



OICA and CLEPA joint position

on

ECE-TRANS-WP.29-GRE-2023-27e-Rev.1

OICA – CLEPA joint position

- IWG-EMC, under the leadership of by Zissis Tsakiridis, with input from the industry experts (OICA, CLEPA) and Contracting Parties has produced an excellent proposal (ECE-TRANS-WP.29-GRE-2023-27e-Rev.1) containing 100+ changes to R10.06
 - Updates regulation to address the latest developments in the industry
 - Aligns with progress made in many international standards
 - Enhances uniform interpretation and application
- OICA and CLEPA support the proposal with two exceptions and recommend two changes are implemented which are detailed in GRE-90-23

OICA and CLEPA position 1 of 2

- Decision flowcharts have been introduced to some annexes to achieve uniform implementation of test selection with mode 2 charge cords
- Footnote 1 included in the flowchart

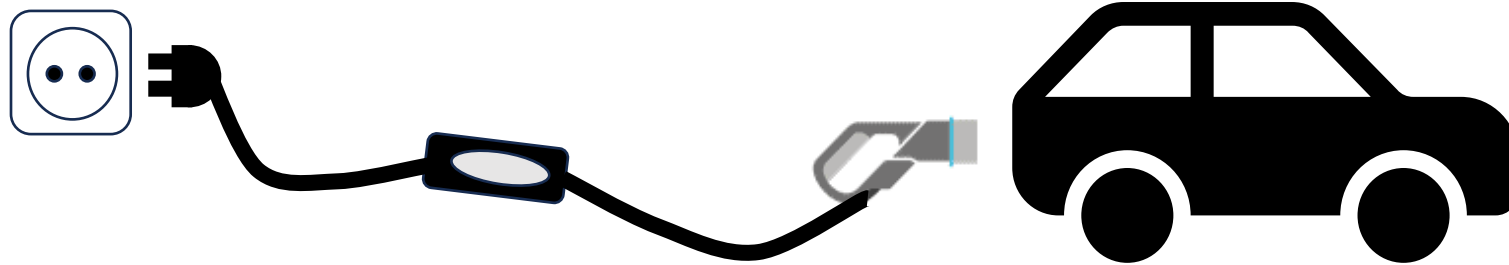
*¹ IEC 61851-21-2 tests shall be performed by an ISO17025 accredited laboratory **recognised by any Technical Service designated by the type approval Authority.** The test report shall be provided by the vehicle manufacturer as evidence for the vehicle type approval.*

- This note introduces dual qualification requirements for test laboratories, (text highlighted above)
- We request the highlighted text to be removed.

OICA and CLEPA position 2 of 2

- Modulations used in Annexes 6 and 9 have been updated to reflect changes to the radio spectrum
- Current draft (GRE-2023-27e-Rev.1) is aligned with interim **drafts of ISO 11451-1 and ISO11452-1 which were available after October 2022.**
- In Feb 2024, International Standardisation bodies have revised the applicable frequency ranges of specific modulations based on a comprehensive research.
- OICA & CLEPA experts recommend **alignment with the Final Draft of ISO 11451-1 and ISO11452-1**

1- Dual qualification requirements (in relation to Mode 2 charge cords)



- In-Cable Control and Protection Devices (ICCPDs) may be supplied with the vehicle or purchased aftermarket
- Vast choice available to consumers
- All ICCPDs must meet relevant IEC standards as part of national legislation (e.g. CE, UKCA etc).
- R10 vehicle tests include ICCPDs

