ZETA Android Demo User Manual

ZETA Android Demo User Manual

CONTENTS

1. Introduction	3
1.1 Purpose and scope	3
2. Operating Instructions	3
2.1 Program function description	3
2.2 Connect Reader	4
2.2.1 Serial Connection	4
2.2.2 Network Connection	5
2.2.3 USB Connection	6
2.2.4 Bluetooth Connection	6
2.3 UHF Function	6
2.3.1 Read Tag	6
2.3.2 Tag Search	9
2.3.3 Tag Access	10
2.3.4 UHF Settings	16
2.3 Barcode function (only applicable to Bluetooth readers)	19
2.3.1 Scan barcode	19

1. Introduction

1.1 Purpose and scope

The purpose of this document is to explain the operation and use steps of ZETA Android demo APP.

The ZETAreader demo APP is suitable for many kinds of Android devices to interact with POLARIS readers, integrated readers, Bluetooth readers, etc. Through this document, users can operate various functions of the fixed reader demo APP.

2. Operating Instructions

2.1 Program function description

After installing the reader demo app in the Android device, click the reader demo app icon on the Android device system desktop to start the app.



You can find the corresponding xxx.apk installer in the demo folder of the provided

secondary development kit.

The reader demo APP mainly includes connection, UHF, and barcode functions. In addition, functions such as version and device serial number can be displayed.

2.2 Connect Reader

The fixed reader Android SDK supports four connection modes: serial, TCP, USB serial and Bluetooth. We can choose the appropriate connection method according to different situations.



2.2.1 Serial Connection

If the Android device used to connect the reader has its own serial port, you can use the serial port connection method to connect the reader. Select RS232 as Connect Type, the connection parameter is the serial address. The serial port number under the Android system is presented in the form of an address, such as /dev/ttyS1:115200.

Connect Device	
Connect Type RS232	*
Connect Param /dev/ttyS1:115200	
Connect	

2.2.2 Network Connection

If the Android device used to connect the reader has its own network port, you can directly connect the Android device and the reader through the network cable or the Android device has WiFi function, you can connect the Android device and the reader to the same LAN and then Android device can connect to the reader via WiFi wireless. After the connection is successful, the APP will automatically jump to the UHF interface.

Select TCP as Connect Type. The connection parameter is the IP address of the reader + port number. The IP address and port number is separated by a colon. The default IP and port number of the reader is 192.168.1.116:9090.

← AndroidDemo	← AndroidDemo
UHF Scanner	UHF Scanner
Connect Device	
Connect Type TCP	
Connect Param <u>192.168.1.116</u> :9090	
Connect	
APP: 3.11 SDK: 3.11 ConniD:	APP: 3.11 SDK: 3.11 ConniD: 192.168.1.116:9090

2.2.3 USB Connection

If the Android device supports the OTG function, it can be connected to the serial port of the reader through a USB-to-serial cable for communication.

The connection method is: Android devices (need to support OTG) ->USB-to-serial cable-->RS232 serial port of the reader.

Select USB as Connect Type and the connection parameters is similar to /dev/bus/usb/001/028#VID_0403 PID_6001



2.2.4 Bluetooth Connection

If the Android device supports Bluetooth and the reader also supports Bluetooth, then the Android device can connect to the reader via Bluetooth. Select Bluetooth as Connect Type, and the connection parameter is the Bluetooth name of the reader.



2.3 UHF Function

2.3.1 Read Tag

After the reader demo APP successfully establishes a connection with the reader, it will automatically jump to the UHF interface. On the main interface of the reader demo APP, click on the "UHF" icon to enter the UHF interface.

On the UHF interface, click the "Inventory" button to start reading tags. Before reading tags, you can open the Advanced Read interface in the function menu, and you can select "EPC", "TID", "User Area", "Reserved Area" or "EPC Area" to read the corresponding data of the tags.

