC, SP, ADUM4160BRWZ, SOIC-16, ADI	T610000059036	
U10	IC, SP, TPS2051BDBVR, SOT-23(5), TI	T610000054204	
U11	MCU, LPC1837JBD144E, 144-LQFP, NXP	T610300092808	
U12, U13	IC, SP, TPD4S012DRYR, SON(6), TI	T610000053904	
U14	IC, MEMORY, SST26VF016B-104ISM, 8-SOIJ, MICROCHIP	T610100071701	
U15	IC, SP, TS5A623157DGSR, 10-VSSOP, TI	T610000054304	
U16, U17, U18, U19, U20, U21, U22, U23	LOGIC, NPIC6C596ADJ, 16-SO, NXP	T612000037503	
U24	MCU, ADSP-21489BSWZ-4B, 176-LQFP, ADI	T610300092778	
U25	IC, MEMORY, M12L128168A-6TG2N, TSOP54, ESMT	T610100037642	
U26	IC, SN74LVC125APW, TSSOP, TI	T60A200125401	
U27	IC, SP, MAX3283EAUT+T, SOT23, MAXIM	T610000057770	
U29	IC, SN74LVC1G17DCKR, SOT-25, TI	T60A201G17501	
U31	IC, PHOTO, 5V, EL817S1(C)(TA)-F, DIP, EVERLIGHT	T58A000491533	
U32	IC, A/D D/A, CS42528, LQFP-64, CIRRUS	T611500003506	
U33, U34	A/D, CS5364, LQFP-48P, CIRRUS	T611100023905	
U35_A, U35_B, U35_C, U35_D, U35_E, U35_F, U35_G, U35_H	OP-AMP, TL074C, SO-14, ST	T610500023802	

ELECTRICAL PART LIST

T8S Main PCB Assembly
Integrated Circuits (continued)

Reference Designator	Description	Vendor Part Number	Note
U36_A, U36_B, U36_C, U36_D, U36_E, U36_F, U36_G, U36_H, U43, U52, U54, U58, U60, U61, U62, U63, U64, U65, U53, U55, U57, U59	IC, OP-AMP, NJM4580, SOP-8, JRC	T610500010706	
U56	IC, OP-AMP, TL072CDT, SO8, ST	T610500028202	
VR1_A, VR1_B, VR1_C, VR1_D, VR1_E, VR1_F, VR1_G, VR1_H	VR, CA, 10K, C, 20X9.8MM, RV09ACF-40-20F-10C10K-0068	T531230000119	
VR17	VR, CA, 10K, B, 15.4X14X26, XV014112YGPV26.4FR1B10K	T531220000216	
VR9, VR10, VR11, VR12, VR13, VR14, VR15, VR16, VR18	VR, CA, 10K, B, 15.4X14X24, XV014112YGPV24FR1B10K	T531220000116	

Miscellaneous

Reference Designator	Description	Vendor Part Number	Note
F1, F2	FUSE, 30V, 200MA, 1206, 0ZC-J0020FF2E	T690100003000	 3
J1, J2, J3, J4, J5, J6, J7, J8	6.35MM STEREO JACK, NRJ6HF	T710200009700	
J9	USB SOCKET, 90, USB, AF, DIP-038-G	T710200002400	
J10	JACK, USB TYPE B, 319BF-K-C2-M-BN, 4P	T710200009500	
J11	6.35MM STEREO JACK WITH HALF THREADED, NMJ6HHD2	T710200009800	
J12	CONN, CF2014, .5MM HLD 1, CF20141V0R0-NH	T690300062300	
J14	HEADER, SMT, 2*5PIN, 1.27-2X5SW-5.5B, 90	T690300079300	
J15	HEADER, DUAL PIN, 14P, P2.54, 180, GOLD, CCP254010-0714	T690300022200	
P1, P3, P4	24P, P=2.0MM, 180, CH74242M100-0P	T690300104100	
P2	GP CONNECTOR, B4B-XH-A, 4 PIN, L, CCN250000-0104	T690300029000	
SW1	PUSHBUTTON SWITCH, PB-22E80-S-E	T670100001700	
SW2, SW3, SW4	ENCODER, RE12CF-41-20F-24P, 180	T670500001900	
SW5	ENCODER, SDB161EPVB16.7FR-1-4-12-12PC	T670500002000	
T1	TRANSFORMER, 6.6V, 3.3V, 4PI, MURATA, 78604\9C	T622000010300	
T2	TRANSFORMER, 3.3V, 4PI, MURATA, DA101C	T622000008300	
Y1	CRYSTAL, 12MHZ, 20, SMD, TXC, 7M12000039	T690900008100	
Y2	CRYSTAL, 12.288MH, SMD, SIWARD, XTL571200-M13-105, SX-322	T690900008000	
Y3	OSC, 11.28960, SMD, TXC, 7X11200002	T690900008400	