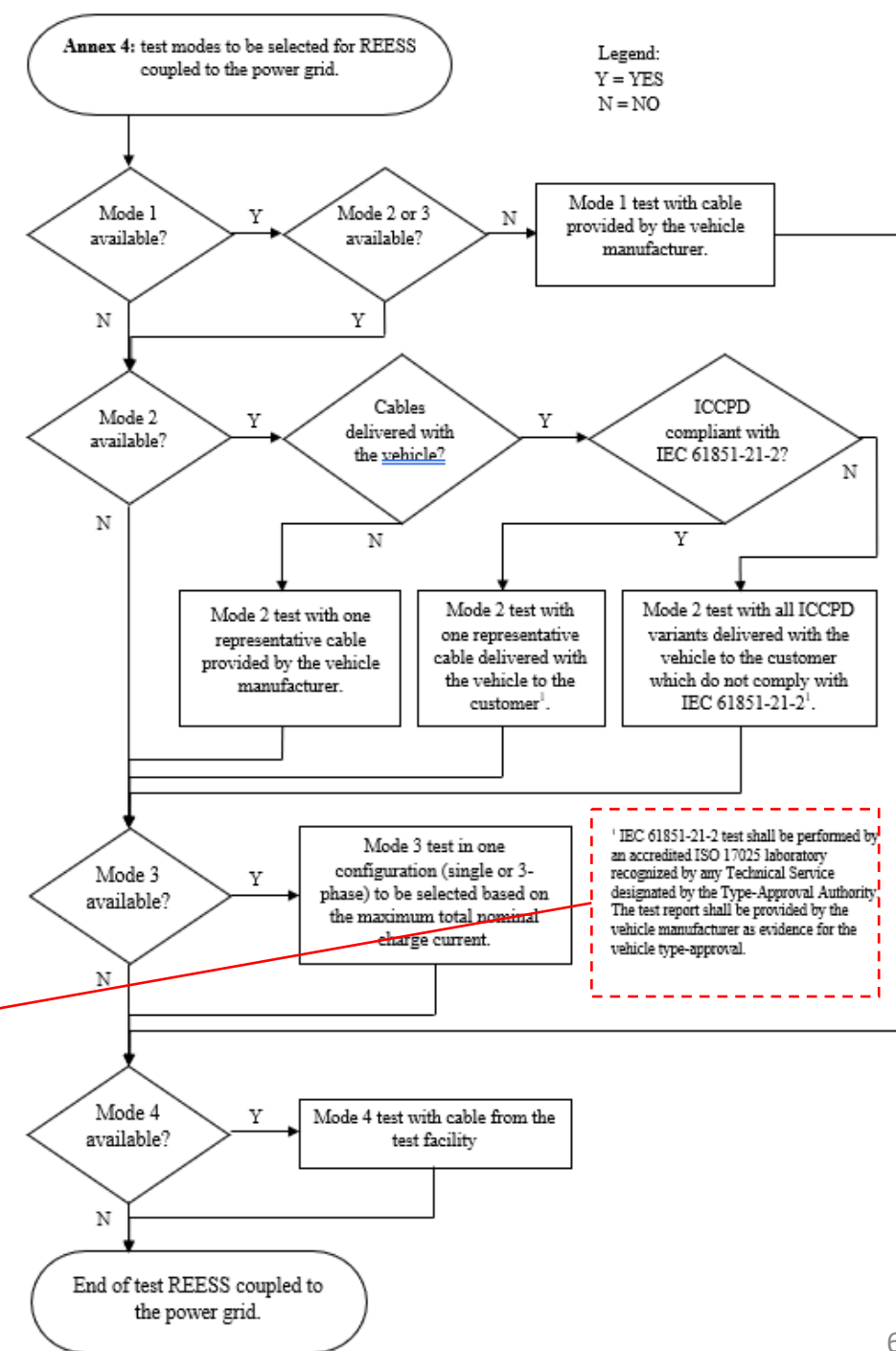


Dual qualification requirements:

Mode 2 test applicability is based on

- (1) delivery of mode 2 cable with the vehicle and
- (2) compliance status with IEC 61851-21-2