228011700000020DB3D1A07F -54.8 2 30083382DDD901400000000 -63.6 6 102623FF2FF0053046455443 -55.8 5 220011112233334455557777 -36.7 2 2200201900000000000016 -53.0 1 110000100033476141938000 -55.8 1 395000010272 -36.7 1 22400019731801662070899B -59.9 1 1000400000000000241040F92 -63.6 1 130303032 -51.0 1 2019000000000000003ABCD -55.8 1 2019000000000000003ABCD -55.8 1 200000199101017713909758 -60.8 1	EPC	RSSI	Count	Click here to en
300083382DDD9014000000000 -63.5 6 102623FF2FF0053046455443 -55.8 5 220011112233334455557777 -36.7 2 220020190000000000000 -53.0 1 110000100033476141938000 -55.8 1 335000010272 -36.7 1 22400019731801662070899B -59.9 1 00040000000000000241040F92 -63.6 1 465032303135303130313035313 -51.0 1 130303032 -57.6 1 220000199101017713909758 -60.8 1 220000199101017713909758 -63.6 1 228011700000020A0AD7D880 -63.6 1 228011700000020A0AD7D880 -63.6 1 228011700000020A0AD7D880 -55.8 1 Advanced Tag Access Settings Tag Search	27000000005	-43.8	2	function menu
102623F2F2F0053046455443 -55.8 5 E20011112233334455557777 -36.7 2 E200201900000000000016 -53.0 1 110000100033476141938000 -55.8 1 935000010272 -36.7 1 E2400019731801662070899B -59.9 1 0004000000000000000000241040F92 -63.6 1 1 - - - 465032303135303130313035331 -51.0 1 130303032 - - - 7446919970739000 - - 55.8 1 E20000199101017713909758 - 60.8 1 - E28011700000020A0AD7D880 - - - Function menu Advanced Tag Access Settings Tag Search Function menu	E28011700000020DB3D1A07	F -54.8	2	
E20011112233334455557777 -36.7 2 E200201900000000000016 -53.0 1 110000100033476141938000 -55.8 1 935000010272 -36.7 1 E2400019731801662070899B -59.9 1 0004000000000000241040F92 -63.6 1 1 1 - 1 465032303135303130313035313 -51.0 1 130303032 - - 55.8 7446919970739000 - - 55.8 E20000199101017713909758 - 60.8 1 E200012900000000000000000000000000000000	300833B2DDD90140000000	0 -63.6	6	
E200201900000000000016 -53.0 1 110000100033476141938000 -55.8 1 935000010272 -36.7 1 E2400019731801662070899B -59.9 1 000400000000000000241040F92 -63.6 1 1 465032303135303130313035313 -51.0 1 130303032 7446919970739000 -57.6 1 2019000000000000003ABCD -55.8 1 E20000199101017713909758 -60.8 1 E28011700000022A0AD7D880 -63.6 1 E2801170000002A0AD7D880 -63.6 1 E2801170000002A0AD7D880 -63.6 1 E2801170000020AAD7D880 -63.6 1 E2801170000020AAD7D880 -55.8 1 E2801170000022AAAD7D880 -63.6 1 E2801170000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E380117000002AAAD7D880 -63.6 1 E3801170000002AAAD7D880 -63.6 1 E3801170000000000000000000000000000000000	102623FF2FF0053046455443	-55.8	5	
110000100033476141938000 -55.8 1 93500010272 -36.7 1 E2400019731801662070899B -59.9 1 00040000000000000241040F92 -63.6 1 1 - - 465032303135303130313035313 -51.0 1 130303032 - - 7446919970739000 -57.6 1 20190000000000003ABCD -55.8 1 E20000199101017713909758 -60.8 1 E280117000002040AD7D880 -63.6 1 E280117000002040AD7D880 -63.6 1 E280117000002240AD7D880 -55.8 1 Advanced Tag Access Settings Tag Search	E20011112233334455557777	-36.7	2	
-36.7 1 E2400019731801662070899B -59.9 1 000400000000000000241040F92 -63.6 1 1 465032303135303130313035313 -51.0 1 130303032 7446919970739000 -57.6 1 20190000000000003ABCD -55.8 1 E20000199101017713909758 -60.8 1 E20000199101017713909758 -60.8 1 E2801170000020A0AD7D880 -63.6 1 E20011 700000200A0AD7D880 -63.6 1 E20011 700000200A0AD7D880 -55.8 1 Function menu Advanced Tag Access Settings Tag Search	E20020190000000000000016	-53.0	1	
E2400019731801662070899B -59.9 1 00040000000000000241040F92 -63.6 1 1	110000100033476141938000	-55.8	1	
O0044000000000000000000000000000000000	935000010272	-36.7	1	
1 1 46503230313530313035313 -51.0 1 13030302 -57.6 1 20190000000000003ABCD -55.8 1 20000199101017713909758 -60.8 1 E280117000002000ADAD7D880 -63.6 1 Formulation of the second s	E2400019731801662070899B	-59.9	1	
130303032 7446919970739000 -57.6 1 2019000000000003ABCD -55.8 1 E2000199101017713909758 -60.8 1 E28011700000020A0AD7D880 -63.6 1 E2801170000000000000000000000000000000000		F92 -63.6	1	
201900000000000000000000000000000000000		313 -51.0	1	
E20000199101017713909758 -60.8 1 E28011700000020A0AD7D880 -63.6 1 E28011700000020A0AD7D880 -55.8 1 Free Function menu Advanced Tag Access Settings Tag Search	7446919970739000	-57.6	1	
E28011700000020A0AD7D880 -63.6 1 E20011700000020A0AD7D82D11872 -55.8 1 Function menu Advanced Tag Access Settings Tag Search	201900000000000003ABC	-55.8	1	
Advanced Tag Access Settings Tag Search	E20000199101017713909758	-60.8	1	
Advanced Tag Access Settings Tag Search Function menu	E28011700000020A0AD7D88	0 -63.6	1	
Advanced Tag Access Settings Tag Search	E 200117000000000000000000000000000000000	-55.8	1	
Advanced Tag Access Settings Tag Search		<u>ನ</u> (2	
				Function menu
	Advanced Tag Access Set	tings Tag	Search	
		ungs nag	Search	
	0			

