

5. Confirmation

"Confirm" presence of leaks by drilling, boring bar and insert listening stick prior to excavation.

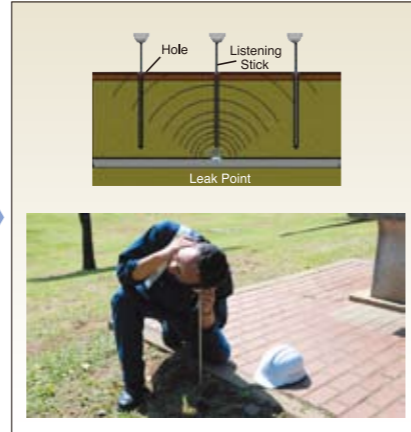
5-1 Drilling



5-2 Boring



5-3 Insert Listening Stick



Standard equipment for NRW reduction team (2 Persons)

1	Portable Ultrasonic Flow Meter UFP-20	1 unit	Flow & Pressure Monitoring
2	Flow & Pressure Logger	1 unit	Flow & Pressure Monitoring
3	Pipe Locator PL-960	1 unit	Site Investigation (Pipe Locate)
4	Non-metallic Pipe Locator NPL-100	1 set	Site Investigation (Pipe Locate)
5	Box Locator F-90M	1 set	Site Investigation (Vslve Locate)
6	Magnetic Locator GA-1	1 set	Site Investigation (Vslve Locate)
7	Listening Stick LSP-1.5m	3 sets	Leak Localization
8	Electric Listening Stick FSB-8D & Sound Judge FSJ-1	2 sets	Leak Localization
9	Leak Noise Logger LNL-1	1 set	Localization & Monitoring
10	Water Leak Detector DNR-18	2 sets	Leak Pinpointing
11	Leak Noise Correlator LC-2500	1 set	Leak Pinpointing
12	Leak Correlating Loggers Zcorr	1 set	Leak Pinpointing
13	Hammer Drill	1 set	Confirmation
14	Generator (2.5kVA or more)	1 set	Confirmation
15	Drill bit Hexagon19x800	5 units	Confirmation
16	Boring Bar 1.0m	2 sets	Confirmation

Others

-	Leak amount measure FLQ-2	1 set	Measuring Leak Volume
-	DPD chlorine check kit	1 set	Chlorine Check kit
-	Faucet Attachable Pressure Gauge SC-60	1 set	Pressure Check
-	Guzzler Hand Pump	1 set	De-water Pits



• Supply record for JICA project of 2000-2014

Tonga, Mongol, Syria, Philippine, Jordan, Sri Lanka, Laos, Cambodia, India, Solomon islands, Vietnam, Guinea, Egypt, Brazil, Timor-Leste, Sudan, El Salvador, Bangladesh, Kuwait, Guatemala, Kenya, Indonesia,

NRW REDUCTION PRODUCTS



FUJI NRW REDUCTION PRODUCTS

1. Flow & Pressure Monitoring

Measuring the extent of total inflow in a District Metered Area (DMA).



• Portable Ultrasonic Flow-meter UFP-20 & Pressure Loggerr



2. Site Investigation

Pipe & Valve locating.



• Pipe & Cable Locator PL-960



• Box Locator F-90M (for Valve)

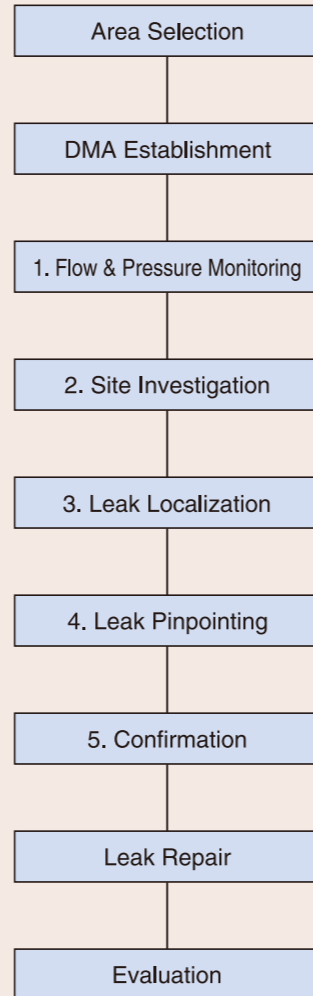


• Magnetic Locator GA-1 (for Valve)



• Non-metallic Pipe Locator NPL-100

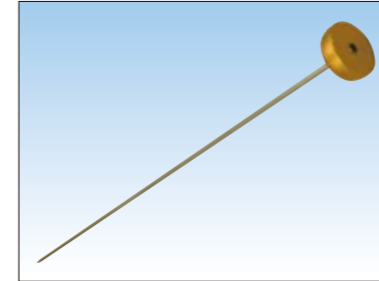
NRW Reduction Activity Basic Steps



After leaks repaired, the DMA should be monitored continuously.

3. Leak Localization

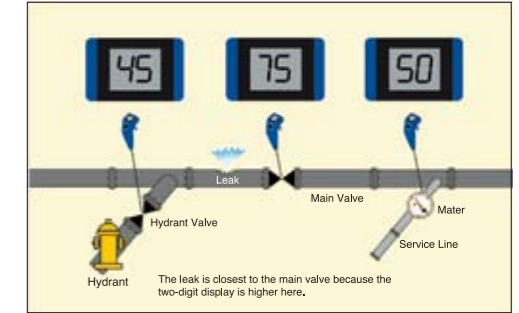
3-1 Listening Sticks are used to detect the presence of leak noise at house meters & valves with a long contact rod.



• Fuji Listening Stick LSP-1.5



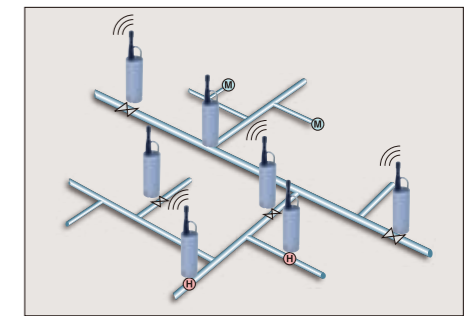
• Fuji Electric Listening Stick FSB-8D & Sound Judge FSJ-1



3-2 Leak Noise loggers are an effective localization to identify areas of potential leakage and continuous monitoring of leak noise presence.



• Fuji Leak Noise Logger LNL-1

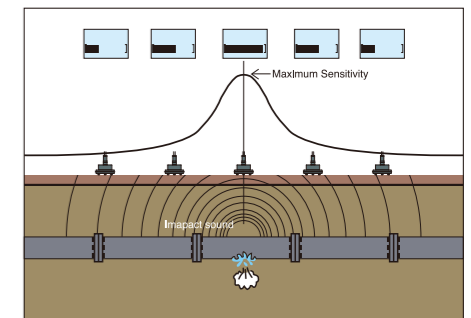


4. Leak Pinpointing

4-1 Advanced Ground microphones, "Pinpoint" water leaks in pipes under asphalt or concrete with the base plate attached to the sensor.



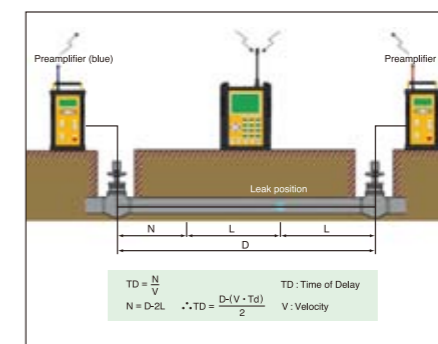
• Fuji Digital Noise Reduction Water Leak Detector DNR-18



4-2 Leak Noise Correlation "Pinpoint" water leaks with Correlation method.



• Leak Noise Correlator LC-2500



• Leak Correlating Loggers ZCORR