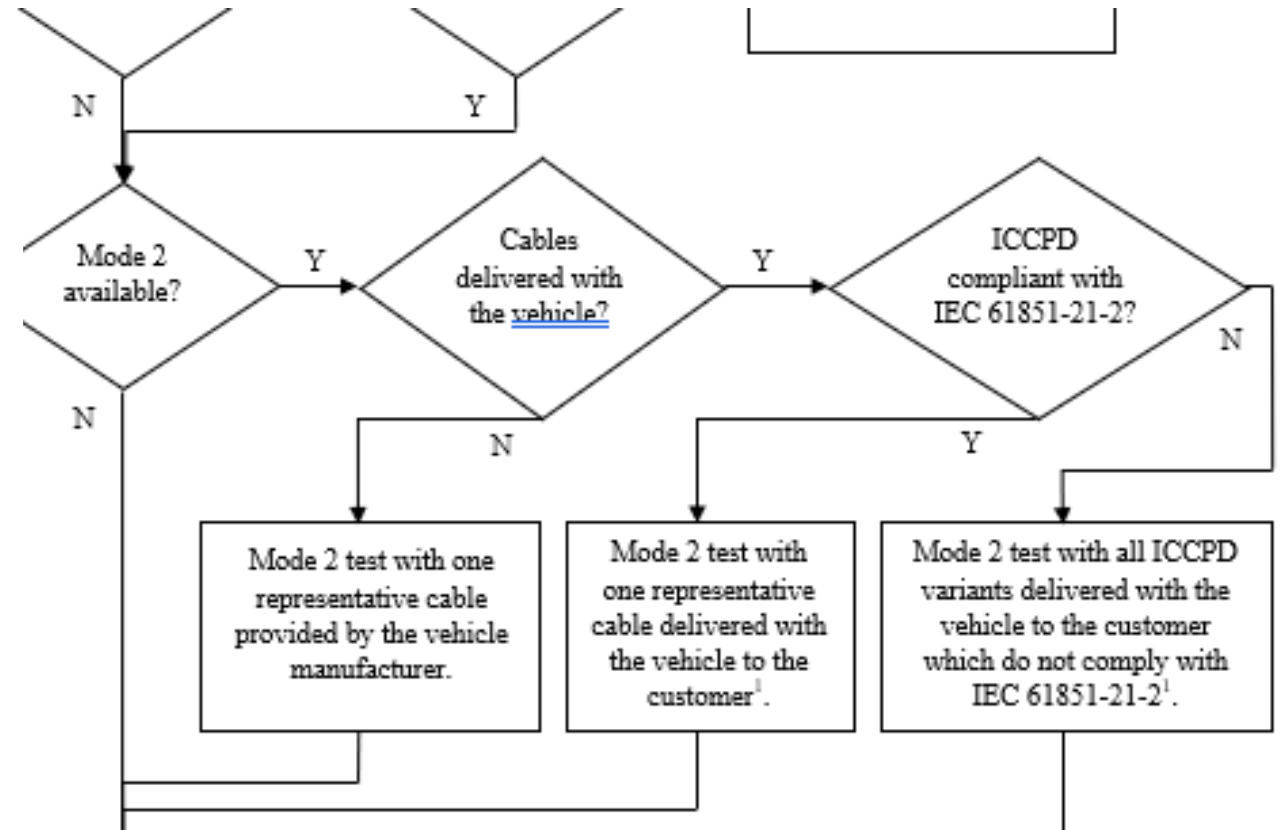
• IEC 61851-21-2 tests shall be performed by an accredited **ISO17025 laboratory recognised by any Technical Service designated by the type approval Authority**. The test report shall be provided by the vehicle manufacturer as evidence for the vehicle type approval.



Dual qualification requirements:

Mode 2 test applicability is based on

- (1) delivery of mode 2 cable with the vehicle and
- (2) compliance status with IEC 61851-21-2



- (1) IEC 61851-21-2 tests shall be performed by an accredited **ISO17025 laboratory recognised by any Technical Service designated by the type approval Authority**. The test report shall be provided by the vehicle manufacturer as evidence for the vehicle type approval.

Justification for objections

- Eligibility criteria requires dual qualifications to ISO 17025 **AND** to be recognised by any Technical Service designated by the type approval Authority
- Economic disadvantage to some countries:
 - Some (~ 8 countries) that have signed the 1958 agreement lack both a technical service and a lab recognised by a technical service.
- Restriction of competition:
 - In Germany for example, there are 336 test laboratories accredited to ISO/IEC 17025, but only 72 labs are recognized by a Technical Service. This will restrict the number of available laboratories and reduce competition.
- Lack of clear benefits
 - The effort for testing Mode 2 cables is not justified: There is neither a technical benefit nor a benefit related to better compliant results. Instead, it restricts free competition among labs and puts countries without any qualifying labs at an economic disadvantage.
- Use of laboratories accredited to ISO/IEC 17025 is sufficient and addition of the requirement of recognition by the technical service will not improve compliance results but instead will restrict competition and disadvantage some signatories to the 1958 agreement.

Recommendation: Remove “recognised by any Technical Service designated by the Type Approval Authority”.