When "EPC" is selected, it means to read the EPC data of the tag.

This function can be used to test the performance (speed and distance) of the UHF module to read ISO18000-6B and ISO18000-6C electronic tags. The APP reads the ISO18000-6C electronic tags by default, which can be set in the setting interface.

The user can also clear or save the tag data, adjust the display format of the tag data (hexadecimal display or ASCII character display) and switch the prompt sound when reading tags. As shown below:

ZETA Android Demo User Manual

tag reading prompt

sound.



Note: To enter the function setting interface from the UHF interface, you need to stop reading first.

Turn off beeper

4,ETSI 865~868MHz

2.3.2 Tag Search

In the UHF interface, the tag search function can be turned on in the function menu. Tag search is used to find tags that meet the matching rules. During the search, the APP will adjust the buzzer rhythm and signal display according to the tag RSSI (Received Signal Strength Indication).

The following figure shows the signal strength returned by the same tag at different positions. The signal strength on the right is obviously better than the signal strength on the left. The stronger the signal, the closer the tag is to the reader antenna.



After entering the data to be matched, click Tag Search, or press and hold the handle button to start the search tag (switch the RFID/SCAN function switch button at the handle to RFID). The operation interfaces are shown in the figures below:

← Tag Search	← Tag Search	← Tag Search
Basic Advanced	Basic Advanced	Basic Advanced
EPC Start With Data:	Custom Search Bank: EPC Bit Ptr: 0 Bit Len: 16 Data: 0000	EPC Start With Data: e20011112233 E200111122333344555557777 Stop
	Tag Search	-66dB
< 0 □		

There are two ways to search tag, Basic and Advanced.

Assuming there are 4 tags, these EPC are

E20011223344556677889900

E20011112222333344445555

E20011112233334455556666

B0111000000000503112377

Basic, match a few digits at the beginning of the tag EPC

Assuming that the matching content is B011, then only the tag with EPC as B0111000000000503112377 is read. Assuming that the matching content is E200, then the three tags starting with E200 in EPC can be read. Assuming the matching content is E2001122, then only tag EPC is E20011223344556677889900 can be read

Note: The length of the matching data needs to be a multiple of 2.

Advanced, use EPC or TID for matching, and you can specify the location of the matching data.

Assumption:

Matching area: EPC,

Start of matching bit: 16 (tag EPC is composed of hexadecimal numbers, a hexadecimal number is 4 bits, 16/4=4, which means the data to be matched is from the 5th hex number of EPC)

Length of matching bit: 32 (32/4=8, which means that 8 hexadecimal numbers need to be matched)

Matching content: 11112233,

Then only the tag with EPC E20011112233334455556666 can be read

2.3.3 Tag Access

In the UHF interface, the Tag Access function can be turned on under the function menu. The Tag Access interface can read, write and lock/unlock the tag.

