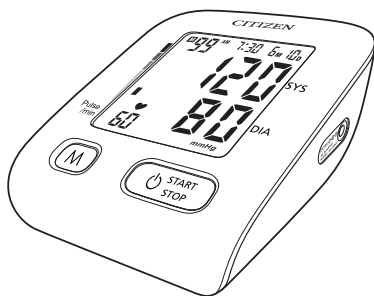


INSTRUCTION MANUAL FOR DIGITAL BLOOD PRESSURE MONITOR

CHUD514 CHUD517



English

Español

العربية

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Thank you very much for purchasing CITIZEN digital blood pressure monitor.

This device uses oscillometric method and is intended to be used for home use. It can measure the systolic blood pressure (SYS), the diastolic blood pressure (DIA) and the pulse rate.

Please read all of the information in this instruction manual before operating the device. Ensure that you have all the following components and use only our authorized parts and accessories.

- Blood pressure monitor unit
- Instruction manual
- 4 AA-size batteries for demonstration purpose only
- Cuff (model: CHUD514: SCN-008, CHUD517: SCW-009)
- * AC adapter (model: AC-230CZ) is optional.

1. GENERAL REMARKS

- Be sure that the cuff size is appropriate to your arm circumference before attaching the cuff. Refer to the SPECIFICATIONS page for the size.
- If you feel urinate, do so before measuring your blood pressure.
- Take five or six deep breaths and then relax before measuring your blood pressure. If you are tense when taking measurement, you will not get a correct reading.
- Your blood pressure will be elevated if you are anxious or irritated, suffering from lack of sleep or constipation, or have just taken some exercise or eaten a meal.
- Do not measure your blood pressure after smoking, bathing or drinking alcohol, coffee or tea.
- Measure your blood pressure where the room temperature is around 68°F/20°C. Do not measure your blood pressure when it is below 41°F/5°C or above 104°F/40°C in the room.
- Measure your blood pressure when you are relaxed and still. Keep the cuff at the height of your heart and do not move your arm and talk.
- Analyzing blood pressure data gathered over a long period is more important than just checking one measurement. Choose the time of day that you are most likely to be able to maintain taking measurements and try to measure your blood pressure at the same time every day.

2. SYMBOL EXPLANATION



: Type BF applied part



: Keep dry



: Warning



: Caution



: Refer to instruction manual before use.



: Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.



Name: CITIZEN SYSTEMS JAPAN CO., LTD.
Address: 6-1-12, Tanashi-cho, Nishi-Tokyo-shi,
Tokyo 188-8511, Japan

Name: EMERGO EUROPE






: European representative Address: Prinsessegracht 20, 2514 AP
The Hague, The Netherlands




: The CE marking indicates the conformity of the product with the Union legislation applying to the product and providing for CE marking.



3. SAFETY PRECAUTIONS

	<p>Warning: Indicates a potentially hazardous situation which it may result in death or serious injury.</p>
	<p>Caution: Indicates a potentially hazardous situation which it may result in injury or property damage. The property damage refers to consequential damage to buildings, household, belongings, livestock, and pets.</p>

	<p>Consult your physician before using the device if you have following conditions such as heart disease, cardiovascular disease, common arrhythmias, such as atrial or ventricular premature beats or atrial fibrillation, arterial sclerosis, poor perfusion, diabetes, pregnancy, preeclampsia, renal disease, weak pulse, other blood circulatory diseases, or if you use a cardiac pacemaker.</p>
	<p>Do not use measurement results for self-diagnosis and self-treatment. Always consult your physician.</p>
	<p>If the battery fluid gets in your eyes or on your skin, rinse it off with water immediately and then receive treatment from your physician.</p>
	<p>Do not use the device on the injured arm or the arm under medical treatment.</p>
	<p>Do not attach the cuff on the arm while on an intravenous drip or blood transfusion.</p>
	<p>Do not share the cuff with other infective person to avoid cross-infection.</p>
	<p>Do not use the device in the vicinity of flammable gases such as those used for anesthesia. It could ignite the gases and cause an explosion.</p>
	<p>Do not use the device in enriched oxygen environments such as a hospital's hyperbaric chamber or oxygen tent. It could ignite the oxygen and cause a fire.</p>
	<p>The air hose of the cuff or the AC adapter cord may cause accidental strangulation in infants.</p>

	Do not use the device for any purpose other than measuring blood pressure.
	Do not attempt to disassemble, repair or modify the device or the cuff.
	Do not use the device for infants or persons who cannot express their intentions.
	Do not measure your blood pressure consecutively. It causes blood congestion and you will not get a correct reading. Wait at least a few minutes before measuring again.
	If you feel there is something abnormal with your body or you start to feel unwell during measurement, discontinue use and consult your physician.
	If the irregular heartbeat indicator appears frequently, consult your physician about your health.
	Press the "START/STOP" button to reduce the pressure immediately or remove the cuff if it does not start deflating during the measurement.
	Do not use device near a mobile phone, other devices that emit electromagnetic fields or in high electromagnetic environment. This could cause malfunction.