ELECTRICAL PART LIST

T8S I/O PCB Assembly

Resistors

Reference Designator	Description	Vendor Part Number	Note
R2, R4, R7, R8, R9, R10, R13, R14, R15, R16, R19, R20, R21, R22, R25, R26	CHIP, 100 OHM, 100PPM, +1%, 0402, WALS, WR04X1000FTL	T502100001399	
R3	CHIP, 75 OHM, 100PPM, +1%, 0603, WALSIN	T502750A02399	
R5, R6, R11, R12, R17, R18, R23, R24	CHIP, 0 OHM, 0603, WALS, WR06X000PTL	T502000002009	
R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42	CHIP, 0 OHM, 200PPM, +5%, 0402, WALSIN	T5020000014A9	
Reference Designator	Description	Vendor Part Number	Note

Capacitors

C1	CAP, X7R, .22UF, 50V, +10%, 0603, WALSIN	T542022247508	
C3, C4, C5, C6, C7, C8, C9, C16, C17, C18, C19, C28, C29, C30, C31, C40, C41, C42, C43, C52, C53, C54, C55, C58, C59	CAP, NPO, 100PF, 50V, +5%, 0603, WALSIN	T541021016508	
C11, C13, C14, C15, C23, C25, C26, C27, C35, C37, C38, C39, C47, C49, C50, C51	CAP, NPO, 470PF, 50V, +5%, 0603, WALSIN	T541024716508	


Inductors

Reference Designator	Description	Vendor Part Number	Note
L1, L2	2.2K OHM, 200MA, 100M, SMD, MURATA, DLW31SN222SQ2L	T621000039300	
L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13	BEAD, FBMA-11-160808-601A10T, 600 OHM, 10	T710500000900	

Diodes

Reference Designator	Description	Vendor Part Number	Note
D1, D2, D5, D6, D9, D10, D13, D14, D17, D18, D21, D22, D25, D26, D29, D30, D33, D34, D35, D36	VR, AVR1005C120MTAAB, TDK	T710500020400	
D3, D4, D7, D8, D11, D12, D15, D16, D19, D20, D23, D24, D27, D28, D31, D32	TVS, 58V, SMAJ58CA, SMD, LITTELFUSE	T593000226100	

Miscellaneous

Reference Designator	Description	Vendor Part Number	Note
J5, J6, J7, J8, J9, J10, J11, J12	COMBO JACK, RCJ9FI-V-0, REAN	T710200010000	
J2, J3	3 POLE MALE XLR RECEPTACLE, NC3MAV-0	T710200009900	
J1	RJ45 RECEPTACLE, NE8FAV-C5, LATCH LOCK	T710200009600	
J4, J13, J14	24 POS, P=2.0MM, 180, CH74242M100-0P	T690300104100	
RT1, RT2	FUSE, PTC, 24V, 0.75A, 1210, 0ZCH0075AF2E	T690100003700	3 

DISASSEMBLY PROCEDURE

T4S Mixer

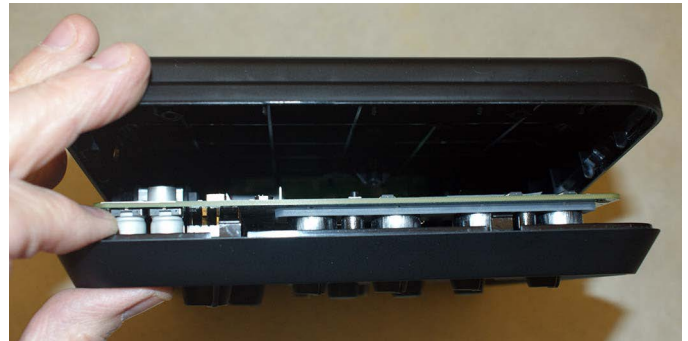
1. Bottom Housing Removal

1.1 Place the T4S onto a soft surface. Remove the four feet and the one rubber screw cover, located near the product label. See photo at right. Remove the five screws that secure the bottom housing to the top housing.

Note: It is recommended to replace the feet with new ones after removal. Be sure to remove all of the old adhesive before installing the new feet.



1.2 At the bottom front edge of the unit near the volume controls, carefully separate the bottom housing from the top housing. Lift off the bottom housing. Take care to not damage the plastic housing.



