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Service Manual
EP2.0 572, DS, CDS

KERN 572, DS, CDS

Type T572-A, TDS-A, TCDS-A

Version 1.0
11/2022
GB

GB

KERN 572, DS, CDS

Version 1.0 – 11/2022

Servicemanual

Table of contents

1 Basic Information

The device must be repaired only by trained specialist staff or personnel with professional formation (such as a repair-specialist accredited by law concerning verification). The service manual is obligatory for repair work. After repair, original conditions of the device must be restored. Only original spare parts should be used.

2 Introduction

This service manual covers the EF2.0 T572-, TDS- & TCDS-A scales series and is edited for the authorized servicing personnel.

3 Feature overview

- Large LCD, 7-digit H=21mm, VA=89x30mm, with white backlight
- Stable, zero, battery level, gloss/net weight and Hi/OK/LO indications
- Buzzer sound
- Weighing unit: (kg), g, ct, (gn), dwt, ozt, lb, oz, m, tlt, tlh, tls, %, pcs, FFA
- 5 buttons operated
- Tare up to Max
- Pre-Tare function
- Percentage weighing function
- Check weighing function
- Piece counting function
- Display Hold function
- Print function with Sum Memory
- Application menu
- Setup menu
- Service menu
- Kern Communication Protocol (KCP)
- Kern Universal Port (KUP) interface, VGA-15 female connector
- Optional external RS-232 interface / Signal light through KUP
- Optional external USB device interface through KUP
- Optional external WiFi interface through KUP
- Optional external Bluetooth BLE interface through KUP
- Optional external Ethernet interface through KUP
- Multi-Plug (EU/UK/US) Power adaptor, 6V 1A
- Optional rechargeable battery, Li-ion 3.7V 3700mAH

4 Service Menu

Hold [ON/OFF] + [TARE] button during power up self-test to enter the Service Menu.
Press ➔ button to select / confirm / shift right
Press ← button to go back / exit / shift left
Press ↓ button to scroll down / decrease digit value
Press ↑ button to scroll up / increase digit value

ADJUST	adjustment
cal	adjustment function (as in User Menu)
calext	adjustment at predefined weight: zero, put ld, wait…
CALEUD	enter adjustment weight (SI unit only: g/kg), update predefined weight then perform adjustment
GRAADJ	set gravity of adjustment location
GRAUSE	set gravity of use location
Zero	Zero calibration
Creep	Creep compensation
Linear	Linearization
3point	3 points
5point	5 points
OVerld	overload counter
mem	view counter
ovrer	reset overload counter
TYPINF	show/set model information
config	select series: 572/DC/CDS, set model after power reset.
info	information querry
serial	Serial number
ver	Software version b 1.2.15
ADVALU	show A/D value
reset	reset
all	reset all

4.1 Adjustment procedure

1. Turn the scale on and allow the scale to acclimatize and stabilize for sufficient time.
2. Press and hold the ON/OFF and TARE key to enter setup menu. Display shows cal.
3. Press ➔, display show calext.
4. Press ➔, display show the first selectable calibration weight.
5. Press ↓ or ↑ to scroll to other selectable calibration weights, see below table.

Type	Calibration Weight g / (kg)		
T572-30-A	50	100	200
T572-31-A	100	200	300
T572-32-A	100	200	400
T572-33-A	500	1000	1500
T572-35-A	500	1000	2000
T572-37-A	1000	2000	3000
T572-39-A	1000	2000	4000
T572-43-A	(2)	(5)	(10)
T572-45-A	(2)	(5)	(12)
T572-49-A	(5)	(10)	(15)
T572-55-A	(5)	(10)	(20)
T572-57-A	(5)	(10)	(20)
Type	**Calibration Weight g / (kg)**		
TDS 3K0.01S-A	1	2	3
TDS 5K0.05S-A	1	2	5
TDS 8K0.05-A	2	5	8
TDS 10K0.1S-A	2	5	10
TDS 16K0.1-A	5	10	15
TDS 20K0.1-A	5	10	20
TDS 30K0.1-A	10	20	30
TDS 30K0.1L-A	10	20	30
TDS 36K0.2-A	10	20	35
TDS 36K0.2L-A	10	20	35
TDS 60K0.2-A	20	40	60
TDS 65K0.5-A	20	40	60
TDS 100K0.5-A	20	50	100
TDS 150K1-A	50	100	150
TCDS 4K0.02-A	1	2	4
TCDS 15K0.05-A	5	10	15
TCDS 16K0.1-A	5	10	15
TCDS 30K0.1-A	10	20	30
TCDS 30K0.1L-A	10	20	30
TCDS 36K0.2L-A	10	20	35
TCDS 60K0.2-A	20	40	60