Before opening the Tag Access interface, you need to read a valid electronic tag on the UHF interface. When operating on a tag you need to select the EPC of the tag to be operated. As shown below:

		•••	← та	ag Access	
EPC	RSSI		Basic	Advanced	
E20011112233334455557777	-29.8	134	Match Param:		
E20020190000000000000015	-44.9 -43.8	133 132	EPC		
E20011223344556677889900 102623FF2FF0053046455443	-43.8	132	E200111122333344		Ψ
E28011700000020DB3D1A07F	-57.6	24	E20020190000000 E20011223344556		
			102623FF2FF00530		
			E2801170000020	DB3D1A07F	
			Write Data:		
			EPC	Φ	/
			TID	¢	
			UserData	¢	/
			AcsPwd	¢	
			KillPwd	\$	
Advanced Tag Access Settings Read	Tag	Search			
⊲ 0			\triangleleft	0 🗆	

Generally, the storage of EPC C1G2 tag consists of four memory Bank:

Reserved Memory	Access and Kill Password
EPC Memory	•EPC Electronic Product Code
	•Code can be written by user
TID	•TID Tag Identifier(preprogrammed & locked)
TID	•IC Manufacturer information, Unique serial number
User Memory	•Manufacturing, quality and product related data storage

EPC Memory: The area where EPC code is stored, the capacity is usually 96 bits. Readable and writable, writable from any state is the default state.

TID Memory: Store the TID number set by the tag manufacturer, the capacity is usually 96 bits, read only, unique in the world.

User Memory: The capacity depends on the chip, the default is 0, Readable and writable, writable from any state is the default state.

Reserved Memory: There are 32Bits access Password and 32Bits kill Password. Readable and writable, Readable and Writable from any state is the default state. The first 32Bits is the Kill password, which is 00000000 by default, while the second 32Bits is the access password, which is 00000000 by default.

When reading and writing the tag data area, the operation is performed in words, that is, the minimum boundary of the operation data is one word.

1 Word = 2 bytes = 16 bits = 4 hex numbers

Basic Tag Operations

After selecting a tag EPC to be operated, click "Get", the reader will try to read all the data area of the tag.

As the user area capacity of the tag is different for different chips, and some tags even have no user area, the app reads only 2Words (32bits) of data by default.



If the data area to be written is locked, you need to fill in the correct access password before writing.

Click the pen icon on the right of each data area to write the data to be written into the tag

Click the refresh icon on the right of each data area to only read the data in this data area

Advanced Tag Operations



Example:

Write EPC

Assuming that the original EPC of the tag is E20011223344556677889900, we want to change it to E20011223344556677889999, the operation is as follow steps:

1. First read the tag to be operated, and then enter the next step

2. Click the upper right corner to enter the function menu, then click Tag Access

3. Select the EPC of the tag to be written, and then operate on this tag

4. Fill in the new EPC, click the pen icon to execute the operation of writing EPC, the result of the success or failure of the operation will be prompted

5. Go back to the UHF interface and read the tag to verify whether the tag EPC has been written successfully.

÷	UHF			÷	UHF		••	÷	Tag Access		
EPC			Count	EPC			Count	Basic		Advanced	
E2002019000 E2001122334 102623FF2FF0	3334455557777 000000000015 4556677889900 0053046455443 0020DB3D1A07F	-35.8 -45.6 -47.0 -47.0 -56.4	217 212 193 212 53	E20011112233 E20020190000 E20011223344 102623FF2FF00	334455557777 000000000015 556677889900 053046455443 020DB3D1A07F	-29.8 -44.9 -43.8 -43.8 -57.6	134 133 132 132 24	E2002019000 E2001122334 102623FF2FF0	3334455557777 00000000015 4556677889900 1053046455443 0020DB3D1A07F	¢	•
								TID		¢	
								UserData		¢	/
								AcsPwd		¢	1
								KillPwd		¢	
Time:0S	SP:86T/S View Clea	Total:5	Save	Advanced <u>Ta</u> Read	ag Access Setting		Search	4	0		