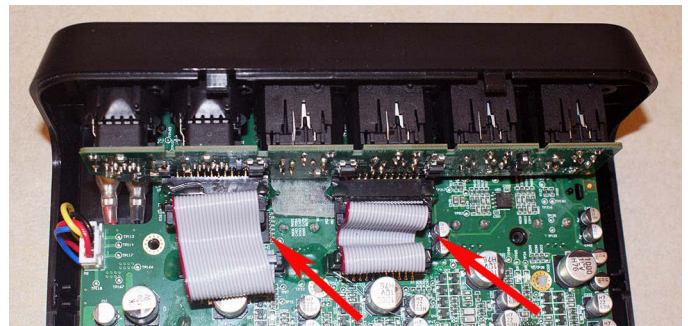
2. Input / Output PCB Removal

2.1 Perform procedure 1.

2.2 Remove the twelve screws that secure the RJ45 and Neutrik® XLR/TRS jacks to the I/O panel.



2.3 Carefully angle the I/O PCB out of the rear panel. Disconnect the two ribbon cables that connect to the main PCB. Lift off the I/O PCB.



DISASSEMBLY PROCEDURE

3. Main PCB Removal

3.1 On the front panel, carefully remove the fourteen knobs by pulling them straight off.

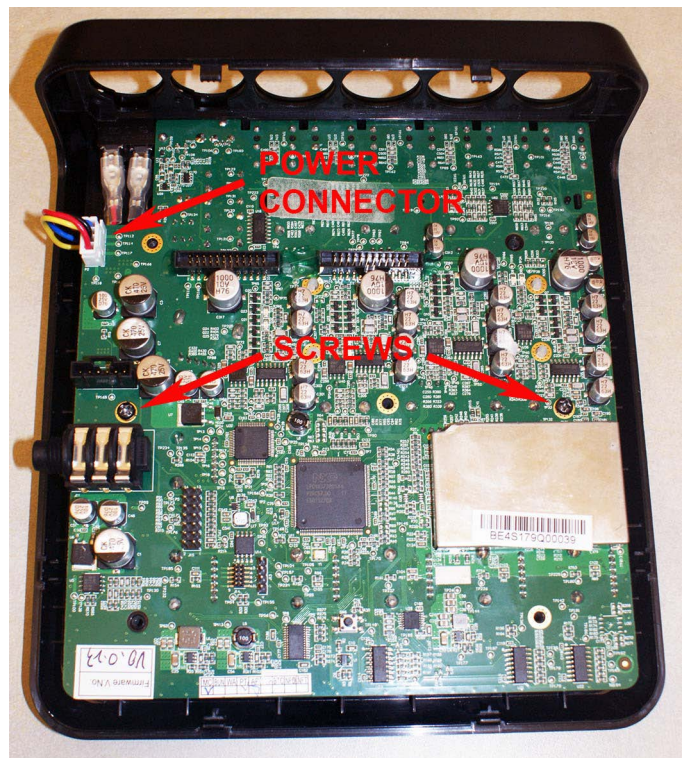
3.2 Perform procedure 2 to remove the I/O PCB assembly.

3.2 On the I/O panel, remove the six plastic nuts that secure the 1/4" TRS jacks.

3.3 On the Main PCB, disconnect the wiring harness for the power switch at connector P2.

3.4 Remove the two screws that secure the Main PCB to the top housing. Lift out the Main PCB assembly.

Re-assembly Note: Be sure that the rubber buttons and phantom power button are properly aligned with the top housing when re-installing the Main PCB.



DISASSEMBLY PROCEDURE

4. LCD Display Assembly Removal

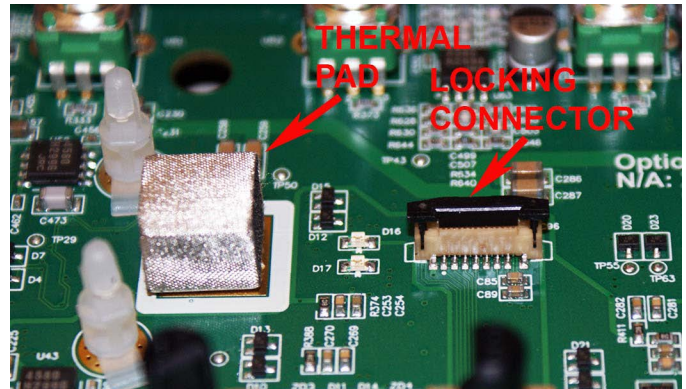
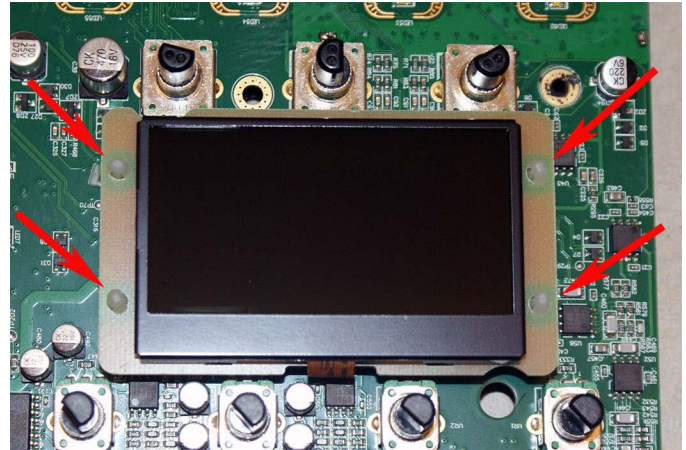
4.1 Perform procedure 3 to remove the Main PCB assembly.