Some models of this device may utilize an AC adapter. In cases where the AC adapter may be used, please read the following precautions.

	When the product will not be used, unplug the power plug from the power outlet.
	When disconnecting the power plug from the outlet, do not pull the power cord. Always disconnect it by holding the power plug.
	Do not insert or disconnect AC adapter from power outlet while your hands are wet.
	Do not use the AC adapter if the power cord or plug is damaged or the plug is loose in the power outlet.
	Wipe off any dust on the power plug.
	Do not apply excessive force to the power cord or twist it, or tie the power cord in a bundle during use.
	Please use the dedicated AC adapter (model: AC-230CZ).

4. STORAGE, CLEANING AND MAINTENANCE

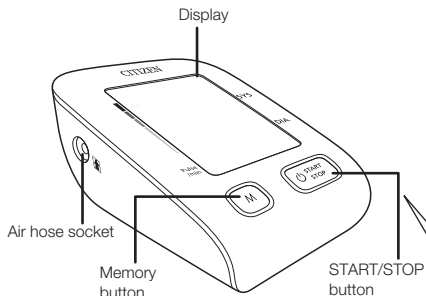
- Do not store the product in locations exposed to direct sunlight, high temperatures, low temperatures, high relative humidity or excessive amounts of dust. Refer to the SPECIFICATIONS page for the detailed storage conditions.
- Make sure to store the product where children, pets cannot reach and or pests are not there.
- Do not drop the device or the cuff and give any shocks or vibrations.
- Do not bend the cuff or the air hose excessively. The pressurization failure may result.
- Remove the batteries if the product will be left unused for a long period of time. There is a risk of failure due to fluid leaking from the batteries.
- Do not wash or get wet the cuff as well as avoid to get water into the air hose. The failure may result.
- Do not clean the device or the cuff with alcohol, thinners or benzine, as this could damage the product.
- In case the device or the cuff gets dirty, wipe off the dirt with cloth moistened with a neutral detergent, then wipe it with a dry cloth.
- It is recommended that the product is inspected every two years to ensure proper function and performance.

5. DISPOSING

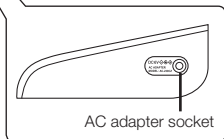
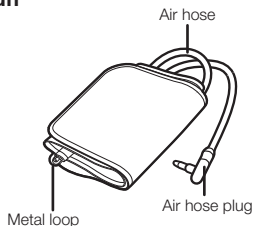
- When disposing of the device and cuff, do so properly in accordance with the local rules and regulations for where you live.
When disposing the battery, please help to protect natural environment by respecting national and/or local recycling regulations.

6. IDENTIFICATION OF PARTS

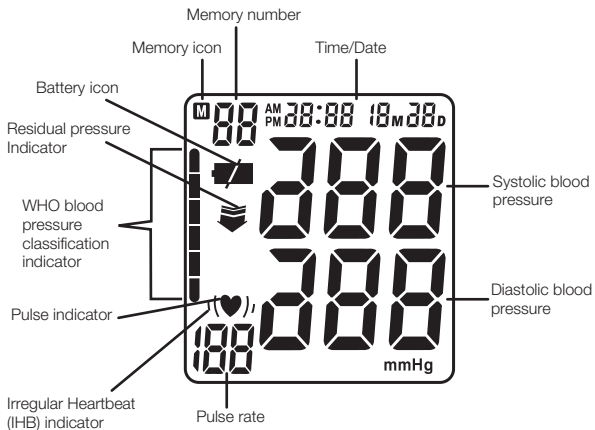
Main Unit



Cuff



Display



7. INSERT THE BATTERIES AND AC ADAPTER

- USING BATTERIES -

(1) **Remove the battery cover.**


Place a finger on the hook, and pull the cover toward you to open.