	← Tag Access	÷	UHF		
After inputting the new EPC, click the pen icon on the right to execute the write EPC operation.	Basic Match Param: EPC E20011223344556677889900 AccessPwd: 0000000 GET Write Data: EPC E200112233445566 89999 TID UserData AcsPwd KillPwd	FPC E2001122334 E200111223 E2002019000 E2801170000 102623FF2FF	145566778899999 13334455557777 10000000000015 10020DB3D1A07F 0053046455443 0053046455443 SP:83T/S View Clea	RSSI Count -44.3 1 -33.5 160 -43.8 139 -53.9 86 -47.0 90 Save 100 Total:5 100	Go back to the UHF interface to read the tag and check if the tag EPC has been successfully written.
		\triangleleft	0		

Lock the EPC area so that you can write the EPC area only when you know the access password

The idea of locking the EPC is to write-protect the EPC with the access password. Since the access password is used to protect the EPC area, it is impossible to let others know the access password of the tag. In order to ensure that the access password is not known by others, we also need to change the default 00000000 of the access password to other values, and do read and write protection for the access password.

In this way, if anyone else does not know the access password, they cannot read the access password and cannot rewrite the EPC.

Assuming that the EPC of the tag is E20011223344556677889999, we need to writeprotect the EPC of this tag, the operation is as follows:

- 1. First read the tag to be operated, and then enter the next step
- 2. Enter the function menu, then click the Tag Access icon
- 3. Rewrite the access password to 8 hexadecimal numbers other than 00000000
- 4. Lock access password
- 5. Lock EPC

6. Verify, use the default access password to try to rewrite EPC, prompting "The data area is locked"

ZETA Android Demo User Manual

←

Tag Access

← UHF		← UHF	•••	← 1	Гад Access	
EPC	RSSI Count	EPC	RSSI Count	Basic	Advanced	
E20011223344556677889999	-42.8 190	E20011223344556677889999	-42.8 190			
E20011112233334455557777	-31.7 197	E20011112233334455557777	-31.7 197	Match Param:		
	-42.8 176	E200201900000000000015	-42.8 176	EPC E2001122334455	6677889999	
	-53.9 122	E28011700000020DB3D1A07F	-53.9 122			After entering
102623FF2FF0053046455443	-48.8 128	102623FF2FF0053046455443	-48.8 128	AccessPwd: 00	000000	
				GET	Clear	the new
				Write Data:		access
				EPC	0/	password,
					· · ·	click the pen-
				TID	Ċ.	
				110	· •	shaped icon
				UserData	01	on the right to
			[AcsPwd 22222	222 🗘 🌶	write the new
				KillPwd	54	access
						password.
		ା 🖉 (ଦି	\square			The result will
Time:9S SP:102T/S T	otal:5					
Inventory View Clear	Save	Advanced Tag Access Setting Read	s Tag Search		Success	be prompted
				\bigtriangledown	0	

Tag Access

Advanced Basic Basic Advanced Match Param: Match Param: EPC EPC E20011223344556677889999 + E20011223344556677889999 AccessPwd: 22222222 AccessPwd: 22222222 Match Param: Match Param: Lock Area: AcsPwd Lock Area: EPC Lock Type: Lock Lock Type: Lock Write Data: Write Data: Bank: EPCData Bank: EPCData --Word Ptr: 0 Word Ptr: 0 Word Len: 0 Word Len: 0 Value: Value: ϕ Φ 1 1 Success Success

After selecting the lock area and lock type, click the lock icon on the right to perform the lock EPC operation

After selecting the lock area and lock type, click the lock icon on the right to perform the lock access password operation

Basic		Advanced	
Match Param: EPC E2001122334	4556677889999		÷
AccessPwd	0000000		
GET		Clear	
	ta area is locked	ОК	
UserData		0 0	1
AcsPwd		\bigcirc	/
KillPwd		φ.	/
\bigtriangledown	0		

Use the default access password to try to write to the EPC, prompt "The data area is locked", indicating that the EPC area has been locked

2.3.4 UHF Settings

In the UHF interface, click ... in the upper right corner to open the function menu, and the Settings can be opened under the function menu. UHF module parameters can be set in the Settings interface, including RF output power, frequency, working mode, baseband parameters, etc.

