

**MS43 DME - EWS Synchronization for work on the table**

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# Required Items

- Inpa K+DCan Cable
- BMW Scanner 1.4
- EWS Editor Lite



- DME MS43
  - EWS3 + Transponder chip (PCF7935A)+Transponder Coil
  - KMB(IKE) Cluster Unit (same type of year)
- Each module was obtained secondhand.**

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# Vehicle Orders for Cluster Units

- Vehicle Order (Car equipment information) = VO

Ex. Xenon headlights, Automatic Transmission

- ZCS Type (~9/2001) VO is written in KMB(Cluster)& EWS

- FA Type (9/2001~) VO is written in AKMB(Cluster)& ALSZ

Need the same type of Cluster Unit as your car

# EWS 3/4 Test Platform

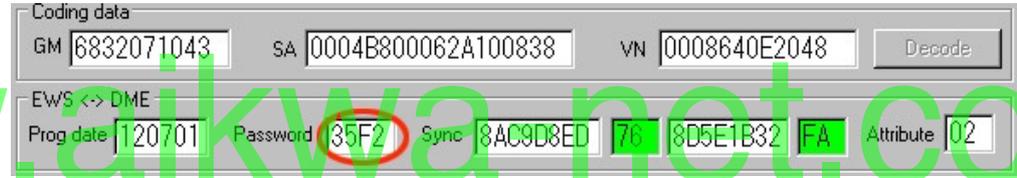
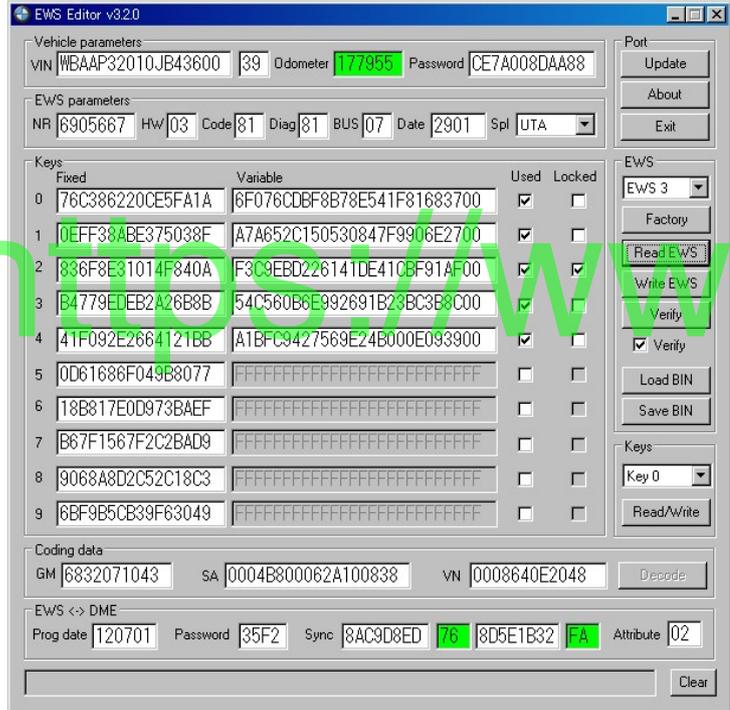
- Transponder coil required for EWS operation
- I used a modified EWS3/4 Test Platform instead of a transponder coil.