(2) **Insert the batteries.**

Be sure to insert the batteries into the negative \ominus side with the protruding springs first so as not to mix up the positive \oplus and negative \ominus terminals.

(3) **Close the battery cover.**

Fit the lugs into the recesses and close the battery cover until you hear a click.

- * When the battery icon  is displayed, or nothing appears in the display, replace all 4 batteries with new ones at once.
- * Do not use rechargeable and manganese (R6P) batteries.
- * Adjust the time and date after changing the batteries.
- * The data stored in the memory is not deleted by changing the batteries.

- USING AC ADAPTER -

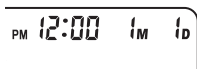
- (1) Insert the AC adapter plug into the AC adapter socket on the device.

8. TIME AND DATE ADJUSTMENT

This device can store measurement results together with the time and date of measurement. The clock can be displayed all the time, which is useful for remembering to take measurement at the same time every day for managing your daily health.

1 Time and date

When you insert the batteries for the first time, "time and date" is displayed.



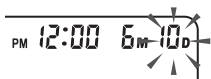
2 Month

Press and hold both the "⏻ START/STOP" button and the "M": memory" button for approximately 2 seconds. The "month" indicator begins flashing. Press the "M" button to adjust the "month". Press the button repeatedly to increase the month value. Press and hold the button to automatically cycle through month values. Press the "⏻ START/STOP" button to confirm the month setting.



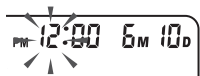
3 Date

After month is set, "date" indicator begins flashing. Press the **(M)** button to adjust the "date". Press the button repeatedly to increase the date value. Press and hold the button to automatically cycle through date values. Press the "START/STOP" button to confirm the date setting.



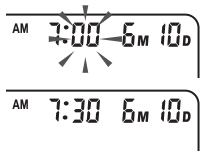
4 Hour

After date is set, "hour" indicator begins flashing. Press the **(M)** button to adjust the "hour". Press the button repeatedly to increase the hour value. Press and hold the button to automatically cycle through hour values. Press the "START/STOP" button to confirm the hour setting.



5 Minute

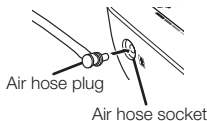
After hour is set, "minutes" indicator begins flashing. Press the **(M)** button to adjust the "minutes". Press the button repeatedly to increase the minutes value. Press and hold the button to automatically cycle through minutes values. Press the "START/STOP" button to confirm the minutes setting.



9. ATTACH THE CUFF

1 Insert the air hose plug into the main unit.

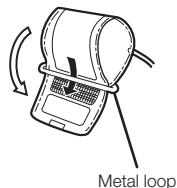
* Do not bend the air hose during measurement, which may cause inflation error or harmful injury due to continuous cuff pressure.



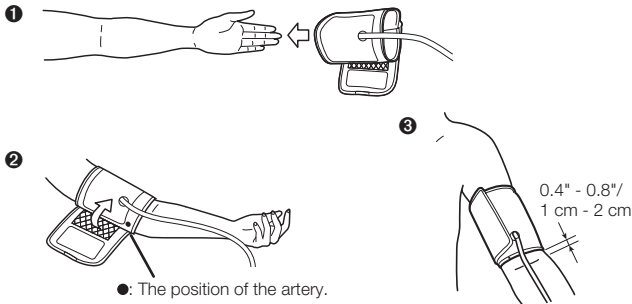
2 Attach the cuff.

Unroll the cuff and put the end of the cuff through the metal loop so that the side with the hook and loop fastener is on the outside.

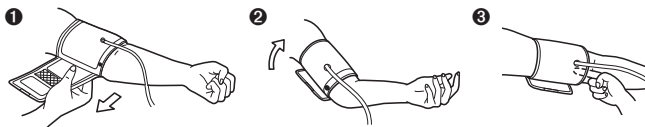
- * Be sure that the cuff size is appropriate to your arm circumference before attaching the cuff.
- * Attach the cuff over a bare arm or a thin sleeve.
- * If you roll up your sleeve, your upper arm will be constricted and this affects your result.
- * The blood pressure value is likely to differ between the right arm and left arm. Measure your blood pressure with the same arm each day.



- (1) Attach the cuff around your arm so that the air hose comes to the palm side and center of your arm. Adjust the position where the hem of the cuff is 0.4" - 0.8"/1 cm - 2 cm above your elbow.