6. Press ➔, display show zero, then ptld, then display calibration weight.
7. Place the calibration weight onto the scale gently.
8. Press ➔, display show wait, then remvld. Remove the calibration weight. Scale will return to the weigh mode and display weight.

Note:

- In step 8, in case Wrong is displayed, this indicates a calibration error. Turn the scale off and then on and repeat the procedures.
- Press ↓↑ to scroll. Press ← to esc/exit. Press → to enter/confirm.
- There is an alternative way to enter the calext menu through the service menu.

4.2 Linearization Procedure

1. Allow the scale to acclimatize and stabilize for sufficient time.
2. Turn on the scale, press and hold ON/OFF and TARE key immediately to enter the service menu. Display shows Adjust.
3. Press ↓ or ↑ to scroll to TYPINF. Press →, display show CONFIG.
4. Press → to select the series, 572, DS or CDS. If power reset, enter Config menu again. Press ↓ or ↑ to select model.

Type 572	Display
T572-30-A	572-30
T572-31-A	572-31
T572-32-A	572-32
T572-33-A	572-33
T572-35-A	572-35
T572-37-A	572-37
T572-39-A	572-39
T572-43-A	572-43
T572-45-A	572-45
T572-49-A	572-49
T572-55-A	572-55
T572-57-A	572-57
Type DS	**Display**
TDS 3K0.01S-A	3K0.01S
TDS 5K0.05S-A	5K0.05S
TDS 8K0.05-A	8K0.05
TDS 10K0.1S-A	10K0.1S
TDS 16K0.1-A	16K0.1
TDS 20K0.1-A	20K0.1
TDS 30K0.1-A	30K0.1
TDS 30K0.1L-A	30K0.1L
TDS 36K0.2-A	36K0.2
TDS 36K0.2L-A	36K0.2L
TDS 60K0.2-A	60K0.2
TDS 65K0.5-A	65K0.5
TDS 100K0.5-A	100K0.5
TDS 150K1-A	150K1
Type CDS	**Display**
TCDS 4K0.02-A	4K0.02
TCDS 15K0.05-A	15K0.05
TCDS 16K0.1-A	16K0.1
TCDS 30K0.1-A	30K0.1
TCDS 30K0.1L-A	30K0.1L
TCDS 36K0.2L-A	36K0.2L

5. Press ➔ to confirm model selection. Display will turn off.
6. Turn on the scale, press and hold ON/OFF and TARE key immediately to enter the service menu again. Display shows Adjvst.
7. Press ➔, display show CAL.
8. Press ↓ or ↑ to scroll to LINEAR. Press ➔, display show 3point.
9. Press ↓ or ↑ to scroll to 5point or 3point.
10. Press ➔, display show wait, then zero, then put ld, then the standard weight for the first point.
11. Place the calibration weight onto the scale gently.
12. Press ➔, display show wait, then remvld. Remove the calibration weight. Display show put ld, then the calibration weight for the next point.
13. Repeat step 11 and 12 until display show succes.

5 Maintenance

5.1 Service, maintenance

The appliance may only be opened by trained service technicians who are authorized by KERN.
Disconnect the scales before opening.