4.2 Using a pair of needle-nose pliers, compress the legs of the nylon standoffs that secure the LCD Display assembly the Main PCB assembly.

4.3 Carefully lift up the LCD Display assembly. Lift the black locking tab for the connector and unplug the ribbon cable from the Main PCB at J12.

4.4 Lift off the LCD Display assembly.

Re-assembly note: Be sure that the cube-shaped thermal pad is in place before re-installing the LCD display onto the nylon posts. Refer to the photo at right.



DISASSEMBLY PROCEDURE

T8S Mixer

1. Bottom Housing Removal

1.1 Place the T8S onto a soft surface. Remove the four feet and the three rubber screw covers, located along the centerline of the product. See photo at right. Remove the seven screws that secure the bottom housing to the top housing.

Note: It is recommended to replace the feet with new ones after removal. Be sure to remove all of the old adhesive before installing the new feet.

1.2 At the bottom front edge of the unit near the volume controls, carefully separate the bottom housing from the top housing. Lift off the bottom housing. Take care to not damage the plastic housing.

2. Input / Output PCB Removal

2.1 Perform procedure 1.

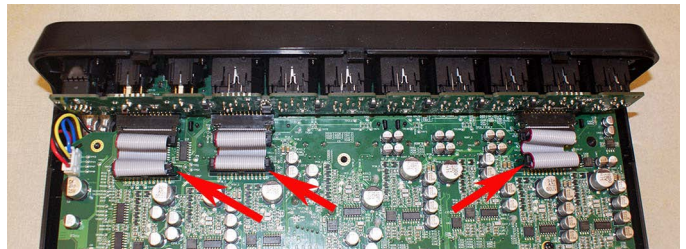
2.2 Remove the twenty-two screws that secure the RJ45 and Neutrik® XLR/TRS jacks to the I/O panel.

2.3 Carefully angle the I/O PCB out of the rear panel. Disconnect the three ribbon cables that connect to the main PCB. Lift off the I/O PCB.

3. Main PCB Removal

3.1 On the front panel, carefully remove the twenty-three knobs by pulling them straight off.

3.2 Perform procedure 2 to remove the I/O PCB assembly.

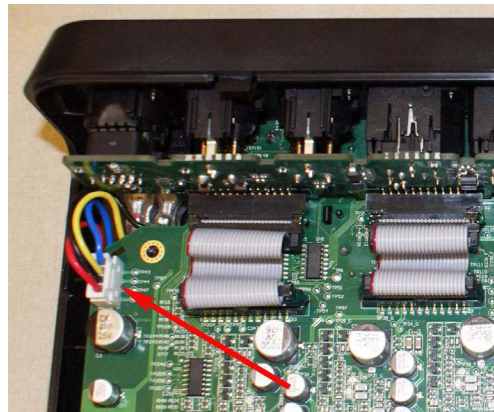


DISASSEMBLY PROCEDURE

3.2 On the I/O panel, remove the eight plastic nuts that secure the 1/4" TRS jacks.

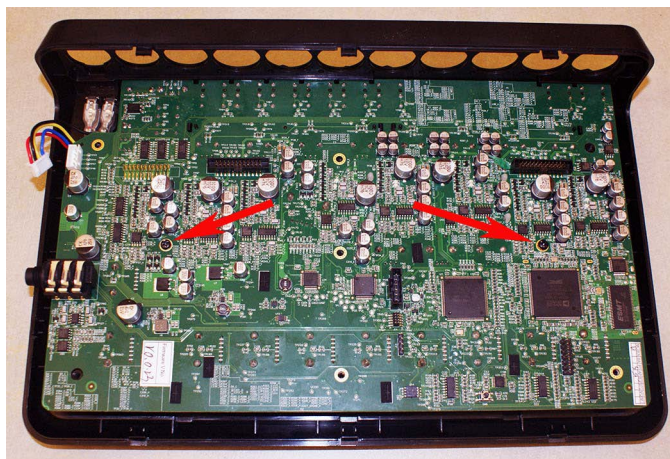


3.3 On the Main PCB, disconnect the wiring harness for the power switch at connector P2.



3.4 Remove the two screws that secure the Main PCB to the top housing. Lift out the Main PCB assembly.

Re-assembly Note: Be sure that the rubber buttons and phantom power button are properly aligned with the top housing when re-installing the Main PCB.