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# EWS Editor Lite

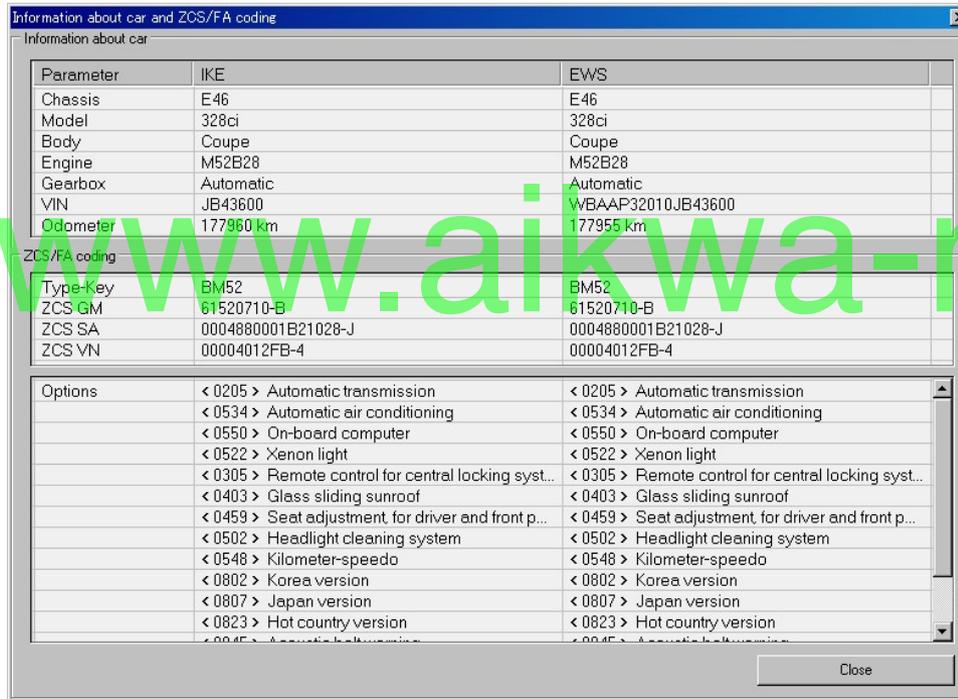
- EWS~DME ISN Code (Password)



ISN Code 35 F2

# Check communication of each module

- Check the communication of the three modules using BMW Scanner.



The screenshot shows a window titled "Information about car and ZCS/FA coding". It contains two main sections: "Information about car" and "ZCS/FA coding".

**Information about car**

Parameter	IKE	EWS
Chassis	E46	E46
Model	328ci	328ci
Body	Coupe	Coupe
Engine	M52B28	M52B28
Gearbox	Automatic	Automatic
VIN	JB43600	WBAAAP32010JB43600
Odometer	177960 km	177955 km

**ZCS/FA coding**

Parameter	IKE	EWS
Type-Key	BM52	BM52
ZCS GM	61520710-B	61520710-B
ZCS SA	0004880001B21028-J	0004880001B21028-J
ZCS VN	00004012FB-4	00004012FB-4

**Options**

Option	IKE	EWS
< 0205 > Automatic transmission	< 0205 > Automatic transmission	< 0205 > Automatic transmission
< 0534 > Automatic air conditioning	< 0534 > Automatic air conditioning	< 0534 > Automatic air conditioning
< 0550 > On-board computer	< 0550 > On-board computer	< 0550 > On-board computer
< 0522 > Xenon light	< 0522 > Xenon light	< 0522 > Xenon light
< 0305 > Remote control for central locking syst...	< 0305 > Remote control for central locking syst...	< 0305 > Remote control for central locking syst...
< 0403 > Glass sliding sunroof	< 0403 > Glass sliding sunroof	< 0403 > Glass sliding sunroof
< 0459 > Seat adjustment for driver and front p...	< 0459 > Seat adjustment for driver and front p...	< 0459 > Seat adjustment for driver and front p...
< 0502 > Headlight cleaning system	< 0502 > Headlight cleaning system	< 0502 > Headlight cleaning system
< 0548 > Kilometer-speedo	< 0548 > Kilometer-speedo	< 0548 > Kilometer-speedo
< 0802 > Korea version	< 0802 > Korea version	< 0802 > Korea version
< 0807 > Japan version	< 0807 > Japan version	< 0807 > Japan version
< 0823 > Hot country version	< 0823 > Hot country version	< 0823 > Hot country version
< 0845 > Acoustic bulkhead	< 0845 > Acoustic bulkhead	< 0845 > Acoustic bulkhead

Close

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# Preparation of software and data files

- Flashing Tools (MS4X WIKI)
  - JMGarage Flasher
  - MS4X Flasher (Activation is required)
- DME Editor
  - Tuner Pro (<https://www.tunerpro.net/>)
    - TunerPro MS43 Community Patchlist (MS4X WIKI)
    - VIN to HEX (Search by "Vin to hex converter")
- Firmware (MS4X WIKI)
  - Siemens\_MS43\_MS430069\_E46\_M54B30\_EU4\_RHD.bin

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# Work Procedures

1. Writing VIN to the downloaded DME data file

(Using Tuner Pro, VIN to HEX and TunerPro MS43 Community Patchlist)

2. Check the checksum of the file created in 1.

(Using MS4X Flasher)