2. Revise frequency ranges of modulations used in Annexes 6 & 9

- Tests in Annexes 6 and 9 verify that vehicles can operate safely in the presence of external radio frequency signals from **intentional radio transmitters**.
- **Radio transmitters** use carrier signals which are modulated by the intended information.
 - AM Modulation changes the amplitude of the carrier. Used by analogue device, e.g. MW radio broadcast, analogue 2-way radio.
 - Pulse modulation pulses the transmitted signal. Used by digital devices such as cellular communications, Wi-Fi
- Industry experts recommend the applicable frequency ranges of modulations used during radiated immunity tests are **aligned with the latest versions (DIS) of ISO 11451-1 and ISO11452-1**
- Specific changes we request are to extend the use of PM3 to start from 380 MHz instead of 800, and to limit the use of AM modulation to 20-400 MHz instead of 20-800MHz.

Justification for the request

- Previous agreement in IWG was to align with ISO standards 11451-1 and 11452-1
- GRE/2023/27e-Rev.1 is aligned with previous interim drafts (Draft International Standards) which have since been updated based on technical research and are scheduled for publication in March 2025 (before the applicability date of ECE R10.07.)
- Modulation schemes and frequency ranges have been carefully selected to replicate actual threats from radio transmitters (cellular phones, WiFi)
- We recommend to extend the applicability of certain Pulse Modulation scheme (PM3) for robustness.
- Modulation details are embedded in the regulation and hence it is not needed to reference Draft International Standards.
- Failure to change: R10 will **not align with** ISO standards (Current or future).

Recommendation: Align applicability of AM and PM3 modulation with ISO draft standards (2025)

Summary

OICA and CLEPA experts recommend the adoption of draft ECE R10.07 with the adoption of 2 changes

1. Revise footnote 1 in flowcharts as follows:

IEC 61851-21-2 tests shall be performed by an accredited ISO/IEC 17025 laboratory ~~recognised by any Technical Service designated by the type approval Authority.~~ The test report shall be provided by the vehicle manufacturer as evidence for the vehicle type approval.

2. Revise modulation section in Annexes 6 & 9 as follows:

- a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to ~~800~~ 400 MHz frequency range; and
- b) PM2 (pulse modulation type 2), Ton 3 μ s, period 3,333 μ s in the 2,700 to 3,100 MHz frequency range; and
- c) PM3 (pulse modulation type 3), Ton 500 μ s, period 1,000 μ s in the ~~800~~ 380 to 2,700 MHz and the 3,100 to 6,000 MHz frequency ranges.