The APP has made preset working mode options for common scenarios, including Standard mode, Portal mode, Point of Sale mode, Label Write mode, Shelf/filling cabinet mode, ETC mode, and Parking Lot mode.

Standard mode, multi-item management, easy to use

Portal mode, item and personnel linkage, safe protection of your assets and storefront

Point of Sale mode helps reduce queuing, fast checkout, improve satisfaction

Label Write mode, write tag accurately, improve tag issuing efficiency

Shelf/filling cabinet mode, fast inventory of a large number of valuable documents and items, real-time status at your fingertips

ETC mode, multi-lane parallel, non-inductive payment, free flow and high speed, fast customs clearance

Parking Lot mode, Parking mode, single vehicle in sequence, unhindered access, easy and convenient

← Settings	← Settings
Firmware:V3.2.33 SerialNo:C400001020090001	Firmware:V3.2.33 SerialNo:C400001020090001
Power: 29	Power: 29 SET Device Beep: On SET
Device Beep: On SET	Device Beep: On SET
Work Mode Standard SET	Work Mode Standard 👻 SET
GPI	GPI
GPI Inc Portal 👻 GET	GPI Index: 1 - GET
Start Conditi 👻	Start Condition: OFF 👻
End Conditi	End Condition: Rising edge t 👻
Start Comma Label Write	Start Command: Single ANT R 👻 SET
Antenna Antenna1 Shelf/filing cabinet Antenna3 Antenna4	Antenna Antenna1 Antenna2 Antenna3 Antenna4
ETC	SET
ParkingLot	Advanced
User Defined	

<u>Power:</u> The transmit power of the UHF module, the larger the value, the farther the distance to read the tag

<u>Device Beep:</u> only applicable to Bluetooth readers. After turning on, the built-in buzzer will sound after the Bluetooth reader reads the tag

<u>GPI:</u> It can be used to set the handle button function of the Bluetooth reader. If it is used to set the handle button of the Bluetooth reader, the applicable parameters are as follows:

GPI Index: the default is 1

Start Condition: Falling edge trigger

End Condition: Rising edge trigger

Start Command: Single antenna read EPC

After clicking Advanced, the complete parameter setting interface can be displayed, and the relevant parameters can be set according to the site conditions.

<u>Region:</u> Set the working frequency range of the UHF module. The radio regulations of different countries or regions are different. Please follow the local regulations. For example, it needs to be set to CHN 920~925MHz in China

<u>Frequency:</u> the way of frequency hopping, there are two options of automatic and designated frequency. A working frequency band is composed of several frequency points. The more frequency points, the stronger the anti-interference ability. It is recommended to set to automatic, that is, use all frequency points in the working frequency band to work. If

you need to use multiple readers at the same place at the same time, you can specify a different frequency point for each reader to avoid co-frequency interference.

<u>Power:</u> The transmit power of the UHF module, the larger the value, the farther the distance to read the tag

<u>Carrier</u>: used to test the matching degree between UHF module and built-in antenna. Used for troubleshooting.

<u>Baseband:</u> After setting different working modes, the APP will automatically set the baseband parameters. Generally, no modification is required.

Tag Type: supports 6C and 6B protocol tags, the default setting is 6C.

<u>TagFocus</u>: Only applicable to the tags of Impinj specific chips to optimize inventory speed and efficiency.

<u>FastID</u>: Only applicable to the tags of Impinj specific chips, TID will be automatically brought out when EPC is read

Read Time (ms): Set how long to read

<u>Stop Time (ms)</u>: Set how long to rest. The UHF module will read tags circularly according to the Read Time and Stop Time.

Get: Query the current parameters of the UHF module

Set: Set new parameters into UHF module

Restore: Restore the parameters of the UHF module to the factory default values.



Note: You only need to adjust the power to change the reading distance (the larger the farther); do not modify the advanced parameters casually, so as not to affect the reading effect.

2.3 Barcode function (only applicable to Bluetooth readers)

2.3.1 Scan barcode

In the barcode function interface of reader Android demo app, this can identify mainstream one-dimensional barcodes and two-dimensional barcodes. In the application center, click the "Barcode" icon to enter the barcode interface.

In the barcode interface, click the "Trigger" button to start scanning the barcode. Or press the handle button to trigger the barcode scan.

As shown below:

