AUTO DARKENING WELDING HELMET

TRUE VIEW DIGITAL

User manual

- TRUE COLOR
- Digital Product
- 180° SIDE VIEW

BLUE DEMON®
WELDING PRODUCTS

*This product is a completely new design, with Digital control and low temperature resistant, corrosion resistant, flame retardant, soft, light tight, intensity high and durable.

*TRUE COLOR vision on the work piece both prior and during welding, which means improved quality and higher efficiency.

*Overall-process protection against ultraviolet (UV) and infrared (IR) radiation. TRUE VIEW PANO is equipped with lithium battery and solar cells that extends the life of the battery.

*The product is in full conformity with related ANSI, CE. CSA, AS/NZS safety standards.

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BLUE DEMON
WELDING PRODUCTS

SHADE NUMBER

Recommended Shade Number According to EN169.

Welding Process	Arc Current(Amperes) 0.5 1 2.5 5 10 15 20 30 40 60 80 100 125 150 175 200 225 250 275 300 350 400 450 500
SMAW	9 | 10 | 11 | 12 | 13 | 14
MIG(heavy)	10 | 11 | 12 | 13 | 14
MIG(Light)	10 | 11 | 12 | 13 | 14 | 15
TIG,GTAW	9 | 10 | 11 | 12 | 13 | 14
MAG/CO_2	10 | 11 | 12 | 13 | 14 | 15
SAW	10 | 11 | 12 | 13 | 14 | 15
PAC	11 | 12 | 13
PAW	2.5 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

Adopt greater or smaller shade number pursuant to the field condition.

READ CAREFULLY AND UNDERSTAND THESE INSTRUCTIONS BEFORE USING THE HELMET

WARNING

TRUE VIEW PANO welding helmets are designed to protect the eyes and face from sparks, spatter and harmful radiation under normal welding conditions. The welding helmets may only be used for welding and not for other purposes. They are suitable for use with virtually all welding process, except oxy-acetylene, laser and gas welding procedures. They will not protect against severe impact hazards, including fragments from grinding disks, explosive devices or corrosive liquids. Machine guards and appropriate protection must be used. Avoid work positions that could expose unprotected areas of the body to sparks spatter, direct and/or reflected radiation. Use adequate protection if exposure can not be avoided.

If the auto-darkening filter is cracked, stop using the helmet: UV/IR protection may be compromised, resulting in burns to the eyes and skin.

During the welding process, heat and radiation are released.

- **FUMES AND GASES** can be dangerous to your health.
  - Keep your head out of fumes.
  - Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases away from your breathing zone and general area.
- **ARC RAYS** can injure eyes and burn skin.
  - Before welding, always inspect helmet and filter lens to be sure they are fitted properly, in good condition and not damaged.
  - Check to see that the clear lens is clean and securely attached to the helmet.
  - Always wear safety glasses or goggles under the welding helmet and protective clothing, to protect your skin from radiation, burns and spatter.
  - Ensure that optical radiation from other welder's arcs in the immediate area does not enter in from behind the helmet and auto-darkening filter.

Welding produces sparks and drops of molten metal that fly in all directions.

- The protective helmet must be worn to avoid potentially serious physical damages.
- Appropriate additional safety clothing must be worn to protect the rest of the body.

CORRECT USE OF THE WELDING HELMET

- Before using the helmet, make sure that:
  - the front cover lens, and the filter are in the correct position and correctly fixed in place;
  - all the sensors and the cells are not obstructed;
  - the protection films on both screens are removed;
  - the red light is off, otherwise change the batteries.
- Keep the filter viewing area as close as possible to the eyes during welding.
- When welding for extended periods, occasionally check the helmet and make sure there are no signs of deformation or deterioration.
- Do not use the helmet without the transparent filter protections (internal and external): non-observance may cause a safety hazard or irreparable damage to t-he filter.
- Subjects with particularly sensitive skin must take extra care: materials that may come into contact with the skin can cause allergic reactions.
- Check that the protection level matches your welding process. If the helmet pres-ents operation problems, refer to the “troubleshooting” chapter; if the problem pe-rsists, immediately stop using the helmet and contact the person in charge or a d-istributor.