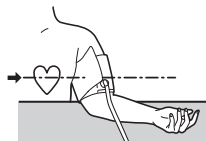


- (2) Pull the end of the cuff outwards so that the cuff is snug around your arm and then secure it with the hook and loop fastener. The appropriate tightness of attaching cuff is that if you can readily slide a finger between the cuff and your arm.



3 Adjust your posture.

- Seat comfortably with your feet flat on the floor and do not cross your legs.
- Place your arm on a table or similar surface with your forearm extended.
- Position your arm so that the cuff is at the same height as your heart.
- Place your hand so that your palm is facing upward and your fingers are relaxed.
- Do not move your body or talk during the measurement.
- When measuring your blood pressure while lying down, lie face up, straighten your arm and relax.



10. MEASURE YOUR BLOOD PRESSURE

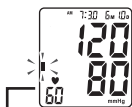
1 Press the “⏻ START/STOP” button to start measurement.

All digits are displayed. After all digits disappear, the last measurement result is displayed. Then the cuff begins pressurizing automatically.



- * If the device judges that pressurization is insufficient, it automatically repressurize.
- * The device automatically sets the pressure based on the previous measurement. If previous user had a high blood pressure result, that high pressure will automatically be used for the current measurement.
- * ♥ indicator will begin flashing when a pulse is detected.
- * If you feel abnormal, or when you want to stop measurement, press “⏻ START/STOP” button, then the cuff will deflate and measurement stops.

2 The measurement result is displayed.



Once measurement is completed, the cuff deflates and the measurement result is displayed. If there is no error in the measurement result, the device stores the result automatically.

WHO blood pressure classification indicator

3 Finishing measurement.

Press “⏻ START/STOP” button to turn the device off or it will turn off automatically after approximately 1 minute.

11. INDICATORS

(1) Irregular Heartbeat Indicator (IHB)

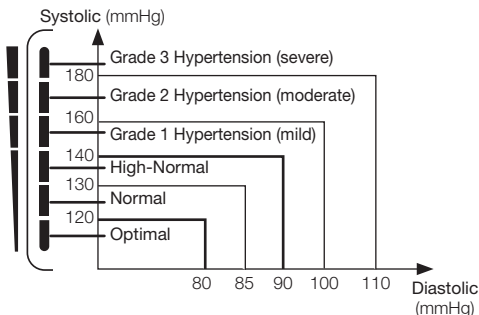
The irregular heartbeat indicator (IHB) is displayed after measurement ends if an irregular heartbeat is detected during measurement.



Correct measurement may not be possible if your heartbeat fluctuates greatly during measurement. If the irregular heartbeat indicator is displayed, measure your blood pressure again while relaxed and still. If the irregular heartbeat indicator appears frequently, consult your physician about your health.

(2) WHO blood pressure classification indicator

The blood pressure classification indicator has six levels which the grades classified by World Health Organization (WHO).



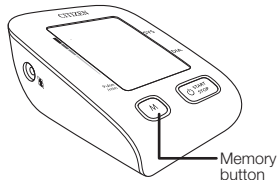
(3) Residual pressure indicator



The residual indicator is displayed when pressure in the cuff is unstable or there is remnant air in the cuff.

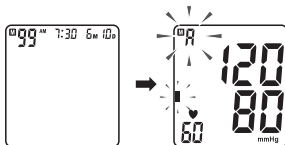
12. CALL THE MEASUREMENT RESULTS

99 measurement results can be stored in memory. The average value is calculated automatically to help you for managing your daily health.



1 Average value

Press the **M** button, the total stored memory number, current time and date are displayed. Then the **A** appears and begins flashing on the top of the display. The average value based on the last three measurements is displayed.



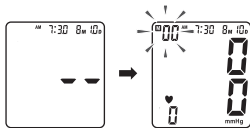
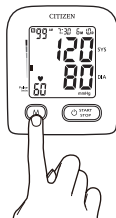
2 Past result

Each time you press the **M** button, the past results are displayed. The result order is from the most recent to the oldest. The value stored in memory is numbered in the order of measurements. For example, when 99 sets of the results are stored in the memory, the number 1 represents the latest result.




13. DELETE RESULTS

When the past results are displayed, press and hold the **M** button for more than 3 seconds. All stored results are deleted when the time and 2 hyphens are displayed. Once you release your finger from the button, the memory number "00" begins flashing. Press **START/STOP** button to finish deleting results function.