3. Writing to DME with bootmode

(Using JMGarage Flasher)

4. Synchronization of EWS and DME (Using INPA)

5. Confirmation of synchronized data (Using INPA)

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# How to check MS43 DME ISN Code

Check this the 2 bytes of the following address match the EWS Editor password

Read ROM

Start address : 0x3ED0  
Number : 32  
Data : 0x00003ED0 FF FF FF FF 0D CA F2 CA 0D 35 FF FF FF FF FF FF  
0x00003EE0 FF FF FF FF FF FF FE FE FE FE FE FE A5 A5 A5 A5

**0x00003ED9 0x35**  
**0x00003ED6 0xF2**

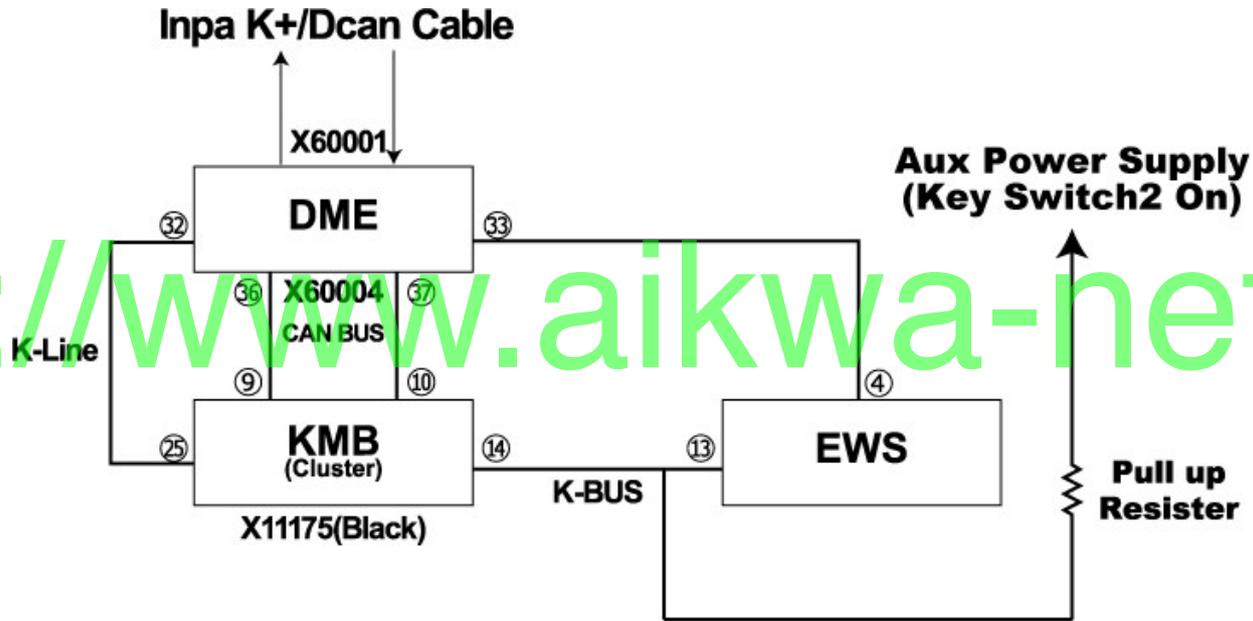
EWS <-> DME										
Prog date	120701	Password	35F2	Sync	8AC9D8ED	76	8D5E1B32	FA	Attribute	02

# Synchronization for work on the table.

- Introduce the wiring diagram for synchronizing the EWS with the DME on the table.

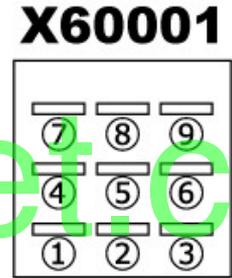
<https://www.aikwa-net.com>

# Configuration of each module



# Connection with INPA cable

- MS4x Wiki (<https://ms4x.net>) How to connect
- DME(MS43)
- ④⑤⑥ GND
- ③ K-Line
- ⑦ Vcc (TERM 30) 12V (always on Power Supply)
- ①⑧ Aux Power Supply (Key Switech2 On)



# Connection with INPA cable

- I use a modified cable for DME sold on ebay.