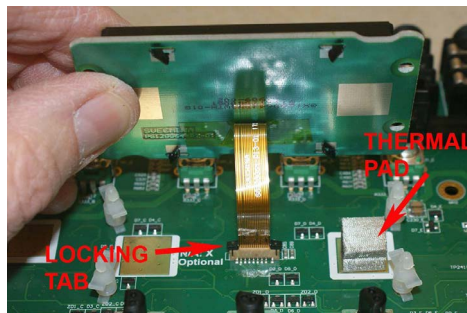
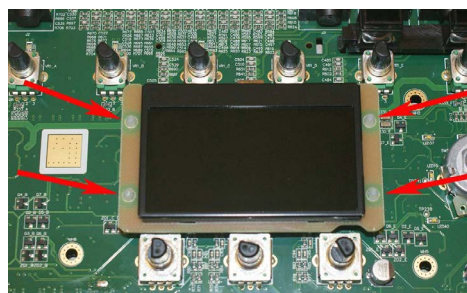
4. LCD Display Assembly Removal

4.1 Perform procedure 3 to remove the Main PCB assembly.

4.2 Using a pair of needle-nose pliers, compress the legs of the nylon standoffs that secure the LCD Display assembly to the Main PCB assembly.

4.3 Carefully lift up the LCD Display assembly. Lift the black locking tab for the connector and unplug the ribbon cable from the Main PCB at J12.

4.4 Lift off the LCD Display assembly.
Re-assembly note: Be sure that the cube-shaped thermal pad is in place before re-installing the LCD display onto the nylon posts. Refer to the photo at right.



TEST PROCEDURE

T4S and T8S ToneMatch Audio Engine

Required Equipment:

- T1 power supply, product code 042533
- Audio Signal Generator, Audio Precision ATS-1 Dual Domain or similar (see tests 15 and 16 for note)
- Bose® L1 Model II or L1 Model 1S Power Stand with Arrays (optional, see tests 15 and 16)
- dB Meter (Audio Precision ATS-1 has can perform this function also)
- Windows or Mac PC with an open USB slot
- 1 - USB Cable, Type A/B
- Connection cables

Test Mode:

The mixer must be placed into test mode by pressing and holding down the mute buttons 2, 3 and 4 at the same time when powering on the mixer. This is required for these tests to be accurate. To confirm that you have entered the test mode using the button method the display should read "Test Mode" and all of the buttons should be blinking on and off.

The test mode sets the individual channel volumes, the master volume, and the headphone volume knobs to 50%. All Measurement are to be made using a 20KHz low pass filter.

1/4" TRS Main Outputs L and R Tests - XLR Input 1 - 4 (T4S) or 1 - 8 (T8S)

1. Gain Test

1.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

1.2 Measure the output level at the 1/4" TRS Main Output L and R jacks. It should be +12.6dBu +/-0.5dBu.

1.3 Rotate the channel 1 Trim control to minimum (fully CCW). Apply a balanced 1 kHz, -1dBu sine wave to the channel 1 XLR input.

1.4 Measure the output level at the 1/4" TRS Main Output L and R jacks. It should be +12.2dBu +/-0.5dBu.

1.5 Repeat steps 1.1 to 1.4 for the remaining inputs.

2. Frequency Response Test

2.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input. Reference a dB meter to the output at the 1/4" TRS Main Output L and R jack.

2.2 Change the input frequency to 20Hz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

2.3 Change the input frequency to 20kHz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

2.4 Repeat steps 2.1 to 2.3 for the remaining inputs.

TEST PROCEDURE

3. THD+N Test

3.1 Place all unmeasured input Trim controls to minimum.

3.2 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

3.3 Measure the THD+N level at the 1/4" TRS Main Output L and R jacks. It should be <0.05%.

3.4 Repeat steps 3.1 to 3.3 for the remaining inputs.

4. Noise Test

4.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

4.2 Measure the Noise level at the 1/4" TRS Main Output L and R jacks. It should be < -75dBu.

4.3 Repeat steps 4.1 to 4.3 for the remaining inputs.

1/4" TRS Inputs 1 - 4 (T4S) or 1 - 8 (T8S) Tests

5. Gain Test

5.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -22 dBu sine wave to the channel 1 1/4" TRS input.

5.2 Measure the output level at the 1/4" TRS Main Output L and R jacks. It should be +12.5 dBu +/-0.5dBu.

5.3 Repeat steps 5.1 to 5.3 for the remaining inputs.

6. Frequency Response Test

6.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -22dBu sine wave to the channel 1 XLR input. Reference a dB meter to the output at the 1/4" TRS Main Output L and R jack.