Thank You

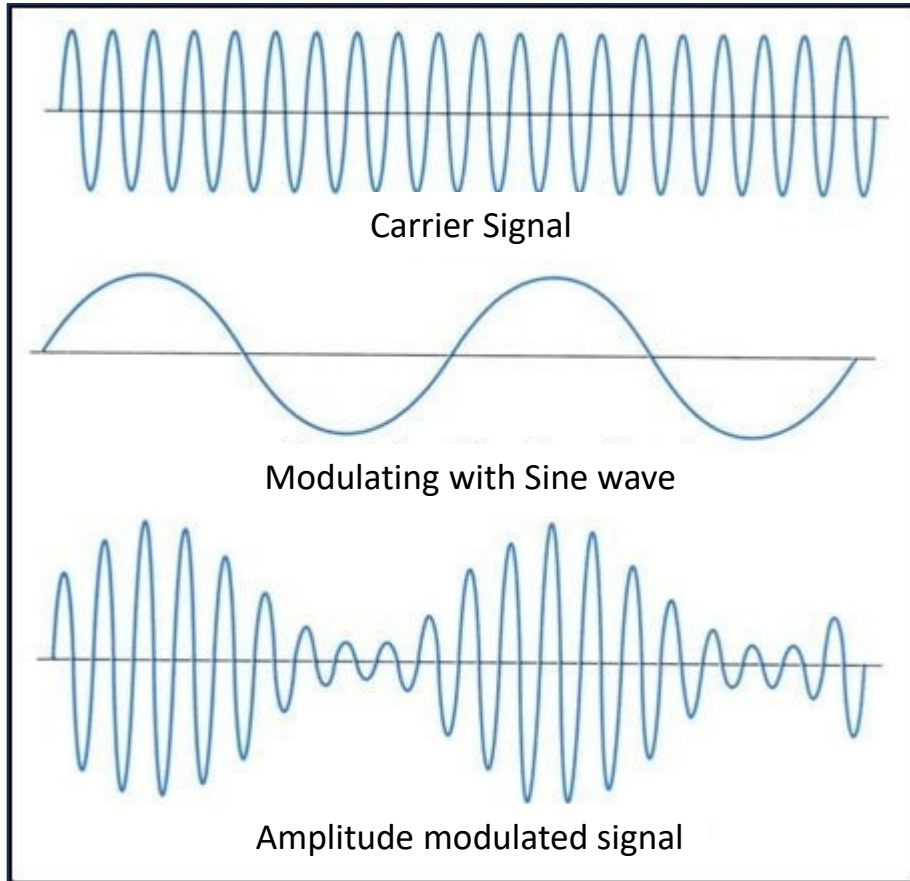
Backup information

Details of the change

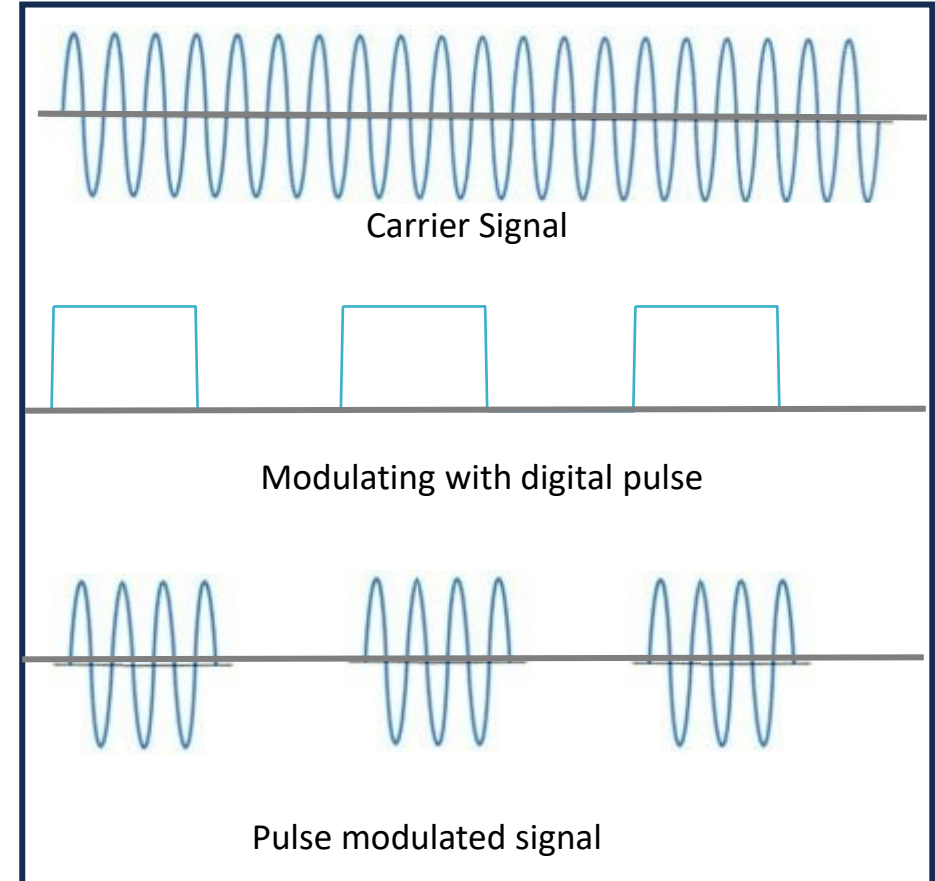
- **The test signal modulation shall be:**
 - a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to ~~800~~ 400 MHz frequency range; and**
 - b) PM2 (pulse modulation type 2), Ton 3 μ s, period 3,333 μ s in the 2,700 to 3,100 MHz frequency range; and**
 - c) PM3 (pulse modulation type 3), Ton 500 μ s, period 1,000 μ s in the ~~800~~ 380 to 2,700 MHz and the 3,100 to 6,000 MHz frequency ranges.**

Summary: Extend the use of PM3 to start from 380 MHz instead of 800. Limit use of AM to 400 MHz

What is modulation?



Used by analogue devices – e.g. MW radio, analogue 2-way-radio



Used by digital devices – e.g. cellular phone, WiFi, etc.