5.2 Error Codes

Error message	Explanation
zerohi	Zero too high at power up
zerolo	Zero too low at power up
zlimit	Over zeroing range
UnderZ	Under zeroing range
instab	Unstable weight
wrong	Adjustment error
lobat	Batteries / rechargeable battery exhausted
⌊ _ _ _ _ ⌋	Over weight
⌈ = = = = ⌉	Under weight

5.3 Trouble Shooting

Power on

↓

Full Segments?

If no display,

- check battery / power adaptor,
- check connection between keyboard—main board,
- check connection between battery / power adaptor—main board.

If missing segments,

- check fixing of LCD frame, zebra connector under LCD.

↓

Display Zero?

If display [LO bat], check battery >4.2V, power adaptor ~6V.

If display [zerohi] or [zerolo] check the load cell connections, load cell damaged?

If display [instab] weight platform, overload stopper, loadcell and wires terminal, environment and stable table.

↓

Proper readout?

If unstable reading, check weight platform, overload stoppers, loadcell and wires, environment and stable table.

If always zero, check ADC. Linearization if necessary.

↓

Correct reading?

If not accurate, perform adjustment or linearization.

If cannot reach full capacity, check tray top, overload stopper, loadcell.

↓

Buttons functioning?

If some buttons not working, check the tact switch. Replace tact switch if needed.

↓

Interface functioning?

If interface not working, check the connection wires.

↓

Normal operation.