6.2 Change the input frequency to 50Hz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

6.3 Change the input frequency to 20kHz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

6.4 Repeat steps 6.1 to 6.3 for the remaining inputs.

7. THD+N Test

7.1 Place all unmeasured input Trim controls to minimum.

7.2 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -22dBu sine wave to the channel 1 XLR input.

TEST PROCEDURE

7.3 Measure the THD+N level at the 1/4" TRS Main Output L and R jacks. It should be <0.05%.

7.4 Repeat steps 7.1 to 7.3 for the remaining inputs.

Aux Inputs 5/6 (T4S) or 9/10 (T8S)

8. Gain Test

8.1 Apply a balanced 1 kHz, +6.5dBu sine wave to the channel 5 AUX TRS input.

8.2 Measure the output level at the 1/4" TRS Main Output L and R jacks. It should be +12.5dBu +/-0.5dBu.

8.5 Repeat steps 8.1 and 8.2 for the channel 6 AUX TRS input.

9. Frequency Response Test

9.1 Apply a balanced 1 kHz, +6.5dBu sine wave to the channel 5 AUX TRS input. Reference a dB meter to the output at the 1/4" TRS Main Output L and R jack.

9.2 Change the input frequency to 20Hz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

9.3 Change the input frequency to 20kHz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

9.4 Repeat steps 9.1 to 9.3 for for the channel 6 AUX TRS input.

10. THD+N Test

10.1 Apply a balanced 1 kHz, +6.5dBu sine wave to the channel 5 AUX TRS input.

10.2 Measure the THD+N level at the 1/4" TRS Main Output L and R jacks. It should be <0.05%.

10.3 Repeat steps 10.1 to 10.3 for the channel 6 AUX TRS input.

XLR Main Outputs L and R (T8S only)

11. Gain Test - XLR Inputs 1 - 8

11.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

11.2 Measure the output level at the 1/4" TRS Main Output L and R jacks. It should be +12.6dBu +/-0.5dBu.

11.3 Repeat steps 11.1 and 11.2 for the remaining inputs.

TEST PROCEDURE

12. Frequency Response Test

12.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input. Reference a dB meter to the output at the 1/4" TRS Main Output L and R jack.

12.2 Change the input frequency to 20Hz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dB_r +/-0.5dB_r.

12.3 Change the input frequency to 20kHz. Measure the output level at the 1/4" TRS Main Output L and R jacks. Verify that the output level is 0.0dB_r +/-0.5dB_r.

12.4 Repeat steps 12.1 to 12.3 for the remaining inputs.

13. THD+N Test

13.1 Place all unmeasured input Trim controls to minimum.

13.2 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

13.3 Measure the THD+N level at the 1/4" TRS Main Output L and R jacks. It should be <0.05%.

13.4 Repeat steps 13.1 to 13.3 for the remaining inputs.

14. Noise Test

14.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

14.2 Measure the Noise level at the 1/4" TRS Main Output L and R jacks. It should be < -75dBu.

14.3 Repeat steps 14.1 to 14.3 for the remaining inputs.

XLR Inputs 1 - 4 to Digital Main Output L and R Tests - T4S only

IMPORTANT NOTE: Tests 15 and 16 require a digital dB meter, such as an Audio Precision ATS-1 Dual Domain, an ATS-2 or an APx515. If you do not have this equipment, you may simply connect the T4S Digital Main Output to a Bose® L1 Model II or L1 Model 1S power stand with the arrays installed and verify that you can pass audio through the T4S and hear it clearly from the power stand in place of tests 15 and 16. The digital output from the T4S is a SPDIF output that is converted to analog audio by the power stand.

15. Gain Test

15.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

15.2 Measure the output level at the Ethercon Main Output L and R jacks. It should be -7.4dBFS +/-0.5dBFS.

15.3 Repeat steps 15.1 and 15.2 for the remaining inputs.

TEST PROCEDURE

16. Frequency Response Test

16.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

16.2 Measure the output level at the Ethercon Main Output L and R jacks. It should be -7.4dBFS +/-0.5dBFS.

16.3 Change the input frequency to 20 Hz. Verify that the output is still -7.4dBFS +/-0.5dBFS.

16.4 Change the input frequency to 20kHz. Verify that the output is still -7.4dBFS +/-0.5dBFS.

16.5 Repeat steps 16.1 to 16.4 for the remaining inputs.

17. THD+N Test

17.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

17.2 Measure the THD+N level at the Ethercon Main Output L and R jacks. It should be <0.05%.

17.3 Repeat steps 17.1 and 17.2 for the remaining inputs.

18. Aux Output Tests 1 - 2 (T4S) or 1 - 4 (T8S)

18.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

18.2 Measure the output level at the 1/4" TRS AUX Output TRS jacks. It should be +16.5dBu +/-0.5dBu.

18.3 Repeat steps 18.1 and 18.2 for the remaining inputs.

19. Frequency Response Test

19.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input. Reference a dB meter to the output at the 1/4" TRS AUX Output TRS jacks.