MAINTENANCE

- Regularly check the condition of the helmet and change any damaged parts.
- Replace the external/internal transparent filter protection if it is damaged.
- Do not immerse the filter in water or other liquids; do not use solvents to clean the filter.
- Do not put any heavy tools/objects in or on the helmet in order not to damage the filter or the protective screens.
- Keep the helmet away from flames.
- The helmet must not fall down.
- Do not place the helmet too close to the welding area.
- Respect the temperature:
  - use: -5°C (+23°F) ÷ +55°C (+131°F)
  - storage: -20°C (-4°F) ÷ +70°C (+158°F).
- Remove batteries when the helmet is not used fo a long time.

- Place the helmet in a way that does not allow its dimension to deform, or the viewing filter to break.
- Do not allow the filter to come into contact with liquid and dirt.
- Do not open the filter container. Do not use any tools or other sharp objects to remove any components of filter or helmet.
- Do not use replacement parts other than those original ones: unauthorized modifications and replacement parts will void the warranty and expose the operator to the risk of personal injury.

CLEANING

Keep the filter, the sensor and the solar cell clean.
After using the helmet and before putting it away, it must be checked to verify integrity and to eliminate any drops of molten metal.
The cartridge and the front cover lens must be cleaned at regular intervals with clean cotton, a soft cloth or a special rag for lens. Do not use strong cleaning agents or solvents: clean the inside and the outside of the helmet with a neutral disinfectant product.

Non-observance of this regulation can expose the operator to health risks and cancellation of the warranty.
We will not accept any liability if the welding helmet is used for other purposes or if these instructions are disregarded.

OPERATING INSTRUCTION

Check the front cover lens to make sure that they are clean, and that no dirt is covering the sensors on the front of filter cartridge. Also check the front / rear cover lens and the front lens retaining snap joint to make sure that they are secure.

Inspect all operating parts before each use for signs of wear or damage. Any scratched, cracked, or pitted parts should be replaced immediately before using again to avoid severe personal injury.

Adjust headband so that the helmet is seated as low as possible on the head and close to your face. Adjust helmet's angle when in the lowered position by pressing the side adjustable button.

Do not make any modifications to either the welding lens or helmet, other than those specified in this manual.

Failure to follow these warnings and/or failure to follow all of the operating instructions could result in severe personal injury.

ADJUSTMENT INSTRUCTION

Basic Functional Parameters

TRUE VIEW PANO has three operating modes: GRIND,WELD and CUT. The specific function of three operation modes parameters is shown in table 1.

Table 1 TRUE VIEW PANO function parameters of three operation modes

Parameter / Mode	SHADE	SENS	DELAY
GRIND	3	No Display	No Display
WELD	8~14	0~7	0~9
CUT	4~8	0~7	0~9

Note: 1、From 0 to 9 gears of the delay time corresponds to 0.06s to 1.0s, 0 gear is suitable for TAC welding;
2、In the function of Welding and Cutting modes, it can be setting different sensitivity and delay time.

Advanced Function

TRUE VIEW PANO in order to improve the convenience and comfort of users, add 4 optional features: Automatic Shade Number Adjust, Automatic Sensitivity Adjust, Automatic Delay Time Adjust and Gradual Return. The optional features of three operation modes are shown in table 2.

Table 2 TRUE VIEW PANO optional features of three operation modes

Optional Features / Mode	Automatic Shade Number Adjust	Automatic Sensitivity Adjust	Automatic Delay Time Adjust	Gradual Return
GRIND	No	No	No	No
WELD	Yes	Yes	Yes	Yes
CUT	No	Yes	No	No

Function Definition Of The Display Area

Figure 1 is the display area, it has 8 function buttons,LCD display and LED lights, which is explained next.

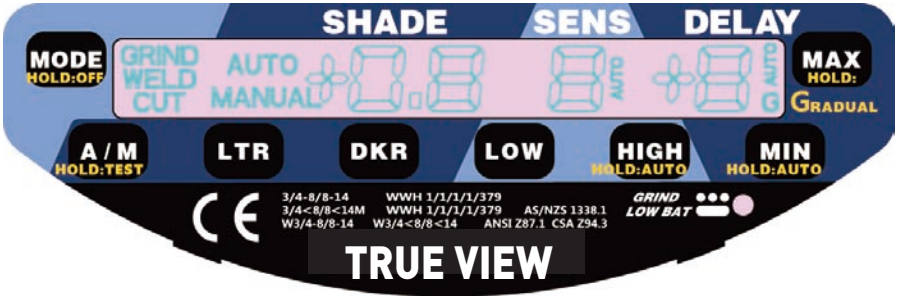


Figure 1 Display Area

Function Buttons

Buttons	Function	The usage the Buttons
MODE **HOLD: OFF**	1.Short Press-Switching Mode: GRIND—WELD—CUT—GRIND. 2.Long Press- Shut off display.	1.Short Press-Short press to switch the mode. Release the button and press again to switch mode again. 2.Long Press-Press over 1.5s to switch OFF. (Note: In the OFF function, can press any button to wake up the display)
A/M **HOLD: TEST**	1.Short Press-In the welding mode switch automatic or manual setting the shade number. 2. Long Press-Test Function: Screen Flashes—Grind—Cut—Weld.	1. Short Press-Short press to switch automatic or manual setting the shade number. 2.Long Press-Press over 1.5s to start the TEST for one time.
LTR	1.Short Press-Decrease the shade number. 2.Long Press-In the welding mode, quickly decrease the shade number.	1.Short Press-Short press to decrease the shade number. Release the button and press again to decrease the shade number again. 2.Long Press-Press over 1.5s to decrease the shade number quickly.
DKR	1.Short Press-Increase the shade number. 2.Long Press-In the welding mode, quickly increase the shade number.	1.Short Press-Short press to increase the shade number. Release the button and press again to increase the shade number again. 2.Long Press-Press over 1.5s to increase the shade number quickly.
LOW	Decrease the sensitivity.	Short press to decrease the sensitivity. Release the button and press again to decrease the sensitivity again.
HIGH **HOLD: AUTO**	1.Short Press -Increase the sensitivity. 2.Long Press - In the cut or weld mode, set sensitivity automatically. (In the process of automatic set sensitivity, SENS area will be shown“AUTO”, sensitivity numbers increase from 0 to 7 in turn)	1. Short Press-Short press to increase the sensitivity. Release the button and press again to increase the sensitivity again. 2.Long Press-Press over 1.5s to set sensitivity automatically for one time.

MIN **HOLD: AUTO**	1.Short Press-Decrease the delay time. 2.Long Press-Enter or exit automatic delay time function（When automatic delay time function is enabled, the screen of DELAY area will show “AUTO”） 3. Tack weld mode - When the delay time is set in Level 0 or 1, the welding helmet can be used for Tack weld.	1. Short Press-Short press to decrease the delay time. Release the button and press again to decrease the delay time again. 2.Long Press-Press over 1.5s to enter automatic delay time function and press over 1.5s again to exit automatic delay time function. 3. Tack weld mode - Short press the button to decrease the delay time to Level 0 or 1.
MAX	1.Short Press-Increase the delay time. 2.Long Press- In the weld mode, enter or exit automatic shade number gradual return.（When gradual return function is enabled, the screen of DELAY area will show“G”）	1、Short Press-Short press to increase the delay time. Release the button and press again to increase the delay time again. 2、Long Press-Press over 1.5s to enter automatic shade number gradual return and press over 1.5s again to exit gradual return.

LCD Display

LCD Display have four parts: Mode, Shade,Sensitivity and Delay time.
Mode: GRIND, WELD, CUT indicates the current work mode.

Shade: AUTO / MANUAL indicates the current shade number setting mode. In the manual mode (MANUAL), the screen will show current setting shade number.In the automatic mode (AUTO), the button (LTR and DKR) can adjust the automatic shade number from -2 to +2.

Sensitivity: In the WELD or CUT mode, SENS area will be shown the gear number. 0 for the minimum sensitivity, and 7 for the maximum sensitivity. When automatic sensitivity function is enabled, SENS area will be shown “AUTO”. The sensitivity numbers will increase from 0 to 7 in turn, and stop at the gear number which is automatically set. Then the system will quit the automatic sensitivity setting mode.

Delay time: DELAY area will be shown current gear number. When automatic delay time function is enabled, DELAY area will be shown “AUTO”. The gear numbers on the screen can adjust from -9 to +9 . In the weld mode, When gradual return function is enabled, the screen of DELAY area will show “G”.

LED Lights

There are two kinds of LED Light mode: Flash and always light. Different LED light indicators are shown in table 3.

Table 3 Different LED light indicators

Operation Condition	LED Indicator
Grind	Red light for 2s and flash for 0.3s
Lack of battery (empty)	Red light always on

Note: In the grind mode when the battery is not enough, the LED will indicates lack of battery.

Sleep And Wake Up

In order to extend the service life of the battery, auto darkening welding filter under the condition of environmental light intensity is less than 10lx and without arc for a long time ,need to enter a dormant state and work in low power mode. In a dormant mode, when the environmental light intensity is more than 10lx ,auto darkening welding filter will be working normally in a instant time. Conditions for Sleep and wake up are shown in table 4.

Table 4 Conditions for Sleep and wake up

Mode	Mode before	Condition
Sleep (**Low power mode**)	**GRIND**	In the grind mode and without any keystrokes for 45 minutes, the filter will enter the OFF function. If environmental light intensity is less than 10lx, it will enter the sleep mode.
	CUT	Without any keystrokes for 45 minutes from the last time receive the arc signals,the filter will enter the OFF function. If environmental light intensity is less than 10lx, it will enter the sleep mode.
	WELD	Without any keystrokes for 45 minutes from the last time receive the arc signals,the filter will enter the OFF function. If environmental light intensity is less than 10lx, it will enter the sleep mode.
Wake up	**GRIND**	When environmental light intensity is more than 10lx or press any button for 0.1s, the filter will be wake up and enter to WELD mode.
	CUT	When environmental light intensity is more than 10lx or press any button for 0.1s, the filter will be wake up and enter to CUT mode.
	WELD	When environmental light intensity is more than 10lx or press any button for 0.1s, the filter will be wake up and enter to WELD mode.

Note: 1. Press OFF not to enter a dormant state. In the OFF mode, filter only close the screen and reduce power consumption. It still in the working mode. In the OFF mode and environmental light intensity is less than 10lx, the filter will enter the sleep mode. 2.After being waken up from the sleep mode, the filter can not function normally in 10s.

Headgear

Headgear adjustment:

The helmet should be adjusted to cover the eyes and face effectively while welding. The position of the forehead band and rear headband can be manually adjusted to fit securely. Rotate the gear to adjust the tightness until it feels comfortable.The front and rear headbands should be adjusted to tightly cover the forehead and the backside of head. See figure 2a.

Headgear depth:

The depth of the headgear can be adjusted to the position that the headgear sits above your brow.Tighten/loosen the two slotted straps to fit the top of your head. See figure 2b.

Distance between lens and face:

The distance from the lens can be adjusted by pressing side pins and move sliders simultaneously. There are 5 distance positions available for adjustment. See figure 2c.

Angle limitation position:

The ideal helmet position is where your eyes are at 90°angle behind the lens.There are 7 angle limitation positions available for adjustment. Press side buttons and move the sliders simultaneously to make the helmet obtain the required angle limitation position.See figure 2d.

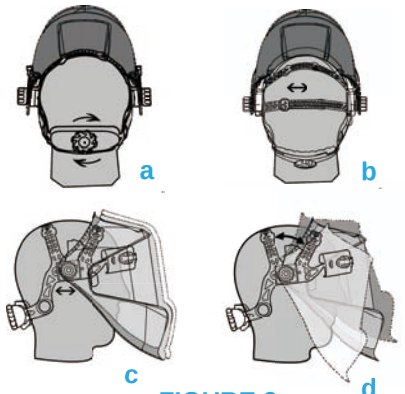


FIGURE 2

As a result of above mechanism action, the welder surely feels more comfortable than before and are in working with more high proficiency at any time.

TECHNICAL SPECIFICATIONS

Main Window:
Light state: DIN3
Dark state: DIN 4-8/8-14
Main window viewing area: 115x85 mm (4.53” x 3.35”)

Side Window:
Light state: DIN3
Dark state: DIN 10
Side window viewing area: 2(pcs)x80(Top)/35(Bottom)x68(Height) mm
(2(pcs)x3.15(Top)” /1.38(Bottom) x 2.68(Height)”)

Sensors: 5
Optical class: 1/1/1/1
True color: YES
Tig capability: >2A
Control: Digital
Shade control: Auto / Manual
Shade deviation of auto shade: -2.0 - +2.0
Sensitivity: 0-7, Automatic
Delay: 0.06 - 1.0S
Manual: YES
Auto mode: YES (-/+9 steps adjustment)
Gradual: YES

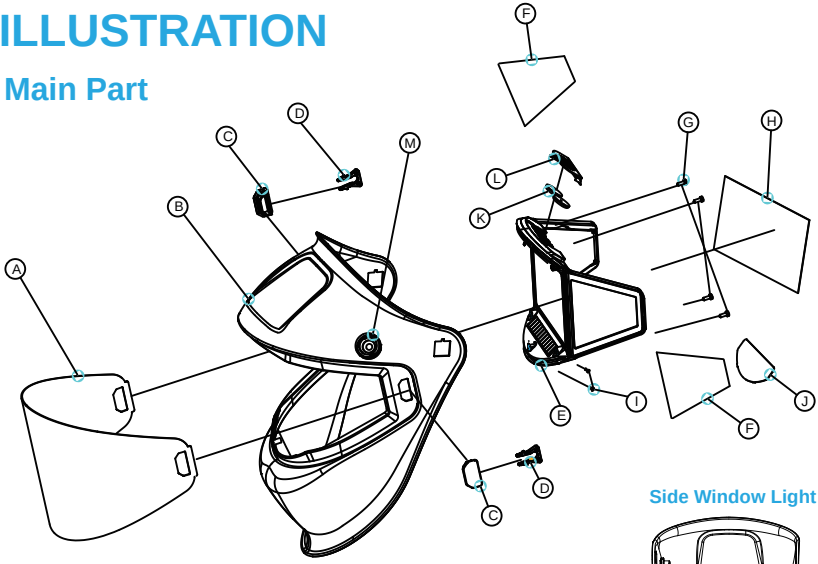
TAC welding: YES
Gradual shade return to clear state: YES
Switch time: 1/10000S
Mode: CUT/WELD/GRIND

Power supply:
Auto ON / OFF: YES
Power backup: Solar panel & battery 2*CR2032
Test: YES

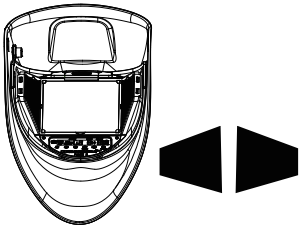
UV & IR protection: Up to shade 16
Certification: CE
Warranty (years): 2
Weight: 615G (1.35 Pound)
Material of helmet: NYLON
Patented Design