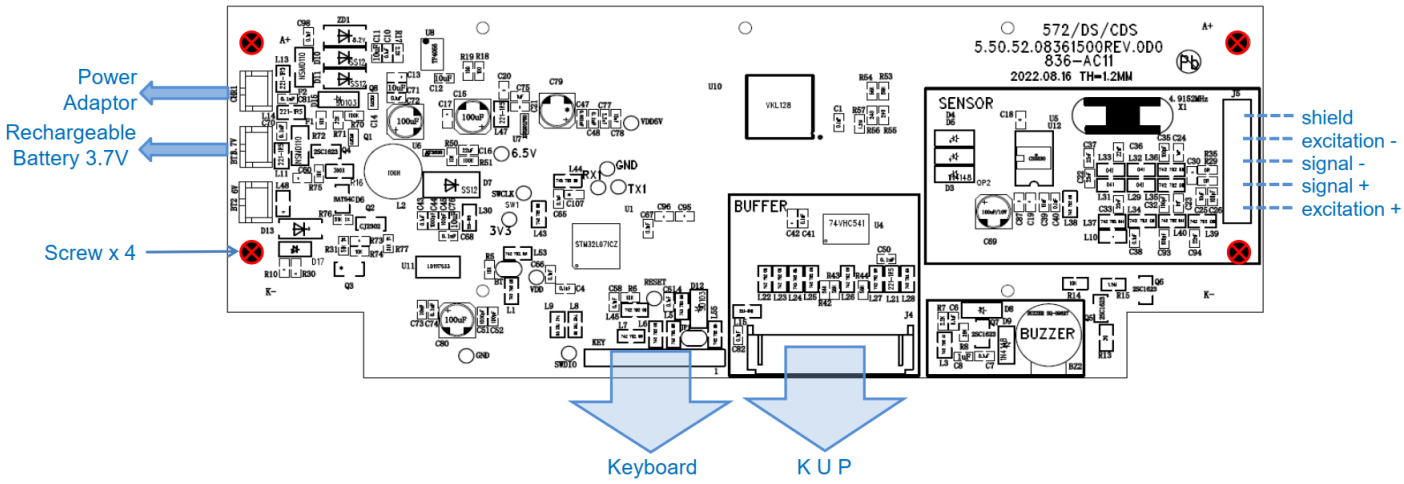
6 Exchange of components

6.1 Spare parts list

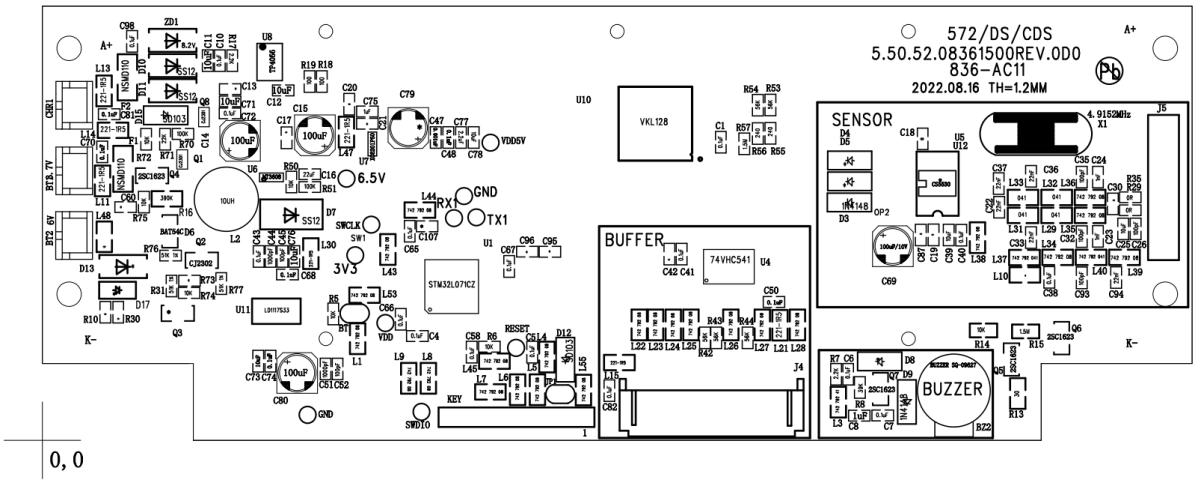
1.15.0836130	Keyboard Overlay DS (TEF-DS-003-A)
1.15.0836140	Keyboard Overlay CDS (TEF-CDS-004-A)
6.01.45.05720000	Keyboard Overlay 572 (TEF-572-110-A)
4.37.03.08351900	Battery door DS/CDS
6.02.50.08360000	Working Cover DS/CDS
5.90.06.10009000	Power adaptor 6V 1A 3-plug

7 Technical drawings

7.1 Wiring Diagram

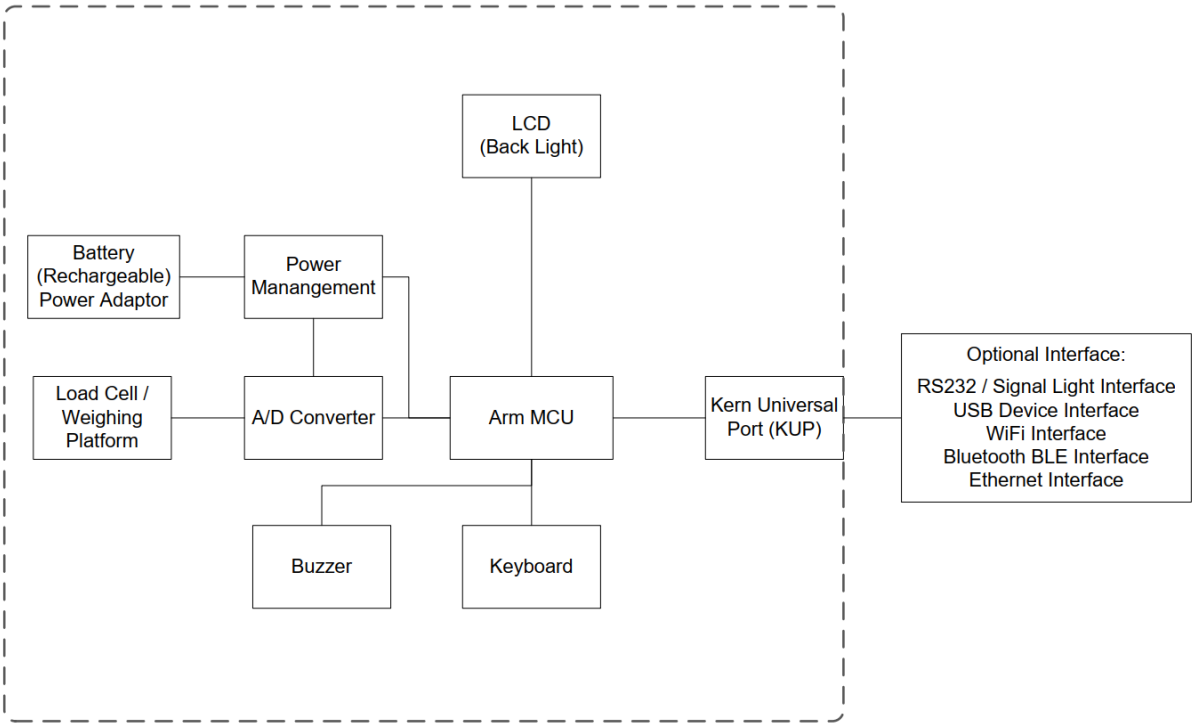


7.2 Component Diagram

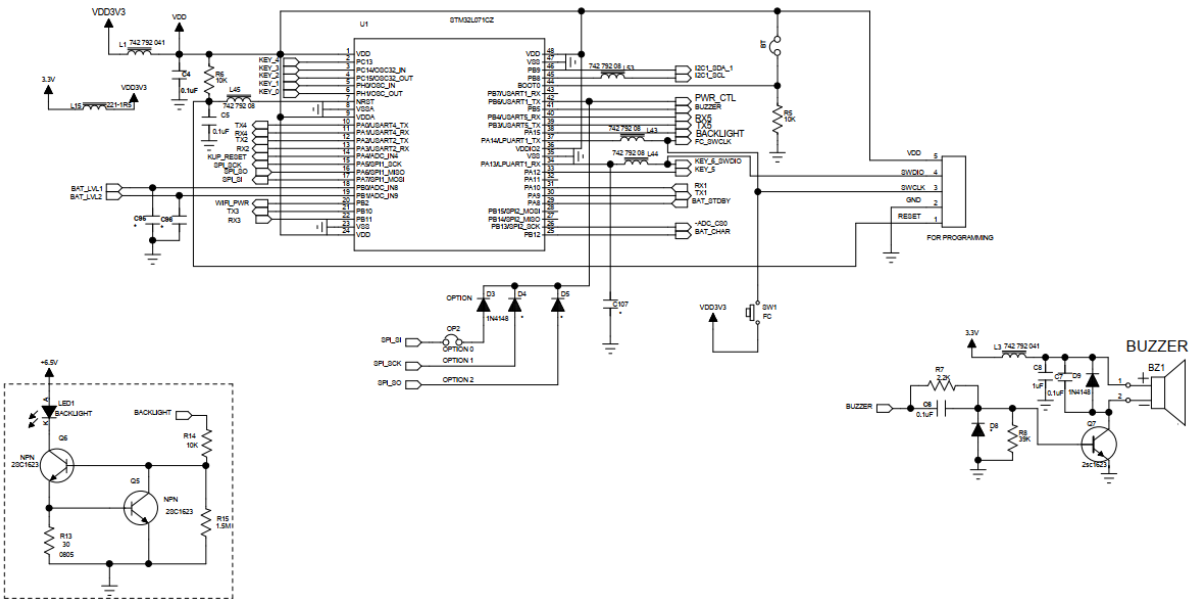


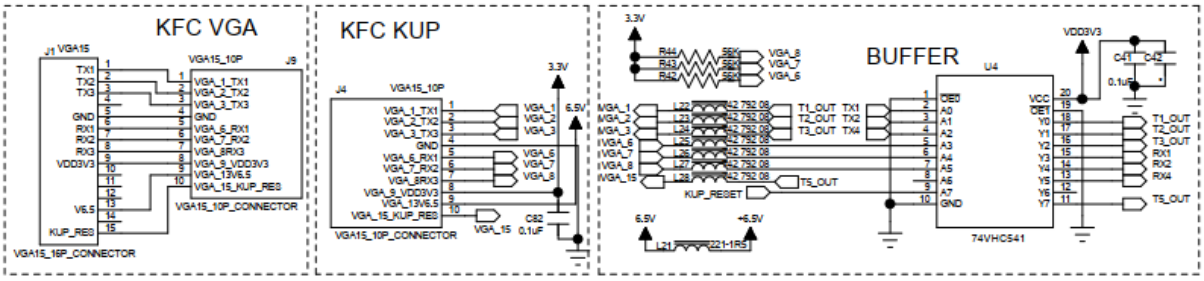
7.3 Functional Block Diagram

DS / CDS / 572 Functional Block Diagram



7.4 Schematic Diagram





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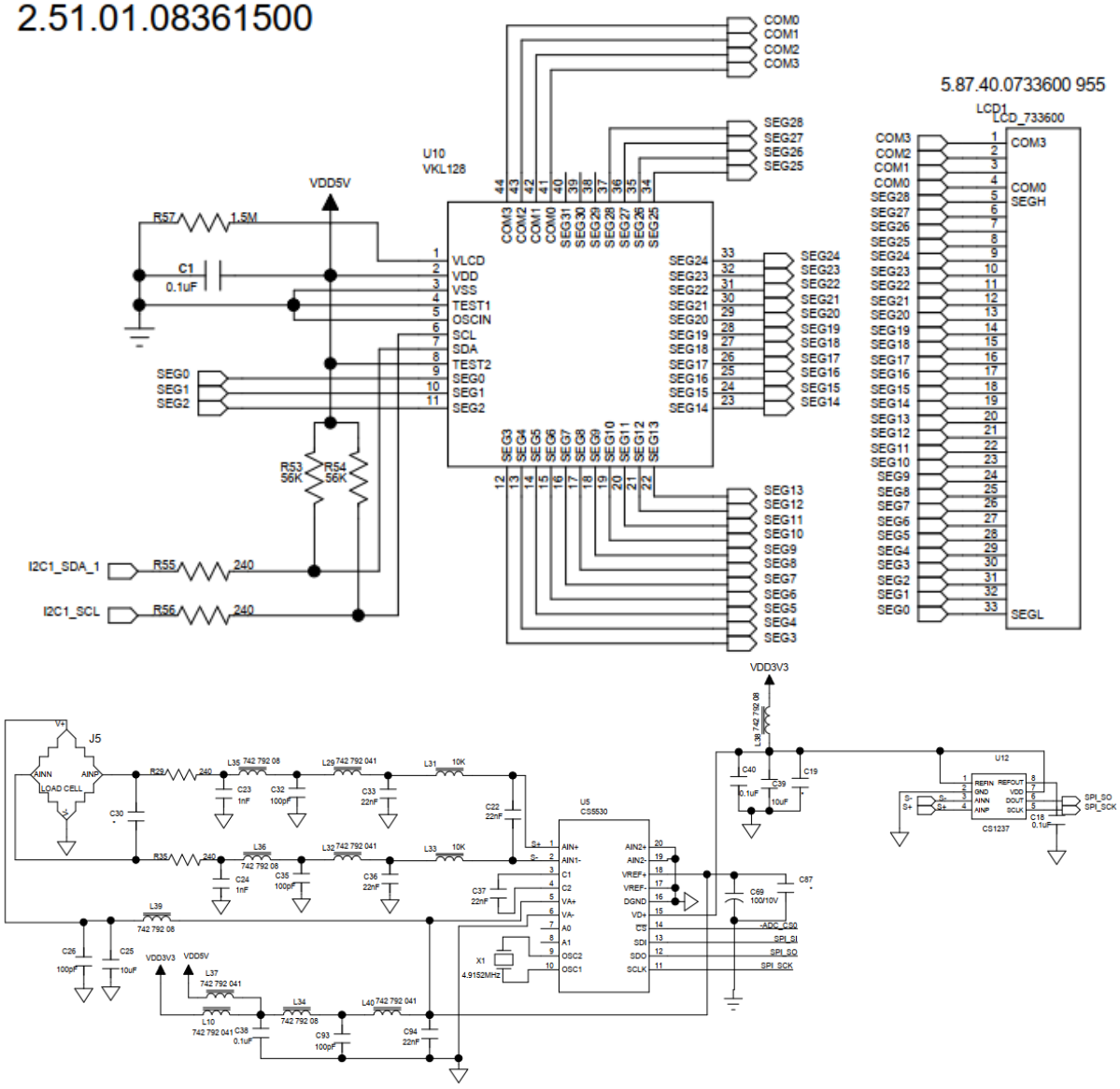