19.2 Change the input frequency to 20Hz. Measure the output level at the 1/4" TRS AUX Output TRS jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

19.3 Change the input frequency to 20kHz. Measure the output level at the 1/4" TRS AUX Output TRS jacks. Verify that the output level is 0.0dBr +/-0.5dBr.

19.4 Repeat steps 19.1 to 19.3 for the remaining inputs.

TEST PROCEDURE

20. THD+N Test

20.1 Place all unmeasured input Trim controls to minimum.

20.2 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

20.3 Measure the THD+N level at the 1/4" TRS Main Output L and R jacks. It should be <0.05%.

20.4 Repeat steps 20.1 to 20.3 for the remaining inputs.

Headphone Output 1/4" TRS L and R Tests

Note: The headphone output is the 1/4" TRS jack located on the right side of the unit.

21. Gain Test

21.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

21.2 Measure the output level at the headphone jack. It should be +5.2dBu +/-0.5dBu.

22. Frequency Response Test

22.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

22.2 Measure the output level at the headphone jack. It should be +5.2dBu +/-0.5dBu.

22.3 Reference a dB meter to the output level. Change the input frequency to 10 Hz. Verify that the output is 0.0dBr +0.5/-1.25dBr.

22.4 Change the input frequency to 20kHz. Verify that the output is 0.0dBr +/-0.5dbr.

23. THD+N Test

23.1 Rotate the channel 1 Trim control to maximum (fully CW). Apply a balanced 1 kHz, -41dBu sine wave to the channel 1 XLR input.

23.2 Measure the THD+N level at the headphone jack. It should be <0.05%.

IMPORTANT NOTE: The remaining tests are performed in normal operation mode. To exit test mode, power off the mixer and power it back on. You will now be in normal operation mode.

24. USB Type A Jack Test

24.1 Obtain a flash drive. Load a .mp3 music file onto the flash drive. Plug it into the USB A jack on the unit. Power on the unit.

24.2 On the mixer front panel, rotate the MODE switch to PREF. Using the control located under the left side of the display, scroll down to USB A Playback. Press the button to select it. With the flash drive installed in the USB A jack, you should see the .mp3 file name on the screen. If you see it, test passes.

TEST PROCEDURE

25. USB Type B Jack Test

25.1 The USB B port is automatically tested by using a USB A/B cable to perform the firmware update on the Mixer. This ensures that a communication connection has been made between the PC and the unit. The firmware update process is outlined on pages 45 and 46 of this manual.

26. Phantom Power Test

Note: Phantom power voltage is checked by measuring the voltage between pins 1 - 2 and 1 - 3 on all XLR input connectors with the phantom power switch in the ON position. Phantom power is ON when the red light above the push button switch is illuminated.

26.1 Power on the unit. Using a multi-meter, carefully measure the DC voltage across pins 1 and 2 of the channel 1 input XLR connector. It should read +48Vdc. Measure the DC voltage across pins 1 and 3 of the same connector. It should read +48Vdc.

CAUTION: Take care to not short across the pins or damage to the unit could result.

FIRMWARE UPDATE PROCEDURE

ToneMatch® T4S and T8S Mixers

Required Equipment:

1. Windows or Mac PC with an open USB port
2. ToneMatch power supply, Bose® product code 042533
3. USB A/B cable

Downloading the L1 Updater Software

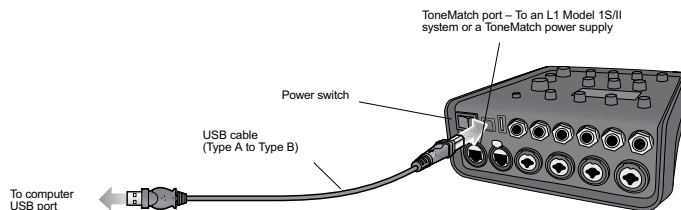
Go to the Bose Musicians Portable PA Community forum page at <http://www.bose.com/musicians>. Click on Downloads. Select L1 Software Updater. You will be taken to the Downloads page. Select the version for PC or Mac for your computer type. Save the .zip file to a known location on your PC.

Note: It is encouraged that you store any .BOS files that you download in the same folder as the L1 Updater Application. We recommend creating this folder on your desktop or in your My Documents folder to make it easily accessible.

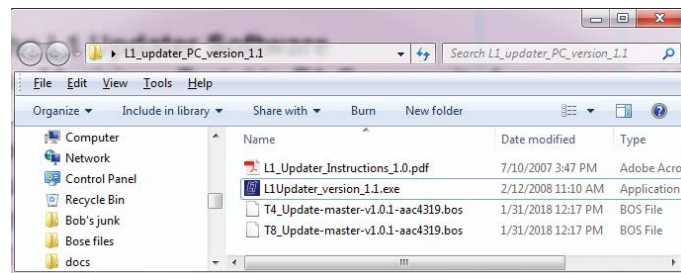
Once the download is completed, unzip the file and double-click the folder to open it. You should see the executable application file, a PDF file with update instructions and the .bos extension firmware update files.

Update T4S or T8S Firmware

1. After the Updater is downloaded and installed, with the mixer power off, connect the mixer to the PC using a USB A/B cable. See photo at right.

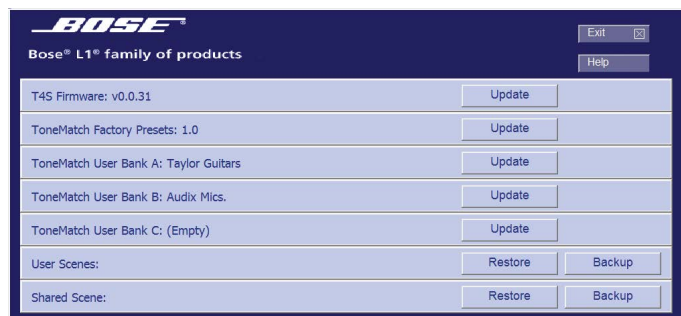


2. Once connected, turn on the mixer. The PC should recognize the mixer as a connected USB device.

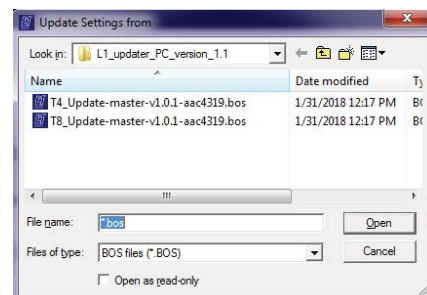


3. Navigate to the L1 Updater software on your PC. Double-click on the L1Updater_version_1.1.exe file to start the program. Note: The version of your updater file may be newer than version 1.1, as shown in this example.

4. Once the Updater window opens, you will see that the Updater program recognizes the connected device, a T4S in this case, and it also shows the installed firmware version, which is 0.0.31 in this case. Click on UPDATE in the same block as the product name, T4S in this case.



5. A dialog box will open, asking you to select the .bos file to use for the update. Be sure to select the correct file. The T4S and T8S have different update files. Select the correct .bos file and click OPEN. The update process will begin.



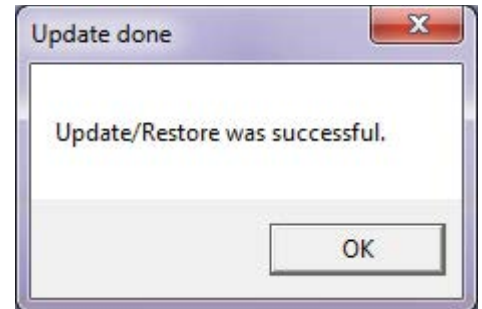
FIRMWARE UPDATE PROCEDURE

6. While the update is in process, you will see a progress bar. The update process takes about seven minutes to complete.

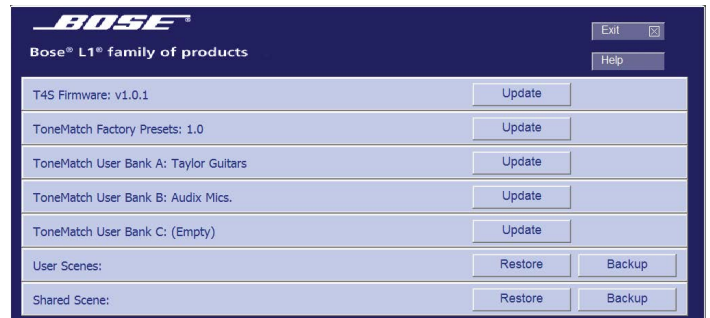
CAUTION: DO NOT turn off/disconnect power or disconnect the USB cable during this update.



7. Once the update is complete, you will see the Update Done dialog box stating that the update process was successful.



8. You should once again see the Updater Software main screen again. Note that the firmware version shown has changed to the new version.



SERVICE MANUAL REVISION HISTORY

Date	Revision Level	Description of Change	Change Driven By	Page(s) Affected
2/20/2018	00	Document released at revision 00	Initial Release	ALL
5/10/18	01	Updated test procedures	Test Change	41 - 42



Bose Corporation
100 The Mountain Road
Framingham Massachusetts USA 01701

Reference Number 785403-SM REV 01; 5/2018
<http://serviceops.bose.com>