ILLUSTRATION

Main Part



Side Window Light Barrier



A. Front protection plate

B. Helmet shell

C. Snap joint of protection plate

D. Locker for snap joint of protection plate

E. Auto darkening lens

F. Rear protection plate 01

G. Screw

H. Rear protection plate 02

I. Screw

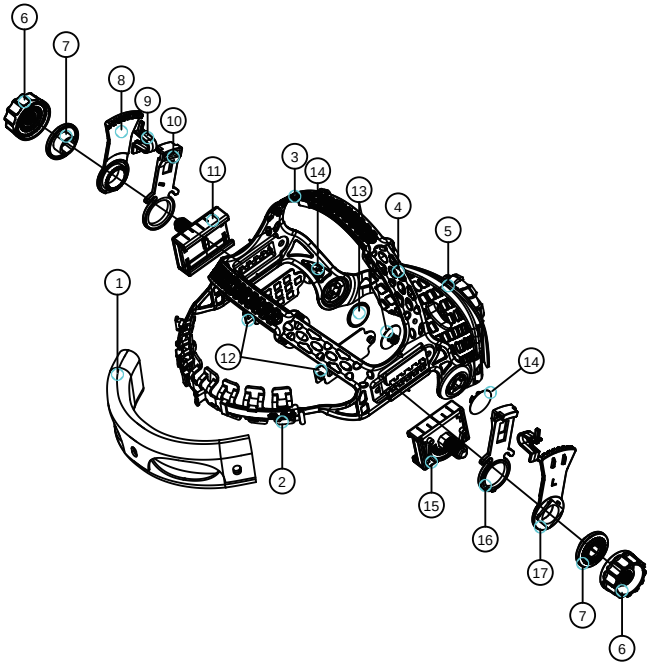
J. Panel

K. Battery

L. Battery Cover

M. Grinding Button

Headgear



1.Sweatband

2.Forehead band

3.Right belt

4.Left belt

5.Occipital pad

6.Headband adjusting nut

7.Washer

8.Right limitation washer

9.Angle pin

10.Right adjustable washer

11.Right slider

12.Side trim

13.Rotating shaft inside trim

14.Rotating shaft outside trim

15.Left slider

16.Left adjustable washer

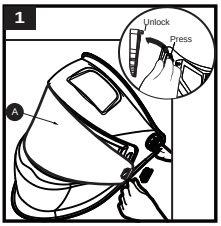
17.Left limitation washer

DISASSEMBLY AND ASSEMBLY INSTRUCTIONS

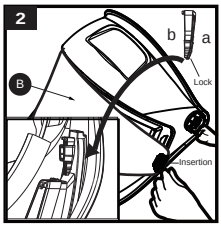
Protection Plate

1. Unlock the snap joint of protection plate if it is locked (A).

   Press the snap joint for protection plate and then take out the plate (A).

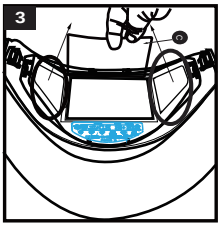


2. Change another protection plate and insert the snap joint (make sure “a” side close to the helmet) and then lock it (B).



3. Insert a finger into the semicircular hole and pull out the inner protection lens (C). Remove protection film from lens.

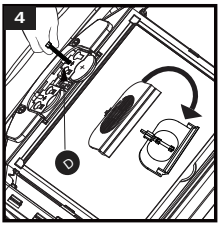
   Place inside protection lens (C) back into the front of the helmet by inserting one side of the lens into either side slot and then bend the lens just enough that it will slip into the other side slot.



DISASSEMBLY AND ASSEMBLY INSTRUCTIONS

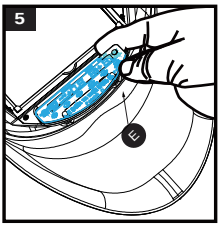
Battery

4. Using the battery remover to take out the battery (D). Change the battery and then put them back.

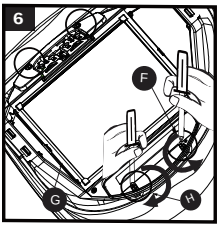


Filter

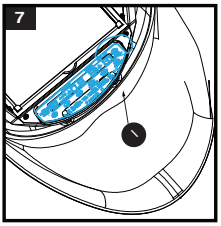
5. Peel off the control panel (E).



6. Loose the screw (F) and take out the filter (G) assembly from the shell.
   Tighten the screws (H).



7. Paste the control panel (I).



TROUBLESHOOTING

Some common problems listed below, together with their possible solutions, can arise when using the helmet:

PROBLEM	POSSIBLE CAUSE	SOLUTION
The filter does not darken or is unstable when switching from light to dark and viceversa	The external transparent protection of the filter is dirty or damaged	Change the external transparent protection
	The sensors are dirty	Clean the sensor surface
	The level of the welding current level (sensitivity) is too low	Increase sensitivity
	The batteries are not in good condition or not properly inserted	Replace the batteries or remove them and re-insert them properly
	Battery terminals and the contact surfaces of the filter are dirty or oxidized	Clean both
	The switch “WELD-GRIND” on the filter is in position “GRIND”	Place the switch in the “WELD”
Slow switching	The operating temperature is too low	Do not use at temperatures under -5°C (+23°F).
Poor visibility	The external or/and internal protection of the filter is/are dirty or damaged	Clean the dirty components and replace the damaged ones
	Not enough light in the surrounding area	
	The scale number is not set correctly, or the fixed scale number is not suitable	Where possible, select the correct number
Filter darkening without arc being struck	Sensitivity is too high	Adjust sensitivity to the right level
Filter remains dark after completing a weld	Delay set too high Ambient light is too bright	Adjust delay. Reduce light level
Weld spatter is damaging the filter	Missed, damaged, broken, distorted front cover	Replace front cover lens

ATTENTION! If the described malfunctions cannot be solved, stop using the helmet immediately and contact the nearest correspondent.

NOTE

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