14. TROUBLESHOOTING

Troubleshooting 1

Display	Possible cause	Solution
Abnormal result	The cuff position was not correct or it was not properly tightened.	Attach the cuff correctly and try again.
	Body posture was not correct during measurement.	Review the "ADJUST YOUR POSTURE" sections of the instructions and try again.
	Speaking, arm or body movement, angry, excited or nervous during measurement	Try again when calm and without speaking or moving during measurement.
	Irregular heartbeat	Consult your physician.

Troubleshooting 2

Display	Possible cause	Solution
"Er 0"	Pressure system is unstable before measurement.	Do not move and try again.
"Er 1"	Fail to detect systolic pressure	
"Er 2"	Fail to detect diastolic pressure	
"Er 3"	Pneumatic system blocked or cuff is too tight during inflation.	Attach the cuff correctly and try again.
"Er 4"	Pneumatic system leakage or cuff is too loose during inflation.	
"Er 5"	Cuff pressure above 300 mmHg	
"Er 6"	More than 3 minutes with cuff pressure above 15 mmHg	
"Er 7"	EEPROM accessing error	Measure again after five minutes. If the LCD is still abnormal, please contact the local distributor.
"Er 8"	Device parameter checking error	
"Er A"	Pressure sensor parameter error	
No response when you press button or load battery.	Incorrect operation or strong electromagnetic interference	Take out batteries for five minutes, and insert all batteries again.
	Low battery	Change the batteries.
"Hi" or "Lo"	Over measurement range	Consult your physician.

15. SPECIFICATIONS

Model Number:		CHUD514/CHUD517	
Measurement system:		Oscillometric method	
Display:		Digital display type	
Measurement localization:		Upper Arm	
Cuff:		Soft cuff	
Cuff circumference range:	CHUD514	8 3/4" – 11 3/4"/22 cm – 30 cm	
	CHUD517	8 3/4" – 16 1/2"/22 cm – 42 cm	
Cuff pressure:		0 – 300 mmHg	
Measurement range:	Pressure:	Systolic: 60 – 260 mmHg Diastolic: 40 – 199 mmHg	
	Pulse:	40 to 180 pulse/min	
Accuracy:	Pressure:	±3 mmHg	
	Pulse:	±5% of reading	
LCD display:	Pressure:	3 digits	
	Pulse:	3 digits	
	Icons:	♥ :	Pulse indicator
		♥ :	Irregular Heartbeat (IHB) indicator
☹ :		Residual pressure indicator	
🔋 :		Battery icon	
	M :	Memory icon	
	I :	WHO blood pressure classification indicator	
Button:		2 (START/STOP, MEMORY)	
Inflation:		Automatic inflation by internal pump	
Deflation:		Automatic speed deflation system	
Rated voltage:		6V DC --- (--- : direct current)	
Exhaust:		Electromagnetic quick exhaust valve	
Power supply:		4 x 1.5V --- SIZE AA batteries (LR6) or AC adapter (option) (model: AC-230CZ)	
Battery duration:		Approx. 420 times (Alkaline)	
Automatic power off function:		Approx. 1 min. (after activated)	
Main unit dimensions:		5 13/32" (W) x 2 7/16" (H) x 4 21/32" (D)/ 137 (W) x 62 (H) x 118 (D) mm	
Weight:		Unit: Approx. 10 3/4 oz/305 g w/o batteries Cuff: Approx. 4.7 oz/134 g	
Operating conditions:	Temperature:	41°F – 104°F/5°C – 40°C	
	Humidity:	≤ 85%RH	
Storage conditions:	Temperature:	-4°F – 131°F/-20°C – 55°C	
	Humidity:	≤ 90%RH	
Electric shock protection:		Internal power unit	
Applied part:		☒ Type BF	
Mode of operation:		Continuous operation	
Memory:		1 × 99 readings, Average of last 3 readings	
Protection against ingress of water:		IPX0	
Accessories:		Cuff, 4 AA batteries (LR6) for demonstration purpose, Instruction manual	

* Applied part for this device is Cuff.

* A range in barometric pressure is 1050 hPa to 800 hPa.

* A range in altitude is -300 m to 2000 m.

* This device corresponds to the below standards: IEC 60601-1:2005+A1:2012/EN 60601-1:2006+A1:2013 (Medical electrical equipment – Part 1: General requirements for basic safety and essential performance), IEC 60601-1-2:2014/EN 60601-1-2:2015 (Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic disturbances - Requirements and tests), EN 1060-3:1997+A2:2009 (Non-invasive sphygmomanometers - Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems), IEC 80601-2-30:2009+A1:2013 (Medical electrical equipment – Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers)

ELECTROMAGNETIC COMPATIBILITY INFORMATION

Appendix The use of accessories and cables other than those specified (other than CITIZEN original parts) may result in increased emissions or decreased immunity of the unit.