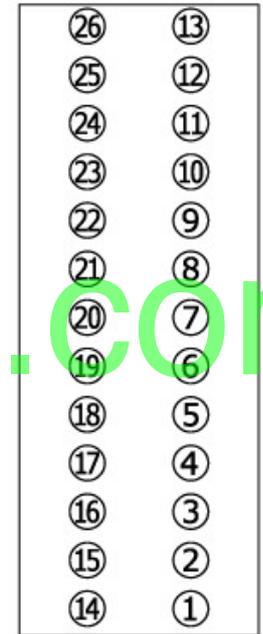


- Only the 7-pin of this cable was modified to be a always-on power connection.

# Connection to KMB(Cluster Unit)

- ① GND
- ④ Vcc (TERM 30) 12V (always on Power Supply)
- ⑤ Aux Power Supply (Key Switech2 On)
- ⑨ CAN BUS H → DME MS43 X60004 ③⑥
- ⑩ CAN BUS L → DME MS43 X60004 ③⑦
- ⑫ K-Line → DME MS43 X60004 ③②
- ⑭ K-BUS → EWS X1658 ⑬

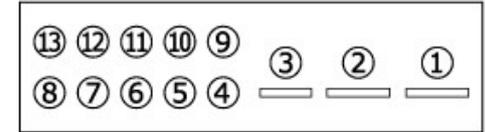
X11175 (26Pin)



# Connection to EWS

- ⑩ Vcc (TERM 30) +12V (always on Power Supply)
- ⑪ Aux Power Supply (Key Switech2 On)
- ⑨ GND
- ④ IMMO CODE SIGNAL → DME MS43 X60004 ⑩
- ⑬ K-BUS → KMB X11175 ⑭
- ⑤⑫ Transponder Coil

## X1658



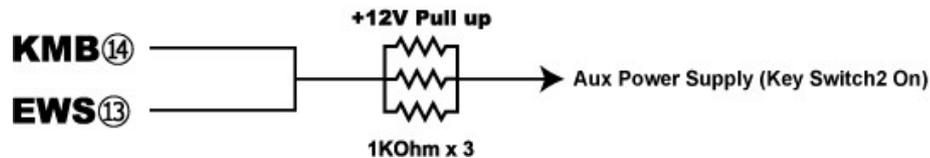
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# Wiring for K-BUS

- K-BUS requires a pull-up resistor to be connected.
- The K-BUS device (KMB, EWS) is connected as shown in the figure below.
- Three 1/4W 1K Ohm resistors were used, connected in parallel.

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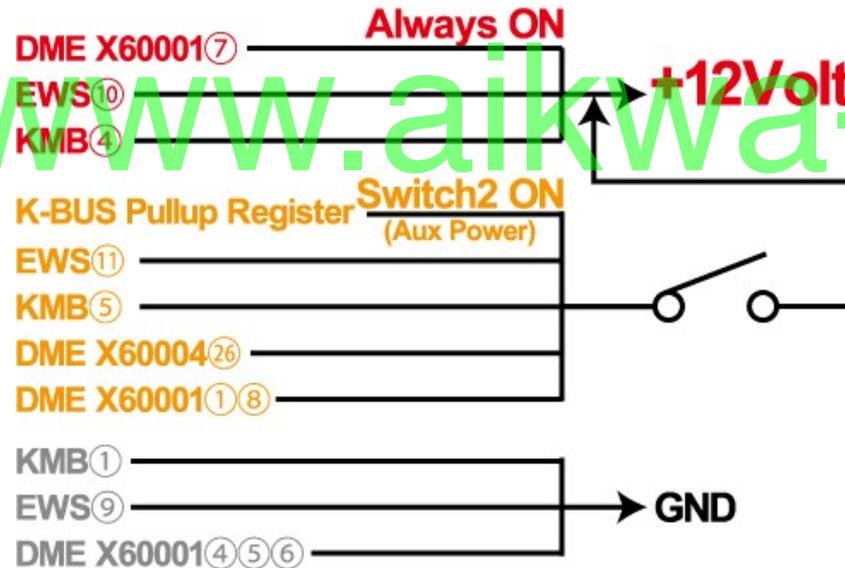
## K-BUS



# Important

- DME X60004 ②⑥ to Aux Power Supply (Key Switch2 On)
- Be sure to reproduce Key position 2. (Aux Power Supply)

## Wiring for power supply



# Thank you for watching!

- The materials used in this video are distributed as PDF files at the following URL

<https://www.aikawa-net.com/view/1378>

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