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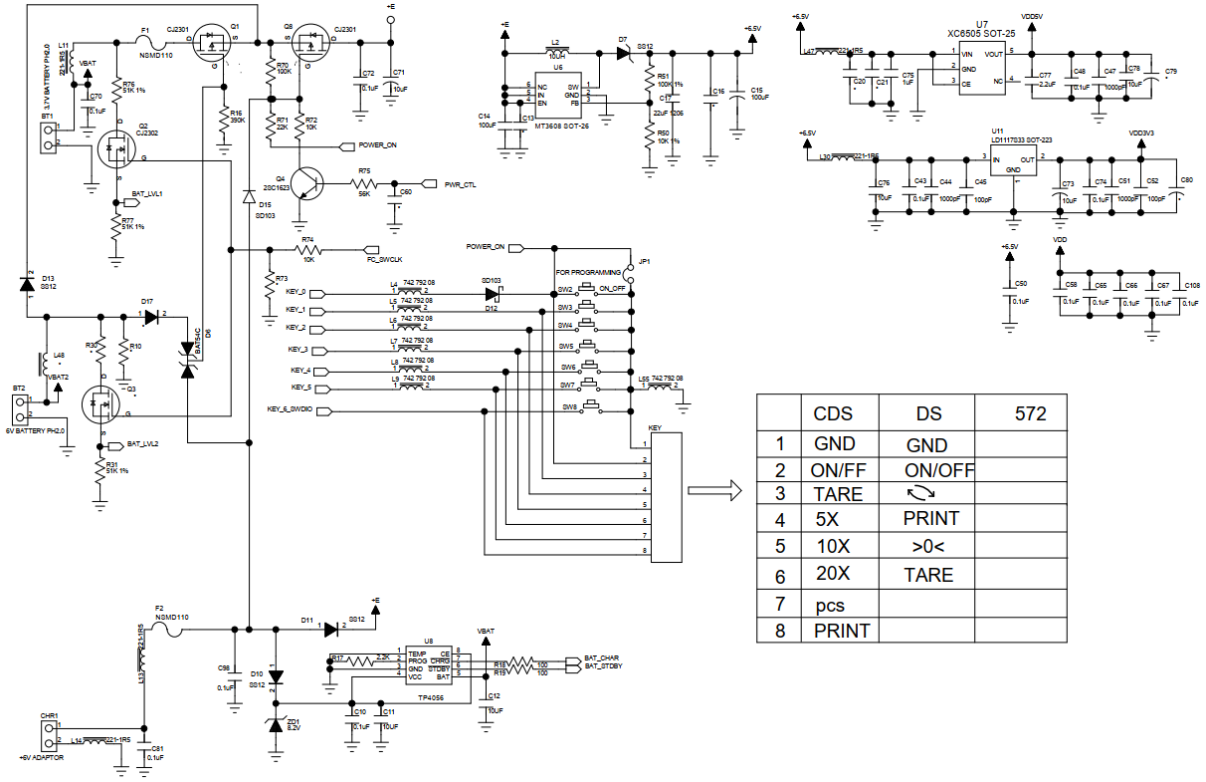

	CDS	DS	572
1	GND	GND	
2	ON/FF	ON/OFF	
3	TARE	↘	
4	5X	PRINT	
5	10X	>0<	
6	20X	TARE	
7	pcs		
8	PRINT		