Guidance and manufacturer's declaration - electromagnetic emissions		
The [CHUD514/517] is intended for use in the electromagnetic environment specified below. The customer or the user of the [CHUD514/517] should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The [CHUD514/517] uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The [CHUD514/517] is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration - electromagnetic immunity			
The [CHUD514/517] is intended for use in the electromagnetic environment specified below. The customer or the user of the [CHUD514/517] should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact	±8 kV contact	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
	±15 kV air	±15 kV air	
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line to line ±2 kV line to earth	±1 kV line to line ±2 kV line to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply IEC 61000-4-11	0% U_T 0.5 cycle	0% U_T 0.5 cycle	Mains power quality should be that of a typical commercial or hospital environment. If the user of the [CHUD514/517] requires continued operation during power mains interruptions, it is recommended that the [CHUD514/517] be powered from an uninterruptible power supply or a battery.
	0% U_T 1 cycle	0% U_T 1 cycle	
	70% U_T 25/30 cycle	70% U_T 25/30 cycle	
0% U_T 250/300 cycle	0% U_T 250/300 cycle		
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Note: U_T is the A.C. mains voltage prior to application of the test level.

Guidance and manufacturer's declaration - electromagnetic immunity

The [CHUD514/517] is intended for use in the electromagnetic environment specified below. The customer or the user of the [CHUD514/517] should assure that it is used in such an environment.

Conducted RF IEC 61000-4-6	3 Vrms, 6 Vrms* 150 kHz to 80 MHz	3 Vrms, 6 Vrms*	Portable and mobile RF communications equipment should be used no closer to any part of the [CHUD514/517], including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2 \sqrt{P}$ 3 Vrms $d = 2 \sqrt{P}$ 6 Vrms* * (in ISM and amateur radio bands)
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	$d = 1.2 \sqrt{P}$ 80 MHz to 800 MHz $d = 2.3 \sqrt{P}$ 800 MHz to 2.7 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^{a)} should be less than the compliance level in each frequency range. ^{b)} Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a). Field strengths from fixed transmitters, such as base stations for radio (cellular/ cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the [CHUD514/517] is used exceeds the applicable RF compliance level above, the [CHUD514/517] should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the [CHUD514/517].
- b). Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the [CHUD514/517]

The [CHUD514/517] is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the [CHUD514/517] can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and [CHUD514/517] as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)			
	150 kHz to 80 MHz 3 Vrms $d = 1.2 \sqrt{P}$	150 kHz to 80 MHz 6 Vrms $d = 2 \sqrt{P}$	80 MHz to 800 MHz $d = 1.2 \sqrt{P}$	800 MHz to 2.7 GHz $d = 2.3 \sqrt{P}$
0.01	0.12	0.2	0.12	0.23
0.1	0.38	0.63	0.38	0.73
1	1.2	2	1.2	2.3
10	3.8	6.3	3.8	7.3
100	12	20	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Guidance and manufacturer's declaration - electromagnetic immunity

The [CHUD514/517] is intended for use in the electromagnetic environment specified below. The customer or the user of the [CHUD514/517] should assure that it is used in such an environment.

Radiated RF-IEC61000-4-3 Test specification for ENCLOSURE PORT IMMUNITY to RF wireless communications equipments	Test Frequency (MHz)	Band a) (MHz)	Service a)	Modulation b)	Maximum power b) (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
	385	380-390	TETRA 400	Pulse modulation b) 18 Hz	1.8	0.3	27
	450	430-470	GMRS 460, FRS 460	FM c) ± 5 kHz deviation 1 kHz sine	2	0.3	28
	710	704-787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0.2	0.3	9
	745						
	780						
	810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation b) 18 Hz	2	0.3	28
	870						
	930						
	1720	1700-1900	GSM 1800, CDMA 1900, GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation b) 217 Hz	2	0.3	28
	1845						
	1970						
	2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0.3	28
	5240	5100-5800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0.2	0.3	9
	5500						
	5785						

NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.

- a). For some services, only the uplink frequencies are included.
 b). The carrier shall be modulated using a 50 % duty cycle square wave signal.
 c). As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.

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 - Design and specifications are subject to change without notice.
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